

The Dark Side of Private Benefits: Implications from Block Trades

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This Draft: May 9, 2008

Abstract

This paper provides a new test of agency problem by examining the relationship between the size of private benefits of the new blockholder and the likelihood of future litigation using block premium as a measure of private benefits. In multivariate logit regressions with a variety of controlling factors, we find that the incidence of securities litigation and earnings management is positively related to higher block premium coupled with greater likelihood of CEO turnover at the time of the block trade. The results suggest that people with greater private benefits of control have greater likelihood of engaging in corporate misconduct.

EFM classification : 150, 180, 750

JEL classification : G34, K42

Key words : block trades, class action lawsuits, earnings management

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Jensen and Meckling (1976), in their classic article which introduced the concept of agency problem, argued that people who have been delegated the role of managing the company may not work in the best interest of shareholders. This agency problem arises when there are private benefits to be enjoyed by the controlling stakeholders at the exclusion of minority shareholders. In an extreme case, the controlling stakeholders may want to use their power in the company to engage in illegal activities in the process of maximizing their own private benefits rather than shareholders' wealth. If private benefits give the beneficiaries the incentives to self-deal, such misbehavior may trigger shareholder lawsuits. This paper examines whether greater private benefits do indeed increase the likelihood of shareholder lawsuits.

Notwithstanding the wide intellectual currency of agency theory in corporate finance literature, previous empirical literature has paid scant attention to the linkage between the presence of private benefits and the possibility of shareholder litigation. The predictors of shareholder litigation studied by previous literature include stock market variables such as firm size (Francis et al (1994), Jones and Weingram (1996), Lu (2003)), share turnover (Francis et al (1994), Jones and Weingram (1996), Lu (2003)), past stock return (Alexander (1991), Weingram (1996)), and market-to-book ratio (Shrahan 1998). Accounting variables, such as leverage (Peng and Röell (2008), Strahan (1998)) and abnormal accruals or sales growth (Johnson et al. (2006)) have also been shown to predict shareholder litigation.

In this paper, we attempt to provide a test of the agency problem of Jensen and Meckling (1976) from a new perspective by examining the relationship between the size of private benefits of the new blockholder, who can exert control power in the company, and the likelihood of future litigation. Specifically, we use block premium to

measure the size of private benefits, and test whether such block premium can be a predictor of future illegal activities or accounting fraud, which are identified through shareholder class-action lawsuits and SEC enforcement actions.

The idea of using block premium to measure the size of private benefits is found in the seminal research by Barclay and Holderness (1989), where they argue that the size of private benefits can be proxied by the difference between the price per share in the transaction of large-percentage blocks of common stock and the exchange price per share after the block transaction. Their reasoning is as follows. If all shareholders receive benefits in proportion to their fractional ownership, blocks should trade at the exchange price. However, if blockholders can enjoy private benefits that do not accrue to minority shareholders, blocks will trade at a premium to the post-announcement exchange price.¹ For a sample of 63 block trades in the U.S. during the period of 1978 to 1982, they find that the block premium averages 16 percent of the post-announcement exchange price and 4.3 percent of the total market value of the firm's equity. In subsequent studies that measure block premiums, Mikkelsen and Regassa (1991) report an average premium of 9.2 percent of the exchange price for a sample of 37 trades in the U.S. between 1978 and 1987. Nicodano and Sembenelli (2004), in a study of Italian companies, document an average block premium of 27 percent. Dyck and Zingales (2004) study 412 control transactions in 39 countries between 1990 and 2000 and document that the premium ranges from -4 percent of firm value in Japan to +65 percent of firm value in Brazil. They conclude that, on average, the size of private benefits is worth 14 percent of the firm's equity value.

¹ Barclay and Holderness (1989) measure the premium using the post-announcement price as a benchmark, because the price that follows the announcement will incorporate the expected effect of the transaction. That is, the post-announcement exchange price will reflect the shared or public benefits of the block trade. And since the privately negotiated block trade price will reflect both private and public benefits, the difference between the block trade price and the post-announcement exchange price will reflect only the private benefits.

In a multivariate logit model using a sample of 391 U.S. firms whose block of shares are traded, we first find that the size of private benefits is positively related to the frequency of class action lawsuits against the new management team after controlling for other economic factors that may influence the probability of litigation. However, circumstances surrounding the block trade or certain characteristics of the block traded company can affect how much control power the blockholder can actually have in order to enjoy her private benefits. Assuming that the most significant control activities that a blockholder can exercise is to replace the top executive of the company - or that control activities are best reflected by the change in the top executive, we construct the likelihood of the top executive turnover at the time of the block trade to proxy for the new blockholder's expected control power. We then interact the likelihood of top executive turnover variable with the block premium variable.² We hypothesize that this new measure can better capture the size of private benefits of control that the new blockholder can exercise to engage in illegal activities. Indeed, our results confirm that such interaction term between block premium and the likelihood of top executive turnover is positively related to the probability of future litigation against the new management team. In sum, our empirical findings suggest that it is our new measure of private benefits of *control* that increases the likelihood of litigation against the new management team. We also show that similar relationship holds when we examine the likelihood of accounting frauds.

² When we include this interaction variable between block premium and the likelihood of top executive turnover, along with the block premium variable itself, the block premium variable can be interpreted as private benefits that are not related to exercising control. Non-control related private benefits can be interpreted as private benefits of just being a large owner of a company (or private benefits of ownership). Some examples of such private benefits of ownership are the feeling of being a 'proud owner' of a well-known or well-admired company, having access to luxury seats in sporting events, or meeting celebrities in social gatherings. These are similar to amenity benefits mentioned by Demsetz and Lehn (1985).

These results, taken together, show that those who have greater private benefits of control have higher likelihood of engaging in corporate misconduct which render them vulnerable to litigation or accounting malfeasance. Even though there must be long-term benefits to building reputations, blockholders who enjoy private benefits of control seem to be tempted to capture short-term private gains in an illegal way, and choose to face the risk of losing these benefits through possible shareholder lawsuit in near future.

Finally, we find that the relationship between the size of private benefits and the likelihood of litigation risk/accounting frauds becomes stronger for a subset of firms that are not financially distressed. For financially distressed firms, the association between the size of block premium and the litigation risk is in fact, although statistically insignificant, *negative*. For distressed firms, many block trades occur at a discount, possibly because the expected cost of possible litigation outweighs the benefits of being a blockholder. Our results suggest that for firms whose blocks are traded at a discount, the possibility of litigation can be a major determinant of the price of the block, and therefore larger block discount can indicate greater likelihood of litigation.

The rest of the paper is organized as follows. Section 1 describes the background on securities class action lawsuits. In Section 2, we explain the sample selection process and data sources. Section 3 examines the relationship between private benefits and incidence of class action lawsuits. In Section 4, we analyze the relationship between private benefits and accounting frauds. A robustness check is done in Section 5. Section 6 concludes.

1. Background on Securities Class Action Lawsuits

For minority shareholders, the incentive to monitor fraudulent behaviors of the controlling stakeholders is reduced by the free rider problem. (Shleifer and Vishny (1997)) This free rider problem is addressed by the ability of lawyers to organize a class of shareholders and litigate for that class. Lawyers have the incentive to collect costly information because they typically receive one-third of the settlement (Martin et al. (1996)) Therefore, securities class actions are initiated by plaintiffs' attorneys who file suits on behalf of shareholders. Typically, a filing is triggered by an information release such as a revelation of accounting scandal or disappointing earnings announcement that causes the firm's stock price to drop substantially. Plaintiffs' attorneys allege that managers or other executives in charge are guilty of fraud by directly engaging in wrongdoing or by at least concealing the negative information. Plaintiffs' attorney would argue that because the firm's stock price did not reflect the negative information during the class period, investors who purchased shares during the class period purchased those at artificially inflated prices.³ And if these shareholders held the stock until the negative information was released, then they would have suffered losses and therefore would be eligible for compensation.

The securities law that is relevant to class action lawsuits is the Securities Act of 1933 and Securities Act of 1934. The Securities Act of 1933 regulates the process whereby companies make offerings of securities and the Securities Act of 1934 covers all aspects of securities trading for firms whose securities are traded on secondary markets. In the Securities Act of 1933, Section 11 and 12 cover fraudulent registration statements and noncompliance with registration rules and misrepresentation. In the

³ The class period is the period during which the fraudulent activities are alleged to have taken place.

Securities Act of 1934, Rule 10b-5 under Section 10(b) makes it unlawful to disseminate false information of a material fact, or fail to disclose materially relevant information to investors. Many class action lawsuits base their case under Rule 10b-5.⁴

2. Sample Selection and Data Sources

We collect block trades of U.S. companies over the period of 1987 to 2002 from the SDC Platinum's Mergers and Acquisitions database. Then we use LEXIS/NEXIS Business News Search to find cases of securities class action lawsuits among the sample of block traded companies. Specifically, we searched for the name of the company whose block of shares were traded and the word "class action."⁵ The reason for examining block trades only up to year 2002 is to find enough number of class action lawsuits where the start of the class period is after the block trade date. Class action lawsuits typically show a span of several years from the start of the class period until the filing date of the lawsuit. The longest span between the class period start date and the filing date in my search of class action lawsuit is 7 years. However, the more we extend the lawsuit search period, the more we must shorten the time period for collecting the block trade sample. Since most class action lawsuits in our search show a span of less than 5 years between the class period start date and the filing date, using block trades of up to year 2002 and searching for class action lawsuits with the filing date within 5 years after each block trade seems to be a reasonable trade-off. After we search for class action lawsuit filings of up to 5 years after the block trade, we then

⁴ The reason for this is because under Rule 10b-5, plaintiffs are not required to prove that they relied on the misinformation. Furthermore, this misinformation is not restricted to the company's SEC filings, but can include false press releases and statements made by company officials.

⁵ Another possible source for searching for class action litigation is the Stanford Securities Class Action Clearinghouse. It provides detailed information on issuers that have been named in federal class action securities fraud lawsuits. The limitation to using this source is that they only cover class action lawsuits since the passage of the Private Securities Litigation Reform Act of 1995.

include in our lawsuit sample those cases where the start of the *class period* is within 3 years after the block trade.

Our initial block trades involve a transfer of a block of shares that comprises 5% or more of the shares outstanding and are classified as “block purchase” in the acquisition technique category of the SDC Platinum’s Mergers and Acquisitions database. 5% is the cutoff point used for measuring block premium because it is the point that triggers a mandatory filing to the SEC with regards to a block transaction.

From our initial sample, there must be information about price paid per share for the block transaction and the exchange price one day after the announcement of the block trade. Thus we exclude cases where the price paid per share may not be valued objectively, such as transactions involving convertible bonds, liabilities, options, warrants, etc. To rule out instances where the transaction price may not reflect private benefits, we exclude cases where either the target or the acquirer is a subsidiary of the other party, or is a government agency. We further exclude transactions that are open market repurchases, tender offers, spinoffs, recapitalizations, self-tenders, exchange offers, repurchases, and acquisition of remaining interest. Also, to stay away from block trades that have any takeover motives, we rule out block trades that happen within six months prior to a merger or acquisition concerning the block trading company.

To construct a measure of probability of top executive turnover, we search the LexisNexis Company Profiles to identify top executive turnovers within one year after the block transaction. Top executive in this study is defined as the CEO or, if a firm has

no CEO, as the president.⁶ Following previous studies (e.g., Weisbach (1988) and Denis et al. (1997)), we exclude from our sample cases where the top executive turnover occurs between the ages of 64-66 and turnovers related to death or illness. We also identify insider ownership and the percentage of outsiders among board members of the company whose block was traded. We collect these data from the firm's proxy statement with the most recent record date prior to the block transaction.

[Table I]

Table I furnishes the distribution of allegations in shareholder lawsuits of block traded companies. Among our sample of block traded firms from 1987 to 2002, we identified 46 class-action lawsuits with the start of the class period within 3 years of the block trade and with the filing date of within 5 years of the block trade. Nearly all of these lawsuits cite multiple causes of action. There were 31 lawsuits where allegation included at least one accounting-related charge. Common examples of litigation cases are omitting material information, artificially inflated earnings, revenue, sales, or assets, premature revenue recognition, failure of accounts to conform to GAAP, over hyped technology, product, or business success, failure to disclose problems in securing new debt capital, and misleading remarks to analysts or investors.

[Table II]

Table II presents univariate tests of the difference between lawsuit and non-lawsuit firms. Firms belong to "lawsuits firms" category if the block traded company is involved in class action shareholder lawsuits after the block transaction. An average firm in our sample has a total asset of \$744 million, a market-to-book ratio of 3.57, and

⁶ There are 5 firms in our sample that do not have a CEO and have the position of president.

a leverage ratio of 0.23. Table II also shows that, as expected, lawsuit firms are larger and more actively traded than non-lawsuit firms. Lawsuit firms also have higher leverage compared to non-lawsuit firms. An interesting result is that, although the difference is not statistically significant, lawsuit firms have higher block premium than non-lawsuit firms, but lawsuit firms also have more cases where block trades occur at a discount (or negative block premium) compared to non-lawsuit firms. This may be caused by some financially distressed firms with high litigation risk. As financially distressed firms may have unique characteristics with regards to the determinants of litigation, we categorize block traded firms into financially distressed firms and non-financially distressed firms and analyze those subsamples separately in Section 3-B.

3. Private Benefits and Class Action Lawsuits

Empirical research has identified a number of predictors of shareholder litigation. We categorize these predictors into stock market variables and accounting variables.⁷

As for stock market variables, studies (for example, Francis et al (1994), Jones and Weingram (1996), Lu (2003)) show that the size of the firm, measured by the logarithm of market capitalization, and share turnover are positively associated with the incidence of lawsuit. The reason is because larger companies have more assets available for the recovery of damages, and shareholder damages are generally increasing in the number of shares traded. And as we expect for firms with worse stock price performance to be more likely to get sued, Alexander (1991) and Jones and

⁷ Some studies (for example, Beasley (1996) and Dechow, et al (1996)) document that weak corporate governance is associated with enforcement actions by the SEC. However, in a recent study, Johnson, et al (2006) finds that there is little evidence of an association between governance structure (average tenure, outside holdings, independence of outside directors) and lawsuit filings. Also, Peng and Röell (2008) and Strahan (1998) find that insider ownership of company stock has no significant effect on lawsuit incidence. Therefore, I do not include these variables in my study.

Weingram (1996), among others, show that recent period cumulative return is negatively related to incidence of lawsuits. Strahan (1998) empirically shows evidence that firms with lower market-to-book ratio are more likely to face lawsuits. He reasons that since market-to-book equity ratio captures managerial quality (Morck et al. 1988), high market-to-book firms are firms that are well managed and therefore they will be less likely to be sued.

The second set of variables represents indications of or incentives for aggressive accounting. Peng and Röell (2008) and Strahan (1998) show that the leverage of the company may be associated with litigation risk. According to Peng and Röell (2008), there are two possible reasons why high leverage is associated with high litigation risk. First, high leverage may be associated with higher future operating risk, and thus a higher probability of a large stock price drop. Second, high leverage may indicate a recent history of poor performance, asset write-downs or forced heavy borrowing, causing shareholder dissatisfaction. Johnson et al. (2006) document that variables capturing aggressive accounting choices, such as sales growth and abnormal accruals, are also related to the likelihood of class action litigation.

To test whether private benefits of the new blockholder affect the likelihood of litigation, we include block premium to proxy for the size of private benefits as done in previous studies such as Barclay and Holderness (1989), Mikkelsen and Regassa (1991), Nicodano and Sembenelli (2004), and Dyck and Zingales (2004). However, circumstances surrounding the block trades can affect how much control power the blockholder can actually have in the company. To measure this probability of actually exercising control by the blockholder, we include the variable that measures the implied likelihood of executive turnover at the time of the block trade. This measure is

created by first examining whether there was a top executive turnover within one year of the block transaction and then constructing an implied probability of the top executive turnover at the time of the block trade. The assumption here is that the most significant control activity that a blockholder can exercise is to replace the top executive of the company, and thus control activities are best reflected by the change in the top executive.⁸ When the likelihood of the top executive turnover is higher at the time of the block trade (for example, when a firm with low insider ownership and many outside directors is performing poorly), the new blockholder can expect to exert more control power in the company. Therefore, the likelihood of the top executive turnover at the time of the block trade can be interpreted as the probability of exercising control in the company by the blockholder. And the interaction term between block premium and the likelihood of the top executive turnover can be termed as the private benefits of *control*. A more detailed description on how to construct this variable can be found in the appendix.

[Table III]

Table III reports results from a multinomial logit regression examining the determinants of lawsuit filings. The dependent variable equals one if a company whose block of shares are traded is subsequently sued after the block trade, and zero otherwise. The table reports marginal sensitivities. That is, numbers refer to marginal changes in the probability of a litigation implied by the logit coefficient estimates, resulting from a unit change in the explanatory variables.

⁸ Holderness and Sheehan (1988) show that for trades of majority blocks of stock, 71% of the trades involve turnovers among the three top managers within one year of the trade and conclude that many corporate majority shareholders place their representatives in top management positions.

In Model 1, we include block premium as a measure of private benefits. In Model 2, we include the interaction term between block premium and the probability of executive turnover to measure private benefits of *control*. In Model 1, the estimated coefficient of block premium is positive but statistically insignificant. In Model 2, when we include the interaction term between block premium and the probability of executive turnover, the estimated coefficient of block premium is still statistically insignificant and the interaction term, which measures private benefits of control, is also not significant. This result tells us that neither the size of private benefits nor the size of private benefits of control of the new blockholder is associated with the likelihood that the company will face class action litigation.

As for control variables, results show that market capitalization and trading volume, which factor into the determination of potential damages, are positively associated with the incidence of lawsuits. This result is consistent with previous literature. The estimated coefficient of cumulative return is significant and negative. This confirms the finding of previous studies that firms with worse stock performance are more likely to get sued by their shareholders. The coefficient of volatility is also positive and significant. More volatile firms are more likely to experience a large price drop, which leads to damages large enough to sustain the cost of bringing a lawsuit. Finally, the coefficient of the market-to-book ratio is negative but statistically insignificant.

As for accounting variables, leverage of the block traded company marginally affects the likelihood of future class action lawsuit. Both sales growth index and total accruals to total assets are not significant determinants of the likelihood of litigation. This is inconsistent with the finding of Johnson et al. (2006), which show that these

variables capturing aggressive accounting choices affect the likelihood of class action litigation.

A. Litigation against the new management team

Even though the private benefits of the blockholder is not significantly related to the overall future litigation risk, we cannot be sure whether the litigation is brought up after the new blockholder has exerted any influence in the company. For example, there may be lawsuits against the company that alleges the former management team of the company in which the blockholder have little or no relevance.

Therefore, in this subsection, we examine cases of lawsuits that are more likely to have been caused by the wrongdoings of the blockholder. We do this by identifying class action lawsuits that allege the new blockholder (that is, when the new blockholder is named as one of the defendant in the lawsuit) or the new management of the company. We define that “new management” is established when after the block trade, CEO is replaced or the new blockholder takes part in any management activity of the company. Therefore, in this subsection, the dependent variable takes the value of one only if the litigation satisfies the above criteria.

[Table IV]

In Model 1 of Table IV, the coefficient of the block premium variable is positive and significant. This shows that if we consider only those class action lawsuits which the new blockholder likely have had influence on, greater private benefits of the blockholder seem to make the firm more vulnerable to litigation. However, when we introduce an interaction variable between block premium and the likelihood of the top executive turnover variable in Model 2, the interaction variable is significantly positive

while the block premium variable itself is no longer significant. This implies that once we decompose private benefits into control-related (the interaction term) and non-control related (block premium), only the private benefits related to control has a positive and significant relationship with the likelihood of class action lawsuits against the new management. This is evidence that suggests greater private benefits of control may induce blockholders to use their power in the company to perpetrate fraud. If the controlling stakeholders act rationally, they will knowingly commit fraud only if they have an incentive to do so. Private benefits of control seem to be one motivation for them to engage in such fraudulent activities.

Results in Table IV also show that firm size, trading volume, and stock return volatility remain as significant determinants of litigation risk. Market-to-book ratio and accounting variables are insignificant, as was the case when we considered the whole sample of litigation. The coefficient of cumulative return is no longer significant once we consider only those litigations against the new management. This suggests that if a new blockholder comes in and possibly exerts influence in the company, previous firm performance becomes a non-factor in affecting the likelihood of lawsuits against the new management team of the company.

B. Distressed vs. non-distressed companies

Maksimovic and Titman (1991) argue that the costs of committing fraud tend to be low for firms facing financial trouble and thus firms near financial distress are more likely than other firms to commit fraud. Therefore, the factors that predict litigation may be different for financially distressed firms. In this subsection, we categorize block traded firms into financially distressed firms and non-financially distressed firms and analyze those subsamples separately.

To estimate the degree of financial distress, we use Altman (1968) Z-Score measured at the year prior to the block trade. Begley, Ming, and Watts (1996) show evidence that several of the coefficients in Altman Z-Score model have substantially changed from their original values. We calculate Z-Scores using the updated coefficients estimated by Hillegeist et al (2004)⁹. Since lower Z-Scores indicate higher probability of bankruptcy, we categorize firms which are in the lowest quartile of Z-Scores as financially distressed firms.

[Table V]

Table V estimates logit models relating the probability of securities class action lawsuit to the measure of private benefits and other potential determinants of lawsuit for non-financially distressed firms and financially distressed firms. As for the non-distressed firms, the variables that have significant estimated coefficients are: firm size, trading volume, stock return volatility, leverage (in Model 1) and the size of private benefits of control (in Model 2). These results are generally consistent with results in Table III, with the exception that the estimated coefficient of cumulative stock return is not significant and the estimated coefficient of the private benefits of control variable in Model 2 is now marginally significant. Therefore, once we exclude those firms which are financially distressed, the size of private benefits of control has a positive relationship with litigation risk.

⁹ Hillegeist, et al (2004) uses a sample of 89,826 firm-year observations including 762 initial bankruptcies between 1980 and 2000. The dependent variable is a dummy variable for bankruptcy in the 4 to 16 months following the fiscal-year end. Their updated coefficients are, 0.08 for WC/TA (working capital divided by total assets), -0.04 for RE/TA (retained earnings divided by total assets), 0.10 for EBIT/TA (earnings before interest and taxes divided by total assets), 0.22 for V_E/TL (market value of equity divided by total liabilities), -0.06 for S/TA (sales divided by total assets), and 4.34 for the intercept.

When we analyze the case for financially distressed firms, we find that firm size is not a significant determinant of litigation but the cumulative stock return of the company is a significant determinant of litigation. An interesting result for the distressed firms in Model 3 is that the estimated coefficient of block premium, although it is not statistically significant, is actually *negative*. We showed in Table II that even though lawsuit firms have higher block premium on average than non-lawsuit firms, there are also more incidences of block trades occurring at a discount. These results, taken together, suggest that for financially distressed companies, the high likelihood of future litigation can result in block trades having *negative* block premiums (or block discounts). For these companies, smaller block premium (or greater block discounts) can indicate a higher likelihood of class action litigation. Once we further decompose private benefits in Model 4, we find that the size of private benefits of control has a negative but statistically insignificant relationship with the likelihood of class action lawsuits, while private benefits not related to control has a positive but statistically insignificant relationship with the likelihood of class action lawsuits.

Results in Table V sheds light on why the block premium variable and the interaction term in Table III were statistically insignificant in explaining future class action litigation. The relationship between block premium and litigation risk differ for financially distressed companies and non-distressed companies. For non-distressed companies, greater private benefits seem to induce controlling stakeholders to engage in self-dealing that triggers class action litigation. However, for financially distressed companies, the increased likelihood of litigation may be incorporated in the lower block premium or greater block discount. If we pool these companies together, these different effects will nullify the relationship between the block premium and the likelihood of future litigation.

4. Private Benefits and Accounting Frauds

Studies have shown that companies manage earnings to increase executive compensation, to reduce taxes, to prevent violations of debt covenants, and to temporarily affect stock prices.¹⁰ While companies have some discretion in reporting earnings within GAAP, some companies may decide to violate GAAP when it has exhausted options to manage earnings within GAAP. And when firms violate GAAP in financial reporting, it is also a violation of the Securities Act. These illegal practices will occur when the firm perceives the benefit of managing earnings exceeds the expected cost of possible litigation. As was the case for class action lawsuits, the blockholder who has private benefits may have incentives to engage in such earnings manipulation. Or any benefits of managing earnings can be a part of his private benefits. In this section, we analyze how private benefits are associated with this specific case of fraud; accounting fraud or earnings manipulation.

To sample firms with accounting manipulation, we first filter our sample of class action lawsuits for cases that are accounting-related. Since in many cases plaintiffs make more than one type of allegations, we categorize a case as accounting-related if any of the allegations relate to accounting problem. We retrieve 31 cases of accounting-related class action lawsuits. In addition to our sample of class actions related to accounting charges, we include cases where the firm was subject to accounting and auditing enforcement by the SEC. The source of data for this is the SEC Accounting and Auditing Enforcement Release (AAER) on LEXIS/NEXIS Accounting Search. The AAERs record enforcement actions brought by the SEC against companies for violating the financial reporting requirements of the Securities Exchange Act of

¹⁰ See Healy and Wahlen (1999) and McNichols (2000) for an overview.

1934.¹¹ Feroz et al. (1991) and Dechow et al. (1996) point out that it is safe to assume that firms facing enforcement actions by the SEC intentionally engaged in earnings manipulation, since SEC will only pursue cases where it can be demonstrated that the management knew about their accounting problems. By searching AAER, we find 18 additional cases where the company was found to have committed accounting fraud within 3 years of the block trade. We do not count those cases where the start of the manipulation period as identified in AAER is before the block trade.

[Table VI]

Table VI lists the type of alleged earnings manipulation reported in the AAER. It shows that the majority of the firms charged with earnings manipulation are overstating revenues (7 firms).

[Table VII]

Table VII shows the results of the logit regression for accounting frauds. In Models 1 and 2, the dependent variable takes the value of one when the block traded company is accused of any accounting fraud, through either accounting-related litigation or SEC enforcement actions. In Models 3 and 4, the dependent variable takes the value of one only when the accounting fraud involves the new management team of the company, which include cases where the fraud occurs after the top executive is replaced, where the blockholder takes part in any management activity of the company, and where the blockholder is named as one of the defendant in the lawsuit.

¹¹ In AAERs, actions are brought against firms pursuant to Section 13(a) of the Securities Exchange Act of 1934. This section requires firms whose securities are registered with the SEC, to file reports as required by the SEC's rules and regulations. The financial statements contained in these filings are required to comply with Regulation S-X, which in turn requires conformity with GAAP.

In Models 1 and 2, neither the size of private benefits nor the size of private benefits of control is a significant determinant of accounting allegations. However, in Models 3 and 4, when we examine only cases of accounting allegations made against the new management, results show that private benefits of control is positively associated with the incidence of accounting fraud of the new management. This is consistent with previous results where we examined all types of class action lawsuits. Therefore, greater private benefits of control increase the likelihood of the new management engaging in corporate misconduct, revealed either through securities class action lawsuits or accounting enforcement actions by the SEC.

As for other explanatory variables, results in Table VII show that large firms and firms whose stock returns are volatile are more likely to commit accounting fraud. These results are generally consistent with our previous results examining class action lawsuits, with the exception that the estimated coefficient on cumulative return is not significant and the estimated coefficient on sales growth is marginally significant. Thus, cumulative return is a significant predictor of class action lawsuits but is not a significant factor in predicting accounting frauds. In contrast, sales growth is not a significant determinant of class action lawsuits but it becomes marginally significant if we examine accounting-related class actions and accounting/auditing SEC enforcements.

In Panel B of Table VII, we exclude firms in the lowest quartile of Z-Scores using the updated coefficients of Hillegeist et al (2004). Results in Panel B are qualitatively similar to those in Panel A. One thing to note here is that in Panel B, the coefficient of the block premium variable becomes significant for both Models 1 and 3, whereas it was insignificant in Models 1 and 3 of Panel A. This shows that once we

exclude firms likely to be financially distressed, the size of private benefits significantly affects the future likelihood of accounting allegations. However, results of Models 2 and 4 show that specifically, it is the size of private benefits coupled with the greater likelihood of exercising control, which positively affects the likelihood of future accounting allegations.¹² Therefore, greater private benefits of control of the new blockholder indicate greater likelihood of accounting allegations made against the new management team, for all block traded companies (Panel A) and for the subset of companies that are less likely to be financially distressed (Panel B).

5. Robustness Check : Effect of PSLRA

In response to claims of abusive routine filings of lawsuits after a stock price drop with little substantive evidence of fraud, Congress passed the Private Securities Litigation Reform Act (PSLRA) in 1995. PSLRA made significant changes to securities fraud litigation, introduced proportionate liability, and created new responsibilities for auditors to detect and report illegal activities. Thus, PSLRA made it more difficult to pursue securities fraud complaints by requiring specific identification of alleged fraud, and establishing a safe harbor for forward-looking disclosures that meet certain requirements. Johnson et al. (2002) find evidence that suggest PSLRA has effectively discouraged frivolous lawsuits and made lawsuits in the post-PSLRA period more merit-based.

To capture the heightened pleading standard and the possible changes in the litigation environment that was brought by PSLRA, we rerun the regressions in Table III, IV, and V by grouping class action lawsuits that were announced between 1987

¹² When we examine those firms in the lowest quartile of Z-Scores, both the coefficient of block premium and the coefficient of the interaction term between block premium and the probability of top executive turnover variable are insignificant in explaining future accounting frauds.

(start of our sample period) and 1995 (before the enactment of PSLRA) and those announced between 1995 (after the enactment of PSLRA) and 2002 (end of our sample period). When we run the logit regressions separately for two groups of subsamples, the results (not reported in the paper) are qualitatively similar to our previous tables for both periods, but the significance levels are lower for many variables possibly due to smaller sample sizes.

6. Conclusion

In this paper, we ask the question of whether private benefits give rise to self-dealing that ultimately triggers class action lawsuits. For the sample of firms whose blocks of shares are traded, we search for cases of securities class action lawsuits and SEC accounting/auditing enforcement actions. Through examining the relationship between the size of private benefits (measured using block premium) and the incidence of securities litigations or accounting frauds, we find that private benefits are positively related to class action lawsuits or accounting frauds that are charged against the new management. Specifically, it is the private benefits of *control* that increases the likelihood of litigation or accounting frauds involving the new management.

Once shareholder litigation or earnings manipulation is revealed, these firms' share price will drop because of the downward revision of firm value and the weakening of the firm's credibility. (Romano (1991)) Even given these potential penalty for perpetrating fraud, our study implies that blockholders with large private benefit of control seem to risk these penalties for their own private benefits and engage in tortious acts that triggers class action lawsuits or enforcement actions by the SEC.

Interestingly, the aforementioned positive relationship between the size of private benefits of control and the future likelihood of litigation holds only for firms that are less likely to be financially distressed. For firms more likely to be financially distressed, the size of private benefits is actually *negatively* (although statistically insignificant) related to future litigation risk. This suggests that for distressed companies, the threat of litigation becomes an important cost of carrying a block of shares and thus greater block discount can be a signal that the block traded company is at a greater risk of litigation.

Overall, our study suggests that investors or regulating agencies should pay attention to block trades occurring with very high premiums or discounts (for financially troubled companies), as these extreme cases of block trades raise a warning flag about future litigation or earnings management.

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Table I
Type of Allegations in Securities Class Action Litigation

This table shows the distribution of allegations in securities class action lawsuits for block traded firms within 5 years of block trade with class period starting within 3 years after the block trade. Sample firms are 391 firms whose blocks of shares are traded during the period from 1987 to 2002. Block trades are identified through SDC Platinum's Mergers and Acquisition database. Identifying cases of securities class-action lawsuits are executed through LEXIS/NEXIS Business News Search. Numbers do not add up to the total number of firms because many lawsuits cite multiple causes of action.

Alleged allegation type	Number of cases
False/misleading financial statements or estimates	28
Accounting manipulation	16
Nondisclosure of material information	12
Unfair merger / breach of fiduciary duties during merger	4
Unfair buyout / breach of fiduciary duties during buyout	3
Market manipulation / improper trading practices	3
Unfair treatment during stock issues	2
Insider trading	2
Embezzlement	2
Other frauds	3
Total number of firms with class action lawsuits	46

Table II
Summary Statistics

This table gives means and medians of several variables for 391 firms whose blocks are traded between 1987 and 2002. Block trades are identified through the SDC Platinum's Mergers and Acquisition database. Firms belong to "lawsuits firms" if the company is involved in class action shareholder lawsuits within 5 years after the block trade with class period starting within 3 years after the block trade. Percentage block premium is defined as $100X\{(\text{price per share paid for the block}) - (\text{exchange price one day after the announcement of the transaction}) / (\text{exchange price one day after the announcement of the transaction})\}$. Percent of shares acquired is the percentage of shares acquired in the block transaction. Volume is the average monthly trading volume divided by shares outstanding for the year preceding the block trade. Cumulative return is the cumulative daily return for the 12 months before the block trade announcement. Volatility is the standard deviation of daily stock returns for the fiscal year prior to the block trade. Market to book ratio is the ratio of market value of equity to book value of equity. Leverage is measured as the book value of long-term debt over book value of assets. Insider holding variable is the percentage of shares owned by officers and directors and includes those shares owned by individuals related to a member of the top management team, employee pension or stock option plans, trusts for which managers have some voting authority, and any other blocks of shares over which a member of the top management team has voting authority. Outsider dominated board dummy is a dummy variable that takes a value on one when the board has more than 60% of its directors who are outsiders of the company. Top exec is founding family dummy variable is a dummy variable that takes the value of one when the top executive is a member of the founding family. Sales growth is the sales growth index and is measured by the ratio of sales in the fiscal year preceding the block trade to sales in the previous year. Accruals is the total accruals to total assets and is measured as the ratio of total accruals to total assets in the fiscal year preceding the block trade. Dollar values are in millions. Significant differences for two groups are indicated at 10%, 5%, and 1% levels by *, **, and *** respectively according to the t-test.

	Whole sample		Lawsuit firms		Non-lawsuit firms		Difference in mean
	mean	median	mean	median	mean	median	
Block premium (%)	9.42	8.03	10.54	7.85	9.27	8.16	1.27
Firms with positive premium (%)	69.31	-	63.93	-	70.03	-	-6.10
Percent of shares acquired (%)	14.22	10.00	16.82	11.42	13.88	9.73	2.97
Total asset (mil)	744.26	97.58	985.18	142.37	712.11	92.78	273.07*
Volume	60.57	47.21	84.63	62.48	57.36	45.91	27.27**
Cumulative return	0.18	0.11	0.07	0.07	0.19	0.12	-0.13*
Volatility	0.48	0.37	0.66	0.53	0.46	0.34	0.20
MB	3.57	2.36	3.54	2.20	3.57	2.39	-0.03
Leverage	0.23	0.11	0.26	0.15	0.23	0.09	0.03*
Insider holding (%)	5.39	0.22	4.72	0.20	5.48	0.23	-0.76
Institutional ownership (%)	27.43	22.26	25.61	20.43	27.67	22.49	-2.06
Outsider dominated board dummy	0.72	1.00	0.68	1.00	0.73	1.00	-0.05
Top exec is founding family dummy	0.20	0.00	0.17	0.00	0.20	0.00	-0.03
Sales growth	1.17	0.84	1.10	1.07	1.18	0.87	-0.08
Accruals	0.02	0.01	0.03	0.03	0.02	0.02	0.01
Sample size	391		46		345		

Table III
Determinants of Securities Class Action Lawsuit

This table estimates logit models relating the probability of securities class action lawsuit to the measure of private benefits and other potential determinants of lawsuit. Dependent variable is the future litigation dummy, which takes the value of one if the company is involved in class action shareholder lawsuits within 5 years after the block trade with class period starting within 3 years after the block trade. Market cap is the logarithm of market value of common equity at the end of the fiscal year preceding the block trade. Volume is the average monthly trading volume divided by shares outstanding for the year preceding the block trade. Cum return is the cumulative daily return for the 12 months before the block trade announcement. Volatility is the standard deviation of daily stock returns for the fiscal year prior to the block trade. MB is the ratio of market value of equity to book value of equity. Leverage is total debt to total assets. Sales growth is the sales growth index and is measured by the ratio of sales in the fiscal year preceding the block trade to sales in the previous year. Accruals is the total accruals to total assets and is measured as the ratio of total accruals to total assets in the fiscal year preceding the block trade. Block premium is defined as $\{(\text{price per share paid for the block}) - (\text{exchange price one day after the announcement of the transaction})\} / (\text{exchange price one day after the announcement of the transaction})$. Probability of executive turnover is the implied probability of executive turnover from Table A.I of the appendix. Dollar values are in millions. P-values are in parentheses. Significant coefficients are indicated at 10%, 5%, and 1% levels by *, **, and *** respectively.

Category of independent variables	Independent variables	Dependent variable : Litigation dummy	
		Model 1	Model 2
Stock market variables	Market cap	0.387** (0.04)	0.364** (0.03)
	Volume	0.004** (0.03)	0.004** (0.03)
	Cum return	-0.927* (0.04)	-0.866** (0.05)
	Volatility	1.231** (0.02)	1.237*** (0.01)
	MB	-0.104 (0.28)	-0.120 (0.23)
Accounting variables	Leverage	0.447 (0.14)	0.476* (0.08)
	Sales growth	0.087 (0.44)	0.010 (0.40)
	Accruals	-0.005 (0.65)	0.041 (0.59)
Block premium	Block premium (Block)	0.179 (0.24)	-0.015 (0.19)
Interaction term	Block X [Probability of executive turnover]		0.239 (0.16)

Table IV
Determinants of Securities Class Action Lawsuit Against New Management

This table estimates logit models relating the probability of securities class action lawsuit against the new management to the measure of private benefits and other potential determinants of lawsuit. The dependent variable of future litigation dummy takes the value of one only if the litigation involves the new management of the company within 5 years after the block trade with class period starting within 3 years after the block trade. This includes cases where the announcement of litigation occurs after the top executive is replaced or the blockholder takes part in any management activity of the company following the block trade and cases where the new blockholder is named as one of the defendant in the lawsuit. Market cap is the logarithm of market value of common equity at the end of the fiscal year preceding the block trade. Volume is the average monthly trading volume divided by shares outstanding for the year preceding the block trade. Cum return is the cumulative daily return for the 12 months before the block trade announcement. Volatility is the standard deviation of daily stock returns for the fiscal year prior to the block trade. MB is the ratio of market value of equity to book value of equity. Leverage is total debt to total assets. Sales growth is the sales growth index and is measured by the ratio of sales in the fiscal year preceding the block trade to sales in the previous year. Accruals is the total accruals to total assets and is measured as the ratio of total accruals to total assets in the fiscal year preceding the block trade. Block premium is defined as $\{(price\ per\ share\ paid\ for\ the\ block) - (exchange\ price\ one\ day\ after\ the\ announcement\ of\ the\ transaction)\} / (exchange\ price\ one\ day\ after\ the\ announcement\ of\ the\ transaction)$. Probability of executive turnover is the implied probability of executive turnover from Table A.I of the appendix. Dollar values are in millions. P-values are in parentheses. Significant coefficients are indicated at 10%, 5%, and 1% levels by *, **, and *** respectively.

Category of independent variables	Independent variables	Dependent variable : Litigation dummy	
		Model 1	Model 2
Stock market variables	Market cap	0.416* (0.08)	0.329* (0.06)
	Volume	0.003** (0.04)	0.004** (0.04)
	Cum return	-0.589 (0.25)	-0.604 (0.18)
	Volatility	1.368** (0.03)	1.329** (0.02)
	MB	-0.055 (0.29)	-0.038 (0.32)
Accounting variables	Leverage	0.41 (0.17)	0.34 (0.21)
	Sales growth	-0.012 (0.43)	-0.030 (0.34)
	Accruals	-0.028 (0.55)	0.031 (0.53)
Block premium	Block premium (Block)	0.225* (0.09)	-0.013 (0.14)
Interaction term	Block X [Probability of executive turnover]		0.101** (0.04)

Table V
Determinants of Securities Class Action Lawsuit ;
Non-Financially Distressed Firms vs. Financially Distressed Firms

This table estimates logit models relating the probability of securities class action lawsuit to the measure of private benefits and other potential determinants of lawsuit. Financially distressed firms are block traded firms with the lowest quartile of Z-Scores using the updated coefficients of Hillegeist et al (2004). Dependent variable is the future litigation dummy, which takes the value of one if the company is involved in class action shareholder lawsuits within 5 years after the block trade with class period starting within 3 years after the block trade. Market cap is the logarithm of market value of common equity at the end of the fiscal year preceding the block trade. Volume is the average monthly trading volume divided by shares outstanding for the year preceding the block trade. Cum return is the cumulative daily return for the 12 months before the block trade announcement. Volatility is the standard deviation of daily stock returns for the fiscal year prior to the block trade. MB is the ratio of market value of equity to book value of equity. Leverage is total debt to total assets. Sales growth is the sales growth index and is measured by the ratio of sales in the fiscal year preceding the block trade to sales in the previous year. Accruals is the total accruals to total assets and is measured as the ratio of total accruals to total assets in the fiscal year preceding the block trade. Block premium is defined as $\{(price\ per\ share\ paid\ for\ the\ block) - (exchange\ price\ one\ day\ after\ the\ announcement\ of\ the\ transaction)\} / (exchange\ price\ one\ day\ after\ the\ announcement\ of\ the\ transaction)$. Probability of executive turnover is the implied probability of executive turnover from Table A.I of the appendix. Dollar values are in millions. P-values are in parentheses. Significant coefficients are indicated at 10%, 5%, and 1% levels by *, **, and *** respectively.

Category of independent variables	Independent variables	Non-financially distressed firms		Financially distressed firms	
		Model 1	Model 2	Model 3	Model 4
Stock market variables	Market cap	0.463** (0.04)	0.475** (0.05)	0.228 (0.21)	0.292 (0.23)
	Volume	0.002** (0.05)	0.003** (0.04)	0.005* (0.09)	0.008 (0.10)
	Cum return	-0.819 (0.14)	-0.740 (0.17)	-0.857*** (0.01)	-0.934** (0.01)
	Volatility	1.258** (0.06)	1.430** (0.05)	1.003* (0.06)	1.219* (0.07)
	MB	-0.119 (0.26)	-0.237 (0.28)	-0.010 (0.19)	-0.004 (0.23)
Accounting variables	Leverage	0.560* (0.08)	0.467 (0.12)	0.431 (0.23)	0.399 (0.28)
	Sales growth	0.103 (0.45)	0.089 (0.41)	-0.028 (0.43)	-0.084 (0.52)
	Accruals	-0.079 (0.44)	-0.061 (0.64)	0.058 (0.52)	-0.004 (0.41)
Block premium	Block premium (Block)	0.239 (0.18)	-0.023 (0.15)	-0.110 (0.23)	0.013 (0.13)
Interaction term	Block X [Probability of executive turnover]		0.231* (0.09)		-0.118 (0.12)

Table VI
Type of Earnings Manipulations Reported in the AAERs

This table lists the alleged earnings manipulation reported in the SEC Accounting and Auditing Enforcement Release (AAER) for block traded firms within 3 years of block trade. Sample firms are 391 firms whose blocks of shares are traded during the period from 1987 to 2002. Block trades are identified through SDC Platinum's Mergers and Acquisition database. Identifying cases of earnings manipulation are done through SEC Accounting and Auditing Enforcement Release (AAER) on LEXIS/NEXIS Accounting Search.

Manipulation type	Number of firms
Overstatement of revenues	7
Combination of overstating revenues and understating expenses	3
Delayed recognition of a loss	2
Overstatement of inventory	1
Understatement of provisions for loan loss reserves	1
Overstatement of marketable securities	1
Disclosure issue	1
Other	2
Total	18

Table VII
Determinants of Accounting Fraud

This table estimates logit models relating the probability of accounting fraud to the measure of private benefits and other potential determinants. Firms with accounting allegations are (1) firms that face class action lawsuits that are accounting-related and (2) firms that are subject to accounting and auditing enforcement by the SEC. Panel A shows the results for all block traded firms. Panel B shows the results for non-financially distressed firms, which excluded those firms with the lowest quartile of Z-Scores using the updated coefficients of Hillegeist et al (2004). In Models 1 and 2, dependent variable takes the value of one if the company is involved in accounting fraud within five years after the block trade. In Models 3 and 4, the dependent variable takes the value of one only if the accounting fraud involves the new management of the company within five years after the block trade. This includes cases where the announcement of accounting-related litigation or SEC enforcement occurs after the top executive is replaced or the blockholder takes part in any management activity of the company following the block trade and cases where the new blockholder is named as one of the defendant in the lawsuit. Market cap is the logarithm of market value of common equity at the end of the fiscal year preceding the block trade. Volume is the average monthly trading volume divided by shares outstanding for the year preceding the block trade. Cum return is the cumulative daily return for the 12 months before the block trade announcement. Volatility is the standard deviation of daily stock returns for the fiscal year prior to the block trade. MB is the ratio of market value of equity to book value of equity. Leverage is total debt to total assets. Sales growth is the sales growth index and is measured by the ratio of sales in the fiscal year preceding the block trade to sales in the previous year. Accruals is the total accruals to total assets and is measured as the ratio of total accruals to total assets in the fiscal year preceding the block trade. Block premium is defined as $\{(\text{price per share paid for the block}) - (\text{exchange price one day after the announcement of the transaction})\} / (\text{exchange price one day after the announcement of the transaction})$. Probability of executive turnover is the implied probability of executive turnover from Table A.I of the appendix. Dollar values are in millions. P-values are in parentheses. Significant coefficients are indicated at 10%, 5%, and 1% levels by *, **, and *** respectively.

Panel A: All block traded firms

Category of independent variables	Independent variables	All accounting allegations		Accounting allegations against new management	
		Model 1	Model 2	Model 3	Model 4
Stock market variables	Market cap	0.348** (0.03)	0.389** (0.05)	0.440** (0.04)	0.401** (0.03)
	Volume	0.003* (0.09)	0.004* (0.06)	0.003* (0.09)	0.003 (0.10)
	Cum return	-0.350 (0.58)	-0.023 (0.51)	-0.080 (0.71)	-0.082 (0.48)
	Volatility	1.072** (0.02)	1.107*** (0.01)	1.430** (0.03)	1.544** (0.02)
	MB	-0.052 (0.32)	-0.036 (0.22)	-0.086 (0.25)	-0.072 (0.24)
Accounting variables	Leverage	0.664 (0.30)	0.625 (0.28)	0.573 (0.23)	0.471 (0.23)
	Sales growth	0.033* (0.09)	0.031* (0.08)	0.038 (0.13)	0.037 (0.12)
	Accruals	0.086 (0.23)	0.093 (0.18)	0.034 (0.35)	0.032 (0.30)
Block premium	Block premium (Block)	0.169 (0.28)	-0.020 (0.22)	0.196 (0.15)	-0.013 (0.19)
Interaction term	Block X [Probability of executive turnover]		0.203 (0.14)		0.117* (0.08)

Panel B: Non-financially distressed block traded firms

Category of independent variables	Independent variables	All accounting allegations		Accounting allegations against new management	
		Model 1	Model 2	Model 3	Model 4
Stock market variables	Market cap	0.403** (0.04)	0.478** (0.05)	0.442** (0.04)	0.453** (0.03)
	Volume	0.004** (0.04)	0.003** (0.05)	0.004* (0.07)	0.005* (0.06)
	Cum return	0.053 (0.56)	0.064 (0.41)	0.014 (0.47)	0.035 (0.37)
	Volatility	1.118* (0.07)	1.280* (0.06)	1.462** (0.05)	1.558** (0.04)
	MB	-0.147 (0.32)	-0.144 (0.32)	-0.046 (0.29)	-0.088 (0.24)
Accounting variables	Leverage	0.308 (0.24)	0.305 (0.16)	0.407 (0.27)	0.369 (0.23)
	Sales growth	0.068* (0.08)	0.074* (0.07)	0.045* (0.08)	0.043* (0.08)
	Accruals	0.067 (0.19)	0.056 (0.15)	0.050 (0.24)	0.035 (0.22)
Block premium	Block premium (Block)	0.187* (0.08)	-0.021 (0.17)	0.202* (0.06)	-0.008 (0.16)
Interaction term	Block X [Probability of executive turnover]		0.254* (0.10)		0.203** (0.05)

Appendix

In the appendix, we show how we measure the probability of the top executive turnover at the time of the block trade.

Following studies that examine the determinants of top executive turnover (e.g. Weisbach (1988), Yermack (1996), Denis, Denis, and Sarin (1997)), we estimate a logit model relating the probability of top executive turnover to firm performance, ownership characteristics, and board composition as shown below.

$$\begin{aligned} \text{Top executive turnover dummy}_i &= \alpha + \beta_1 \cdot (\text{prior firm performance})_i \\ &+ \beta_2 \cdot (\text{percentage of shares acquired})_i + \beta_3 \cdot \log(\text{firm size})_i \\ &+ \beta_4 \cdot (\text{dummy for } 5\% < (\text{insider ownership}) < 25\%)_i \\ &+ \beta_5 \cdot (\text{dummy for } (\text{insider ownership}) > 25\%)_i + \beta_6 \cdot (\text{top exec. is founding family dummy})_i \\ &+ \beta_7 \cdot (\text{outsider dominated board dummy})_i \\ &+ \beta_8 \cdot (\text{prior firm performance})_i \cdot (\text{dummy for } 5\% < (\text{insider ownership}) < 25\%)_i \\ &+ \beta_9 \cdot (\text{prior firm performance})_i \cdot (\text{dummy for } (\text{insider ownership}) > 25\%)_i \\ &+ \beta_{10} \cdot (\text{prior firm performance})_i \cdot (\text{outsider dominated board dummy})_i \end{aligned}$$

Results to the regression are shown in Table A.I. The numbers in the table refer to marginal effects where derivatives are evaluated at mean values of the variables. The numbers we use for the probability of executive turnover in the main body of the paper and in Tables III through VII are the predicted (or expected) value of the top executive turnover variable in the above logit regression. A detailed explanation of each variable in the logit regression is described as follows.

A1. Block Size

A blockholder who owns greater proportion of a firm's shares has more voting power in the company. A blockholder also has more incentive to work towards value-increasing activities, such as replacing incompetent CEO, as he holds more shares of the firm. We thus include the percentage of shares acquired in the block trade as an explanatory variable for the top executive turnover. Results in Table A.I confirm that block size is positively associated with the likelihood of the top executive turnover.

A2. Prior Firm Performance

Results in Table A.I show that the probability of top management turnover is negatively related to prior firm performance, which is measured as the percentage of common stock return for the 12 months ending two months before the block trade announcement minus the return on the CRSP equal-weighted index. We obtain qualitatively similar results when we use the CRSP value-weighted index. This result is consistent with previous studies (e.g. Weisbach (1988), Yermack (1996), Denis, Denis, and Sarin (1997)); worse the performance, more likely the chances of top executive turnover.

A3. Characteristics of Ownership Structure

More managerial shareholdings may better align the interests of managers and shareholders, and provide managers with a greater incentive to invest in value-increasing activities. (Jensen and Meckling (1976), DeAngelo and DeAngelo (1985)) However, greater managerial shareholdings can also entrench management by making it more

difficult to transfer control and to remove a manager. (See, for example, Stulz (1988) for a theoretical study and Mikkelsen and Partch (1989) for empirical work)¹³ Empirically, studies have shown that there is generally a negative relationship between management turnover and the ownership of officers and directors. (Ofek (1993), Mikkelsen and Partch (1996), Denis et al. (1997)) In Table A.I, we follow Denis et al. (1997) and Morck et al. (1998) and classify firms into three categories of managerial ownership: less than or equal to 5%, between 5% and 25%, and greater than 25%.¹⁴ Results show that firms with insider ownership greater than 25% have 40% lower likelihood of top management being replaced. Firms that have insider ownership between 5% and 25% lower the probability of top management change by 15%, although it is only marginally significant.

A4. Characteristics of Board Composition

Studies (e.g. Weisbach (1988), Byrd and Hickman (1991), Brickley et al. (1994)) suggest that internal monitoring is improved by having a higher fraction of outside directors. Following the classification used by Denis et al. (1997) and Weisbach (1988), we label a firm as an outsider-dominated board company if at least 60% of the company's board members are outsiders.¹⁵ Results in Table A.I indicate that having outsider-dominated board alone does not affect the likelihood of top management turnover. This is consistent with the results of Weisbach (1988) and Denis et al. (1997).

¹³ Entrenched management may be immune to the discipline of the product market (Hart (1983)), monitoring by large shareholders (Shleifer and Vishny (1986)), and value-enhancing takeovers (Jensen and Ruback (1983), Franks and Mayer (1990)).

¹⁴ Denis et al. (1997) also use other cutoff points as a robustness test and find that the sensitivity of turnover to performance changes significantly at the 5% cutoff point but it does not matter much for the upper cutoff point, as long as it is between 15% and 30%.

¹⁵ A director is an outside director when he or she is not an employee of the company, has no family connection with the management of the company, nor has any business dealings with the company.

A5. Status of the Top Executive

According to Morck et al. (1988), manager's status as the founder of the firm may be conducive to managerial entrenchment. Denis et al. (1997) show empirically that the top executive is less likely to be replaced if he or she is a member of the founding family. Result in Table A.I show that the top executive's status as the founder of the firm has a marginally negative effect on the probability of the top executive being replaced.

A6. Interaction Variables

Studies show that insider ownership and the existence of outsider dominated boards affect the sensitivity of top executive turnover to performance.¹⁶ Denis et al. (1997) find a weaker relationship between performance and turnover in firms with high insider ownership. Also, the existence of outsider dominated board is found to have a significant influence on the sensitivity of turnover to performance in Weisbach (1988), whereas it is shown to be insignificant in Denis et al. (1997).

Regression results in Table A.I show that insider ownership has a significant impact on the sensitivity of turnover to performance. The probability of turnover is negatively related to performance when insider ownership is less than 5%. However, the positive coefficient on the interaction of prior performance variable with the dummy variable denoting insider ownership between 5% and 25% indicates that the probability

¹⁶ As for other interaction variables, studies generally find insignificant coefficient terms when they use the interaction term between performance and a continuous insider ownership variable and when they use squared insider ownership variable interacted with performance. Denis et al. (1997) find that when they use the ownership of only the top executive, the relationship between turnover and past performance is significant only when the top executive ownership is less than 1% of the firm's shares.

of turnover is significantly less sensitive to performance for firms in this ownership structure category. These results are consistent with the findings of Denis et al. (1997).

Surprisingly, we find that firms with outsider-dominated boards have less sensitivity of top management turnover to performance. This result is contrary to that of Weisbach (1988), who finds a stronger association between prior performance and the probability of top executive turnover for companies with outsider-dominated boards. The difference may be due to fact that our sample firms are confined to companies whose blocks are traded. Thus, during times of possible control contest, an existing insider of the company may not continue to be aligned with the incumbent managers. Insiders may push towards replacing the top executive when opportunities arise (in this case, a new blockholder coupled with poor firm performance) in order to gain control of the company, or to be a part of the team that gains control. Therefore, for block traded companies, it is possible to observe *greater* sensitivity of top management turnover to performance for *insider*-dominated boards, which is equivalent to observing *less* sensitivity of top management turnover to performance for *outsider*-dominated boards.

Table A.I
Determinants of Top Executive Turnover

This table estimates logit models relating the probability of top executive turnover to firm performance, ownership characteristics, and other potential determinants of turnover. Sample of firms are block traded companies which are retrieved from SDC Platinum's Mergers and Acquisitions database for over the period of 1987 to 2002. Dependent variable is the top executive turnover dummy variable, which takes the value of one if the firm whose shares were traded in a block experienced a top executive turnover within one year after the block trade. Incidence of top executive turnover is found through the search of the LexisNexis Company Profiles. Prior firm performance is the percentage of common stock return for the 12 months ending two months before the block trade announcement minus the return on the CRSP equal-weighted index. Firm size is the natural logarithm of book value of assets. Insider ownership variable is the percentage of shares owned by officers and directors and includes those shares owned by individuals related to a member of the top management team, employee pension or stock option plans, trusts for which managers have some voting authority, and any other blocks of shares over which a member of the top management team has voting authority. Top exec if founding family variable is a dummy variable that takes the value of 1 when the top executive is a member of the founding family. Outsider dominated board is a dummy variable that takes a value on one when the board has more than 60% of its directors who are outsiders of the company. Data on total asset, market value of equity are from SDC Platinum's Mergers and Acquisition database. Data on prior firm performance is from CRSP. Data on board and ownership structure are from the last proxy statements (according to the record date) prior to the block trade. Numbers are marginal effects where derivatives are evaluated at mean values. Dollar values are in millions. P-values are in parentheses. Significant coefficients are indicated at 10%, 5%, and 1% levels by *, **, and *** respectively.

Category of independent variables	Independent variables	Dependent variable : Top executive turnover
Block size	Percentage of shares acquired (%)	0.033** (0.04)
Firm performance	Prior firm performance(%) (RET)	-0.010** (0.04)
Firm size	Log of firm size (mil)	-0.029* (0.09)
Ownership structure	Dummy for 5%<(insider ownership)<25%	-0.154* (0.09)
	Dummy for (insider ownership)>25%	-0.402** (0.04)
Board composition	Outsider dominated board dummy	-0.069 (0.62)
Status of top executive	Top executive is founding family dummy	-0.179* (0.09)
Interaction terms	RET*[Dummy for 5%<(insider ownership)<25%]	0.008** (0.03)
	RET*[Dummy for (insider ownership)>25%]	-0.006 (0.14)
	RET*[Outsider dominated board dummy]	0.005** (0.03)