LARGE INVESTORS' PORTFOLIO COMPOSITION AND FIRM VALUE

S. Abraham Ravid* and Naciye Sekerci˜

Abstract

This paper investigates the impact of block-holding from a new angle. New Swedish data shows that firm value increases with the weight of a stock in a large owner's own portfolio. In Sweden this weight may be greater than 50%. We find some evidence suggesting that this "stock importance" (high portfolio weight) can mitigate the negative effects of a dual class structure on firm value. The identity of the block-holder, and if the block-holder is the CEO or the Chairman are not important for the premium. We conduct a variety of tests to rule out endogeneity and reverse causality.

This Draft: April 21, 2017

Key Words: Stock importance, portfolio composition, block-holders, dual-class shares.

JEL: G3, G30, G32, G39

*S. Abraham (Avri) Ravid, Sys Syms Professor of Finance, Sy Syms School of Business, Yeshiva University, ravid@yu.edu, and research fellow, Knut Wicksell Center for Financial Studies, Lund University.

˜Naciye SEKERCI, Assistant Professor, Utrecht School of Economics, Utrecht University, n.sekerci@uu.nl, and research fellow at Knut Wicksell Centre for Financial Studies, Lund University.

Acknowledgment: We thank seminar participants at NYU in particular David Yermack, Josh Ronen and Kose John; and those at Ben Gurion University, as well as Iftekhar Hasan, Benjamin Maury, Javier Estrada, Po-Hsin Ho, Joshua Spizman, Fredrik NG Anderson and Philip Fliers, as well as other participants at MFA Annual Conference (2017), Paris Financial Management Conference (2016), Corporate Finance Day in Antwerp (2016), IFABS Conference (2016), and 17th Annual SNEE European Integration Conference (2015) for useful comments and suggestions. Naciye Sekerci would like to thank Swedish House of Finance (SHoF) for providing a stimulating research environment during hand-collection of the ownership data from the database by SIS Ägarservice AB, which is run by Modular Finance AB (Holdings) since 2016 - thereafter, the database is called Modular Finance AB throughout the paper. We also thank our research assistant, Oskar Stigland for his excellent work for a portion of the data collection, and KWC for funding our RA.

1. Introduction

There is a very large literature studying the role of block-holders (large shareholders) in firm governance, and decisions, starting with Shleifer and Vishny (1986). Edmans (2014) reviews the three roles blockholders can be expected to play in affecting firm value. Block-holders can improve firm value through either voice or exit (Hirschman, 1970), or decrease firm value because of private benefits of control (Shleifer and Vishny (1997). "Voice" means intervention or close monitoring. Large shareholders can bring forth shareholder proposals, request discussions with management, offer private communication, or simply vote against directors. Block-holders can also simply sell their shares. On the other hand, private benefits of control may lead to behavior which is detrimental to firm value (although this may not always be the case).

The empirical literature usually uses cash-flow rights and votes for testing block-holders' power. However, as Cronqvist and Fahlenbrach (2009) point out, the impact of block-holders may very well be heterogeneous. Therefore, it is useful to incorporate the make-up of the large shareholder group in an analysis. To this end, some recent studies investigate the role of (large) shareholders in further detail by looking at shareholders' portfolio composition, at block-holders' characteristics, and at large shareholders' (particularly institutional investors) investment horizons. Such papers include for example, Ekholm and Maury (2014) and Fich et al. (2015). We will review these studies below. Our paper is related to this new stream of studies. Our novel Swedish ownership data allows us to look at the portfolios of large block-holders in detail. We create a "stock importance" variable based on the weight of a stock in an owner's portfolio (similar to Ekholm and Maury (2014) and Fich et al. (2015)), and argue that block-holders may be much more motivated to act in the interests of shareholders if the stock in question constitutes

a big part of their portfolios. More specifically, since potential monitoring costs can be high (e.g. costs of gathering and analyzing information, as well as costs of monitoring managers), it stands to reason that large shareholders whose portfolio is heavily weighted in the stock in question will find it individually rational to monitor a firm and their incentives are expected to increase as the share of the firm in their portfolio increases.

The main findings of this paper are as follows: We find that "stock importance" is associated with higher firm value. On the other hand, dual-class share structure is negatively related to firm value, confirming earlier work by for example, Gompers, Ishii and Metrick (2010). However, we also offer evidence that stock importance mitigates the negative impact of control enhancing mechanisms. It does not seem to matter whether the block-holder in question is an individual, a corporation, a financial institution or the government or whether individual investors hold a CEO or Chairman positions. We also present a variety of robustness checks, an IV analysis to rule out endogeneity and reverse causality regressions which suggests that firm value improves as stock importance increases, not the other way around.

1.1 A Brief Literature Review

We cannot do justice to the large block-holders literature. However, we review in detail a few recent studies and show how our work relates to them. These studies can be divided into three groups based on the topics they explore. In the first category, Ekholm and Maury (2014), whose study is closely related to our paper, show that average (small) shareholder portfolio concentration is positively related to a firm's future operational performance and valuation, as well to future stock returns. Their variable of interest, portfolio concentration is measured as an Average Weight Index reflecting how important a stock is for its average shareholder.

Accordingly, they only focus on small, outside shareholdings, and use data from low-voting class shares in Finland, which are the shares that are most often traded. The positive relation they show is stronger for smaller shareholdings (<1%) rather than larger shareholdings (<5%). This main finding implies that portfolio concentration is important when small shareholders are not able to scale up information gathering because of resource constraints. Fich, Harford and Tran (2015)'s study explores the role of portfolio holdings in the acquisition process. Their variable of interest is measured as the relative importance of the target firm to the institutional investor. They hypothesize that monitoring activities of a given firm increase as the importance of that firm to the institutions that invest in it increases. They find that "monitoring investors" are associated with greater bid completion, higher premiums and lower acquirer returns. Their paper uses a similar concept to ours, however, we analyze all types of investors, including individuals, other companies, families and the government rather than just institutional investors, and our dependent variable is firm value, rather than mergers outcomes. Also, as it turns out, in the Swedish sample the proportion of the "monitored stocks" in the largest owner's portfolio tends to be much higher than in US samples. In that sense, our paper can be viewed as an extension and generalization of the Fich et al. (2015) paper. Other papers test whether large shareholders' portfolio diversification affects firm decisions. Faccio, Marchica and Mura (2011) show that firms whose large shareholders hold more diversified portfolios tend to take greater risks, which the authors interpret as an alignment of interests. In a recent paper, Lyandres, Marchica, Michaely and Mura (2015) also look at the effects of large shareholders' portfolio diversification on firm strategies. They find that investment-to-assets ratios and profit margins of less constrained firms (proxied by a classification as public firms) are positively related to portfolio diversification. Bodnaruk, Kandel, Massa, and Simonov (2008) conclude that portfolio

diversification by large owners plays an importance role in an initial public offering (IPO) process. More specifically, they show that less diversified shareholders are likely to sell more of their shares at an IPO, and that firms with less diversified shareholders are more likely to go to public.

The second group of papers includes studies such as Cronqvist and Fahlenbrach (2009). They argue that large shareholders are probably different along measurable dimensions, such as skills, beliefs or preferences, and that this heterogeneity among large shareholders matters. Cronqvist and Fahlenbrach (2009) initially show that large shareholders, on average, do not have any impact on firm's investment, financial and executive compensation policies. However, when they add a block-holder fixed effect (i.e., adding a dummy variable for each individual large shareholder in the regression) to their analyses, their model fit improves. Cronqvist and Fahlenbrach (2009) reject the F-test for the joint significance of all block-holders and conclude that there is evidence of significant heterogeneity across different investors. They further show significant fixed effects in investment, financial and executive compensation policies, as well as in performance measures. Deng, Moshirian, Pham and Zein (2013) also look at the effect of heterogeneity in block-holders' characteristics on corporate policies and firm performance.

The last category in this area of research, which is not as closely related to the current work, includes studies from the institutional-investors literature documenting the importance of investment horizon of investors for corporate policies (See Gaspar et al. 2012; Cella, 2014; Derrien, Kecskés and Thesmar, 2013; and Michaely, Popadak and Vincent, 2015).[1]

[1] Other related studies include Gaspar, Masso and Matos (2005), Cella, Ellul and Gianetti (2013); and Schwartz-Ziv and Wermers (2015). There is also another important stream of studies that focuses on presence of multiple shareholders, which is less relevant to our study. Some recent work shows that multiple block-holders might act competitively when trading, impounding more information into prices, and this in turn induces higher managerial effort (Edmans and Manso, 2011). Similarly, there are a few

1.2 Our Work and the Swedish Corporate Governance Environment

Our paper uses detailed ownership data from 1999-2012[2] to investigate whether the impact of block-holding on firm value depends on the weight of the stock in question in the largest block-holder's portfolio. In addition to this main research question, we consider other issues. First, we look at corporate control mechanisms, in particular at the disparity between votes and cash flow rights and dual class share structures. We test to see whether a large position in a stock can mitigate the adverse effects of control enhancing mechanisms. We then ask whether the identity and the role of the largest owner matters for the relation between firm value and stock importance. Some studies suggest that for example, family firms or institutional-investors affect value and we consider the impact of the owner identity here. We also test to see whether a CEO or chairman role affects the firm value premium since the incentive of an owner might change if s/he is directly involved in management. We employ several different techniques and alternative measures for robustness purposes, as well as for mitigating endogeneity related concerns.

There are several reasons why the Swedish market is interesting to study. Sweden (and other Nordic countries) has high corporate governance according to World Bank Governance Indicators 2014 (see Table 1 in Thomsen (2016) who discusses the Nordic Corporate Governance Model). Dent Jr (2013) suggests that the Swedish system of Corporate Governance is successful and can serve as a model for other countries, in particular the US. This presumed success is because first, the Sweden features an investor-centered governance system. Listed

---

other studies showing that presence of multiple shareholders matter. For example, Maury and Pajuste (2005) show that the contestability of the largest shareholder's voting power is positively associated with firm value. They find that firm value is higher when the voting power is distributed more equally. Another study is by Boubaker, Nguyen and Rouatbi (2016) who show that the presence, number and voting power of multiple (large) shareholders is related to higher corporate risk taking.

[2] Also extending Cronqvist and Nilsson (2003)'s time frame which is 1991-1997, who also use a *portion* of the ownership data from Modular Finance AB (called SIS Ägarservice AB back then).

companies have nomination committees that typically represent the company's major shareholders (although one independent member is required by law). Unlike the US, this committee nominates the board of directors. The Nomination Committee is elected at the Annual general meeting giving voice to small shareholders as well. Also, the boards are "semi-two tiered boards", i.e. in between the US one-tier boards and the German two-tier boards. In addition to the supervisory role the board can also intervene in decisions; such as changes to the articles of association, adoption of balance sheets and selection of auditors. Finally, independent media and high social norms exert a disciplining effects on larger owners as well as on managers. This would probably be not the case in large heterogeneous countries with large stock markets and many international investors such as the US, or the UK (See also Coffee (2001) for the role of social norms on corporate behavior). In summary, the features discussed in this paragraph suggest that the Swedish setting enables powerful investors to affect firm outcomes in ways that are not common in other countries.

On the other hand, in Sweden there is an extensive use[3] of control enhancing mechanisms, such as dual-class shares and shareholders agreements. 55.3% of our sample firms use dual-class share structures (versus 6% in the US (Gompers, et al., 2010)). In Sweden the typical structure features A shares with 10 votes per share and B shares with one vote per share. Therefore, large shareholders can become controlling shareholders in a firm by holding only very limited cash flow rights. Similar to the motivation in Cronqvist and Nilsson (2003), this distinguishing feature offers us a nice setting to analyze potential agency costs of large (controlling) shareholders.

[3] Giannetti and Simonov (2006), who also use a portion of the ownership data (only 2001) from Modular Finance AB (called SIS Ägarservice AB back then), stress the widely use of control entrenchment mechanisms in Sweden.

In addition to its distinguishing governance setting, Sweden also offers uniquely accurate and detailed ownership data. The Swedish Securities Register Center, Värdepapperscentralen, keeps a register of all shareholders in all the firms listed on the Stockholm Stock Exchange since the 1970s (Cronqvist and Nilsson, 2003), and Swedish law allows "public" access to this shareholders' register. The ownership database provided by Modular Finance AB uses this register, and covers the years from 1999 to today. The data provides a detailed look into the largest shareholder's portfolio composition. Another advantage of the data is that Modular Finance AB aggregates closely related owners into a single group (sfär), which is basically an ownership coalition. This usually holds for family owners. If we do not group the closely related owners together, we might end up with a different order in the ownership structure. Thus, the ability to observe coalitions in the data enables us to define the largest shareholder in a more economically meaningful way, improving earlier definitions.

The experiment we are conducting will be difficult to replicate in the US. In the US, the largest shareholder in the vast majority of US stocks is Blackrock or Vanguard (See for example, Azar, Schmalz and Tecu, 2015). In contrast, in our sample, family firms are the largest shareholder in 52% of the cases. 26% of those are founder families. All in all there are 103 different family owners in our sample. 10% of the owners are other corporations and only about 21% are various financial institutions. Individuals are the largest owners in 15% of the cases (See for similar distinction Cronqvist and Nilsson (2003)). Lastly, the government is the largest block-holder in only 1% of the firms in our sample.

Two recent studies, Appel, Gormley an Keim (2016), which presents a clever natural experiment, and Schwartz Ziv and Wermers (2015), who analyze in detail voting on say-on-pay proposals, support our view in the sense that they show that even small holdings by seemingly

passive investors may make a difference to corporate outcomes. However, as noted, in the US the largest block-holders tend to be major mutual funds, and in particular BlackRock, Vanguard and Fidelity (See Table 3 in Schwartz Ziv and Wermers, (2015)). Therefore, almost by definition the stakes studied are very small (Appel et al. (2016) say that the average portfolio weight of stocks they study in the Russel 1000 was 0.012% whereas in the Russel 2000 it was 0.127%). The mean portfolio weight of stocks in Schwartz- Ziv and Wermers' (2015) sample is 0.18% - see Table 2)). Our study complements this literature as we document the behavior of various entities, not only institutional investors, whose portfolios are heavily weighted with specific stocks. Nevertheless, the significant variability our sample features enables us to study the effect of portfolio composition in detail.

The rest of the paper proceeds as follows. Section 2 presents the data and variable construction. Section 3 exhibits descriptive statistics. In Section 4-6, we discuss the methodology and empirical results. Finally, in Section 7, we present concluding remarks.

2. Data and Variable Construction

2.1 Data

Our sample includes 208 firms[4] listed on the NASDAQ-OMX stock exchange in Stockholm and domiciled in Sweden.[5] Our unbalanced panel dataset covers the period from 1999 through 2012. We have 2158 firm-year observations in our sample. We remove twenty four financial firms from the sample as most studies do.

[4] Accounting data of four firms were not available on Datastream, so they were removed from the sample.
[5] Fourteen foreign firms were removed from the sample.

All the data used are collected as fiscal year-end values. Three data sources are used for the study: Datastream, company annual reports and Modular Finance AB ownership data. Accounting data, as well as firm characteristics, are collected from Datastream and annual reports. Data regarding ownership structure and shareholders' portfolios are collected manually from the ownership database provided by Modular Finance AB. The database also indicates whether a firm uses a dual-class share structure. Individual holdings are presented as percentages of both total capital and votes – when different. Moreover, we can compute also the ultimate shareholdings for each stock and each investor.

The database also provides information regarding portfolio composition of shareholders. Namely, we can calculate the relative weight of each stock in the largest shareholder's portfolio. Similar to Ekholm and Maury (2014) the portfolios we observe include only holdings in Swedish stocks (in their case the analysis is of portfolios of Finnish stocks). Thus, the question we are studying can be interpreted as follows: given that an investor decides to hold Swedish stocks in their portfolio, should they concentrate the holdings in one or two stocks or should they hold a diversified portfolio, aggregating a risk exposure to Swedish stocks. Similar to Ekholm and Maury (2014) we do not have information about say, fixed income holdings or holdings of international stocks of our investors, but based on their work[6] and the home bias literature (See Massa and Simonov (2006) for Sweden, and Grinblatt and Keloharju (2001) for Finland) one can assume that most of the stocks in the portfolios of Swedish investors would be Swedish. In fact, as we will see, our paper can be interpreted as arguing that to some extent, in addition to the

[6] Ekholm and Maury (2014) restrict their sample to shares of listed Finnish firms with the following argument stated in their footnote on page 907: "The Finnish Central Securities Depository (FCSD) shareholder register includes a relatively small fraction of foreign securities, as well as other securities than shares."

behavioral bias, there is an economic reason for a portfolio that is heavily weighted in specific stocks, namely, the ability to influence or monitor the value of the stocks in question.

< Insert Table 1 around here >

2.2 Variable Construction

Below, we provide information on how we construct our variables. All variable definitions are compiled in Table 1. The currency used is Swedish Krona (SEK).

2.2.1 Variables of Interest

Stock Importance is our main variable of interest. It is the percentage of the portfolio of the largest shareholder that is dedicated to the stock in question. We also construct four dummy variables, to be used in robustness checks: ***Stock Imp. 05/10/20/50***. These variables equal 1 when the weight of the stock in question in the largest shareholder's portfolio is at least 5%, 10%, 20% and 50%, respectively.

Stock Importance Highest Weight is a dummy variable that equals 1 if the stock in question has the highest weight in the portfolio of the largest owner.

Following Faccio et al. (2011), diversification is measured in two ways. ***No. of Firms in Portf***. is the natural logarithm of total number of firms in which the largest shareholder invests. We also use another proxy ***(1−Herfindahl Index)*** calculated as one minus the sum of the squared weights that each investment has in the largest shareholder's portfolio. The Herfindahl index itself can take values between 0 and 1, where 1 reflects the largest owner investing in just one firm (fully

concentrated wealth) while 0 shows the opposite state. For easier interpretation of the results, we subtract the index from 1 so that a higher value indicates a more diversified portfolio.

Largest Investor vote is calculated as the percentage of votes held by the largest shareholder.

We define control in two ways: 1) ***Excess Vote***, calculated as the difference between the percentage of votes and the percentage of capital held by the largest shareholder (Villalonga and Amit, 2006; Cronqvist and Nilsson, 2003), and 2) ***Dual-class Share***, a dummy variable equal to 1 when the firm has a dual-class share structure and zero otherwise (Gompers et al., 2010, Villalonga and Amit, 2006; Anderson, Duru and Reeb, 2012).

There are five dummy variables created to represent the identity of the largest owner. **a) *family,* b) *corporation,* c) *financial institution,* d) *government and e) individual*** which is our default.

There are four dummy variables that we create based on the role of the investor in the corporate governance system. ***CEO*** is a dummy variable that takes value of 1 when the largest shareholder is the CEO of the firm. ***Chairman*** is a dummy variable that takes value of 1 when the largest shareholder is the Chairman of the firm. ***CEO or Chairman*** is a dummy variable that takes value of 1 when the largest shareholder is either the CEO or the Chairman. ***CEO-Chairman duality*** is a dummy variable that takes value of 1 when the largest shareholder is the CEO and the Chairman.

2.2.2 Dependent Variables

We measure firm value with ***Tobin's Q*** which is the natural logarithm of the sum of the market value of equity plus book value of total liabilities, all divided by the book value of assets.

We use return on assets (***ROA*)** as the profitability measure. It is EBITDA divided by total assets.

2.2.3 Other Control Variables

We control for basic firm characteristics that may potentially affect our outcome variables. Control variables are obtained from Datastream.: ***Ln(TA)*** is the natural logarithm of total assets, which is in million SEK. ***Leverage*** is measured as total long-term debt divided by total assets. ***Net Sales/TA*** is net sales divided, which is in million SEK, by total assets. ***Capex/TA*** is the capital expenditures divided by total assets. ***Dividend/TA*** is the ratio of total cash dividends paid to total assets. ***Cash/TA*** is the ratio of total cash and cash equivalents divided by total assets.

3. Descriptive Statistics

Table 2 Panel A presents descriptive statistics, while Panel B shows the correlation matrix of the selected variables.

ROA is, on average, is 0.070, but our firms vary between unprofitable firms and very profitable firms. The mean value of *Leverage* is 15%; however, some firms are highly leveraged whereas others have no debt at all.

< Insert Table 2 around here >

The mean value of our main variable of interest, *Stock Importance* is 0.568, and its standard deviation is 0.414. This is a possibly unexpected statistic- showing that on average, the largest investors' portfolios are focused on the stock in which they hold a major interest. However, on average large investors hold around 23 stocks in their portfolios which is higher than the number reported in Faccio et al. (2011), (4 stocks). Similar to Faccio et al. (2011) some shareholders are

well diversified (min value: 0.001)[7]. However, some large shareholders, have only one stock in their portfolio (max value of *Stock Importance* is 1.000). The focus on very few stocks can be considered an "extreme home bias", as these investors are very focused on a local stock, but as we will show, it seems to serve a very clear economic purpose.

The vote held by the large shareholders (*Largest Investor's Vote*) is, on average, 32.9% of all the votes. *Excess Vote* is, on average, 8.5%. On average 55% of the firms employ a dual-class share structure.

13% of the largest owners in our sample firms are the CEOs of their firms, 24% of these largest owners are the Chairman of board of directors. 35% of the large owners are either CEO *or* the Chairman. Only 1.3% of the large investors are both CEO and Chairman of their companies.

Panel B provides the correlation matrix of the selected variables. We observe that *Stock Importance* is positively correlated with *Tobin's Q* (0.066). There are negative correlations between *Tobin's Q* and *Largest Investor's Vote* (-0.141), as well as *Excess Vote* (-0.108) and *Dual-class Share* (-0.090), respectively. This seems to indicate that stock importance is correlated with higher firm value and control enhancing mechanisms lower firm value. As we shall see, this indication will be verified in regression analysis.

4. Empirical Findings

4.1 Stock Importance, Vote Ownership, Entrenchment and Firm Value

[7] The maximum value of (*1−Herfindahl Index*) is 0.985, and the highest value for *No. of Firms in Portf.* is 475, whereas the minimum value of (*1−Herfindahl Index*) is zero.

Equation (1) presents our baseline regression (Table 3). Firm value is measured as the natural logarithm of *Tobin's Q*. Our variables of interest are *Stock Importance* and *Largest Investor's Vote* and we include firm characteristics as control variables:

$$\text{Ln}(\textit{Tobin's } Q_{it}) = \beta_0 + \beta_1(\textit{Stock Importance}_{i,\,t-1}) + \beta_2(\textit{Largest Investor's Vote}_{i,t-1}) + \beta_3 X_{\textit{Control Variables}, i,t-1} + u_{it} \quad (1)$$

We use a two-way error component model, including both firm and year fixed effects. First, firm fixed effects control for any unobserved firm heterogeneity and mitigate issues related to omitted, unobserved time-invariant firm characteristics that may be correlated with any of the independent variables.[8] Unreported descriptive statistics also show that our key variable, *Stock Importance* varies over time (e.g., mean value varies from 0.280 (2002) to 0.625 (2005) between 1999-2012.[9] Second, some year-specific shocks might influence all the firms in a similar fashion, therefore we also use year fixed effects. This two-way error component model is also used by Cronqvist and Nilsson (2003). However, in our model standard errors are also clustered at firm level to control for serial correlation within firms.

The last feature of our baseline regression is that the right-hand side variables are lagged by one-year to mitigate potential endogeneity problems stemming from reverse causality, that is, the concern that shareholders may choose high value firms for their portfolios, rather than have an effect on the value of the firms they invest in.

< Insert Table 3 around here >

[8] Endogeneity is present if ($\text{corr}(\mu_i, X_i) \neq 0$), where μ is *unobserved* firm heterogeneity (hence, a component of the error term) and where X is the independent variables.

[9] On the other hand, *Largest Investor's Vote* variable seems to stay stable over time: the mean value of this variable ranges from 0.316 (2010) to 0.357 (2003) between 1999-2012.

We include several specifications in Table 3. Columns 1-6 start with OLS[10][11] regressions where unobserved firm heterogeneity is controlled for. In Columns 1 and 3, all the independent variables are measured at time *t* while in Columns 4 and 6 the independent variables are at time *t-1*. When we include firm fixed effects in our regressions, (in Columns 7-12), we find that firm value improves with a higher level of stock importance. The right hand side variables are measured at time *t* in Columns 7-9 while they are measured at time *t-1* in Columns 10-12. As expected, the explanatory power of the fixed-effects regressions is higher in general. We also note that the explanatory power of the fixed effect regressions improves when Stock Importance is added to the regressions which already had *Largest Investor's Vote* as an independent variable (Columns 8-9, and Columns 11-12). Moreover, in Table 3 the control variables make sense. In columns 10-12, where we lag the independent variables and use firm fixed effects, we see that Tobin's Q increases with (lagged) ROA. In other words, profitable firms have a better outlook.

In the most robust specification in Table 3 the correlation between stock importance and firm value is both statistically and economically significant. In Column 12, the premium we find on firm value is around 9%[12]. It thus seems that if the portfolio of the largest investor in a stock is heavily weighted in that stock then the firm is viewed more positively by the market.

In Table 4, we conduct a complementary analysis to Table 3 by re-estimating Equation (1) replacing the stock importance variable with two alternative portfolio diversification variables used by other authors (e.g. Faccio et al. 2011). The argument might be that if a shareholder is

[10] By using firm fixed effects, we aware that we lose the cross sectional variation; on the other hand, we can mitigate potential omitted variable biases that might cause endogeneity. Thus, we present both fixed effects and OLS specifications.

[11] All OLS regressions in Table 3 include year dummies to control for time fixed effect.

[12] The premium is calculated as $(e^{\beta_1} - 1) \times 100\% = (e^{(0.090)} - 1) \times 100\% = 9.41\%$.

well-diversified, (s)he probably should not have much of an incentive to "care" about a specific company in her/his portfolio, and hence may not act in the best interest of shareholders which would in turn result in lower firm value. In Columns 1 and 2, diversification is measured as (*1-Herfindahl Index*), and in Columns 3 and 4 it proxied by the natural logarithm of *No. of Firms in Portf*.. (*1-Herfindahl Index*) is a more robust measure compared to *No. of Firms in Portf*., and the correlation between (*1-Herfindahl Index*) and *Stock Importance* is -0.88. Hence, one could expect that (*1-Herfindahl Index*) would provide a mirror image to the results regarding *Stock Importance*. However, Table 4 indicates that none of the diversification measures is able to explain firm value, although the sign is negative as expected. These findings indicate that *stock importance* affects value and it is not the same as lack of diversification. In other words, it seems that it is the single minded focus on a specific stock rather than lack of attention to diversification that increases value. ROA also remains significant and positive across all the columns.

< Insert Table 4 around here >

Table 5 introduces control enhancing mechanisms. We add the *Excess Vote* and *Dual-class Share* variables to Equation (1), one at a time, instead of the *Largest Investor's Vote*. *Excess Vote* and *Dual-class Share* are used in the regressions interchangeably since the correlation between them is 0.789. Moreover, in Columns 5 and 6, we do not include *Largest Investor's Vote* together with *Excess Vote* as they are highly correlated (0.670). Table 5 shows that a dual-class share structure is negatively correlated with firm value, although the relevant coefficient is significant only when stock importance is controlled for. The finding that dual-class structure is detrimental to firm value is consistent with other work (e.g., Gompers et al., 2010). Stock importance is still

positively associated with Tobin's Q. We should also note that the coefficient of our stock importance variable is very robust in all specifications, staying around 0.09. This increases our confidence in the main theme of this paper. ROA also stays significant and positive across all the columns.

< Insert Table 5 around here >

< Insert Table 6 around here >

In Table 6 we replace our main *Stock Importance* variable in Equation (1) with one of our threshold dummy variables: *Stock Imp. 05/10/20/50* (Columns 1-4). Table 6 suggests that the value premium we find exists at all stock importance levels, regardless of the level of holdings. However, the coefficients are more significant for larger portfolio weights. We also note that ROA stays significant throughout.

4.2 Stock Importance by Entrenched Owners and Firm Value

In Table 7, we test the relation between stock importance and firm value conditional on whether or not the largest shareholders may be protected by a dual class share structure. Previous tables show that dual class structure lowers firm value and much other work also suggests that most control enhancing mechanisms are detrimental to firm value (see for example, Gompers et al. (2010) showing that firm value is decreasing with the insider's vote, but not with the cash flow rights). Thus we run the following conditional analysis:

$$Firm\ Value_{it} = \lambda_0 + \lambda_1(Stock\ Importance_{it-1}) + \lambda_2(Largest\ Investor's\ Vote_{it-1}) + \lambda_3(Stock\ Importance_{it-1} \times Dual\text{-}class\ Share_{it-1}) + \lambda_4(Dual\text{-}class\ Share_{it-1}) + \lambda_5 X_{Control\ Variables, it-1} + u_{it} \quad (2a)$$

$$Firm\ Value_{it} = \lambda_0 + \lambda_1(Stock\ Importance_{it-1}) + \lambda_2(Largest\ Investor's\ Vote_{it-1}) + \lambda_3(Stock\ Importance_{it-1} \times Excess\ Vote_{it-1}) + \lambda_4(Excess\ Vote_{it-1}) + \lambda_5 X_{Control\ Variables, it-1} + u_{it} \quad (2b)$$

In Equation (2a) and (2b), we interact *Stock Importance* with a *Dual-class Share* dummy variable, or with an *Excess Vote* continuous variable, respectively. Equation (2) also includes firm and year fixed effects. Errors are clustered at firm level.[13]

< Insert Table 7 around here >

This table suggests that *Stock importance* may mitigate the negative effects of dual class share structure. In other words, somewhat counter-intuitively, if a dual class share structure is in place, it may be better to have a large shareholder who holds a large proportion of his portfolio in the stock in question. This notion is supported by un-tabulated univariate test results which indicate that stock importance is higher in dual-class firms: the mean value of *Stock Importance* is 0.656 in dual-class firms whereas it is 0.480 in non-dual class firms, and this difference is statistically significant at 1% level. In other words, it may be that large block-holders in dual class firms hold a bigger stake to counteract the detrimental effect of dual classes.

[13] We present the Lincom test results at the bottom of each regression column. We would like to know if the total effect is statistically significant from zero.

The total effect of stock importance in Table 7, calculated using both the constituent and the interaction coefficients, ((λ1 + λ3) is positive, but it seems that most of the effect is for companies with a dual share structure.

The valuation premium we find is even higher than in earlier tables, around 15%[14] compared to the one found in main regressions (Table 3). ROA also stays significant and positive across all the columns.

4.3 Identity of the Largest Owners, Stock Importance, Vote Ownership and Firm Value

In this section, we investigate the effects of the identity of the largest owner. We classify the largest owner into *family*, *corporation*, *financial institution*, *individual* (*non-family*) *block-holder* which is the reference group, or *government*. Firm and year fixed effects are also used in this analysis. Errors are clustered at firm level.[15]

< Insert Table 8 around here >

Table 8 presents our findings. In the first regression, on the left-hand-side of the table, we interact *Stock Importance* variable with the identity variables. Similarly, we interact the *Largest Investor's Vote* variable with the identity variables on the right hand-side of the table. *Individual block-holder* category is the base group in both regressions. The left-hand-side analysis suggests that none of the identity groups is important for the value premium. In the analysis on the right, we show that vote in *family*-controlled firms is weakly associated with lower firm value

[14] The premium is calculated as $(e\beta_1 - 1) \times 100\% = (e^{(0.14)} - 1) \times 100\% = 15.02\%$.

[15] Lincom test results are not presented at the bottom of each regression column in Table 8 to save space, yet they are available upon request.

(compared to *individual block-holder*-controlled firms since *individual* (*non-family*) *block-holder* is the base group in the regressions). We further find that votes in *government*-controlled firms are associated with lower firm value (compared to *individual block-holder*-controlled firms). In other words, if families or the government have significant voting powers they can negatively affect the value of the company. This is consistent with other work, on families and government controlled firms (for example see Villalonga and Amit (2006)). ROA remains significant and positive and most importantly, our stock importance variable remains positive and significant.

4.4 Stock Importance for CEO and Chairman Owners and Firm Value

The impact of stock importance might also depend on whether the large owner is also the CEO or the Chairman of the company. In theory, we could expect a large owner who is a CEO or the Chairman to be freer of agency issues and able to more directly exert influence on firm behavior and policy. We employ the following moderating-effect analysis:

$$\begin{aligned} \textit{Firm Value}_{it} = {} & \psi_0 + \psi_1(\textit{Stock Importance}_{it-1}) + \psi_2(\textit{Largest Investor's Vote}_{i,t-1}) \\ & + \psi_3(\textit{Stock Importance}_{it-1} \times \textit{Largest Investor's Role}_{it-1}) \\ & + \psi_4(\textit{Largest Investor's Role}_{it-1}) + \psi_5 X_{\textit{Control Variables},it-1} + u_{it} \end{aligned} \quad (3)$$

Largest Investor's Role is four dummy variables, and takes value of 1 when the largest investor is the CEO (Column 1), the Chairman (Column 2), the CEO or Chairman (Column 3), and CEO and Chairman at the same time (Duality) (Column 4). In Equation (3), we interact the stock importance variable with each of the *Largest Investor's Role* dummy variables one at a time. Equation (3) also includes firm and year fixed effects. Errors are clustered at firm level.[16]

[16] We present the Lincom test results at the bottom of each regression column. Similar to Equation (2a) and (2b), we would like to know if the total effect is statistically significant from zero.

< Insert Table 9 around here >

Table 9 suggests that the largest owner's role does not make a difference. In other words, it does not matter if the largest owner is the CEO or the Chairman of the company where s/he is the largest block-holder. We note that stock importance stays significant and positive throughout the table. The interesting suggestion is that possibly we do not need to require that a manager "own the firm", but a large shareholder whose portfolio is heavily weighted in the stock in question provides sufficient monitoring so that agency problems may be resolved.

Our results so far show that stock importance increases firm value. The effect seems more pronounced for dual class firms, where entrenchment can decrease firm value. If the largest owner includes the stock in question as a large proportion of his portfolio, then the negative effect of control enhancing mechanisms may be mitigated. Perhaps surprisingly, it seems that the role of the large investor does not matter- put differently, you do not have to be a CEO or chairman to monitor the firm and increase value. Finally, the identity of the large owner is not important. In other words, it seems that a stock being a very important component in a large block-holder's portfolio is a sufficient condition for value enhancement. Our independent variables are lagged, so this provides some indication of causality. However, below we offer some robustness checks, IV regressions and additional analysis which can help our claim that a block-holder's large position in a stock can improve firm value.

5. Robustness Checks and Endogeneity Corrections

5.1 Alternative Measures for Stock Importance

As robustness check for our stock importance variable, we replace it with the *Stock Importance Highest Weight* variable which is a dummy variable taking the value of 1 if the largest owner gives the highest weight in her/his portfolio to the firm in question, and zero otherwise. Table 10 shows the results from this analysis. Columns 5-8 confirm our main findings that Tobin's Q increases with a higher level of stock importance and the table is overall similar to table 3. Among control variables, ROA still stays positive and significant in the most sound specifications.

< Insert Table 10 around here >

5.2 Alternative Estimation Techniques

5.2.1 Random Effect Model

As an alternative estimation method, we employ firm random effects (RE) model. The six columns in Table 11 replicate the regressions in the last six columns in Table 3. The only difference from Table 3 is that in Table 11 we employ *random* fixed effects instead of *firm* fixed effects (FE). The reason we do this is that there is some indication by the Hausman test results that we could choose RE over FE. RE requires the strict assumption that the error term should be uncorrelated with the independent variables (i.e., no presence of endogeneity). We see that this assumption is fulfilled in Columns 4 and 6 according to the Hausman test results at the bottom of Table 11 (18.54 and 17.86, and insignificant, meaning that we cannot reject the following: ($corr(\mu_i, X_i) = 0$). We also include other columns for sake of comparability with Table 3. RE

estimations confirm our earlier findings. Tobin's Q increases with higher levels of stock importance (Column 1-6 in Table 11).

< Insert Table 11 around here >

5.2.2 Instrumental Variable Estimation

In Table 12, we employ an instrumental variable estimation method to control for possible endogeneity that may be related to an omitted variable bias. We use an exogenous shock to stock-holding (the *stock importance* variable) to help identify the causality between stock importance and firm value. Sweden, as a member state of the European Union, is subject to the International Accounting Standards (IAS) Regulation adopted by the European Union in 2002. The EU IAS Regulation requires application of International Financial Reporting Standards (IFRS) for the consolidated financial statements of European listed companies starting in 2005. Even though there are a few early adopters of IFRS, prior to 2005, the vast majority of listed Swedish companies adopted IFRS as of 2005. Anecdotal evidence suggests that a handful of early adopters are not likely to matter for the analysis. Most large companies such as Volvo AB were not early adopters of IFRS.[17]

Accordingly, our instrument is *post-IFRS dummy* which takes value of 1 for post 2005, when by the EU legislation IFRS became mandatory. IFRS is expected to incentivize cross-border investments thanks to more transparent financial disclosure by firms, but also reduce informational asymmetry between local firms and investors, and thus increase investors'

[17] Changes of the Volvo Group's financial reporting in 2005 as consequence of adopting International Financial Reporting Standards ("IFRS"), presentation by Volvo AB, Group Accounting, 2004-12-16.

confidence and appetite for stock investing. In our context, IFRS can help reduce the information asymmetry between owners and firms and thus exogenously affect *stock importance*. This exogenous shock to the portfolio composition of the largest owner help "extract" the "good" variation out of a potentially endogenous variable, *stock importance* (Roberts and Whited, 2011).

We check the validity of our IV instrument. A valid IV has to fulfill two criteria (Wooldridge, 2002). The first condition is the instrument's relevance criterion. As seen in Column 1 in Table 12, the coefficient of the instrument is positive and highly significant. Unreported univariate results also show that mean value stock importance post-IFRS is 0.585, and its mean value is 0.370 prior to IFRS. This difference is statistically different.

The second condition is that the IV has to be exogenous to the outcome variable, that is the error term of the firm value regression has to have zero correlation with the IV. It is (always..) very difficult to verify this condition. The best a researcher can do is check the correlation between the IV instrument (post-IFRS dummy) and firm value (Tobin's Q). In our sample the correlation between post-IFRS dummy and ln(Tobin's Q) (as well as Tobin's Q) is 0.03 (0.02) and insignificant. Unreported univariate results also show that the mean value of log Tobin's Q post-IFRS is 0.447, compared to 0.442 prior to the enactment of the IFRS. The difference is not statistically different than zero.

Overall, checks on the instrument's relevance and exogeneity condition suggest that the IFRS regulation may improve firm value only through the stock importance variable, which is the setting we need for an IV estimation.

The second column in Table 12 shows the second stage in the analysis, confirming our earlier findings that stock importance significantly enhances firm value. In this analysis, the largest investor's vote is negative and significant.

< Insert Table 12 around here >

We also ran a treatment effect model (available from the authors). The treatment is defined based on the mandatory IFRS adoption. We capture "the time-series difference within treatment group" (Roberts and Whited, 2011). All the firms that are in our sample will become eligible for the treatment, and the treatment will be happening at a certain point in time.[18] Our coefficient can be interpreted as the difference in average firm value for firms post-IFRS (the post-treatment era) and the *same* firm before the IFRS adoption (the pre-treatment era) – as the IFRS adoption defining the treatment. We find that the relation between firm value and stock importance is higher post-IFRS, which is in line with our IV estimation findings.

5.2.3 Reverse Causality

In Table 13 below we run a reverse causality test, i.e. run stock importance as a dependent variable on Tobin's Q as an independent variable (lagged one period) to rule out reverse causality. As we can see, the coefficient is insignificant throughout. In unreported results we also ran Tobin's Q lagged two periods. There was no significance either. This gives us further confidence that indeed, as table 3 suggests, the causality would run the right way.

< Insert Table 13 around here >

[18] Note that this is different than the setting of capturing "cross-sectional difference after treatment", where the researcher would only be able to observe the post-IFRS period, and would compare firms treated to firms that are not treated. The combination of the two methods, "time-series difference within treatment group" and "cross-sectional difference after treatment" would yield the Dif-in-Dif model. However, we do not have the proper setting for Dif-in-Dif since in our case all firms become eligible for the treatment group at the same time.

6. Stock Importance, Vote Ownership and Firm Profitability

We further look at the relation between firm profitability and stock importance, as well as the vote by the largest owner by using Equation (4). Our new dependent variable is firm profitability, which is measured as ROA, calculated as EBITDA over total assets (*EBITDA/TA*). Similar to the analysis in Table 3, we employ both OLS and FE models.

$$ROA_{it} = \eta_0 + \eta_1(Stock\ Importance_{i,\,t-1}) + \eta_2(Largest\ Investor's\ Vote_{i,t-1}) + \eta_3 X_{Control\ Variables,i,t-1} + u_{it} \quad (4)$$

< Insert Table 14 around here >

The findings from this analysis are presented in Table 14. Firm FE results show that stock importance is positively associated with ROA, though only when it is regressed at time t. The explanation may be that Tobin's Q reflects future profitability whereas ROA reflects current firm success. In other words, if an investor holds a large position in his/her portfolio, it improves current performance, and it would improve outlook and market valuation which reflects the future (Table 3, Columns 10 and 12),

7. Conclusion

The role of large shareholders in firm value and policies has gained considerable attention in the corporate finance literature. This paper enhances recent studies focusing on large shareholders' portfolio composition such as Ekckholm and Maury (2014) and Fich et al. (2015). Our novel Swedish ownership data set allows us to consider whether the effect of large block-holders also depends on the importance of the stock in question in a block-holder's portfolio. We argue that block-holders may be much more motivated to act in the interests of shareholders (as monitors or

advisors or in nominating board members) if the stock in question constitutes a big part of their own portfolios.

We show that Tobin's Q increases in the weight of a stock in a large shareholder's portfolio. This seems to indicate that if a large owner "cares" about a stock, block-holding is beneficial. The value premium we find is around 9% and it is fairly consistent across tests. However, control enhancing mechanisms in particular dual class share structure are detrimental to firm value. We find that "stock importance" may mitigate these negative effects, in other words, somewhat counter-intuitively you would want a large entrenched block-holder to include the stock in question as a prominent component in their portfolio.

These results may help explain the inconclusive results on the effect of block-holding on firm value and profitability (See Holderness, 2009; and Holderness and Sheehan 1988; Cronqvist and Nilsson, 2003; Claessens, Djankov, Fan and Lang, 2002; Thomsen, Pedersen, and Kvist, 2006; Konijn, Kräussl and Lucas, 2011). Our paper suggests that the reason for the mixed findings may be that the data contains block-holders whose own portfolios may hold a different mix of stocks, and that the positive impact may come from block-holders with a high degree of stock-importance.

References

Anderson, D., A. Duru, and D. Reeb, (2012), "Investment Policy in Family Controlled Firms," *Journal of Banking and Finance* 36, 1744–1758.

Appel, I. R., T. A. Gromley, and D. B Keim, (2016), "Passive Investors, Not Passive Owners", *Journal of Financial Economics, 121*(1), 111-141.

Azar, J. M. Schmalz and I. Tecu, (2015), "Anti-Competitive Effects of Common Ownership", Working paper, available at SSRN at 2427345.

Bodnaruk, A., E. Kandel, M. Massa, and A. Simonov, (2008), "Shareholder Diversification and the Decision to Go Public", *Review of Financial Studies* 21(6), 2779-2824.

Boubaker, S., P. Nguyen, and W. Rouatbi, (2016), "Multiple Large Shareholders and Corporate Risk Taking: Evidence from French Family Firms", *European Financial Management* 22(4), 697-745.

Cella, C., (2014), "Institutional Investors and Corporate Investment", available at SSRN at 1572814.

Cella, C., A. Ellul, and M. Giannetti, (2013), "Investors' Horizons and the Amplification of Market Shocks", *Review of Financial Studies* 26(7), 1607-1648.

Claessens, S., S. Djankov, J. P. H. Fan, and L. H. P. Lang, (2002), "Disentangling the Incentive and Entrenchment Effects of Large Shareholdings", *Journal of Finance* 57, 2741-2771.

Coffee, J. C. (2001), "Do Norms Matter?: A cross-country evaluation", *University of Pennsylvania Law Review*, 149(6), 2151-2177.

Cronqvist, H. and R. Fahlenbrach, (2009), "Large Shareholders and Corporate Policies", *Review of Financial Studies* 22(10), 3941-3976.

Cronqvist, H. and M. Nilsson, (2003), "Agency Cost of Controlling Shareholders", *Journal of Financial and Quantitative Analysis* 38(4), 695–719.

Deng, H., F. Moshirian, P. K. Pham, and J. Zein, (2013), "Creating Value by Changing the Old Guard: The Impact of Controlling Shareholder Heterogeneity on Firm Performance and Corporate Policies", *Journal of Financial and Quantitative Analysis*, 48(06), 1781-1811.

Dent Jr, G. W. (2013), "Corporate Governance: The Swedish Solution", Florida Law Review, 364, 1633.

Derrien, F., A. Kecskés, and D. Thesmar, (2013), "Investor Horizons and Corporate Policies", *Journal of Financial and Quantitative Analysis* 48(06), 1755-1780.

Edmans, A. (2014) "Blockholders and Corporate *Governance", Annual Review of Financial Economics*, *6*(1), 23-50.

Edmans, A. and G. Manso, (2011), "Governance through Trading and Intervention: A Theory of Multiple Blockholders", *Review of Financial Studies* 24(7), 2395-2428.

Ekholm, A. and B. Maury, (2014), "Portfolio Concentration and Firm Performance", *Journal of Financial and Quantitative Analysis*, *49*(04), 903-931.

Faccio, M., M. T. Marchica, and R. Mura, (2011), "Large Shareholder Diversification and Corporate Risk Taking," *Review of Financial Studies* 24(11), 3601–3641.

Fich, E. M., J. Harford, and A. L. Tran, (2015), "Motivated Monitors: The Importance of Institutional Investors' Portfolio Weights, *Journal of Financial Economics*, *118*(1), 21-48.

Gaspar, J. M., M. Massa, P. Matos, R. Patgiri, and Z. Rehman, (2012), "Payout Policy Choices and Shareholder Investment Horizons", *Review of Finance* 17(1), 261-320.

Gaspar, J. M., M. Massa, and P. Matos, (2005), "Shareholder Investment Horizons and the Market for Corporate Control", *Journal of Financial Economics* 76(1), 135‐165.

Giannetti, M. and A. Simonov, (2006), "Which Investors Fear Expropriation? Evidence from Investors' Portfolio Choices" *The Journal of Finance*, 61(3), 1507-1547.

Gompers, P. J. Ishii, and A. Metrick, (2010), "Extreme Governance: An Analysis of Dual-Class Firms in the United States" *Review of Financial Studies*, 23(3), 1055-1088.

Grinblatt, M. and M. Keloharju, (2001), "How Distance, Language, and Culture Influence Stock Holdings and Trades", *Journal of Finance* 56, 1053–1073.

Holderness, C. (2009) "The Myth of Dispersed Ownership in the United States", *Review of Financial Studies*, 22(4) 1377-1408.

Holderness C. and Sheehan D., (1988), "The Role of Majority Shareholders in Publicly Held Corporations- an Exploratory Analysis", *Journal of Financial Economics*, 20(1) 317-346.

Konijn, S. J., R. Kräussl, and A. Lucas, (2011), "Blockholder Dispersion and Firm Value", *Journal of Corporate Finance* 17(5), 1330-1339.

Lyandres, E., M. Marchica, R. Michaely, and R. Mura (2015), "Owners' Portfolio Diversification and Firm Investment: Evidence from Private and Public Firms", Working Paper, available at SSRN at 2234195.

Maury, B. and A. Pajuste, (2005), "Multiple Large Shareholders and Firm Value", *Journal of Banking & Finance* 29(7), 1813-1834.

Massa, M., and A. Simonov, (2006), "Hedging, Familiarity, and Portfolio Choice", *Review of Financial Studies* 19, 633–685.

Michaely, R., J. Popadak, and C. Vincent, (2015), "The Deleveraging of U.S Firms and Institutional Investors' Role", Working Paper, available at SSRN at 1941902.

Roberts, M. and T. M. Whited, (2012), "Endogeneity in Empirical Corporate Finance", Available at SSRN at 1748604.

Shleifer, A. and R. W. Vishny, (1986), "Large Shareholders and Corporate Control", *Journal of Political Economy* 94, 461–488.

Shleifer, A. and R. W. Vishny, (1997*)*, "A survey of Corporate Governance"*, Journal of Finance* 52, 737–783.

Schwartz–Ziv M. and R. Wermers (2015) "Do Small or Large Shareholders Govern their Companies through Public Votes? Evidence from Say on Pay", Working Paper, June.

Thomsen, S. (2016), "The Nordic Corporate Governance Model", *Management and Organization Review*, 12(01), 189-204.

Thomsen, S., T. Pedersen, and H. K. Kvist, (2006), "Blockholder Ownership: Effects on Firm Value in Market and Control Based Governance Systems", *Journal of Corporate Finance* 12(2), 246-269.

Villalonga, B. and R. Amit, (2006), "How Do Family Ownership, Control and Management Affect Firm Value?" *Journal of Financial Economics* 80, 385–417.

Wooldridge, J. M. (2002), *Econometrics Analysis of Cross Section and Panel Data*, The MIT Press Cambridge Massachusetts, London, England.

Table 1 Definition of Variables

Dependent and Control Variables	
Tobin's Q	The natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets
ROA	EBITDA divided by total assets
Leverage	Total long-term debt divided by total assets
Cash/TA	Total cash and cash equivalents divided by total assets
Dividend/TA	Total cash dividends paid divided by total assets
Capex/TA	Capital expenditures divided by total assets
Total Assets (TA) (in million)	The natural logarithm of total assets
Net Sales/TA	Net sales divided by total assets
Test Variables	
Stock Importance	
Stock Importance (%)	The weight of the stock in question in the largest shareholders' portfolio
Stock Imp. Highest Weight	Dummy variable that equals 1 if the stock in question has the highest weight in the portfolio of the largest owner
Stock Imp. Dum05/10/20/50%	Dummy variable that equals 1 when the weight of the stock in question in the largest shareholder's portfolio is at least 5%, 10%, 20% and 50%, respectively
Diversification	
1-Herfindahl Index	1 minus the sum of the squared weights that each investment has in the largest shareholder's portfolio
No. of Firms in Portf.	The natural logarithm of total number of firms that constitutes the largest shareholder's portfolio
Ownership & Entrenchment	
Largest Inv. Vote	% of votes held by the largest shareholder
Excess Vote	(% of votes) - (% of capital) held by the largest shareholder
Dual-class Share	Dummy variable that equals 1 when the firm has a dual-class share structure
Identity	
Identity Dummy Variables	Five dummy variables created to represent the identity of the largest owner. The dummy variables take value of 1 if the largest owner is : a) family, b) corporation, c) financial institution, d) individual (non-family) block-holder or e) government; and 0 otherwise.
Largest Investor's Role	
CEO	Dummy equals 1 when the largest owner is the CEO
Chairman	Dummy equals 1 when the largest owner is the Chairman
CEO or Chairman	Dummy equals 1 when the largest owner is either the CEO *or* the Chairman
CEO-Chairman Duality	Dummy equals 1 when the largest owner is the CEO *and* the Chairman

This table presents brief definitions of the variables used in this paper. The data is obtained from Datastream, company annual reports and Modular Finance AB ownership data. The currency used is SEK.

Table 2 Descriptive Statistics

Panel A: Descriptive Statistics of Variables (firm-year)								
	Mean	**Median**	**Stdev**	**Max**	**Min**	**Q1**	**Q3**	**N**
Dependent & Control Variables								
Tobin's Q	1.853	1.353	1.436	9.122	0.633	1.048	2.028	2047
ROA	0.070	0.110	0.200	0.443	-0.889	0.047	0.168	2037
Leverage	0.150	0.098	0.167	0.831	0.000	0.003	0.245	2066
Cash/TA	0.162	0.087	0.188	0.858	0.001	0.036	0.211	2072
Dividend/TA	0.025	0.013	0.038	0.221	0.000	0.000	0.033	2016
Capex/TA	0.042	0.027	0.054	0.645	0.000	0.011	0.054	2028
Total Assets (TA) (in million)	11468	1065	33555	361239	7.290	346	5901	2073
Net Sales/TA	1.125	1.088	0.737	4.826	0.001	0.605	1.538	2070
Test Variables								
Stock Importance								
Stock Importance	0.568	0.673	0.414	1.000	0.001	0.114	1.000	1473
Stock Importance Highest Weight	0.599	1.000	0.490	1.000	0.000	0.000	1.000	1441
Stock Imp. Dum05%	0.829	1.000	0.376	1.000	0.000	1.000	1.000	1473
Stock Imp. Dum10%	0.758	1.000	0.427	1.000	0.000	1.000	1.000	1473
Stock Imp. Dum20%	0.680	1.000	0.466	1.000	0.000	0.000	1.000	1473
Stock Imp. Dum50%	0.547	1.000	0.497	1.000	0.000	0.000	1.000	1473
Diversification								
1-Herfindahl Index	0.382	0.372	0.357	0.985	0.000	0.000	0.733	1488
No. of Firms in Portf.	23.392	4.000	63.592	475	0.000	1.000	15.000	1489
Ownership & Entrenchment								
Largest Investor's Vote	0.329	0.276	0.212	0.884	0.002	0.155	0.464	2153
Excess Vote	0.085	0.017	0.095	0.221	0.000	0.000	0.202	2153
Dual-class Share	0.553	1.000	0.497	1.000	0.000	0.000	1.000	2148
Identity								
Family	0.521	1.000	0.499	1.000	0.000	0.000	1.000	2152
Corporation	0.105	0.000	0.307	1.000	0.000	0.000	0.000	2152
Financial institution	0.210	0.000	0.408	1.000	0.000	0.000	0.000	2152
Individual (non-family) block-holder	0.151	0.000	0.359	1.000	0.000	0.000	0.000	2152
Government	0.011	0.000	0.107	1.000	0.000	0.000	0.000	2152
Largest Investor's Role								
CEO	0.130	0.000	0.337	1.000	0.000	0.000	0.000	1820
Chairman	0.241	0.000	0.427	1.000	0.000	0.000	0.000	1820
CEO or Chairman	0.358	0.000	0.479	1.000	0.000	0.000	1.000	1820
CEO-Chairman Duality	0.013	0.000	0.116	1.000	0.000	0.000	0.000	1820

Panel B: Correlation Matrix of Selected Variables

	ln(Tobin's Q)	ROA	Leverage	Cash/TA	Dividend/ TA	Capex/TA	Ln(TA)	Net sales/TA	Stock Importance	Largest Investor's Vote	Excess Vote	Dual Class Share
ln(Tobin's Q)	1.000											
ROA	-0.072***	1.000										
Leverage	-0.338***	0.041*	1.000									
Cash/TA	0.516***	-0.336***	-0.438***	1.000								
Dividend/TA	0.269***	0.405***	-0.153***	0.021	1.000							
Capex/TA	-0.081***	0.094***	0.262***	-0.208***	-0.003	1.000						
Ln(TA)	-0.331***	0.327***	0.416***	-0.459***	0.100***	0.173***	1.000					
Net sales/TA	0.056***	0.290***	-0.314***	-0.158***	0.310***	-0.136***	-0.124***	1.000				
Stock Importance	0.066***	0.113***	0.029	-0.001	0.120***	0.036	-0.102***	-0.031	1.000			
Largest Inv.'s Vote	-0.141***	0.201***	0.056***	-0.122***	0.152***	0.039*	0.084***	0.067***	0.267***	1.000		
Excess Vote	-0.108***	0.192***	-0.009	-0.014	0.161***	-0.009	0.122***	0.032	0.222***	0.670***	1.000	
Dual-class Share	-0.090***	0.128***	-0.090***	0.025	0.100***	-0.050**	0.050**	0.056***	0.213***	0.428***	0.789***	1.000

In this table, Panel A provides descriptive statistics of the main variables while Panel B presents the correlation matrix of the selected variables used in this study. All variables are described in Table 1. *Q1* and *Q3* refer to the first and third quartiles, respectively. *N* is the number of observations. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively.

Table 3 Stock Importance, Vote Ownership and Firm Value

	Dependent Variable: Ln(Tobin's Q)											
	OLS						Firm Fixed Effects					
	RHS at time *t*			RHS at time *t-1*			RHS at time *t*			RHS at time *t-1*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Stock Importance	0.036		0.072	0.045		0.080	0.126***		0.135***	0.090**		0.090**
	(0.073)		(0.075)	(0.072)		(0.075)	(0.051)		(0.050)	(0.040)		(0.040)
Largest Investor's Vote		-0.269**	-0.264*		-0.247*	-0.258*		-0.269*	-0.242		-0.118	-0.008
		(0.138)	(0.154)		(0.136)	(0.153)		(0.142)	(0.193)		(0.129)	(0.176)
Controls												
Ln(TA)	-0.064***	-0.063***	-0.062***	-0.065***	-0.065***	-0.062***	-0.045	-0.065*	-0.053	-0.042	-0.108***	-0.043
	(0.018)	(0.018)	(0.018)	(0.018)	(0.017)	(0.018)	(0.043)	(0.036)	(0.043)	(0.040)	(0.039)	(0.039)
ROA	0.163	0.070	0.198	0.290	0.193	0.326	0.104	0.087	0.109	0.385***	0.323***	0.385***
	(0.258)	(0.167)	(0.256)	(0.239)	(0.164)	(0.237)	(0.115)	(0.096)	(0.114)	(0.103)	(0.103)	(0.102)
Leverage	-0.579***	-0.809***	-0.594***	-0.625***	-0.809***	-0.639***	0.163	0.243	0.175	-0.008	0.181	-0.007
	(0.245)	(0.222)	(0.239)	(0.248)	(0.218)	(0.243)	(0.120)	(0.178)	(0.121)	(0.121)	(0.168)	(0.120)
Net sales/TA	-0.012	-0.034	-0.011	-0.057	-0.065*	-0.055	0.285***	0.139***	0.277***	0.041	0.017	0.041
	(0.040)	(0.035)	(0.040)	(0.040)	(0.035)	(0.040)	(0.043)	(0.045)	(0.043)	(0.037)	(0.042)	(0.038)
Capex/TA	-0.119	0.075	-0.107	-0.414	-0.178	-0.411	0.262	0.561***	0.268	0.140	0.296	0.140
	(0.431)	(0.364)	(0.415)	(0.409)	(0.358)	(0.393)	(0.260)	(0.218)	(0.269)	(0.217)	(0.207)	(0.217)
Intercept	1.332***	1.573***	1.458***	1.404***	1.766***	1.534***	0.490	0.721	0.721	0.871*	2.034***	0.880*
	(0.295)	(0.272)	(0.299)	(0.292)	(0.274)	(0.298)	(0.560)	(0.584)	(0.584)	(0.511)	(0.557)	(0.522)
Firm Fixed Effect	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Errors Clust. at Firm Level	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.185	0.215	0.195	0.194	0.214	0.192	0.311	0.202	0.313	0.299	0.201	0.299
Observations	1346	1974	1346	1199	1822	0.204	1346	1974	1346	1199	1822	1199

The dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *Stock importance* is the weight of the stock in question in the largest shareholders' portfolio. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 4 Portfolio Diversification, Vote Ownership and Firm Value

	Dependent Variable: Ln(Tobin's Q)			
	(1)	(2)	(3)	(4)
(1- Herfindahl)	-0.015	-0.015		
	(0.045)	(0.046)		
Ln(No of Firms in Portfolio)			-0.004	-0.004
			(0.009)	(0.009)
Largest Investor's Vote		0.010		-0.001
		(0.180)		(0.178)
Controls				
Ln(TA)	-0.045	-0.044	-0.043	-0.043
	(0.040)	(0.044)	(0.040)	(0.040)
ROA	0.406***	0.405***	0.404***	0.404***
	(0.103)	(0.102)	(0.103)	(0.102)
Leverage	-0.003	-0.003	-0.001	-0.001
	(0.120)	(0.119)	(0.120)	(0.120)
Net sales/TA	0.028	0.028	0.031	0.031
	(0.038)	(0.039)	(0.039)	(0.039)
Capex/TA	0.130	0.130	0.143	0.143
	(0.215)	(0.214)	(0.213)	(0.213)
Intercept	0.970*	0.960*	0.948*	0.949*
	(0.516)	(0.533)	(0.516)	(0.531)
Firm Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
Errors Clustered at Firm Level	Yes	Yes	Yes	Yes
R^2	0.292	0.292	0.292	0.292
Observations	1213	1213	1213	1213

This table reports fixed effect regression results. The dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *(1- Herfindahl)* is 1 minus the sum of the squared weights that each investment has in the largest shareholder's portfolio. *No. of Firms in Portf.* is the natural logarithm of total number of firms that constitutes the largest shareholder's portfolio. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. The dependent variable is measured at time *t* while all the independent variables are measured at time *(t-1)*. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 5 Stock Importance, Entrenchment and Firm Value

	Dependent Variable: Ln(Tobin's Q)					
	(1)	(2)	(3)	(4)	(5)	(6)
Stock Importance			0.097***	0.096***		0.090**
			(0.039)	(0.039)		(0.040)
Excess Vote					-0.616	-0.203
					(0.505)	(0.421)
Dual-class Share	-0.260	-0.254	-0.290***	-0.296***		
	(0.179)	(0.180)	(0.008)	(0.085)		
Largest Investor's Vote		-0.088		0.040		
		(0.127)		(0.177)		
Controls						
Ln(TA)	-0.100***	-0.100***	-0.035	-0.033	-0.107***	-0.043
	(0.035)	(0.035)	(0.041)	(0.041)	(0.038)	(0.040)
ROA	0.309***	0.308***	0.380***	0.379***	0.325***	0.386***
	(0.105)	(0.105)	(0.103)	(0.102)	(0.104)	(0.103)
Leverage	0.153	0.150	0.001	0.001	0.175	-0.004
	(0.136)	(0.137)	(0.124)	(0.123)	(0.153)	(0.122)
Net sales/TA	0.013	0.013	0.047	0.048	0.015	0.040
	(0.044)	(0.043)	(0.037)	(0.037)	(0.043)	(0.037)
Capex/TA	0.324	0.327	0.141	0.139	0.321	0.140
	(0.209)	(0.211)	(0.219)	(0.219)	(0.213)	(0.217)
Intercept	2.057***	2.081***	0.909*	0.872*	2.039***	0.896*
	(0.550)	(0.548)	(0.518)	(0.525)	(0.558)	(0.526)
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Errors Clustered at Firm Level	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.208	0.208	0.306	0.306	0.203	0.299
Observations	1816	1816	1193	1193	1822	1199

This table reports fixed effect regression results. The dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *Stock importance* is the weight of the stock in question in the largest shareholders' portfolio. *Excess vote* is (% of votes) - (% of capital) held by the largest shareholder. *Dual-class Share* is a dummy variable that equals 1 when the firm has a dual-class share structure. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. The dependent variable is measured at time *t* while all the independent variables are measured at time *(t-1)*. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 6 Stock Importance at Different Levels and Firm Value

	Dependent Variable: Ln(Tobin's Q)			
	Weight of the Stock in the Largest Investor's Portfolio is at least:			
	5%	**10%**	**20%**	**50%**
	(1)	(2)	(3)	(4)
Stock Imp. Dum05/10/20/50	0.062*	0.083***	0.091***	0.066**
	(0.034)	(0.031)	(0.027)	(0.033)
Largest Investor's Vote	-0.004	-0.020	-0.024	0.002
	(0.179)	(0.177)	(0.178)	(0.175)
Controls				
Ln(TA)	-0.038	-0.038	-0.041	-0.045
	(0.040)	(0.039)	(0.039)	(0.039)
ROA	0.388***	0.385***	0.370***	0.392***
	(0.102)	(0.104)	(0.103)	(0.101)
Leverage	-0.001	-0.001	-0.003	-0.007
	(0.120)	(0.120)	(0.120)	(0.120)
Net sales/TA	0.039	0.042	0.043	0.037
	(0.038)	(0.037)	(0.037)	(0.038)
Capex/TA	0.157	0.165	0.168	0.130
	(0.212)	(0.213)	(0.215)	(0.217)
Intercept	0.814	0.809	0.850	0.929*
	(0.528)	(0.519)	(0.516)	(0.522)
Firm Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
Errors Clustered at Firm Level	Yes	Yes	Yes	Yes
R^2	0.297	0.301	0.304	0.298
Observations	1199	1199	1199	1199

This table reports fixed effect regression results. The dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *Stock Imp. Dum05/10/20/50%* are dummy variables that equal 1 when the weight of the stock in question in the largest shareholder's portfolio is at least 5%, 10%, 20% and 50%, respectively. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. The dependent variable is measured at time *t* while all the independent variables are measured at time *(t-1)*. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 7 Stock Importance by Entrenched Owners and Firm Value

	Dependent Variable: Ln(Tobin's Q)		
	(1)	(2)	(3)
Stock Importance	0.061	0.058	0.087**
	(0.046)	(0.046)	(0.042)
Largest Investor's Vote		0.059	
		(0.182)	
Stock Importance X Dual-class Share	0.139*	0.142*	
	(0.081)	(0.085)	
Dual-class Share	-0.353***	-0.363***	
	(0.103)	(0.109)	
Stock Importance X Excess Vote			0.111
			(0.638)
Excess Vote			-0.260
			(0.516)
Controls			
Ln(TA)	-0.040	-0.037	-0.042
	(0.041)	(0.040)	(0.040)
ROA	0.386***	0.384***	0.385***
	(0.103)	(0.102)	(0.103)
Leverage	0.008	0.005	-0.004
	(0.123)	(0.122)	(0.122)
Net sales/TA	0.052	0.054	0.041
	(0.037)	(0.038)	(0.037)
Capex/TA	0.155	0.154	0.140
	(0.216)	(0.215)	(0.217)
Intercept	0.966*	0.913*	0.888*
	(0.516)	(0.520)	(0.530)
Firm Fixed Effect	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes
Errors Clustered at Firm Level	Yes	Yes	Yes
R^2	0.308	0.308	0.299
Lincom test for the total effect: ($\lambda 1 + \lambda 3$)	0.202***	0.200***	0.199
Standard error of the total effect: : ($\lambda 1 + \lambda 3$)	(0.068)	(0.069)	(0.626)
Observations	1193	1193	1193

This table reports fixed effect regression results. The dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *Stock importance* is the weight of the stock in question in the largest shareholders' portfolio. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Dual-class Share* is a dummy variable that equals 1 when the firm has a dual-class share structure. *Excess vote* is (% of votes) - (% of capital) held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. The dependent variable is measured at time *t* while all the independent variables are measured at time *(t-1)*. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 8 Identity of the Largest Owner, Stock Importance, Vote Ownership and Firm Value

	Dep. Var.: Ln(TQ)		Dep. Var.: Ln(TQ)
Stock Importance	0.173*	Stock Importance	0.100**
	(0.105)		(0.049)
Family	0.035	Family	0.068
	(0.090)		(0.114)
Stock Importance*Family	-0.130	Largest Investor's Vote*Family	-0.506*
	(0.134)		(0.314)
Corporation	0.021	Corporation	-0.079
	(0.216)		(0.142)
Stock Importance*Corp.	-0.089	Largest Investor's Vote*Corp.	0.137
	(0.260)		(0.386)
Finan. Inst.	0.065	Finan. Inst.	0.029
	(0.079)		(0.108)
Stock Importance*Finan. Inst.	-0.043	Largest Investor's Vote*Finan. Inst.	0.029
	(0.116)		(0.383)
Government	-0.208	Government	-0.086
	(0.272)		(0.293)
Stock Importance*Government	0.034	Stock Importance*Government	-2.175***
	(0.243)		(0.476)
Largest Investor's Vote	-0.027	Largest Investor's Vote	0.148
	(0.183)		(0.304)
Controls		Controls	
Ln(TA)	-0.051	Ln(TA)	-0.064
	(0.044)		(0.045)
ROA	0.378***	ROA	0.384***
	(0.104)		(0.102)
Leverage	0.003	Leverage	0.003
	(0.128)		(0.128)
Net sales/TA	0.044	Net sales/TA	0.038
	(0.042)		(0.041)
Capex/TA	0.160	Capex/TA	0.145
	(0.219)		(0.220)
Intercept	0.964*	Intercept	1.242**
	(0.588)		(0.609)
Firm Fixed Effect	Yes	Firm Fixed Effect	Yes
Year Fixed Effect	Yes	Year Fixed Effect	Yes
Errors Clustered at Firm Level	Yes	Errors Clustered at Firm Level	Yes
R^2	0.303	R^2	0.307
Observations	1199	Observations	1199

This table reports fixed effect regression results. The dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *Stock importance* is the weight of the stock in question in the largest shareholders' portfolio. *Family, Corporation, Finan. Inst., Individual* (*non-family*) *block-holder and Government* are dummy variables take value of 1 if the identity of the largest owner is one of the following five options: a) *family*, b) *corporation*, c) *financial institution*, d) *individual* (*non-family*) *block-holder* or e) *government*; and 0 otherwise. *Individual* (*non-family*) *block-holder* is the reference group. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. The dependent variable is measured at time *t* while all the independent variables are measured at time *(t-1)*. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 9 Stock Importance for CEO and Chairman Owners and Firm Value

	Dependent Variable: Ln(Tobin's Q)			
	Largest Investor's Role **is:**			
	CEO	**Chairman**	**CEO or Chairman**	**CEO-Chairman Duality**
	(1)	(2)	(3)	(4)
Stock Importance	0.084**	0.090**	0.089**	0.085**
	(0.042)	(0.041)	(0.043)	(0.040)
Stock Importance X Largest Investor's Role	0.038	-0.057	-0.023	0.014
	(0.164)	(0.083)	(0.076)	(0.095)
Largest Investor's Role	0.021	0.017	0.015	0.024
	(0.081)	(0.047)	(0.037)	(0.030)
Largest Investor's Vote	0.031	0.043	0.040	0.038
	(0.172)	(0.184)	(0.178)	(0.182)
Controls				
Ln(TA)	-0.053	-0.052	-0.052	-0.052
	(0.043)	(0.042)	(0.043)	(0.042)
ROA	0.393***	0.392***	0.394***	0.393***
	(0.108)	(0.107)	(0.108)	(0.108)
Leverage	-0.076	-0.076	-0.075	-0.076
	(0.139)	(0.138)	(0.139)	(0.139)
Net sales/TA	0.070*	0.074*	0.074*	0.073*
	(0.041)	(0.043)	(0.042)	(0.043)
Capex/TA	0.056	0.048	0.048	0.051
	(0.225)	(0.229)	(0.227)	(0.227)
Intercept	0.906	0.877	0.886	0.890
	(0.627)	(0.616)	(0.620)	(0.616)
Firm Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
Errors Clustered at Firm Level	Yes	Yes	Yes	Yes
R^2	0.314	0.314	0.313	0.313
Lincom test for the total effect: ($\psi 1 + \psi 3$)	0.123	0.033	0.065	0.099
Standard error for the total effect: ($\psi 1 + \psi 3$)	(0.158)	(0.086)	(0.074)	(0.102)
Observations	1063	1063	1063	1063

This table reports fixed effect regression results. The dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *Stock importance* is the weight of the stock in question in the largest shareholders' portfolio. *Largest Investor's Role* are dummy variables created based on the role of the investor in the corporate governance system. *CEO* is a dummy variable that takes value of 1 when the largest shareholder is the CEO of the firm. *Chairman* is a dummy variable that takes value of 1 when the largest shareholder is the Chairman of the firm. *CEO or Chairman* is a dummy variable that takes value of 1 when the largest shareholder is either the CEO *or* the Chairman. *CEO-Chairman duality* is a dummy variable that takes value of 1 when the largest shareholder is the CEO *and* the Chairman. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. The dependent variable is measured at time *t* while all the independent variables are measured at time *(t-1)*. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 10 Stock Importance Highest Weight, Vote Ownership and Firm Value

	Dependent Variable: Ln(Tobin's Q)							
	OLS				Firm Fixed Effect			
	RHS at time *t*		RHS at time *t-1*		RHS at time *t*		RHS at time *t-1*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Stock Importance Heighest Weight	0.019	0.046	0.031	0.058	0.092***	0.099***	0.072**	0.072***
	(0.058)	(0.060)	(0.058)	(0.061)	(0.034)	(0.033)	(0.031)	(0.030)
Largest Investor's Vote		-0.254*		-0.249*		-0.252		-0.006
		(0.154)		(0.154)		(0.197)		(0.177)
Controls								
Ln(TA)	-0.065***	-0.063***	-0.065***	-0.064***	-0.054	-0.063	-0.047	-0.047
	(0.018)	(0.018)	(0.018)	(0.018)	(0.043)	(0.044)	(0.041)	(0.040)
ROA	0.180	0.218	0.290	0.329	0.124	0.129	0.372***	0.372***
	(0.263)	(0.262)	(0.243)	(0.241)	(0.118)	(0.117)	(0.105)	(0.104)
Leverage	-0.581**	-0.593**	-0.634***	-0.644***	0.161	0.174	-0.013	-0.013
	(0.249)	(0.243)	(0.253)	(0.248)	(0.119)	(0.120)	(0.120)	(0.119)
Net sales/TA	-0.013	-0.011	-0.057	-0.056	0.281***	0.273***	0.034	0.034
	(0.041)	(0.041)	(0.040)	(0.040)	(0.043)	(0.043)	(0.038)	(0.039)
Capex/TA	-0.172	-0.156	-0.416	-0.411	0.226	0.231	0.176	0.176
	(0.434)	(0.418)	(0.415)	(0.399)	(0.256)	(0.266)	(0.219)	(0.219)
Intercept	1.359***	1.492***	1.434***	1.571***	0.639	0.883	0.957*	0.963*
	(0.284)	(0.291)	(0.281)	(0.290)	(0.567)	(0.588)	(0.524)	(0.533)
Firm Fixed Effect	No	No	No	No	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Errors Clustered at Firm Level	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.186	0.195	0.194	0.203	0.310	0.313	0.293	0.293
Observations	1317	1317	1171	1171	1317	1317	1171	1171

The dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *Stock Importance Heighest Weight* is a dummy variable that equals 1 if the stock in question has the highest weight in the portfolio of the largest owner. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 11 Alternative Estimation Technique: Firm Random Effect

	Dependent Variable: Ln(Tobin's Q)					
	RHS at time *t*			RHS at time *t-1*		
	(1)	(2)	(3)	(4)	(5)	(6)
Stock Importance	0.098**		0.113***	0.076**		0.081**
	(0.047)		(0.047)	(0.037)		(0.037)
Largest Investor's Vote		-0.278***	-0.283**		-0.158	-0.105
		(0.1130	(0.142)		(0.105)	(0.134)
Controls						
Ln(TA)	-0.081***	-0.089***	-0.082***	-0.077***	-0.105***	-0.077***
	(0.021)	(0.020)	(0.021)	(0.020)	(0.020)	(0.020)
ROA	0.120	0.083	0.113	0.386***	0.292***	0.389***
	(0.114)	(0.096)	(0.047)	(0.098)	(0.103)	(0.097)
Leverage	0.067	0.083	0.076	-0.115	0.015	-0.113
	(0.112)	(0.170)	(0.112)	(0.113)	(0.163)	(0.112)
Net sales/TA	0.176***	0.089***	0.178***	0.002	0.006	0.003
	(0.131)	(0.030)	(0.031)	(0.028)	(0.027)	(0.028)
Capex/TA	0.291	0.503**	0.297	0.075	0.213	0.077
	(0.259)	(0.221)	(0.267)	(0.213)	(0.203)	(0.214)
Intercept	1.142***	1.641***	1.278***	1.422***	2.058***	1.473***
	(0.290)	(0.276)	(0.291)	(0.273)	(0.295)	(0.275)
Firm Random Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Random Effect	Yes	Yes	Yes	Yes	Yes	Yes
Errors Clustered at Firm Level	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.304	0.199	0.308	0.296	0.198	0.296
Hausman test: Fixed vs. Random Effects	51.87***	59.05***	46.19***	18.54	39.78***	17.86
Observations	1346	1974	1346	1199	1822	1199

This table reports random effect regression results. The dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *Stock importance* is the weight of the stock in question in the largest shareholders' portfolio. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. The dependent variable is measured at time *t* while all the independent variables are measured at time *(t-1)*. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 12 Instrumental Variable Estimation - Stock Importance and Firm Value

	Dependent Variables:	
	Stock Importance	**Ln(Tobin's Q)**
	1st Stage	2nd Stage
Stock Importance		1.564**
		(0.693)
Largest Investor's Vote	0.447***	-0.799**
	(0.104)	(0.364)
Post-IFRS dummy	0.069***	
	(0.025)	
Controls		
Ln(TA)	-0.044***	-0.075**
	(0.018)	(0.038)
ROA	0.161***	0.248*
	(0.054)	(0.152)
Leverage	0.031	-0.081
	(0.083)	(0.154)
Net sales/TA	-0.078***	0.132*
	(0.030)	(0.078)
Capex/TA	0.317**	-0.237
	(0.155)	(0.362)
Intercept	1.067***	0.744
	(0.286)	(0.823)
Firm Fixed Effect	Yes	Yes
Year Fixed Effect	No	No
R^2	0.040	0.040
Observations	1306	1306

This table reports fixed effect IV estimation results. In the 1st stage of the two stage IV estimation, the dependent variable is *Stock importance* which is the weight of the stock in question in the largest shareholders' portfolio. In the 1st stage of the two stage IV estimation, the dependent variable is *Ln(Tobin's Q)* which is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Post-IFRS* is the instrumental variable which is a dummy taking value of 1 for post 2005, when by the EU legislation IFRS became mandatory. *Ln(TA)* is the natural logarithm of total assets. *ROA* is EBITDA divided by total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. The dependent variables are measured at time *t* while all the independent variables are measured at time *(t-1)*, except *Stock Importance* and *Post-IFRS dummy*. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively.

Table 13 Reverse Causality between Stock Importance and Firm Value

	Dependent Variable: Stock Importance									
	All right-hand-side variables are at time *t-1*									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Largest Investor's Vote	0.523***	0.514***	0.502***	0.470***	0.481***	0.455***	0.426***	0.427***	0.427***	0.432***
	(0.162)	(0.167)	(0.171)	(0.173)	(0.170)	(0.162)	(0.166)	(0.162)	(0.160)	(0.162)
ln(Tobin's Q)		0.011	0.019	0.022	0.028	0.024	0.042	0.040	0.045	0.047
		(0.039)	(0.038)	(0.039)	(0.040)	(0.040)	(0.042)	(0.042)	(0.042)	(0.043)
ROA			0.095	0.094	0.079	0.099	0.118*	0.127*	0.119*	0.121*
			(0.070)	(0.071)	(0.071)	(0.070)	(0.071)	(0.073)	(0.073)	(0.073)
Dual-class Share				0.181	0.170	0.175	0.190	0.191	0.194	0.187
				(0.223)	(0.223)	(0.222)	(0.212)	(0.211)	(0.212)	(0.215)
Ln(TA)					0.018	0.013	-0.011	-0.011	-0.011	-0.002
					(0.031)	(0.032)	(0.036)	(0.036)	(0.034)	(0.034)
Leverage						0.038	0.015	0.017	0.032	0.023
						(0.096)	(0.097)	(0.097)	(0.099)	(0.103)
Net sales/TA							-0.068*	-0.071*	-0.071*	-0.073*
							(0.039)	(0.040)	(0.040)	(0.041)
Capex/TA								0.249	0.442**	0.441**
								(0.249)	(0.215)	(0.215)
Dividend/TA									0.265	0.268
									(0.194)	(0.193)
Cash/TA										-0.057
										(0.103)
Intercept	0.313***	0.315***	0.311***	0.230*	-0.012	0.047	0.458	0.452	0.295	0.321
	(0.076)	(0.083)	(0.086)	(0.142)	(0.446)	(0.438)	(0.516)	(0.514)	(0.500)	(0.506)
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clustered Errors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.041	0.037	0.040	0.044	0.045	0.044	0.048	0.051	0.058	0.059
Observations	1391	1363	1348	1342	1342	1338	1336	1330	1316	1316

This table reports fixed effect regression results. The dependent variable is *Stock importance* which is the weight of the stock in question in the largest shareholders' portfolio. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(Tobin's Q)* is the natural logarithm of the sum of market value of equity plus book value of total liabilities, all divided by book value of assets. *ROA* is EBITDA divided by total assets. *Dual-class Share* is a dummy variable that equals 1 when the firm has a dual-class share structure. *Ln(TA)* is the natural logarithm of total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. *Dividend/TA* is total cash dividends paid divided by total assets. *Cash/TA* is total cash and cash equivalents divided by total assets. The dependent variables are measured at time *t* while all the independent variables are measured at time *(t-1)*. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.

Table 14 Stock Importance, Vote Ownership and Firm Profitability

	Dependent Variable: ROA											
	OLS						Firm Fixed Effect					
	RHS at time *t*			RHS at time *t-1*			RHS at time *t*			RHS at time *t-1*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Stock Importance	0.066***		0.054***	0.052**		0.037*	0.042**		0.039*	-0.015		-0.012
	(0.020)		(0.019)	(0.022)		(0.021)	(0.021)		(0.021)	(0.022)		(0.022)
Largest Investor's Vote		0.150	0.085**		0.158	0.095***		-0.035	0.073		-0.006	-0.056
		(0.035)	(0.037)		(0.035)	(0.039)		(0.083)	(0.114)		(0.076)	(0.081)
Controls												
Ln(TA)	0.031***	0.033***	0.030***	0.023***	0.026***	0.021***	0.120***	0.095***	0.123***	-0.024	-0.002	-0.025
	(0.005)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.027)	(0.022)	(0.028)	(0.017)	(0.016)	(0.017)
Leverage	-0.069	-0.019	-0.063	-0.025	0.049	-0.018	-0.215***	-0.183***	-0.218***	0.021	0.009	0.024
	(0.055)	(0.043)	(0.056)	(0.060)	(0.043)	(0.060)	(0.064)	(0.060)	(0.063)	(0.044)	(0.046)	(0.045)
Net sales/TA	0.074***	0.091***	0.073***	0.076***	0.099***	0.075***	0.107***	0.106***	0.109***	0.021	0.077**	0.020
	(0.016)	(0.015)	(0.015)	(0.017)	(0.016)	(0.017)	(0.032)	(0.039)	(0.031)	(0.022)	(0.035)	(0.022)
Capex/TA	-0.108	0.287**	-0.105	0.240***	0.321***	0.239***	-0.290**	-0.205**	-0.291**	-0.090	-0.166**	-0.088
	(0.128)	(0.124)	(0.127)	(0.087)	(0.100)	(0.087)	(0.139)	(0.095)	(0.135)	(0.077)	(0.079)	(0.080)
Intercept	-0.426***	-0.531***	-0.463***	-0.262***	-0.480***	-0.304***	-1.517***	-1.289***	-1.588***	0.450**	0.017**	0.497**
	(0.099)	(0.081)	(0.103)	(0.104)	(0.078)	(0.109)	(0.364)	(0.338)	(0.393)	(0.237)	(0.250)	(0.256)
Firm Fixed Effect	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clustured Errors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.208	0.273	0.217	0.179	0.264	0.191	0.155	0.149	0.157	0.035	0.088	0.036
Observations	1361	1998	1361	1185	1806	1185	1361	1998	1361	1185	1806	1185

The dependent variable is ROA which is EBITDA divided by total assets. *Stock importance* is the weight of the stock in question in the largest shareholders' portfolio. *Largest Investor's Vote* is % of votes held by the largest shareholder. *Ln(TA)* is the natural logarithm of total assets. *Leverage* is total long-term debt divided by total assets. *Net Sales/TA* is net sales divided by total assets. *Capex/TA* is capital expenditures divided by total assets. ***, **, * denote statistical significance at the 1, 5 and 10% levels, respectively. Clustered errors at firm level are in parenthesis.