Large Shareholders
and Accounting Choices

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This is the first large-scale study to examine the effects of individual large shareholders, defined as blockholders who hold five percent or more of the company's stock, on firms' accounting choices. Using a large hand-collected sample of all blockholders of S&P 1500 firms for the years 2002 – 2009 (23,555 blockholder-firm-year observations; 8,409 firm-years; 574 uniquely identified blockholders), we document significant variation among blockholders and significant heterogeneous blockholder fixed effects on financial reporting quality (accrual-based earnings management, real earnings management, and restatements). We find evidence suggesting that this association is primarily driven by large shareholders influencing rather than "selecting" firms' accounting practices. Using very detailed data on each blockholder, we find only limited evidence that observable factors explain the fixed effects results we observe, suggesting the presence of important unobservable heterogeneity among large shareholders. Finally, we identify "reputable" blockholders as blockholders associated with high financial reporting quality, and find that the presence of reputable blockholders is positively related to future earnings persistence.

<center>**Large Shareholders and Accounting Choices**</center>

1. Introduction

Blockholders are large shareholders who own five percent or more of a company's outstanding shares. Blockholders hold very significant equity stakes in the U.S. market. For example, Holderness (2009), using a random sample of U.S. listed firms from 1995, reports that 96% of these firms have blockholders and that these blockholders in aggregate own an average 39% of the common stock.[1] Furthermore, a large body of work in financial economics models the governance role of large shareholders and accounting research argues that large shareholders can play an important role in shaping firms' financial reporting practices. Although blockholders differ significantly from each other, existing empirical studies do not incorporate such blockholder heterogeneity into their analyses. In this study, using a large hand-collected sample of all the blockholders of S&P 1500 firms, we investigate whether and how individual blockholders affect firms' financial reporting quality (FRQ). Although there is prior research on how specific shareholders (e.g., founding families) influence accounting choices, our study encompasses *all* large shareholders within a firm and makes use of the significant heterogeneity among these shareholders, thus providing a more complete picture of blockholders' effect on FRQ.

Blockholders have heterogeneous beliefs, skills, or preferences. On one hand, owing to the sizable holdings, some blockholders are better able and more willing to acquire private information and thereby monitor managers (Shleifer and Vishny 1986). Such monitoring aligns the interests of shareholders and managers, and consequently, mitigates managers' incentives to manage accounting earnings. On the other hand, concentrated ownership can allow some

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[1] In our larger and more recent sample, the mean ownership by all blockholders is 30.2%.

blockholders to influence managers and secure private benefits detrimental to other shareholders and creditors (Shleifer and Vishny 1993; Armstrong, Guay, and Weber 2010).

In addition, different blockholders influence corporate policies through different channels and to various extents (Klein and Zur 2009; Cronqvist and Fahlenbrach 2009). These channels include direct communication with the management, insider positions (management or director), and changes to corporate governance practices such as board characteristics (see Section 2.3 for details). As a result, we expect significant heterogeneity among large shareholders in shaping firms' financial reporting practices. Although there are *observable* shareholder-level factors that can explain the heterogeneity (and we consider several of these in our analyses), we emphasize the importance of *unobservable* shareholder-level variables. The existence of significant unobservable variables motivates our identification strategy of using blockholder fixed effects.

Note that finding support for large shareholder effects on accounting outcomes is not tautological. First, blockholders may not have sufficient incentives to monitor firms or to extract private benefit due to risk aversion or illiquidity (Admati, Pfleiderer, and Zechner 1994; Maug 1998). Second, Cronqvist and Fahlenbrach (2009) study blockholder heterogeneity and do not find evidence that large shareholders are associated with all the corporate policies they examine.[2] Third, accounting decisions are likely secondary to operational and financing decisions. Finally, similar to prior literature, we control for firm fixed effects which are likely to capture a large portion of variation in accounting practices. The identification in this paper comes from blockholders that move not only from one firm to another but also from the holdings of multiple

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[2] For example, the authors find no relation between blockholders and either the number of acquisitions or the number of diversifying acquisitions.

firms at a given point in time.[3] Thus, it is an empirical question whether individual large shareholders are associated with financial reporting practices.[4]

We manually collect data on all S&P 1500 firms' blockholder ownership for the years 2002 – 2009 from annual proxy statements. As explained below, this is an involved process that requires significant data cleaning and checking for double counting. We are thus able to identify and track all unique blockholders during the sample period. Following prior research, we classify these blockholders into the following categories: (1) activists and pension funds, (2) banks and trust companies, (3) corporations, (4) hedge funds, (5) insurance companies and money managers, (6) mutual funds, (7) venture capitalists and LBOs, and (8) individuals. We further collect data on other blockholder-specific information. Our final sample consists of 23,555 blockholder-firm-year observations for 8,409 firm-years, with 574 uniquely identified blockholders.

As this is the first paper to study individual blockholder effects on FRQ, we consider FRQ broadly and consider several aspects of FRQ (or inversely, earnings management): (1) accrual-based earnings management, (2) real earnings management, and (3) restatements.

In our first empirical analyses, we follow Bertrand and Schoar (2003) and Cronqvist and Fahlenbrach (2009) and employ a blockholder fixed effects approach to disentangle the impact of large shareholders from firm and time-period effects. Specifically, we test whether adding blockholder fixed effects to a regression model that includes firm fixed effects, year fixed effects, and numerous time-varying firm characteristics yields significant incremental

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[3] Several studies relate institutional investor characteristics to financial reporting practice (e.g., Bushee 1998; Ayers, Ramalingegowda, and Yeung 2011; Ramalingegowda and Yu 2012). These studies do not examine blockholders like we do in this study. In addition, they do not control for firm fixed effects and therefore cannot separate specific owner effects from firm effects.

[4] Armstrong et al. (2010) provide a survey of the mixed empirical evidence on the relation between active shareholders and FRQ.

explanatory power. Our results highlight the importance of heterogeneity across large shareholders, not only across types, but also within types. We find evidence of both statistical and economic significance of blockholder effects, with the adjusted R^2 increasing by between 1.6 and 9 percentage points, translating to increases of 20 percent to over 500 percent relative to the base models' adjusted R^2s. We further find evidence of significant variation in the magnitudes of the estimated blockholder fixed effects, providing further evidence on the economic importance of the blockholder fixed effects.

Although the fixed effects approach is econometrically strong in controlling for alternative factors, it is an association-based test and any observed significance could be explained either by owners influencing firms' accounting practices or by shareholders selecting firms with certain accounting qualities. In either case the results are interesting; however the interpretation varies. We use lead-lag tests to shed some light on this question and find evidence that the primary effect is that blockholders *influence* firms' FRQ.

Next, we explore the sources of the blockholder fixed effects. Motivated by prior research, we consider having a single decision maker, being the largest shareholder, holding insider positions (i.e., having a representative on the board of directors or as a corporate officer), and being located geographically close to the firm in which they invest. Although some of these characteristics are statistically significant, overall our results suggest that the explanatory power of these observable characteristics is moderate. These findings support the notion that a significant proportion of blockholder heterogeneity is unobservable and further highlights the importance of accounting for heterogeneity among large shareholders in empirical research.

We further explore whether individual blockholders associated with higher financial reporting quality (hereafter, "reputable blockholders") "certify" the quality of firms' accounting

numbers in the subsequent periods. In a set of out-of-sample tests, we use the first half of our sample period (2002–2005) to estimate the blockholder fixed effects on FRQ and code blockholders as reputable if their fixed effect coefficients are ranked in the bottom three deciles (i.e., the least earnings management or highest FRQ). In the second sample period (2006–2009), we find that the presence of reputable blockholders is significantly associated with enhanced earnings sustainability.

Our study contributes to the literature in the following ways. First, based on a large sample of U.S. firms in recent years, we provide new descriptive statistics on large shareholdings. Consistent with recent finance and economics literature, we find a rapid growth of hedge funds and active involvement of other blockholders (e.g., activists, VCs, LBOs, and individuals). Second, and directly related to the accounting literature, we provide additional evidence on factors associated with firms' FRQ. Specifically, we provide the first evidence on individual blockholder effects on FRQ. Prior finance research has found that blockholders can impact the financial and investment policies of firms (Cronqvist and Fahlenbrach 2009); however we provide initial evidence on accounting outcomes. Third, while a large literature examines relations between the reputation of auditors, underwriters, or banks and accounting quality (DeFond and Jiambalvo 1991; Lee and Masulis 2011; Bushman and Wittenberg-Moerman 2012), we extend this line of research by documenting that blockholder reputation is associated with higher earnings persistence. Finally, we add to the recent literature on "fixed effects" in accounting, which includes interesting recent studies on the role of managers by (among others) Bamber, Jiang, and Wang (2010), Ge, Matsumoto, and Zhang (2011), and Yang (2012).

The next section provides background and reviews related literature, including a discussion of how large shareholders may be able to affect FRQ. Section 3 explains the research design and Section 4 presents our empirical results. Section 5 concludes.

2. Background and Related Literature

In this section, we discuss the corporate governance role of large shareholders, briefly review some empirical evidence on specific owners, outline ways in which blockholders may be able to affect accounting outcomes, and discuss related fixed effects research.

2.1 The Role of Large Shareholders in Corporate Governance

Blockholders are shareholders who own five percent or more of a company's stock, and are therefore reported as "Principal Shareholders" in firms' annual proxy statements. Prior research documents the prevalence and importance of large shareholders in the U.S. market. For example, Holderness (2009), using a random sample of 428 U.S. listed firms from 1995, finds that 96% of these firms have blockholders, and these blockholders in aggregate own on average 39% of the common stock. He further shows that 89% of S&P 500 firms have blockholders. Holderness concludes that equity ownership in the U.S. is more concentrated than usually perceived.

Large-block ownership can be motivated by two factors: the shared benefits of control and the private benefits of control. A large body of research in accounting, finance, and economics provides evidence that managers, when left unmonitored, are more likely to manage earnings, commit fraud, or make suboptimal corporate decisions (e.g., Beasley 1996; Leuz, Nanda, and Wysocki 2003; Bertrand and Mullainathan 2003; Hope and Thomas 2008). Financial

economics models the monitoring role of large shareholders as a potential solution to the agency problem that arises from the separation of ownership and control. However, while all shareholders have the responsibility to monitor managerial activities, the benefits of doing so by any individual shareholder are proportional to the percentage of shares owned (Jensen and Meckling 1976; Shleifer and Vishny 1997). Put another way, when ownership is widely dispersed, it is economically less desirable for any individual shareholder to incur significant monitoring costs, because she will receive only a small portion of the benefits. Moreover, when ownership is dispersed, it is harder for shareholders to monitor managerial actions due to the free rider problem (Grossman and Hart 1980). Shareholders are only willing to incur necessary monitoring costs if they have a large enough ownership stake. By monitoring managers, large shareholders help to align the interests between shareholders and managers, and consequently reduce managers' incentives to manage accounting earnings.[5] In contrast, Shleifer and Vishny (1997) propose a competing view of blockholders, suggesting that by influencing management, blockholders can extract private benefits at the expense of other shareholders and creditors.

Focusing either on the existence of a large shareholder, ownership concentration, or on a particular type of shareholder, the existing empirical findings are mixed (see Armstrong. Guay, and Weber 2010 for an overview). For example, using firms subject to accounting enforcement actions by the SEC, Dechow, Sloan, and Sweeney (1996) and Farber (2005) find that compared

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[5] Prior research relies on these arguments to motivate the prediction between institutional ownership and FRQ (Rajgopal and Venkatachalam 1997; Chung, Firth, and Kim 2002; Mitra and Cready 2005; Roychowdhury 2006; Koh 2007; Burns, Kedia, and Lipson 2010; Zang 2012; Chhaochharia, Kumar, and Niessen-Ruenzi 2012), between blockholders and FRQ (De Fond and Jiambalvo 1991; Dechow et al. 1996; Farber 2005), between corporate governance and FRQ (Beasley 1996; Klein 2002; Francis, Schipper, and Vincent 2005), between founding family controls and FRQ (Wang 2006; Ali, Chen, and Radhakrishnan 2007), between public ownership and FRQ (Burgstahler, Hail, and Leuz 2006; Katz 2009; Givoly, Hayn and Katz 2010; Hope, Thomas, and Vyas 2013;) and between legal environment and FRQ (Leuz et al. 2003). This argument suggests a complementary relation between FRQ and the presence of blockholders. However, Bushman et al. (2004) find a negative relation between earnings timeliness and concentrated ownership, which they interpret as evidence that earnings timeliness and concentrated ownership are substitute monitoring mechanisms.

with control firms, firms manipulating earnings are less likely to have a large shareholder. However, Beasley (1996) and Agrawal and Chadha (2005) do not find a significant relation between large shareholdings and SEC enforcement actions and earnings restatements, respectively.[6] Moreover, Klein (2002) documents a negative relation between the presence of blockholders in the audit committee and the absolute value of abnormal accruals. Larcker, Richardson, and Tuna (2007) do not find a significant relation between their blockholding factors and the absolute value of abnormal accruals. Importantly, large shareholders differ significantly from each other and, unlike this study, existing empirical research has not fully incorporated blockholder heterogeneity into the analysis.

2.2 Empirical Evidence on Specific Owners

While prior research examines large shareholders' association with firms' accounting choices, most of this research is on institutional investors. Based on trading characteristics, Bushee (1998) classifies institutions into three groups – transient, dedicated, and quasi-indexers.[7,8] He finds that only ownership by transient institutions significantly increases the probability of managing earnings by reducing R&D. In a related study, Bushee and Noe (2002)

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[6] Similarly, focusing on institutional investors, while Mitra and Cready (2005) and Guthrie and Sokolowsky (2010) find that abnormal accruals are positively related to institutional ownership, Zang (2012) finds that institutional ownership is negatively related to abnormal accruals.

[7] "Transient" institutions have high portfolio turnover and highly diversified portfolio holdings. They focus on the short term and make investments based on the likelihood of short-term trading profits. According to Bushee (2001), the short investment horizons of transient investors create little incentive for them to gather information relevant to long-run value. In contrast, "dedicated" investors and "quasi-indexers" focus on the long term and provide stable ownership to firms. Dedicated investors hold large stakes in a limited number of firms. Such ownership creates greater incentives to invest in monitoring management and to rely on information beyond current earnings to assess managers' performance. Quasi-indexers generally follow indexing and buy-and-hold strategies, and are characterized by high diversification. Although quasi-indexers follow a passive investment strategy, these investors may also have strong incentives to monitor management to ensure that it is acting in the best interest of the firm.

[8] Ayers et al. (2011) further decompose dedicated investors into local and distant monitoring investors and observe that firms are less likely to use financial reporting discretion in the presence of local monitoring institutions than distant monitoring institutions. We make use of these findings when examining observable blockholder characteristics (see Section 4.4).

find that firms' disclosure levels (AIMR scores) only increase in ownership by transient institutions. Ramalingegowda and Yu (2012) focus on conditional conservatism and find a positive correlation with institutional ownership by firms that have concentrated holdings by dedicated institutions. Other studies have also shown associations between disclosure levels and specific types of institutional ownership (see Beyer, Cohen, Lys, and Walther 2010 and Armstrong et al. 2010 for overviews of such literature).[9]

We emphasize the differences between blockholder heterogeneity as implemented in this study and Bushee's (1998) categorizations. First, Bushee's categorization only applies to institutional investors filing form 13F, so that important blockholders (e.g., arbitrageurs and corporations) are not included. We hand collect the full population of blockholders for the S&P 1500 firms in our sample. Second, Bushee (1998) classifies institutional investors by three trading dimensions: diversification, turnover, and trading sensitivity to earnings, which may not capture variation in monitoring actions. We consider a much greater variety of blockholders' characteristics.

2.3. Large Shareholders' Possible Effects on Financial Reporting Quality

There is limited prior research on the mechanisms through which shareholders can influence firms' FRQ. With this caveat in mind, we outline possible ways in which blockholders may be able to affect accounting outcomes. As blockholders have heterogeneous beliefs, skills, or preferences, when monitoring managers, they influence firms through different channels (Cronqvist and Fahlenbrach 2009; Becker, Cronqvist, and Fahlenbrach 2011). Therefore, we

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[9] Similarly, there is also research investigating the role of family ownership in shaping accounting outcomes (e.g., Chen, Chen, and Cheng 2008).

would expect blockholders' heterogeneity to manifest in heterogeneous effects on firms' FRQ. We next discuss two forms by which influence by large shareholders can take place.

2.3.1 Influence through interventions ("voice")

In the first type of monitoring, blockholders take various actions to intervene in firms' operating, financing, investment, and governance decisions.

Seats on the board or in the top management team. Blockholders typically obtain these key positions through proxy solicitations. Prior research observes a large variation in the success rate of proxy solicitations by different institutions (Pound 1988; Nuys 1993; Brav et al. 2008). Klein and Zur (2009) discuss why hedge funds tend to be more effective than mutual funds and pension funds in making changes to their target firms. They also compare the effectiveness between hedge funds and other private investors and find significant differences. Recent literature discovers that even within hedge funds, there is significant heterogeneity in proxy contests (Zur 2009; Sade and Zur 2010). The outcome of these proxy contests is important since a large literature shows how board compositions can affect accounting outcomes.

Private communication. While many studies implicitly assume private communication as a significant channel of monitoring, only a few clinical studies have directly examined the private negotiations between management and large shareholders. Carleton, Nelson, and Weisbach (1998) show that TIAA-CREF is able to reach agreements with targeted companies more than 95% of the time regarding governance issues. Becht, Franks, Mayer, and Rossi (2009) investigate private engagements with management by the Hermes UK Focus Fund and find that private interventions significantly improve targets' performances.

Leading plaintiff in class action lawsuits. Cheng, Huang, Li, and Lobo (2010) consider another channel through which institutional investors monitor the firm. They predict and find that institutional investors are more likely to serve as the lead plaintiff for class action lawsuits with certain characteristics, such as involving an accounting-related allegation, having an accounting firm as the codefendant and having a longer class period. They further show that securities class actions with institutional owners as lead plaintiffs are less likely to be dismissed and have larger monetary settlements than securities class actions with individual lead plaintiffs. Moreover, they document the importance of distinguishing between different types of institutional owners by showing that the results are mainly driven by public pension funds rather than by mutual funds.

Activism. Activism by large shareholders includes all the above mentioned actions as well as other actions: seeking board representation and other types of proxy contests, communication, public criticism, shareholder proposals, lawsuits, and even takeover bids. The goals cover general undervaluation/maximizing shareholder value, capital structure, business strategy, sale of target company, and governance (Brav et al. 2008; Klein and Zur 2009).[10]

Other mechanisms examined in prior literature, which could indirectly affect accounting outcomes, include initiating shareholder proposals, voting on shareholder/management proposals, and managerial compensation/turnover.[11]

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[10] Del Guercio and Hawkins (1999) study the shareholder proposals of the largest and most active pension funds and find that the funds are successful at monitoring and promoting changes in target firms. They further document significant heterogeneity across funds in activism objectives, tactics, and impact on target firms. Gillan and Starks (2000) show that shareholder proposals sponsored by institutions or coordinated groups receive significantly more favorable votes than those sponsored by independent individuals or religious organizations. Brickley et al. (1988) find that blockholders vote more actively on antitakeover amendments and more often vote against proposals appearing to harm shareholders.

[11] Hartzell and Starks (2003) document a positive (negative) relation between pay-for-performance sensitivity of executive compensation (level of compensation) and institutional ownership concentration. Chhaochharia et al. (2012) find that local institutions are more likely to increase CEO turnover and to reduce excess CEO pay.

2.3.2 Influence through trading ("exit")

In the second type of monitoring, blockholders acquire private information and trade on it. The trading moves stock prices and therefore affects managers' decisions. Empirical evidence supports this channel of blockholders' influence on managers' decisions. The survey evidence in McCahery, Sautner, and Starks (2012) suggest that institutions use "exit" trades frequently, and Parrino, Sias, and Starks (2003) provide evidence that aggregate institutional ownership and the number of institutional investors decline in the year prior to forced CEO turnover. Also accounting research shows that institutional ownership plays a significant role in helping the market incorporate accounting information (Bartov, Radhakrishnan, and Krinsky 2000; Balsam, Bartov, and Marquardt 2002).[12]

The channels discussed above also motivate our choices of blockholder *characteristics* to explain the estimated blockholder fixed effects: dominating large shareholders, insider positions as board members or officers, individual decision makers, and local shareholders (i.e., geographical proximity between blockholders and firms).

2.4 Fixed Effects Approach

Recently studies have shown that managers have an effect on both earnings quality and disclosure choices. These studies are motivated by the heavily cited article by Bertrand and Schoar (2003) and include Bamber, Jiang, and Wang (2010), Ge, Matsumoto, and Zhang (2011), and Yang (2012). Bamber et al. (2010) find that managers exert significant influence over management earnings forecasts beyond that of firm fixed effects and other controls. Ge et al.

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[12] In addition, anecdotal evidence and prior research suggest that the trading of investors with short horizons promotes managers' myopic behavior. However, Edmans (2009) and Edmans and Manso (2011) demonstrate that transient shareholders can encourage long-term investment by impounding its effects into prices. Although researchers can sort blockholders by their turnover, it is difficult to observe the true investment strategy of each blockholder and there is a large variation even within the same type of investor.

(2011) provide evidence on CFOs' effect on accounting choices. Yang (2012) concludes that individual managers benefit from establishing a personal disclosure reputation. These studies find limited evidence that personal characteristics explain the fixed effects results, suggesting there are important unobservable effects captured by the fixed effects approach.

The paper most closely related to our study is likely Cronqvist and Fahlenbrach (2009). They build a large dataset of blockholders from 1996-2001 and show that there are significant blockholder fixed effects on investment, financial, and executive compensation policies. They further find that blockholders with a larger block size, board membership, direct management involvement, or with a single decision maker are associated with larger effects.[13]

It is important to note that finding support for large shareholder effects on accounting outcomes is far from tautological. First, several theoretical studies show that liquidity or risk aversion may reduce blockholders' incentives to monitor firms (e.g., DeMarzo and Urosevic 2006). Second, as Bamber et al. (2010) point out, accounting and disclosure decisions are likely secondary to operational and financing decisions. Third, Cronqvist and Fahlenbrach (2009) do not find evidence that large shareholders are associated with all corporate policies they examine. Finally, similar to prior literature, we control for firm fixed effects which are likely to capture a large portion of variation in accounting practices. Thus, it is an empirical question whether large shareholders (blockholders) are associated with financial reporting practices.

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[13] Although we build on Cronqvist and Fahlenbrach (2009), they do not consider variations in firms' FRQ. In addition, we use a newer sample period of 2001 – 2009, and investigate the persistence of blockholder effects on FRQ.

3. Sample and Research Design

In this section, we first describe in detail our sample construction and its merits over other sources of blockholder information. We continue by introducing the research design and the identification strategy we use to capture blockholders' influence on FRQ.

3.1 Sample

To analyze the effects of blockholder heterogeneity, we require a dataset that allows us to identify and track each unique blockholder. Because such data are not readily available from existing sources, we construct a new blockholder-firm panel dataset. We follow the approach of Dlugosz et al. (2006), who created a blockholder-firm panel for the years 1996 to 2001. We form our sample for the time period 2002-2009, a period characterized by a rapid growth of hedge funds and active involvement of other blockholders (e.g., activists, VCs, LBOs, and individuals). As described below, in order to estimate blockholder fixed effects, we manually identify and track each blockholder over time and across firms.

We start with all S&P 1500 firms for 2002-2009. Consistent with prior literature, we exclude financial industry firms, utility firms, and firms with dual share classes. For the remaining firms we manually collect blockholder information from firms' proxy statements. Such information includes blockholder names and addresses, percentage of holdings, and blockholder affiliation (e.g., having representatives as officers or directors). Following Dlugosz et al. (2006), we carefully adjust for biases and double-counts by using the information in the proxy footnotes on the ownership structure of jointly held blocks.

Blockholder information is also available from other sources, such as Compact Disclosure, ExecuComp, IRRC Directors, Thomson Reuters (13F), 13D/G filings, and insider

trading filings (forms 3, 4, and 5). However, these sources suffer from various problems: Compact Disclosure often double counts blockholdings (Dlugosz et al. 2006); ExecuComp and IRRC Directors only provide the ownership of top managers and directors; Thomson Reuters (13F) only covers institutional investors and suffers from classification errors (Chen et al. 2007); the 13D/G filing requirements do not apply to existing blockholders; and the reliance on aggregated insider trading may lead to incorrect inferences regarding the holdings of large shareholders (Anderson and Lee 1997a, b; Jeng et al. 2003).[14] In contrast, we collect all the blockholder information directly from the proxy statements so that our sample is free from the biases and errors discussed above. The downside to our approach is the time and cost of extensive manual data collection.

After collecting the blockholder information, we identify and track each unique blockholder. This stage requires overcoming the complications of inconsistencies in blockholders' names (e.g., misspellings) and variations in blockholders' investment vehicles and subsidiaries. Thus, we rely on several information sources to identify the ultimate owners, such as the notes from proxy statements, blockholders' websites, Capital IQ, Bloomberg BusinessWeek, and newspaper databases.

Although we have been very careful in identifying unique blockholders, our dataset is still subject to certain limitations. First (and consistent with Cronqvist and Fahlenbrach 2009), we aggregate blockholders to the parent company level. That is, if several entities/subsidiaries are present in our sample, we identify all of them as their parent company. Although this procedure is appropriate when all the subsidiaries share the same investment philosophy, it would not be able to capture the cross-subsidiary heterogeneity if the subsidiaries follow

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[14] 13D/G filings provide an update of new blockholders. Item 403 of Regulation S-K explains that a company may rely on the information disclosed in the SC 13D/G forms by beneficial owners when preparing proxy statements.

different policies. This limitation works against our finding any significant blockholder fixed effects on FRQ. Second, the role of blockholders on FRQ could be different for large established firms and for smaller firms. We estimate blockholder fixed effects, which reflect the average impact. Third, consistent with extant research, when there are multiple owners we determine the ultimate ownership based on the identity of the entity's largest owner.

In order to estimate blockholder fixed effects, we require them to be present in at least two different firms. Unlike CEO fixed effects studies where CEOs can only be present in different firms in different years, blockholders can be present in different firms at the same time. Thus, we can make use of both the time-series and cross-sectional variation to identify blockholder fixed effects. Our final sample consists of 23,555 blockholder-firm-year observations for 8,409 firm-years, with 574 uniquely identified blockholders.

3.3 Research Design

To investigate whether blockholders play unique, entity-specific roles in explaining firms' FRQ, we estimate the following firm-year models:

$$Y_{it} = \alpha + \beta X_{it} + \pi_i + \gamma_t + \varepsilon_{it}; \tag{1}$$

$$Y_{it} = \alpha + \beta X_{it} + \varphi_{BH\_TYPE} + \pi_i + \gamma_t + \varepsilon_{it}; \tag{2}$$

$$Y_{it} = \alpha + \beta X_{it} + \varphi_{BH} + \pi_i + \gamma_t + \varepsilon_{it}; \tag{3}$$

In the above regression equations, Y_{it} is the FRQ for firm i in year t and vector X controls for eight firm-specific time-variant characteristics that have been shown to potentially affect FRQ: firm size (*SIZE*), return on assets (*ROA*), book-to-market (*BTM*), leverage (*LEV*), volatility of cash flow from operations (*CFOVOL*), volatility of revenues (*REVVOL*), estimated value of option-based compensation (*OPTION*), and the average bonus as a proportion of total compensation (*BONUS*). The detailed definitions of these variables are provided in Exhibit 1. We include firm fixed effects π_i to control for unobservable time-invariant firm characteristics, and we include year fixed effects γ_t.

Model (1) is the base-line model. Then we add blockholder-type fixed effects by including a group of indicator variables for each *type* of blockholder, φ_{BH_TYPE}. We classify these blockholders into the following categories: (1) activists and pension funds, (2) banks and trust companies, (3) corporations, (4) hedge funds, (5) insurance companies and money managers, (6) mutual funds, (7) venture capitals and LBOs, and (8) individuals. This model allows blockholders' effects on FRQ to vary by their type, but imposes uniformity on the effects related to any blockholder within the category. In Model (3), which is our main regression, we relax that assumption by allowing the magnitude of blockholder effects to be different for each individual blockholder. Specifically, φ_{BH} is a group of 574 indicator variables that take the value of one if the specific blockholder is present for firm i in year t, and zero otherwise.

3.3 Financial Reporting Quality Measures

We use several common proxies of FRQ to capture its multiple dimensions: accrual management activities, real earnings management activities, and earnings restatements (i.e., *inverse* measures of FRQ). Each of these proxies has been used extensively in prior research (see

Dechow, Ge, and Schrand 2010 for an overview of each proxy's advantages and disadvantages).

We use multiple proxies for the following reasons. First, because the relation between blockholders and FRQ has not been explored before, it is useful to present empirical evidence on a number of FRQ dimensions. Second, we lack a universally accepted measure of FRQ (Dechow et al. 2010) so any single proxy is unlikely to cover all facets of FRQ and the use of multiple proxies helps to generalize our results. Finally, the use of alternative measures mitigates the possibility that the results from a particular proxy capture factors other than FRQ, and that these other factors are driving our results (Hope et al. 2013).

Our first FRQ proxy, accrual management, is based on the modified Jones model. Following Kothari et al. (2005), we also control for current period performance by including $ROA_{i,t}$ as a control variable in estimating abnormal accruals. We estimate the following model for each industry-year with at least 20 observations, where industry is defined as the first two digits of the SIC code:

$$Accr_{i,t} = \alpha_0 + \alpha_1 \left(\frac{1}{Assets_{i,t-1}} \right) + \alpha_2 \Delta Rev_{i,t} + \alpha_3 PPE_{i,t} + \alpha_4 ROA_{i,t} + \varepsilon_{i,t}; \qquad (4)$$

Where $Accr_{i,t}$ is total accruals measured as income before extraordinary items minus operating activities net cash flow, scaled by lagged total assets for firm i in year t. $\Delta Rev_{i,t}$ is the annual change in revenues scaled by lagged total assets for firm i in year t, and $PPE_{i,t}$ is property, plant, and equipment for firm i in year t scaled by lagged total assets. The residuals from this industry-year specific regression model, *PMJE*, are used to proxy for discretionary accruals. [15]

Next, we employ two real activity management proxies following Roychowdhury (2006), Cohen, Dey, and Lys (2008), Cohen and Zarowin (2010), and Zang (2012). Firms' actual

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[15] Using the absolute value of residuals from the Dechow and Dichev (2002) model yields similar results.

engagement in real activities manipulation is supported by the survey evidence in Graham, Harvey, and Rajgopal (2005). We consider the following three real activity management channels and their impact: (1) boosting revenue through price discounts or lenient credit terms. Such price discounts and lenient credit terms will temporarily generate high revenue that will disappear once the prices revert; (2) reducing reported cost of goods sold through over-production. In that way, fixed costs are spread over more units of products produced, thereby reducing unit product costs and increasing earnings; and (3) increasing earnings by cutting discretionary expenses including advertising, R&D, and SG&A expenses. While all these activities may generate higher reported earnings in the short term, research suggests that these are sub-optimal activities that can potentially hurt firm value in the long run, even more severely than accrual management.

We first generate the normal levels of cash flow from operations, production costs, and discretionary expenses using the model developed by Dechow, Kothari, and Watts (1998) and implemented by Roychowdhury (2006). Based on these normal levels, we calculate the abnormal levels that form our real earnings management proxies.

To estimate the normal levels of cash flow from operations, we run the following cross-sectional regressions for each industry and year:

$$\frac{CFO_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{Sales_{it}}{Assets_{i,t-1}} + k_3 \frac{\Delta Sales_{it}}{Assets_{i,t-1}} + \varepsilon_{it}; \tag{5}$$

Where CFO_{it} is cash flow from operations for firm i in year t, and abnormal CFO is calculated as the actual CFO minus the normal level CFO predicted by model (5).

Production costs are defined as the sum of cost of goods sold (*COGS*) and change in inventory during the year. We use the following model to estimate normal level production costs:

$$\frac{PROD_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{Sales_{it}}{Assets_{i,t-1}} + k_3 \frac{\Delta Sales_{it}}{Assets_{i,t-1}} + k_4 \frac{\Delta Sales_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{it}; \tag{6}$$

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The normal level of discretionary expenses can be estimated using the following model:

$$\frac{DISX_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{Sales_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{it};$$

(7)

Our first measure, *RM1*, is calculated by multiplying abnormal discretionary expenses by negative one, and adding it to abnormal product costs. Our second measure, *RM2*, is calculated as the sum of abnormal discretionary expenses and abnormal *CFO*, multiplied by negative one. In both cases, a higher number indicates a greater likelihood of real earnings management activities. All the variables are from Compustat.

Our last measure of FRQ is an indicator variable, *RESTATE$_{it}$*, for restatements from the Audit Analytics database (e.g. Hennes, Leone, and Miller 2008; Karpoff, Lee, and Martin 2008; Leone and Liu 2010; and Feng et al. 2011). *RESTATE$_{it}$* takes the value of one if the financial report for firm i in year t was later restated and zero otherwise. The literature typically views restatements as a more objective and error-free measure of earnings management than alternative proxies. However, few firms report restatements, so that the use of this proxy puts significant weight on a relatively small number of observations.

Panel A of Table 1 presents summary statistics for the FRQ variables and some firm characteristics for our full sample.

3.4 Summary Statistics of Large Shareholders

Panel B of Table 1 reports summary statistics for the 574 unique large shareholders included in our sample. The composition is comparable to Cronqvist and Fahlenbrach (2009), except for the significant increase in the number of hedge funds in the past decade.

The left part of the panel describes the number of years blockholders hold each firm. Individuals and corporations have the longest holdings within our sample period (2.89 and 2.67

years on average, respectively), which may be explained by individual blockholders often being family members with a long ownership horizon and many corporate owners having customer/supplier relationships with the firm in question. On the other hand, hedge funds invest in firms for the shortest horizons, 1.64 years on average, followed by activists/pension funds and money managers/insurance companies. The center of the panel displays the percentage of common shares an average blockholder holds for each firm. The overall average is 8.65 percent, with corporations holding the highest stake, and banks/trusts and mutual funds holding the smallest stake. The right side of the panel shows the frequency of insider blockholders. A blockholder is considered an insider if the controlling party of the blockholder is included in the firm's management team or sits on the firm's board. Almost half of the corporation blockholders are insiders, while money managers/insurance companies and mutual funds are the least likely to be insiders. Overall, this table suggests considerable heterogeneity across blockholder types.

4. Empirical Evidence on Blockholder Heterogeneity and Financial Reporting Quality

Having shown the heterogeneity of individual blockholders in our sample, in this section we demonstrate the importance of that heterogeneity in explaining blockholders' effects on FRQ.

4.1 Blockholder *Type* Effects

We begin with estimating model (2) and reporting the results of average blockholder effects in Table 2. To generate the F-statistics, model (1) is used as the baseline model. Prior studies usually use large shareholder *type* to distinguish their impact on various decision variables, and the evidence is mixed. In this table, we show that blockholder type indicators only explain a small portion of the variation of accounting choice variables. We further test the joint

significance of blockholder type fixed effects, and are unable to reject any of the null hypotheses that these fixed effects are all equal to zero for accrual-based and real earnings management. For restatements, in contrast, three blockholder types load significantly: activists and pension funds; corporations; and especially hedge funds (significant at the one percent level). These results highlight the potential importance of heterogeneity across large shareholders, not only across types, but also within types.

4.2 Blockholder Fixed Effects

Next, we test blockholder level fixed effects, with results reported in Table 3. We construct an indicator variable for each of the 574 blockholders. The indicator variable takes the value of one if the blockholder is present for a certain firm-year, and zero otherwise. We then test the joint significance of all the 574 indicator variables and test the joint significance for each type of blockholder.

We first focus on the row labeled "ALL." This row reports the F-statistics and p-values for the joint test. We reject the null of all fixed effects being equal to zero for all four FRQ proxies at the one percent level (using two-sided tests). Consistent with the results in Table 2, the significance level for *RESTATE* is especially high (with an F-value of 32,400).

We further show that in most cases there is meaningful heterogeneity within each type. Activists/pension funds, hedge funds, insurance companies/money managers, and venture capitals/LBOs show the greatest heterogeneity, and mutual funds show the least heterogeneity. For *RM1* and *RM2*, we cannot reject the null hypothesis that all mutual funds jointly have no association with real earnings management activities. These findings are consistent with the

notion that real earnings management is harder to detect and to prevent than accrual management, especially for investors with a limited monitoring role (Davis and Kim 2007).

In addition, the adjusted R^2s increase considerably after we include blockholder fixed effects, with increases between 1.6 and 9 percentage points, translating to increases of 20 percent to over 500 percent relative to the base models' adjusted R^2s. *PMJE* and *RESTATE* show the largest increase in explanatory power in both percentage (more than 500 and 200 percent) and percentage points (8.35 and 8.96 percent). Recall that the base model without blockholder fixed effects already includes firm fixed effects as well as firm characteristics and year fixed effects. We also present the number of significant (at the ten percent level) blockholder fixed effects for each FRQ variable and the numbers range from 80 to 121, out of 574 blockholders. These numbers suggest that rejecting the null of no heterogeneity is not driven by a few extreme blockholders.

Taken together, Table 3 highlights the importance of considering each blockholder as a different force in shaping accounting choices. We conclude that there is a strong statistical relation between large shareholders and FRQ and that this relation is also economically meaningful.

Table 4 shows the distribution of the estimated blockholder fixed effects, which can be used as an additional gauge of the economic meaningfulness of these fixed effects. For example, for blockholder fixed effects for *PMJE*, we find that the difference between large shareholders in the bottom and top quartiles is 0.035 (from -0.018 to 0.017). Comparing this to the distribution of *PMJE* with the 25th and 75th percentiles of -0.028 and 0.029, we conclude that the magnitude of blockholder effects is economically meaningful. The significant variation in the magnitudes lends further credence to the primary results reported in Table 3.

The results reported in tables 3 and 4 complement and extend prior findings on large shareholders. Although prior accounting research has examined the roles of specific large shareholders on FRQ, this is the first study to include all blockholders and to explore the heterogeneity among these stockholders and their effects on FRQ. We further add to the literature on corporate governance effects of large shareholders, as financial reporting plays a significant role in governance. Finally, we contribute to the growing body of literature on fixed effects by extending such research from individuals (CEOs, CFOs, etc.) to blockholders.

4.3 "Influence" versus "Selection" Explanations

The previous section documents the statistically significant and economically meaningful blockholder effects on FRQ. These results inform about the heterogeneity of blockholders and their importance in explaining variations in firms' accounting quality. Before conducting additional analyses, the observed pairing between firms and large shareholders could be explained by either the "influence" mechanism or the "selection" hypothesis: large shareholders may influence accounting practices, or blockholders may systematically select firms in which they invest major stakes based on their preference for certain accounting policies.[16]

In an attempt to differentiate between these alternative explanations, we construct a pseudo blockholder sample. In this sample, we estimate blockholder fixed effects as if each blockholder had a stake in the firm two years prior to its actual investment, and exited before the beginning of its actual holding. Then we correlate these pseudo fixed effects with the actual fixed effects using the real sample. Under the selection interpretation, we expect a positive correlation

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[16] In their study of the effect of CFOs on accounting policies, Ge et al. (2011) note that they do not attempt to distinguish between the explanation that the personal style of CFOs results in certain accounting choices versus the alternative explanation that CFOs with a certain style are selected by firms. They argue that CFO style impacts firms' accounting choices under both explanations. The same could possibly be argued in our blockholder setting; however, we attempt to disentangle these two possible explanations.

between these effects because firms' accounting choices just prior to and following a blockholder's investment are similar (Cronqvist and Fahlenbrach 2009). Under the influence interpretation, we would expect a negative correlation or no relation, depending on how blockholders choose firms to influence. The results in Table 5 show that the preponderance of estimated coefficients are negative and statistically significant, which suggests that the primary effect is that blockholders *influence* firms' FRQ.[17]

4.4 Sources of Blockholder Heterogeneity

Table 6 explores whether observable blockholder characteristics can explain the estimated fixed effects.[18] The observable characteristics we consider are motivated by our discussion in Section 2.3 and by Cronqvist and Fahlenbrach (2009). We have hand-collected data on these characteristics. *SINGLE* is an indicator variable for blockholders that are likely to have a single decision maker. *DOMINATE* measures the frequency of the blockholder being the largest shareholder. *INSIDE* is an indicator variable for insider blockholder (i.e., member of the management team or a seat on the board of directors). Finally, *BHLOCAL* is an indicator variable for blockholders that are within a 100 km distance from the firm they are holding.

The explanatory power of these observable characteristics is moderate (i.e., the largest adjusted R^2 is 0.025). In terms of the observable characteristics, *SINGLE* and *INSIDE* are statistically significant in two models, and *DOMINATE* and *BHLOCAL* are significant in one model. These findings are in line with prior fixed effects research in accounting and finance. One reason for the relatively limited explanatory power is that the dependent variables are estimated parameters with measurement error. Another, more fundamental explanation, is that

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[17] Exceptions relate to *RESTATE* and in particular to corporation blockholders.
[18] To ensure that our results are not an artifact of some extreme values, we follow Bamber et al. (2010) and report OLS results after removing a few outliers with absolute studentized residuals exceeding 2.

blockholders' influence on accounting choices results from *unobservable* factors, such as their experiences and unique styles. In other words, these findings further highlight the heterogeneity among large shareholders and the importance of accounting for such heterogeneity in empirical research.

4.5 Certifying Role of Reputable Blockholders

In untabulated tests, we partition the sample into two sub-periods: 2002-2005, and 2006-2009, and estimate blockholder fixed effects separately for each sub-sample. We observe significant correlation coefficients, suggesting that blockholders' styles are persistent over time.

Building on these findings, motivated by Bushman and Wittenberg-Moerman (2012) (with further support from DeFond and Jiambalvo 1991 and Lee and Masulis 2011), in our final analysis, we examine whether the presence of certain blockholders inform about the persistence of earnings. If a blockholder is associated with high FRQ, it suggests that the blockholder is reputable in closely monitoring firms' financial reporting process. Moreover, prior literature documents that low FRQ reduces the sustainability of earnings (Xie 2001). For firms with reputable blockholders, we expect that these firms' current profitability is more positively correlated with their future profitability. [19]

We first use the 2002–2005 sample to estimate blockholder fixed effects for each of the FRQ variables. Next, we rank the fixed effects into deciles, and identify large shareholders ranked in the bottom three deciles (i.e., blockholders that are associated with the least earnings management and thus the highest FRQ) as reputable blockholders. Then we examine in our out-of-sample test (2006-2009) whether the presence of such reputable large shareholders indicates

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[19] Similarly, Yang (2012) finds that management forecasts issued by managers who exhibit high forecast accuracy fixed effects experience greater market reaction around the forecast dates.

more persistent profitability. Test results are reported in Table 7, where the variable *PRES* equals one if at least one reputable blockholder has a stake in the firm, and zero otherwise. We are interested in the interaction term between current *ROA* and *PRES*, and expect a positive sign. In our firm-year level tests, we look at up to three years ahead profitability.[20] Across all horizons and all FRQ proxies, we consistently find positive and significant coefficients for the interaction term *ROA×PRES*, and the magnitude is economically meaningful.[21]

5. Concluding Remarks

This is the first large-scale study to explore the relation between blockholders and firms' accounting practices. Theory suggests that large shareholders are important in reducing agency costs between managers and owners. There is, however, significant variations among large shareholders.

Using a large hand-collected sample of all blockholders for the S&P 1500 firms, we empirically examine the association between blockholders and financial reporting quality (FRQ). We classify blockholders into (1) activists and pension funds, (2) banks and trust companies, (3) corporations, (4) hedge funds, (5) insurance companies and money managers, (6) mutual funds, (7) venture capitals and LBOs, and (8) individuals. We further collect data on the type of blockholders and on various other blockholder-specific information. Our final sample consists of 23,555 blockholder-firm-year observations for 8,409 firm-years, with 574 uniquely identified blockholders.

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[20] Since our sample ends in 2009, three-year-ahead ROA is only available for part of the sample, which could contribute to the relatively weaker results for *ROAt+3*.

[21] We also conduct a principal component analysis for the estimated fixed effects from the four FRQ variables and run the test in Table 7. One factor is generated and the results are similar.

We operationalize FRQ as accrual-based earnings management, real earnings management, and restatements (i.e., inverse measures of FRQ). We follow Bertrand and Schoar (2003) and Cronqvist and Fahlenbrach (2009) and use a fixed effects approach to ascertain the incremental contribution of blockholders to explaining firms' FRQ. Specifically, we regress FRQ proxies on firm fixed effects, year fixed effects, numerous time-varying firm characteristics and then assess the incremental explanatory power of adding blockholder fixed effects. We find that including blockholders yields statistically significant and economically meaningful increases in model explanatory power. We further find evidence of significant variation in the magnitudes of the estimated blockholder fixed effects, providing further evidence on the economic importance of the blockholder fixed effects.

In additional analyses, we show that most of the documented association is likely driven by blockholders "influencing" (rather than "selecting") firms' accounting practices. Finally, we make use of highly detailed data on each blockholder and test whether having a single decision maker, being the largest shareholder, holding insider roles, and being located geographically close to the firm they invest in explain the fixed effects results. The explanatory power of these observable characteristics is moderate, which supports the idea that a significant proportion of blockholder heterogeneity is unobservable and further highlights the importance of accounting for heterogeneity among large shareholders in empirical research. In our final analyses we show that blockholders' styles are persistent over time. More importantly, we show that when blockholders who are associated with higher FRQ hold stakes in the firm, firms exhibit more persistent earnings in the future.

Financial Reporting Quality variables

PMJE Discretionary accruals. Residuals from the modified Jones model estimated for each year-industry with more than 20 observations, controlling for current period ROA. Industry is defined as SIC 2-digits. We use the following model:

$$Accr_{i,t} = \alpha_0 + \alpha_1 \left(\frac{1}{Assets_{i,t-1}} \right) + \alpha_2 \Delta Rev_{i,t} + \alpha_3 PPE_{i,t} + \alpha_4 ROA_{i,t} + \varepsilon_{i,t}$$

Where $Accr_{i,t}$ is total accruals measured as income before extraordinary items minus operating activities net cash flow, then scaled by lagged total assets for firm i in year t. $\Delta Rev_{i,t}$ is the annual change in revenues scaled by lagged total assets for firm i in year t, and $PPE_{i,t}$ is property, plant, and equipment for firm i in year t scaled by lagged total assets.

RM1 Real earnings management activity proxy 1. Calculated as multiplying abnormal discretionary expenses by negative, and add it to abnormal product costs.

RM2 Real earnings management activity proxy 2. Calculated as the sum of abnormal discretionary expenses and abnormal *CFO*, then multiple by minus one.

Normal levels of CFO, production costs, and discretionary expenses are predicted by running the following regressions for each year-industry with more than 20 observations.

Normal CFO model :

$$\frac{CFO_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{Sales_{it}}{Assets_{i,t-1}} + k_3 \frac{\Delta Sales_{it}}{Assets_{i,t-1}} + \varepsilon_{it}$$

Normal production costs model:

$$\frac{PROD_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{Sales_{it}}{Assets_{i,t-1}} + k_3 \frac{\Delta Sales_{it}}{Assets_{i,t-1}} + k_4 \frac{\Delta Sales_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{it}$$

Normal discretionary expenses model: $\frac{DISX_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{Sales_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{it}$

RESTATE Indicator variable, =1 for the firm-year's financial reported being restated.

Blockholder characteristic variables

SINGLE Indicator variable, =1 if the blockholder is more likely to have a single decision maker, i.e., activists/pension funds, corporations, hedge funds, and individuals.

DOMINATE If a blockholder is the largest stakeholder of the common shares, then it's defined as the dominate shareholder. *DOMINATE* is such fact aggregated to blockholder level.

INSIDE If a blockholder is also in the management team or on the board of directors of the firm, the blockholder is considered an insider. *INSIDE* is such fact aggregated to blockholder level.

BHLOCAL We first calculated the distance between the blockholder and the firm it is holding. If the distance is shorter than 100km, the blockholder is deemed as local. *BHLOCAL* is such fact aggregated to blockholder level.

(Exhibit continued on next page)

Exhibit 1: Variables Definition (continued)

Fir characteristics variables:

SIZE	The natural logarithm of total assets
ROA	Net income (ib_t) divided by lagged total assets (at_{t-1})
LOSS	Indicator variable for negative net income
LEV	Long-term debt ($dltt_t$) to the sum of long-term debt and book value of equity (ceq_t).
BTM	The book (at_t - lt_t) to market ($prcc\_f_t \times csho_t$) ratio.
CFOVOL	Cash flow from operation volatility, calculated as the standard deviation of CFO in the past five years.
REVVOL	Revenue volatility, calculated as the standard deviation of sales in the past five years.
OPTION	The Black-Scholes value of option compensation as a proportion of total compensation received by the CEO and the CFO of a firm.
BONUS	The average bonus compensation as a proportion of total compensation received by the CEO and the CFO of a firm.
PRES	Indicator variable, equals to 1 if at least one reputable blockholder has a stake in the firm, and zero otherwise. Reputable blockholders are defined as those with estimated fixed effects for corresponding FRQ variable in the lowest three deciles.

Blockholder type indicator variables: =1 if the firm has this type as a blockholder, 0 otherwise

AP	Activists and pension funds
B	Banks and trusts
C	Corporations
H	Hedge funds
I	Insurance companies and money managers
M	Mutual funds
V	Venture capitals and LBOs
X	Individuals

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Table 1 Panel A: Firm Characteristics

Variable	N	Mean	Median	p25	p75	Std Dev
PMJE	8,404	-0.001	0.000	-0.028	0.029	0.061
RM1	7,923	-0.208	-0.101	-0.459	0.140	2.431
RM2	7,963	-0.076	-0.084	-0.359	0.084	2.157
RESTATE	8,409	0.137	0.000	0.000	0.000	0.343
SIZE	8,264	7.130	6.980	6.095	8.052	1.491
LEV	8,264	0.297	0.281	0.036	0.460	1.095
BTM	8,260	1.674	0.454	0.285	0.689	108.300
ROA	8,408	0.025	0.051	0.008	0.089	0.228
LOSS	8,265	0.222	0.000	0.000	0.000	0.415
CFOVOL	7,542	0.064	0.047	0.029	0.077	0.067
REVVOL	7,542	0.259	0.176	0.098	0.312	0.332
OPTION	8,089	0.162	0.000	0.000	0.366	0.238
BONUS	8,089	0.251	0.249	0.000	0.435	0.268
SHPCT	8,409	23.852	21.500	13.360	31.600	13.855

Table 1 Panel A provides descriptive statistics for firm characteristics. Our sample spans from 2001-2009, covering 8,409 firm-year observations and 23,555 firm-year-blockholder observations. Please see Exhibit 1 for variables definition.

Table 1 Panel B: Blockholder Characteristics: 2001-2009

Type	N	Holding time by BH type (in years)				Percentage holding by BH type (in %)				% of insiders
		Mean	p25	p75	sd	Mean	p25	p75	sd	Mean
Activists/pension funds	15	2.06	1	2	1.55	10.43	6.48	13.58	6.29	16.32%
Banks/trusts	27	1.88	1	2	1.52	8.02	5.64	8.90	5.21	4.86%
Corporations	19	2.67	1	4	2.35	20.18	8.40	27.20	17.08	48.70%
Hedge funds	161	1.64	1	2	1.06	9.00	5.72	9.50	6.70	9.11%
Money managers/insurance companies	194	2.06	1	3	1.47	8.15	5.86	9.70	3.08	0.90%
Mutual funds	94	2.37	1	3	1.73	8.35	6.00	9.91	5.38	0.33%
Venture capital/LBO	37	2.51	1	3	1.98	13.88	7.20	16.20	10.37	31.43%
Individuals	27	2.89	1	4	2.20	9.96	6.30	10.75	5.16	35.02%
Overall	574	2.19	1	3	1.59	8.65	5.89	9.99	5.06	13.49%

Table 1 Panel B provides descriptive statistics for blockholders. Blockholders are defined as shareholders with equal or greater than 5% of common share. We further categorize them into eight groups: activisms/pension funds, banks/trusts, hedge funds, money managers/insurance companies, mutual funds, venture capital/LBO, and individuals. In our later tables, we use AP, B, C, H, I, M, V, and X to represent these categories, respectively.

Table 2: Large Shareholders and Accounting Choices: Average Blockholder Type Effects

Variable	PMJE Coef.	p-value	RM1 Coef.	p-value	RM2 Coef.	p-value	RESTATE Coef.	p-value
AP	-0.001	0.828	-0.005	0.786	0.000	0.984	0.058*	0.057
B	0.000	0.877	0.008	0.260	0.007	0.134	-0.009	0.569
C	-0.005	0.608	0.006	0.844	0.021	0.286	-0.106*	0.098
H	0.004	0.184	-0.004	0.549	0.003	0.571	-0.039***	0.006
I	0.003*	0.083	-0.001	0.764	-0.001	0.684	0.001	0.898
M	0.000	0.902	-0.001	0.877	-0.003	0.603	-0.022	0.130
V	0.000	0.997	-0.008	0.648	-0.011	0.358	-0.009	0.776
X	0.011	0.228	0.044	0.102	0.032*	0.063	-0.043	0.309
SIZE	0.002	0.568	-0.010	0.391	-0.023***	0.005	0.046***	0.003
ROA	0.088***	0.000	-0.039	0.184	-0.064***	0.002	-0.061	0.149
BTM	0.005	0.112	0.024***	0.001	0.023***	0.000	0.029*	0.072
LEV	0.009	0.188	0.034**	0.012	0.047***	0.000	0.009	0.744
CFOVOL	0.034**	0.044	-0.055	0.123	-0.009	0.762	0.207**	0.019
REVVOL	-0.001	0.828	-0.003	0.798	0.001	0.870	0.016	0.298
OPTION	0.002	0.657	0.013	0.253	0.007	0.389	-0.001	0.979
BONUS	-0.001	0.858	-0.003	0.757	-0.002	0.748	-0.045***	0.007
Year FE	YES		YES		YES		YES	
Firm FE	YES		YES		YES		YES	
F-test of type FE	0.866		0.597		1.161		2.019**	
p-value	0.545		0.781		0.319		0.041	

Table 2 provides the results regressing accounting choice variables on blockholder type indicators and control variables. We classify blockholders into the following categories: (1) activists and pension funds, (2) banks and trust companies, (3) corporations, (4) hedge funds, (5) insurance companies and money managers, (6) mutual funds, (7) venture capitals and LBOs, and (8) individuals. We use AP, B, C, H, I, M, V, and X to label these categories, respectively. In this table, we show that blockholder type indicators only explain a small portion of the variation of accounting choice variables. We further test the joint significance of blockholder type fixed effects, and we are unable to reject any of the null hypotheses that they are all equal to zero. ***, **, and * indicate significance at the 0.01, 0.05, and 0.1 level, respectively, based on two-tailed tests.

Table 3: Blockholder Fixed Effects and Accounting Choices

	PMJE	RM1	RM2	RESTATE
Activists/pension funds	2.745***	23.190***	6.407***	10.196***
	<0.001	<0.001	0.000	0.000
Banks/trusts	3.577***	2.901***	2.316***	1.672*
	<0.001	<0.001	<0.001	0.016
Corporations	1.960**	1.587*	2.227***	7.451***
	0.017	0.064	0.003	<0.001
Hedge funds	2.854***	2.919***	2.406***	3.971***
	<0.001	<0.001	<0.001	<0.001
Money managers/insurance companies	4.558***	2.302***	1.648***	3.118***
	<0.001	<0.001	<0.001	<0.001
Mutual funds	1.957***	1.094	0.923	7.733***
	<0.001	0.254	0.688	<0.001
Venture capitals/LBOs	39.622***	12.942***	4.699***	233.769***
	<0.001	<0.001	<0.001	<0.001
Individuals	2.449***	3.977***	1.893***	31.473**
	0.001	<0.001	0.006	<0.001
ALL	387.63***	670.41***	253.90***	32,400.00***
	<0.001	<0.001	<0.001	<0.001
Number of significant FE	121	100	80	118
Adj. R^2 without FE	1.32%	9.94%	7.94%	4.27%
Adj. R^2 with FE	9.67%	14.20%	9.52%	13.23%

Coefficients are in the top row and p-values in the bottom row. ***, **, and * indicate significance at the 0.01, 0.05, and 0.1 level, respectively, based on two-tailed tests.

Table 4: Blockholder Fixed Effects Distribution

	Variable	N	mean	sd	p50	p5	p95	p25	p75
All	PMJE	574	-0.001	0.044	0.000	-0.086	0.063	-0.018	0.017
	RM1	574	0.035	1.153	0.000	-1.593	1.783	-0.421	0.462
	RM2	574	0.017	0.955	0.000	-1.424	1.488	-0.413	0.364
	RESTATE	574	-0.020	0.260	-0.007	-0.493	0.394	-0.104	0.064
type =	PMJE	15	-0.007	0.053	-0.009	-0.098	0.090	-0.029	0.026
Activists/	RM1	15	-0.951	1.481	-0.854	-3.990	1.003	-1.676	0.159
pension funds	RM2	15	-0.830	1.155	-0.656	-3.073	0.563	-1.441	0.302
	RESTATE	15	0.146	0.290	0.025	-0.148	0.951	-0.026	0.241
type =	PMJE	27	0.013	0.045	0.000	-0.034	0.131	-0.013	0.032
Banks/trusts	RM1	27	0.219	1.477	0.042	-1.363	4.225	-0.773	0.548
	RM2	27	0.212	1.336	-0.020	-1.213	4.073	-0.537	0.260
	RESTATE	27	-0.042	0.207	-0.033	-0.332	0.222	-0.151	0.056
type =	PMJE	19	-0.008	0.054	0.000	-0.141	0.073	-0.021	0.029
Corporations	RM1	19	0.348	1.628	0.043	-3.492	3.411	-0.542	1.728
	RM2	19	-0.150	1.313	0.000	-3.073	2.915	-0.896	0.441
	RESTATE	19	0.034	0.418	-0.005	-0.613	0.951	-0.235	0.011
type =	PMJE	161	-0.005	0.049	0.000	-0.095	0.062	-0.025	0.018
Hedge funds	RM1	161	0.013	1.196	0.000	-1.870	1.582	-0.475	0.494
	RM2	161	0.050	1.003	0.009	-1.228	1.584	-0.445	0.465
	RESTATE	161	-0.034	0.277	-0.030	-0.514	0.448	-0.166	0.064
type =	PMJE	194	0.000	0.041	0.000	-0.065	0.061	-0.019	0.018
Insurance companies/	RM1	194	0.092	1.077	0.037	-1.482	1.783	-0.421	0.524
Money managers	RM2	194	0.018	0.899	-0.041	-1.261	1.343	-0.445	0.398
	RESTATE	194	-0.003	0.214	-0.001	-0.328	0.394	-0.080	0.084
type =	PMJE	94	-0.001	0.030	-0.002	-0.031	0.043	-0.010	0.008
Mutual funds	RM1	94	0.083	0.536	0.041	-0.841	1.249	-0.169	0.254
	RM2	94	0.074	0.478	0.007	-0.610	1.071	-0.190	0.224
	RESTATE	94	-0.012	0.127	-0.004	-0.162	0.160	-0.059	0.027
type =	PMJE	37	0.005	0.056	0.003	-0.130	0.080	-0.013	0.038
Venture capitals/	RM1	37	-0.048	1.449	0.000	-2.446	2.898	-0.695	0.625
LBOs	RM2	37	0.024	1.002	0.000	-1.589	2.239	-0.566	0.581
	RESTATE	37	-0.140	0.438	0.000	-0.956	0.444	-0.349	0.084
type =	PMJE	27	0.008	0.043	0.000	-0.042	0.121	-0.014	0.020
Individuals	RM1	27	-0.159	1.405	-0.081	-1.870	1.717	-0.446	0.280
	RM2	27	0.006	1.234	0.000	-2.388	2.103	-0.397	0.311
	RESTATE	27	-0.036	0.322	0.000	-0.585	0.521	-0.128	0.039

Table 4 provides the distribution of the estimated blockholder fixed effects.

Table 5: Evidence on "Influence" versus "Selection"

Variable	ALL	Activists/ Pension funds	Banks/ trusts	Corporations	Hedge funds	Insurance companies/ Money managers	Mutual funds	Venture capitals/ LBOs	Individuals
PMJE	0.028	0.718	0.282	0.165	-0.174	0.298	-0.089	-0.333**	-0.189
RM1	-0.063***	0.000	0.013	0.038	-0.154*	-0.005	-0.146***	-0.134***	-0.035
RM2	-0.072***	0.000	0.042	0.033	-0.246***	-0.007	-0.176***	-0.154***	0.018
RESTATE	-0.028	0.452	0.217	0.508**	-0.034	-0.05	-0.117	0.182	-0.049

The observed pairing between firms and large shareholders can be explained by both the selection hypothesis and the influence mechanism. To differentiate such possibilities, we construct a pseudo blockholder sample: in this sample, we estimate blockholder fixed effects as if each blockholder had a stake in the firm two years prior to its actual investment, and exited before its actual holding starts. Then we correlate this pseudo fixed effects with our actual fixed effects using the real sample. Under the selection interpretation, we expect the effects to correlate positively because firms' accounting choices just prior to and after a blockholder's investment are similar. Under the influence interpretation, we would expect a negative correlation or no relation, depending how blockholders choose firms to influence. ***, **, and * indicate significance at the 0.01, 0.05, and 0.1 level, respectively, based on two-tailed tests.

Table 6: Explaining the Sources of FE Estimators

	PMJE	RM1	RM2	RESTATE
DOMINATE	0.004	0.106	0.184	-0.117***
	0.606	0.54	0.199	0
INSIDE	-0.002	-0.361**	-0.437***	-0.007
	0.848	0.047	0.004	0.845
SINGLE	-0.007*	-0.114	-0.077	-0.025*
	0.052	0.139	0.23	0.085
BHLOCAL	-0.001	0.017	0.035	-0.016*
	0.823	0.912	0.778	0.084
CONSTANT	-0.003	-0.023	-0.063	0.024*
	0.385	0.733	0.257	0.06
Adj. R^2	0.011	0.025	0.004	0.024

Table 6 explores whether some observable blockholder characteristics can explain the estimated fixed effects. *SINGLE* is an indicator variable for blockholders that are likely to have a single decision maker. *DOMINATE* measures how often the blockholder is the largest shareholder. *INSIDE* is an indicator variable for insider blockholder (controlling party in the management team or in the board of directors). *BHLOCAL* is an indicator variable for blockholders that are within 100km distance from the firm they are holding. ***, **, and * indicate significance at the 0.01, 0.05, and 0.1 level, respectively, based on two-tailed tests.

Table 7: Out-of-Sample Test: Presence of "Reputable" Blockholders and ROA persistence (2006-2009)

	ROA_{t+1}				ROA_{t+2}				ROA_{t+3}			
	PRES calculated based on				PRES calculated based on				PRES calculated based on			
	PMJE	RM1	RM2	RESTATE	PMJE	RM1	RM2	RESTATE	PMJE	RM1	RM2	RESTATE
ROA	0.437***	0.385***	0.400***	0.418***	0.378***	0.282***	0.306***	0.308***	0.476***	0.351***	0.397***	0.330***
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ROA×PRES	0.112***	0.056*	0.079**	0.106***	0.152***	0.036	0.069**	0.074**	0.174***	0.023	0.093*	0.011
	0.003	0.072	0.011	0.001	0.000	0.278	0.039	0.030	0.003	0.628	0.053	0.822
PRES	0.005	0.002	0.004	0.006	0.013**	0.004	0.006	0.005	0.017**	0.008	0.014***	0.003
	0.267	0.655	0.347	0.117	0.012	0.368	0.110	0.242	0.014	0.128	0.008	0.564
SIZE	0.005***	0.005***	0.005***	0.005***	0.006***	0.006***	0.006***	0.006***	0.006***	0.006***	0.006***	0.006***
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LEV	-0.029***	-0.029***	-0.029***	-0.029***	-0.046***	-0.047***	-0.046***	-0.046***	-0.037***	-0.037***	-0.037***	-0.037***
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BTM	-0.079***	-0.078***	-0.078***	-0.079***	-0.088***	-0.093***	-0.087***	-0.088***	-0.093***	-0.093***	-0.093***	-0.092***
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CFOVOL	-0.194***	-0.199***	-0.199***	-0.195***	-0.244***	-0.248***	-0.251***	-0.250***	-0.208***	-0.209***	-0.207***	-0.211***
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001
REVVOL	-0.012	-0.011	-0.011	-0.010	-0.025**	-0.020*	-0.023**	-0.023**	-0.034**	-0.031**	-0.031**	-0.032**
	0.262	0.301	0.306	0.351	0.031	0.088	0.048	0.048	0.014	0.022	0.024	0.018
OPTION	-0.018**	-0.018**	-0.018**	-0.018**	-0.033***	-0.007	-0.033***	-0.033***	-0.010	-0.010	-0.010	-0.010
	0.027	0.024	0.026	0.026	0.000	0.466	0.000	0.000	0.311	0.313	0.308	0.305
BONUS	0.013**	0.013**	0.014**	0.013**	0.005	0.008	0.005	0.005	-0.005	-0.005	-0.005	-0.005
	0.022	0.019	0.016	0.018	0.416	0.188	0.371	0.401	0.526	0.528	0.538	0.498
LOSS	-0.001	0.000	-0.001	-0.001	-0.001	-0.001	0.000	0.000	0.001	0.002	0.001	0.003
	0.886	0.966	0.927	0.870	0.907	0.931	0.960	0.992	0.905	0.783	0.891	0.743
YEAR FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adj. R^2	22.60%	22.50%	22.50%	22.60%	18.60%	18.80%	18.40%	18.40%	17.00%	16.80%	16.90%	16.70%

This table presents whether the presence of certain "reputable" blockholders (*PRES*; defined as those associated with the highest three deciles of FRQ) enhances ROA persistence. Coefficients are in the top row and p-values in the bottom row. ***, **, and * indicate significance at the 0.01, 0.05, and 0.1 level, respectively, based on two-tailed tests.