

**The Value of SOX Internal Control Disclosures  
in the Market for Corporate Control**

**Masako Darrough**

**Rong Huang**

**Emanuel Zur**

**Stan Ross Department of Accountancy  
Baruch College  
City University of New York**

January 2010

**Corresponding Author:**  
**Emanuel Zur**  
**Stan Ross Department of Accountancy**  
**Baruch College**  
**[Emanuel.Zur@baruch.cuny.edu](mailto:Emanuel.Zur@baruch.cuny.edu)**  
**646 (312)-3230**

The authors acknowledge the research support from the PSC-CUNY Foundation. We appreciate the comments made by the participants at the seminars at Baruch College and Rutgers University.



## **The Value of SOX Internal Control Disclosures in the Market for Corporate Control**

### **Abstract**

This paper examines how SOX 302 and 404 disclosures on the internal control environment affect the market for corporate control. An acquisition of another firm is one of the most expensive investments firms make. Acquirers are looking to realize synergy or increase market share by acquiring another firm. Yet, a large number of empirical studies show that many M&As do not succeed in increasing shareholders' wealth of the acquiring firm. We document that while acquirers that report internal control weakness (ICW) earn smaller cumulative abnormal returns (CAR) than those without ICW, targets with ICW receive higher CAR than those without ICW around the announcement dates. Acquirers with ICW pay larger acquisition premia to targets, but targets with ICW receive smaller acquisition premia. Overall, our results suggest that SOX disclosures on internal control provide incremental information in evaluating firm value. Furthermore, the results are consistent with the notion that firms with ICW have weak corporate governance: acquisition is likely to be motivated by empire-building, and top management suffers from hubris.

## 1. Introduction

The Sarbanes-Oxley Act (SOX) was enacted by Congress in 2002 in the aftermath of a series of egregious corporate scandals. The primary goal of SOX is to strengthen investor protection by promoting better corporate governance and auditor independence. Various new rules and requirements also enhanced regulatory oversight (e.g., PCAOB). Perhaps the most controversial feature of SOX is its additional requirements on internal controls (Sections 302 and 404). In particular, Section 404 requires top management to assess the effectiveness of internal controls over financial reporting (ICFR) and the external auditor to attest and report on management's assessment. The controversy surrounds the costs and benefits of the required disclosures. Direct benefits seem to be elusive (e.g., Ogneva, Subramanyam, and Raghunandan, 2007). Yet, costs appear to be high: empirical evidence suggests that SOX imposed net costs on shareholders (Zhang, 2007, Ashbaugh-Skaif *et al.*, 2009) and bondholders (DeFond, Hung, Karaoglu, and Zhang, 2007), with disproportionately large costs on small firms (Iliev, 2007, Gao, Wu, and Zimmerman, 2008).

In this paper, we focus on the benefit of effective internal controls, or more precisely, the cost of not having effective internal control. We examine this issue in the context of the market for corporate control. A bidder acquires a target firm for various reasons: to achieve synergy, to expand its market share or to build an empire, among others. We ask whether and how disclosures on internal control weaknesses (ICW) affect the behavior of the players as well as the profitability of the M&A game. Specifically, how does the market react to the acquisition announcement when either the acquirer or the target has previously disclosed internal control weaknesses? Do firms that suffer from internal control weaknesses make decisions that are suboptimal?

One would expect that an effective internal control system is an important and necessary component of good corporate governance to resolve agency problems within an organization. It is in the interest of the management of a company to make sure that internal controls are effective to mitigate the agency problem between the management and its subordinates. A lack of effective internal controls, then, indicates that the management is not performing its duty in an optimal

manner. In such a case, the board of directors, in turn, can step in to rectify the situation by directing the management to improve internal controls or replacing the incumbent management with a new management team. When this internal governance process does not work, an external mechanism to discipline the underperforming management might come into play (Jensen and Ruback, 1983). The underperforming company becomes an attractive target of a takeover. By taking over the company, the acquirer can unlock the hidden potential of the underperforming company. Granted that SOX focuses on ICFR, lack of effective ICFR is likely to signal ineffective management and could hamper operational efficiency, reduce transparency, and increase information asymmetry between firms and investors.

A large body of literature has examined the performance of M&A transactions. In general, the market is skeptical of M&A. The cumulative abnormal returns (CARs) of acquiring firms around the announcement-period are often negative, although those of targets can be positive and very large. Moeller, Schlingemann, and Stulz (2004) report that while the equally-weighted average announcement return to acquirers is 1.1%, the value-weighted return is -1.25%, indicating that large acquisitions tend to have negative CARs.<sup>1</sup> A study conducted by KPMG (Kelly, Cook, and Spizer, 1999) concludes that 83% of M&A deals they examined “failed” to “unlock value,” indicating that the combined companies did not perform better than their benchmark.

Why do so many mergers and acquisitions seem to fail? Some M&As are motivated by the manager’s incentive to pursue private gains, for example, to build an empire. Some managers suffer from hubris (Roll, 1986) and overestimate the profitability of an acquisition. In either case, these managers are willing to buy the wrong targets and pay too much. Then it is rational for the market to take a cautious and skeptical attitude towards M&As. Better acquisition decisions are likely to be made by companies with effective management and good corporate governance. Good corporate governance is important in reining in managerial opportunism.

---

<sup>1</sup> The sample consists of 12,023 deals completed between 1980 and 2001 including private companies as targets.

Masulis, Wang, and Xie (2007) and Francis and Martin (2009) focus on two specific aspects of corporate governance to examine how corporate governance affects the success of acquisitions. Masulis *et al.* (2007) ask whether managers protected by antitakeover provisions (ATP) are more likely to indulge in value-destroying acquisitions since they are less likely to be disciplined via takeovers for taking such actions. They find that acquirers with more ATPs experience significantly lower CARs, while acquirers in which the CEO and the chairman of the board are two distinct individuals experience higher CARs. Francis and Martin (2009) hypothesize and find supporting evidence showing that firms that recognize losses in a timelier manner (Basu, 1997) make more “profitable acquisitions,” measured by announcement-period CARs as well as post-announcement-period performance. Firms that employ conservative accounting are likely to be those with better corporate governance (Garcia, 2009). The findings in these two studies suggest that the market expects certain features of good corporate governance to promote successful M&A. Our paper focuses on another facet of corporate governance, i.e., internal controls. We view effective internal controls as an essential ingredient of good corporate governance. This is consistent with the findings in Hoitash, Hoitash and Bedard (2009): firms with “better” corporate governance are less likely to disclose material weaknesses under SOX 404.<sup>2</sup>

In sum, our research focuses on how the lack of effective internal controls plays out in the M&A game. On the one hand, a firm with weak internal controls is a good target of discipline via a takeover. On the other hand, a firm with weak internal controls is more likely to engage in an M&A that is not in the best interest of its shareholders. First, we examine the announcement-period CARs of acquirers and targets to determine how the market evaluates the profitability of M&A deals. Second, we examine the premium paid to targets to determine how the shareholders of the two companies fare in the transaction. The central question is how the information on the internal control status is utilized in these M&A deals.

---

<sup>2</sup> The quality of governance is measured in terms of financial expertise in their audit committees and independent board.

Our sample is obtained from the M&A transactions (“deals”) in the Securities Data Corporation (SDC) database that were announced and completed (or withdrawn) during the post-SOX period from 2003 to 2008. We delete the transactions that are labeled as mergers of equals so that the deals we examine have clearly identifiable acquirers and targets. Acquirers continue as larger firms and targets cease to exist after the completion of the deals. We then identify acquirers and targets that have reported one or more material weaknesses in the most recent 10-Q (Section 302) or 10-K reports (Section 404) prior to the acquisition announcements. Our sample consists of 437 acquisition deals, of which 282 deals involve acquirers that had disclosed at least one material weakness (referred to as firms with internal control weaknesses or ICW-acquirers hereafter) in the quarter/year prior to the acquisition announcement, and 155 deals involve targets with ICW disclosures (referred to as ICW-targets).<sup>3</sup> In addition, there are 2,929 deals in which neither the acquirer nor the target had disclosed ICW. We use these deals as the control sample.

We find, on average, firms that had reported ICW are valued differently by the market from those that had not reported any ICW. More specifically, acquirers that had previously reported ICW (ICW-acquirers) experience significantly lower announcement-period cumulative abnormal returns (CARs) than non-ICW acquirers. More precisely, ICW-acquirers experienced, on average, a negative CAR (-2.61%), while non-ICW acquirers experienced a positive 3-day CAR (1.30%). This negative impact on CAR remains even after controlling for a host of additional variables that are known to affect CAR as well as ICW.

We also find that ICW-acquirers are willing to pay a larger premium to their targets. On average, ICW-acquirers offer a premium of 28.91%, while non-ICW acquirers in the control sample offer a 24.30% premium.<sup>4</sup> In contrast, we find that the non-ICW acquirers are willing to pay a smaller premium to ICW-targets (14.71%) compared to non-ICW targets (24.30%). This is presumably because the acquirer will have to invest more resources to improve the target with poor

---

<sup>3</sup> We delete 12 deals in which both the acquirer and the target have ICW so that our sample consists of M&A deals with at most one ICW company. This deletion is done to sharpen the differences in the groups; however, including the observations does not change the results.

<sup>4</sup> The percentage premium is calculated relative to the target price one day (or seven days) prior to the announcement date.

internal controls: a discount due to ICW. Overall, these results are consistent with the notion that the market is more skeptical of the motive as well as the competence of ICW-acquirers. The market suspects that these acquirers have overbid for their targets because they are anxious to build empires. Consequently, the market reacts more negatively to the acquisition announcement.

On the other hand, ICW-targets experience a significantly higher average 3-day announcement-period CAR (22.99%) than non-ICW targets (13.90%). We interpret the additional returns as representing the potential benefit from improving the poorly-run target. Thus, the potential value creation can be larger when targets have ICW. Our findings further suggest that neither the overpayment nor the discount is trivial: we estimate that ICW-acquirers paid on average \$24.27 million more than non-ICW acquirers (18.35% of the premium paid by non-ICW acquirers) and ICW-targets received \$36.92 million less (27.9% of the premium received by non-ICW targets) than non-ICW targets. Thus, firms suffering from ICW are disciplined in the market for corporate control by being taken over and paying penalties in the form of significantly lower premia.

Additional analyses show that acquisitions, on average, are viewed by the market as value enhancing rather than destroying. The sum of the value-weighted CARs of acquirers and targets are on average positive. This initial enthusiasm exhibited by the market, however, wanes quickly: we find that post-acquisition returns are largely negative. The returns are more negative for acquisitions involving ICW. In particular, ICW-acquirers perform worst with CARs of -8.15% over a one-year period after acquisition. However, even within this relatively short period, we see evidence that some acquisitions are value enhancing. Post-acquisition accounting performance is significantly better than pre-acquisition performance, especially for the deals in which non-ICW firms acquired ICW-targets. In contrast, accounting performance measures of ICW-acquirers deteriorate, which is consistent with the notion that these acquisitions are made for empire-building and/or they overpaid because managers are hubristic and misjudged the value of the targets.

This paper makes several contributions to the literature. First, while many studies document the importance of corporate governance in general, few studies examine the importance of corporate governance on M&A activities. Focusing on specific aspects of corporate governance, Musulis *et al.* (2007) and Francis and Martin (2009) document that good corporate governance helps firms to make better acquisitions. We focus on a different aspect of corporate governance and show that disclosures on ICFR and M&A activities are intricately linked. We document that ICFR is an important variable in determining M&A profitability, as measured by the CARs around the announcement date and the premia paid to targets. Second, we provide corroborating evidence for the notion that some acquisitions are made by ineffective management, who are, for example, infected by hubris and motivated by empire-building. While a firm with ineffective management pays significantly more to acquire target firms, it could be disciplined by a takeover because firms with ICW make attractive targets. Third, firms with ineffective internal controls are attractive takeover targets because their acquirers can pay a lower premium due to ICW and can rectify the ICW problems quickly to realize the targets' potential. Fourth, we contribute to the controversy over the benefit of SOX 302 and 404 (e.g., Engel, Hayes, and Wang, 2007, and Zhang, 2007). Although we cannot unambiguously estimate the financial benefit of SOX requirements, we are able to demonstrate that the disclosures on ICFR provide incremental information to investors in assessing M&A deals. Furthermore, we document the relation between ICW and acquisition premia and provide estimates of the overpayment made by ICW-acquirers and the discounts received by ICW-targets. The average overpayment of \$24 million (18%) and the average discount of \$36 million (28%) together suggest that the cost of not having effective controls is substantial. These findings in turn suggest that the value of SOX internal control disclosures is substantial in the market for corporate control.

The remainder of the paper proceeds as follows. In the next section, we provide a background for SOX 302/404 and M&A. We then develop and formalize our hypotheses for empirical tests and specify our research design in Section 3. Section 4 describes the data and descriptive statistics. Section 5 reports empirical results. The last section concludes the paper.

## **2. Background**

### **2.1. SOX Sections 302 and 404**

The importance of internal controls has been recognized in the American legal framework for a long time. The Foreign Corrupt Practice Act (FCPA) of 1977, which is better known for its anti-bribery provisions, requires that all SEC registrant firms (irrespective of foreign business) keep good books and records as well as establish and maintain appropriate internal controls. SOX pushed the notion further to require managers to examine and assess the effectiveness of internal controls. Section 302 requires CEOs and CFOs personally to certify the accuracy of financial statements and the effectiveness of internal controls. In addition to management's evaluation and certification, Section 404 mandates independent auditors to certify management's assertion of the effectiveness of its internal controls.<sup>5</sup>

Clearly, not all companies have effective internal control systems. Even before SOX was enacted in 2002, both the SEC and the Justice Department brought many enforcement cases under FACA (Section 13(b)(2)(A) of the Securities and Exchange Act), which involved violations of the books and records requirement. Another manifestation of poor ICFR is the incidence of restatements of financial reports. The Government Accountability Office documents 2,705 restatements during the period from 1997 to June 2006. By definition, when there is a material weakness in internal control, there is “more than a remote likelihood that a material misstatement” of the financial reports “will not be prevented or detected.” The firms that restated their financial statements are likely to have had ineffective internal controls.

Under SOX, firms are required to identify and report specific types of material weakness in internal controls. Different forms of weaknesses (or deficiencies) are identified by companies and some firms disclose as many as 11 material weaknesses in the same year (Core-Mark Holding). Doyle, Ge, and McVay (2007a) find that firms that report material weaknesses tend to be “smaller, younger, financially weaker, more complex, growing rapidly, or undergoing

---

<sup>5</sup> See Ge and McVay (2005) for a summary of the legislation and Coates (2007) for the general discussion of SOX.

restructuring.” Furthermore, more serious entity-wide control problems are associated with smaller, younger and financially weaker firms. Ge and McVay (2005) attribute weaknesses to a lack of commitment of resources for internal controls. Similar findings were also noted by Ashbaugh-Skaife, Collins, and Kinney (2007) about the firms that voluntarily disclosed information on internal controls under SOX 302. In addition to an increased likelihood of misstatements in financial reports, firms with ICW are more likely to have financial reports that are of poor quality. Doyle, Ge, and McVay (2007b) find that firms that reported at least one material weakness are associated with “poorly estimated accruals” that are not realized as cash flows. That is, poor internal control results in lower quality accounting. Ashbaugh *et al.* (2009) find that firms that report internal control deficiencies have significantly higher idiosyncratic and systematic risk, resulting in a higher cost of equity. All these findings suggest that firms that disclose ICFR have governance problems. That is, ICW is a summary indication of underlying shortcomings in the firm.<sup>6</sup>

While ineffective internal controls suggest that firms have some operational difficulty, the benefit from being able to report effective internal controls is elusive. Of course, it cannot be good to have weaknesses (which can lead to misstatements, restatements, fraud, or in general lack of transparency). Direct benefits for having no ICW are difficult to document, however. Ogneva *et al.* (2007) report that the difference in the implied cost of capital between firms with ICW and those without ICW disappears once firm characteristics are controlled for. With the benefits of ICW disclosures being unclear, firms have complained about the cost of SOX 404 compliance. Audit fees in the initial year of SOX 404 compliance increased significantly. For example, Eldridge and Kealey (2005) report that the average audit fees of Fortune 1000 firms went up from \$3.5 million in 2003 to \$5.8 million in 2004 – an increase of 66%.<sup>7</sup> In addition to the increased fees for audit service, other direct costs are also incurred such as additional costs for internal audit

---

<sup>6</sup> Both acquiring and target firms with ICW are likely to be firms with chronic internal control problems. A perusal of data on restatements (G.A.O., 2002; G.A.O., 2006; Doyle *et al.*, 2007a) shows (untabulated) that roughly 60% of firms have a history of restatements in the past; some firms had multiple restatements (e.g., Checkpoint Systems, Tyco International, and McAfee).

<sup>7</sup> They start with all 1,000 firms, but 352 firms were dropped for various reasons.

services. It is also possible that there are indirect costs of SOX 404. Gao *et al.* (2008) argue that smaller firms are incentivized to remain small while large firms are incentivized to become smaller since SOX 404 exempts “non-accelerated filers” from compliance. They do so by engaging in otherwise suboptimal strategies, such as foregoing positive NPV investment projects, distributing excessive dividends, and reducing market capitalization. Gao *et al.* (2008) refer to this possible misallocation of resources as an “unintended consequence” of SOX. Another effect is felt in the reduction in disclosure transparency since some firms go private (Engel *et al.*, 2007) or go “dark” by reducing the number of shareholders below the SEC registration requirement after SOX (Leuz, Triantis, and Wang, 2008).

## **2.2. *M&A and Internal Control Weakness***

Even though there are costs, there are also benefits from the implementation of SOX 302 and 404. In order to certify that internal controls are effective, the management of each company assesses and, if found ineffective, rectifies their internal control systems. When internal controls are effective, perhaps investors take it for granted. In contrast, if a firm discloses material weaknesses, the disclosure could raise serious doubts about the management and operations of the company. A well-managed company does not have ICW. Thus, the presence of ICW could be a manifestation of poor management. Our research question is whether firms with these problems are perceived by the market to make good acquisition decisions. Arguably, acquisitions are one of the most expensive and risky investments, in part due to the difficulty in integrating unfamiliar entities. We are interested in how ICW disclosures mandated by SOX are interpreted by market participants, both the general investors and the players of the M&A game.

Several motives for M&A have been presented in the literature. One obvious motive is the potential synergy: a combined operation can be more efficient than two separate, stand-alone operations. A combined entity can enjoy economies of scale and/or scope as well as cost reduction by eliminating redundancy. Synergy is enhanced if a takeover target has hidden and untapped potential, which the incumbent management was not able to exploit. The target’s management is disciplined by surrendering the rights to corporate control to the acquirer

management (Jensen and Ruback, 1983). Another motive is to increase market share, which, in the short run, may not produce any “synergy,” but in the long run, may result in a strategic and competitive advantage. The third motive stems from the manager’s desire to maximize his/her private benefits at the expense of shareholders’ wealth, for example, to build an empire. Roll (1986) puts forth a hypothesis that many corporate takeovers are initiated by managers who are infected by hubris. These managers overestimate the value of takeovers and are willing to pay too much for the acquisition. Winning bids are of course those that pay too much (“winners’ curse”).

### **3. Hypothesis Development and Research Design**

#### **3.1. Hypotheses**

Drawing on these prior studies, we first investigate the market reaction to the announcements of M&As when the acquirer has previously reported ICW. For this set of acquirers, the market is more skeptical about their motives for acquisition as they could be motivated by empire-building. The market may also discount these acquirers’ ability successfully to implement integration of the targets and to capitalize on any potential synergies. Therefore we state our first hypothesis as follows:

*H1: CARs of ICW-acquirers around the announcement dates are smaller than those of non-ICW acquirers.*

Targets, on the other hand, are clearly winners in M&A transactions. Typically, the shareholders of targets in successful M&As receive a substantial increase in their share prices (e.g., Healy, Palepu, and Ruback, 1992). When a company becomes a target, its board of directors commonly engages the services of a financial advisor, generally an investment bank, which in turn writes a report to provide a “fairness opinion” (Calomiris and Hitscherich, 2007; Cain and Denis, 2009).<sup>8</sup> The fairness opinion speaks only to the fairness of the transaction from “a financial point of view” and does not opine on the question as to whether this is the best course of

---

<sup>8</sup> Calomiris and Hitscherich (2007) claim that “virtually all” boards of directors of public target companies seek fairness opinions, even though that is not legally required. The fairness opinion likely serves as evidence that the board of directors has fulfilled its fiduciary duty of care.

action. Nevertheless, since it is likely that target companies will only accept offers that are at least “fair,” the premium associated with offers should be positive. Knowing this, the market is likely to react positively to the possibility of becoming a target of acquisition. If an M&A transaction is not successfully completed, however, the share price decreases to the original level, suggesting that the increase in the share price is solely due to the prospect of a successful M&A transaction (Bradley, Desai, and Kim, 1983).

In contrast to acquirers with ICW, the market is likely to react more favorably to the news of acquisitions of ICW-targets. This is because the acquirer is likely to rectify the target’s internal control problems and unlock its hidden potential, while the present management may not be able to do so. Thus, we state the second hypothesis as follows:

*H2: CARs of ICW-targets around the announcement dates are higher than those of non-ICW targets.*

The second set of hypotheses concerns the premia paid to targets. Clearly, to entice the board and shareholders to sell their shares, the acquirer has to sweeten the deal. That is, a premium will be paid for the acquisition. Prior research found that the premium depends on variables such as the acquirer’s size, the target’s inherent value, the potential synergy, and managerial ownership (Palia, 1993). Beatty, Santomero and Smirlock (1987) found that banks paid higher premia to acquire banks that are managed well and more profitable. Moeller (2005) found that the premium is positively related to the bargaining power of the target’s shareholders.

When an acquirer has ICW, we hypothesize that it is more likely to engage in a suboptimal acquisition that enhances managerial power (i.e., the “empire”), or by simply overestimating the value of acquisition. In such a case:

*H3: ICW-acquirers pay larger premia than non-ICW acquirers.*

On the other hand, when a target has ICW, we expect that the premium paid will be less than otherwise. This is because the acquirer, knowing that the target has ICW, estimates the cost of integration to be higher, or uses a higher discount rate in evaluating the benefit from the

acquisition. If the target has ICW, the financial information of the target is of poorer quality and the future benefits are more difficult to estimate, i.e., risky,

*H4: The premia paid to ICW-targets are smaller than those paid to non-ICW targets.*

Combining Hypotheses 2 and 4, we predict the following relation: CARs of ICW-targets are larger, but their premia are smaller than those of non-ICW targets. That is:

$$\begin{aligned} ICW\_CAR &> non-ICW\_CAR \\ ICW\_Premium &< non-ICW\_Premium, \end{aligned} \quad (1)$$

where *ICW\_CAR* is the CARs of ICW-targets, *non-ICW\_CAR* are the CARs of non-ICW targets, *ICW\_Premium* is the premium paid to ICW-targets, and *non-ICW\_Premium* is the premium paid to non-ICW targets. This reversal of relation is unlikely to hold when an acquisition is paid for in cash, since the premium determines the CAR. A reversal is possible, however, when acquirers' stock is used as the means of acquisition.<sup>9</sup> Because of ICW, both the pre-acquisition stock price and the acquisition premium of an ICW-target are discounted. But, the value of the target shares after the acquisition announcement would reflect the value of the combined company, which benefits from the improvement in internal controls initiated by their acquirers and the potential synergy from acquisitions. Thus, the value of the combined company is higher than the sum of the values of the two firms on a stand-alone basis. In the Appendix, we describe in detail how this reversal of relations can happen and derive the conditions under which this occurs.

### **3.2. Research Design**

We test our hypotheses by estimating: (1) the average (median) CAR around the acquisition announcement; and (2) the premium paid to targets. First we examine the CARs of the three groups consisting of: (1) deals involving ICW-acquirers (and non-ICW-targets); (2) deals involving ICW-targets (and non-ICW-acquirers); (3) deals in which neither acquirers nor targets have ICW. The first two groups comprise our ICW-sample, while the last group is included as a

---

<sup>9</sup> More than half of the deals in our ICW-sample were paid by a combination of cash and stock. Roughly 6% of the deals were 100% stock acquisitions

control sample.<sup>10</sup> Since the differences in CARs or premia across groups might be driven by forces other than the ICW status, we employ a multiple regression framework to control for a host of variables. Thus,

$$CAR = \alpha_0 + \alpha_1 ICW + \sum \beta Control + \varepsilon_1 , \quad (2)$$

$$Premium = \gamma_0 + \gamma_1 ICW + \sum \lambda Control + \varepsilon_2 , \quad (3)$$

where *ICW* is a dummy variable indicating that either the acquirer has ICW (*Acq ICW*) or the target has ICW (*Target ICW*). The control variables we include consist of variables (1) that characterize the deal itself; (2) that are found to be associated with ICW; and (3) that are found to be associated with corporate governance.

#### 4. Sample Selection and Descriptive Statistics

We obtain our acquisition sample from the Securities Data Corporation (SDC) Mergers and Acquisitions database. Table I, Panel A summarizes our sample construction procedure. We identify 3,378 acquisitions announced by 3,209 firms between January 1, 2003 and December 31, 2008 that meet the following criteria:

1. The acquisition is completed (or withdrawn) by December 31, 2008.
2. The transaction involves at least 50% of the target's shares.
3. The deal value is disclosed in SDC.<sup>11</sup>
4. Both the acquirer and the target are included in the Audit Analytics Database.

Because we are interested in examining the influence of ICW disclosures on acquisitions, we identify all acquisitions in our database that involve acquirers and/or the target that disclosed that their internal controls are ineffective under Sections 302 (in 10-Q) or 404 (in 10-K) reported in the last quarter or the last year prior to the acquisition announcement dates. Of the 3,378 deals, 2,929 deals do not involve ICW either on the part of the acquirer or of the target. We refer to this

---

<sup>10</sup> As mentioned earlier, we delete 12 deals in which both acquirers and targets have ICW to sharpen the difference among the three groups. Including them in our analysis, however, does not change our results.

<sup>11</sup> Deal value is defined by SDC as the total value of consideration paid by the acquirer, excluding fees and expenses.

group as the control sample. The final ICW sample yields 437 acquisitions, of which 369 are eventually completed and 68 are eventually withdrawn after announcements. Of the 437 deals, 282 are made by ICW-acquirers, while 155 deals involve ICW-targets. The Audit Analytics Database includes data from more than 6,000 publicly traded companies per year since January 1, 2001. The database includes detailed information on auditor firms, auditor changes, opinions, disclosures on internal controls under Sections 302 and 404, audit legal cases, financial details and compliance difficulties.

In Panel B of Table I, we present the distribution of our sample firms for each year of the 6 year period and their ICW status. Acquisitions involving ICW under Section 302 are fewer (total of 35) and represent roughly 8 percent of the ICW sample (437). Panel B also indicates that the number of deals is fairly constant during 2003 to 2007.

Table II presents descriptive statistics (the mean, median, first quartile (Q1), third quartile (Q3), and standard deviation) on the characteristics of acquirers, targets, and the acquisition transactions themselves. The sample characteristics are calculated over the one-year period preceding the acquisition's announcement date.

Panel A of Table II reports the descriptive statistics for the entire sample consisting of 3,378 deals, while Panels B and C report statistics on the subsamples of interest. In general, acquiring firms have a higher market value of equity, total assets, and return-on-assets (*ROA*) compared to target firms. Comparison of Panels A and B reveals that ICW-acquirers tend to be larger both in total assets and market value than the acquirers in the entire sample. With respect to deal value, we find that on average it is much larger when targets have ICW than when acquirers have ICW. Although there are some differences, the financial characteristics of the acquirers in our sample are consistent with those found in Moeller *et al.* (2004) and the material weakness characteristics are consistent with those found in Doyle *et al.* (2007b). Panel D of Table II also describes the method of payments for the three groups. Cash is the most common method of payment. Roughly 40% of the deals are for 100% cash. However, more than half of the deals

involve payments with acquirers' stock. Stock payments are important in producing the reversal of CAR and premium reversal for targets as summarized in equation (1).

## 5 Results

### 5.1. *Announcement Effects*

#### 5.1.1. *Univariate Analysis of Returns*

To evaluate the market impact of each acquisition, we estimate CARs around the acquisition announcement date ("day zero"). The announcement period CARs are computed using the market model, whose parameters are estimated over the 210-day period (-210,-11) with the CRSP value-weighted NYSE/AMEX/NASDAQ return as the market index.

Prior event studies used various windows.<sup>12</sup> For example, Kang, Shivdasani, and Yamada (2000) examine 3, 5, and 11-day windows in the Japanese market, while Moeller *et al.* (2004) calculate CARs over a 3-day event window. Masulis *et al.* (2007) use a five-day window to examine abnormal returns to acquirers with antitakeover provisions, while Louis (2004) extends the window to 23-days (-21,+1) to take into account the possibility of information leakage ahead of official acquisition announcements.

Given these different time periods utilized in prior research, we calculate abnormal returns over 3, 5 and 23-day windows. The 3-day short window avoids confounding events, while the 5-day window is more likely to capture announcements in case the SDC announcement dates are not precise.<sup>13</sup> However, we find that using the 3, 5, or 23-day event window does not qualitatively affect our results.

---

<sup>12</sup> See Halpern (1983) for a review of studies that use CARs to evaluate M&A activities.

<sup>13</sup> According to Aktas, Bodt, and Roll (2006), SDC announcement dates are "known to be somewhat imprecise." Fuller, Netter, and Stegemoller (2002), however, verified the announcement dates listed on SDC and found that "for 92.6 percent of the sample, the announcement date provided by SDC was correct, in the other cases it was only off by two days at most" of the SDC recording errors.

Table III presents the estimated CARs. Panel A of Table III reports the mean (median) CAR estimate for the 282 acquisition events with ICW-acquirers.<sup>14</sup> Acquirers' CARs have been adjusted for the toehold shares (<50%) they already owned of their targets, using the procedure suggested by Bates, Lemmon, and Linck (2006).<sup>15</sup> ICW-acquirers earn a mean CAR of -2.61% over the (-1, +1) window, -2.49% over the (-2, +2) window, and -2.07% over the (-21, +1) window. The median CARs are -1.29%, -1.36%, and -1.19%, respectively. In contrast, the acquirers in the control sample earn a significantly positive mean (median) CAR of 1.30% (0.93%) over the (-1, +1) window, 1.55% (1.13%) over the (-2, +2) window, and 1.23% (0.47%) over the (-21, +1) window. These CARs are consistent with those of Moeller *et al.* (2004) for their full sample of acquisitions. When we compare the returns over each window between our sample and the control sample, we find that the differences are statistically significant at the 0.01 level. Supporting Hypothesis 1, the results suggest that the market reacts less favorably to acquirers in deals in which they have ICW prior to the acquisition.

Panel A of Table III also presents the mean (median) CARs for the targets in our sample and the control sample. Targets earn a mean (median) market-adjusted return of 20.19% (14.91%) over the (-1, +1) window, 19.93% (14.65%) over the (-2, +2) window, and 22.87% (18.39%) over the (-21, +1) window. The targets in the control sample earn a mean (median) market-adjusted return of 13.90% (10.69%) over the (-1, +1) window, 13.28% (10.48%) over the (-2, +2) window, and 17.31% (14.52%) over the (-21, +1) window. The differences in the mean CARs between our sample and the control sample are statistically significant at the 0.10 level. The results support Hypothesis 2, suggesting that the market reacts more positively to targets of ICW-acquirers.

---

<sup>14</sup> The number of deals analyzed in Table IV is smaller because some of the firms are private without necessary information.

<sup>15</sup>  $AdjCAR_{Acq}$  is calculated following the method in Bates *et al.* (2006) as;

$$AdjCAR_{Acq} = (\Delta AMV_{Acq} - \alpha \Delta AMV_T) / (MV_{Acq} - \alpha MV_T),$$

where  $\Delta AMV_i$  is the abnormal change in the market value and is defined as:  $\Delta AMV_i = MV_i * CAR_i$ ,  $i=Acq, T$ .  $AdjCAR$  essentially adjusts both the  $MV$  and the abnormal  $MV$  of the acquirer by removing the portion attributed to the toehold.

Panel B of Table III reports the mean (median) CARs for both acquirers and targets around the announcement dates of deals in which the targets have ICW. Since CARs are very similar for all windows, we discuss only the CARs over the (-1, +1) window. While positive, the adjusted-CARs for our sample acquirers (who acquire ICW- targets) are smaller than those in the control sample (who buy targets without ICW). The difference is statistically significant at the 0.01 level. The CARs of ICW-targets, on the other hand, are substantially higher than those of targets in the control sample (which do not have ICW). These CARs are also higher than those of non-ICW targets, which were acquired by acquirers with ICW (in Panel A). In sum, the two panels of Table III summarize the stylistic relationship between the CARs of acquirers and targets with and without ICW. However, we cannot unambiguously conclude that the relationship is due to ICW, since there may be other omitted variables that systematically affect CARs. To investigate what other factors determine the announcement-period returns, we next examine CARs in a multivariate setting.

### **5.1.2. *Multivariate Analysis of Returns***

In Tables IV and V, we report the results of multiple regression models that incorporate cross-sectional variations in acquisition deal characteristics and firm characteristics. We regress the 3-day announcement-window CAR against the ICW variable as well as a host of control variables. We define internal control status as either a categorical variable (1 if a firm has ICW and 0 otherwise) or the number of material weaknesses (in natural logarithm). We run different regressions on two samples including: (1) ICW-acquirers and control sample; and (2) ICW-targets and the control sample. Sample size varies due to missing data for certain variables. Since the two alternative internal control status variables are highly correlated with each other, we separately examine their effects on CAR. We control for different known determinants of M&A announcement returns (i.e., the characteristics of deals and the financial characteristics of the firms) and the determinants of ICW.

Panel A of Table IV reports the results of regression models using the data for deals in the control sample and the subsample with ICW-acquirers. Note that the deals included in these

regressions do not have any deals with ICW-targets. The first two columns of Panel A present the coefficient estimates of ICW status variables. The coefficient estimates on *Acq ICW* are -0.106 (t=-3.79, Model 1) and -0.103 (t=-3.51, Model 2). The incremental effect of having a larger number of material weaknesses is -0.029 (t= -1.91, Model 2). These estimates suggest that the market expects acquirers with ICW to make poorer acquisitions and that, on average, the larger the number of material weaknesses, the more negative the reaction to acquisition announcements. Model 1 also controls for the severity of weaknesses; however, the coefficient is not significant.<sup>16</sup> These findings are consistent with the univariate results. Models 3, 4, and 5 include various control variables. In Model 3, we find that certain characteristics of the deals are important in explaining CARs: in particular, the size of acquisition (*Stock owned after deal*), the method of payment (*Only Cash*), and private target, all consistent with findings in prior research (Chang, 1998 and Fuller, Netter, and Stegemoller, 2002). The coefficient on *Same Industry*, indicating acquisitions in the same industry, is positive as expected (Berger and Ofek, 1996), but is not significant at the conventional levels. None of the other control variables is statistically significant. While deal characteristics reduce its size, we find the coefficient on *Acq ICW* remains negative and significant at the 0.05 level.

Model 4 includes ICW-related variables. The coefficients on the variables *Acq CFO*, *Acq Book-to-Market*, *Acq ROA*, *Acq Ln(Market Value)*, *Acq Inventory*, and *Acq Big 4* are statistically significant, consistent with the findings in Barger, Schlingemann, Stulz, and Zutter (2008), Louis (2005) and Moeller *et al.* (2004). Other variables are not statistically significant. What is noteworthy is that the coefficient estimate on *Acq ICW* stays virtually the same even after adding the variables that are determinants of ICW. Finally, Model 5 includes corporate governance characteristics of the acquirers. Contrary to our expectation, the coefficient on *Acq CEO not Chair* is negative and highly significant. Board characteristics that are found to be associated with accounting conservatism (Ahmed and Duellman, 2007) are not significant.

---

<sup>16</sup> We categorized the following four weaknesses as the more severe weaknesses: Senior management competency, tone, reliability issues; Accounting personnel resources, competency/training; Segregation of duties/ design of controls; Information technology, software, security & access issues.

However, the positive coefficient on *Acq Book-to-Market* suggests that accounting conservatism promotes better acquisitions. Altogether, we find that ICW contributes negatively to acquirers' announcement returns.

Panel B of Table IV reports the results for acquirers (without ICW) that acquire targets with or without ICW. The observations include the control sample and deals with ICW-targets (deals with ICW-acquirers are not included). Model 1 and Model 2 show that acquirers that acquire ICW- targets experience smaller CARs as we saw in the univariate estimates. Neither the severity of ICW nor the number of weaknesses is statistically significant. As in Panel A, deal characteristics are important: the estimates and significance are very similar to the results in Panel A in all Models. With respect to the variables that are associated with targets' ICW, only *Target Ln(Market Value)* is negative and statistically significant. Again, the variable *Acq CEO not Chair* is negative and significant. All together, these results in Panels A and B show that the ICW status of acquirers or targets is a significant determinant of acquirers' announcement-period CAR. In particular, acquirers' CARs are statistically significantly lower when either acquirers themselves or targets have ICW.

In contrast to acquirers' CARs, targets' CARs benefit from ICW, be it the acquirers' ICW or that of the targets themselves. Table V reports the results of various multiple regression specifications of targets' 3-day returns. Note that only public targets are included in these regressions. Panel A shows that a target's CAR is higher when its acquirer has ICW. The coefficient estimate on *Acq ICW* is 0.049 (t=1.93) and is statistically significant at the 0.10 level. This variable is statistically significant even after controlling for the characteristics of the deals, acquirer ICW-related variables, and target corporate governance variables. As before, the estimate of the coefficient on *Acq ICW* drops substantially when deal characteristics are included. Interestingly, the variable *Same Industry* is positive and highly significant. Except for *Acq Leverage*, none of the variables that are expected to determine acquirers' ICW status is statistically significant. The coefficient on *Target CEO not Chair* is positive, as we expect, but is not significant.

Panel B of Table V reports the regression estimates of targets' CARs when targets can have ICW. The coefficient on *Target ICW* is positive and significant (at the 0.10 level or better) in all Models. The coefficients on *Target Book-to-Market*, *Target ROA*, *Target Ln (Market Value)*, and *Target Dividend Payer* are negative and significant. Note, however, that the coefficient on *Target ICW* remains significant, and moreover, the value of the coefficient remains about the same across different specifications. In sum, the results in Table V show that both *Acq ICW* and *Target ICW* increase targets announcement-period returns.

### **5.2. Acquisition Premium for the Targets**

Panels A and B of Table VI report the average premium paid to the targets by their acquirers in percentage and dollar amount (in \$ million), while Panel C reports the results of the regression analysis of the premium (%). Prior research examines a number of justifications for acquisition premia, ranging from a premium for potential synergy to empire-building. Of course, a premium is required to convince the board of directors, as it is unlikely to agree to an acquisition unless it enhances the shareholders' wealth. The question of interest is, then, how the premium is affected by ineffective internal controls in either the acquiring or the target firm. Hypothesis 3 proposes that an acquirer with ICW tends to pay too much, while Hypothesis 4 proposes that the premium for a target with ICW is discounted.

We calculate the premium as the acquirer's offer price in excess of the target's share price as a percentage of the target's share price one day (one week) prior to the announcement date. Moreover, in order to evaluate the benefit and cost of internal controls, we calculate the premium in dollars as the percentage premium multiplied by the target's market value one day (one week) prior to the announcement date. Note that premium data are available only for targets that are public.

Panel A of Table VI reports the average premium paid (in % and \$) to targets by ICW-acquirers. They paid a significantly higher premium (28.91% on average) than non-ICW acquirers in our control sample. The difference is statistically significant at the 0.10 level and amounts to \$24.27 million. Panel B shows that ICW-targets received significantly lower premia

that non-ICW targets in the control sample. The difference is roughly 9.60% (or \$36.92 million). Thus, the discount targets suffer for having ICW is statistically and economically significant. The \$36.92 million discount could be attributed to the cost of ICW in the target firm. Alternatively, instead of buying a firm with ICW and resolving the problems, acquirers are willing to pay additional \$36.92 million on average to buy a target without ICW.

To see if these differences are really driven by ICW rather than other omitted variables, we report in Panel C the results of multiple regressions that control for a number of variables. Model 1 replicates Panels A and B. Model 2 controls for variables that are found to influence the acquisition premium. For example, the coefficient on *% Shares Acquired* is negative and significant. That is, the larger the percentage a bidder is acquiring, the lower the premium it is willing to pay. The coefficient on *Target ROA* is negative and significant at the 0.10 level. While the negative coefficient is consistent with that on *Target ROA* in the regression of target CARs, it is somewhat puzzling. However, the variables of interest are *Acq ICW* and *Target ICW*, both of which remain significant in Model 2. In Model 3, *Acq ICW* is no longer significant at the conventional level, but *Target ICW* is significant at the 0.05 level.

We attribute the lower premium paid to ICW-targets to the additional resources that the acquirers have to invest in the targets to rectify their internal control problems. On the other hand, the seemingly excessive premium paid by ICW-acquirers can be attributed to their ineffective management. It is consistent with the notion that these managers are interested in empire-building and/or suffer from hubris. Empire-building managers are taking advantage of poor internal control in their firms to hide their true motives. Overall, the results in Table VI support Hypotheses 3 and 4: ICW-acquirers pay larger premia, while ICW-targets receive lower premia.

### **5.3 Additional Analyses**

#### **5.3.1 Wealth Creation**

Our empirical analyses have provided supporting evidence for the four hypotheses we developed in this paper. We find that the disclosures on internal controls, mandated by SOX Sections 302 and 404, remain an important factor in determining announcement CARs and

premia, even after controlling for the various characteristics pertaining to the specific acquisition deals and the firms involved. Our analyses underscore the general finding made in prior research that the winners in acquisitions are target shareholders. Both CARs and premia of targets are substantial. Moreover, ICW-targets receive smaller premia than non-ICW targets, although they experience higher CARs than non-ICW-targets. This is consistent with the notion that ICW-targets are disciplined in the form of lower premia, but can participate in the gain from unlocked value if they retain shares in the combined firm. ICW-acquirers perform poorly: they experience lower announcement-period CARs and pay higher premia than non-ICW acquirers. This is consistent with the market being skeptical of ICW-acquirers' motives and competence.

What is not clear is whether acquisitions create value for the shareholders of the acquirers and targets combined. Although the CARs of targets are positive and large in magnitude, those of many acquirers are negative. Since acquirers tend to be larger than their targets, it is possible that the negative market reaction for acquirers outweighs the positive reactions toward targets. Thus, it is possible that some M&As are perceived by the market to be actually value destroying. To examine this issue, we compute a value-weighted average of the change in the abnormal market value of acquiring and target firms. Panel A of Table VII reports the combined abnormal changes in the market value of the acquirer and the target. Following Bates *et al.* (2006), we adjust for the toehold the acquirer already has in the target as follows:

$$MV_c = MV_{Acq} * CAR_{Acq} + (1 - \alpha) * MV_T * CAR_T,$$

where  $MV_c$ ,  $MV_{Acq}$  and  $MV_T$  are the market values of the combined firm, the acquirer, and the target before the announcement date,  $\alpha$  is the toehold or the percentage of the target shares held by the acquirer. CARs are calculated over the announcement window of (-1, +1). Extending windows to (-2, +2) or (-21, +1) does not change qualitative implications.

Panel A shows that the combined change in abnormal market values is substantially higher for our ICW-sample firms compared to those in the control sample. A much larger value is partially due to the fact that acquirers and targets in our ICW sample tend to be larger than those

in the control sample. What is important, however, is that, on average, the value-weighted changes are positive; that is, the positive market reaction for the targets outweighs the negative reaction for acquirers. In sum, these results show that even though ICW points to underlying governance problems in bidder or target firms, the market does not necessarily view acquisitions involving ICW firms to be value-destroying propositions. In fact, the market views that these acquisitions are, on average, value-creating as in the control sample.

### **5.3.2. Deal Completion**

ICW in the target firm, however, reduces the probability of deal completion. Our sample includes acquisition deals that were eventually withdrawn. There are 68 such deals.<sup>17</sup> To see how the ICW status affects the probability of completion, we run a logistic regression, based on the logistic regression models in Bates and Lemon (2003) and Bates *et al.* (2006). The results are reported in Panel B of Table VII. The coefficient on *Acq ICW* is negative, but is not significant. While the management of acquiring firms with ICW may not be as competent, they might be very anxious to conclude the deal especially if they are hubristic and/or anxious to build an empire. The coefficient on *Target ICW* is negative and significant even after controlling for various factors that affect bid completion probability. We interpret this result to indicate that ICW in targets is likely to make potential synergy from the acquisition more uncertain, in part due to poorer quality financial reporting. The likelihood of completion is enhanced when an acquisition is attempted through a tender offer, but is reduced by prior bidding and litigation, consistent with the findings in Bates and Lemon (2003) and Bates *et al.* (2006). In addition, the likelihood is increased when an acquisition takes place in the same industry.

### **5.3.3. One-Year Ahead**

While the stock market reaction to many acquisition announcements appears to be optimistic, the enthusiasm wanes quickly: the average CARs over the next one-year period are negative for all three groups. The average one-year ahead CARs are -8.15%, -6.03%, and -2.80%,

---

<sup>17</sup> The withdrawn deals consist of 41 deals with ICW-acquirers, 27 deals with ICW-targets, and 384 deals without any ICW.

for the ICW-acquirers, for the non-ICW acquirers that acquired ICW-targets, and the control group acquirers, respectively.<sup>18</sup> The stock market grows more skeptical about the success of the acquisitions. This general negative drift is consistent with the findings in prior research (Agrawal, Jaffe and Mandelker, 1992; Anderson and Mandelker, 1993; Loughran and Vijh, 1997); however, acquirers with ineffective internal controls are penalized most during the year after the acquisition.

While the stock market becomes more critical of acquisitions, accounting performance measures tell a different story, especially for non-ICW acquirers. Panel D of Table VII provides the mean accounting performance measures for the pre- and post acquisition periods.<sup>19</sup> We find that many of the performance measures have actually improved substantially for non-ICW acquirers. The winners appear to be acquirers that acquired ICW-targets. The differences between the mean post- and pre-acquisition performance measures are positive, significant and larger than those for the control sample. One possible explanation is that after acquiring ICW-targets, the acquirers were able to fix the ICW problem to reap a bigger benefit from synergy. Another reason could be that because they paid smaller acquisition premia, post acquisition asset bases are smaller to yield better accounting return measures.

Notwithstanding the caveat that accounting performance measures are susceptible to manipulation and changes in accounting policies after M&A activities (Stanton, 1987, Powell and Stark, 2005), any benefits arising from acquisitions will eventually appear in the firm's accounting measures. Prior literature, however, documents mixed evidence without producing any clear evidence of improved post-acquisition performance.<sup>20</sup> Our results suggest that there

---

<sup>18</sup> We calculate 12-month abnormal buy-and-hold portfolio returns adjusted for size and book-to-market cumulated from the end of the month in which the deal was announced. We follow Fama and French (1992, 1993) and Barber and Lyon (1997) to calculate size and book-to-market adjusted returns for each firm-year-deal observation. Size for year  $t$  is the market value of equity at the end of June of year  $t$ . The book-to-market value for year  $t$  is the book value of equity at the end of the fiscal year ending in  $t-1$  divided by the market value of equity at December 31 of  $t-1$ . The CARs are calculated only for the deals that were completed.

<sup>19</sup> Qualitative conclusions are the same when we compare median measures (untabulated).

<sup>20</sup> Notable exceptions are: Healy *et al.* (1992) who examine post-merger operating performance for the largest 50 mergers between 1979 and 1984 to find improvements in asset productivity, leading to higher operating cash flows relative to their industry peers in the first year after M&A, Andrade, Mitchell, and Stafford (2001) who show that margins (measured as cash flows to sales) improve relative to industry

could be systematic differences in the degrees of success. In particular, acquirers who are able to buy ICW-targets with a discount and remedy their ICW problems can reap a bigger benefit from acquisitions. For these acquirers the information on internal controls of potential targets turns out to be very valuable. In contrast, the accounting performance measures of ICW-acquirers deteriorate, suggesting that the acquisitions were poorly executed, consistent with the notion that ICW firms made acquisitions for empire-building and/or they overpaid because managers are hubristic and misjudged the value of the targets

#### **5.3.4. Sensitivity Tests**

While we report in this paper a certain set of results from our analyses, we have also performed a battery of sensitivity tests to see if our results are robust to alternative specifications. First, we examine alternative CAR measurements. In addition to the market-model-adjusted returns, we use raw returns, size-adjusted returns, and value-weighted-index-adjusted returns. We find that the choice of return measures does not affect our results. We also examine whether our results depend on the length of the window we use to estimate the stock returns. We estimate the different return measurements using longer windows (5 and 23-day windows). The results are qualitatively the same as those reported for the 3-day CARs.

Next, we examine the extent to which the source of ICW disclosures (section 302 or 404) influences the market reactions by including an indicator variable for Section 302 in the regression. The coefficient on the indicator is not statistically significant and there is no material effect on the rest of the results.

Finally, we test the robustness of our results by including in our regression additional control variables related to auditing, accounting, and corporate governance characteristics of the firms based on the prior research (i.e., Doyle *et al.*, 2007a and

---

benchmarks, and Bild, Guest, and Runsten. (2005) who report abnormal returns on equity of between 17.24% and 21.50% for the years 0 to +3.

2007b; Ashbaugh-Skaif *et al.*, 2007; Louis, 2005; and Hoitash *et al.*, 2009). Specifically, we control for the following variables: standard deviation of cash flow from operations, foreign sales, prior restructuring, growth, negative earnings, Altman (1968) z-score, litigation, prior restatements, the number of investment bankers, in-house investment banker, and the governance index. Our main results are not affected by the inclusion of these variables.

## **6. Conclusions**

Our empirical results suggest that SOX 302/404 disclosures on the internal control environment affect the market for corporate control.<sup>21</sup> Clearly, acquisition of another firm is one of the most expensive investments firms can make, but is one fraught with risk. In fact, many empirical studies have shown the difficulty of implementing successful acquisitions. Our study contributes to this literature by focusing on the question of how the players in the market for corporate control utilize SOX 302/404 information in evaluating M&A deals. We find that while acquirers that report ICW receive smaller CARs than those without ICW, targets with ICW receive higher CARs than those without ICW around the announcement dates. The higher CARs for targets with ICW suggest that the market incorporates into their valuation the potential gain from fixing the internal control problem in the target.

The results on the acquisition premium paid to targets are very interesting. Acquirers with ICW pay larger acquisition premia to targets, suggesting that ICW-acquirers likely have managers who are interested in empire-building and/or are suffering from hubris and as a result overestimate the value of the acquisition. Targets with ICW, however, receive smaller acquisition premia. Acquirers discount the value of their targets because of the cost of correcting ICW. While the discount is quite large and acquirers are able to buy targets with ICW cheaply, the market

---

<sup>21</sup> We performed regression analyses with an indicator variable for Section 302. However, the variable was not significant.

does not view this discount as sufficient enough to react favorably to the announcement. CARs of acquirers that purchase ICW-targets are substantially lower than those acquirers that acquire non-ICW targets.

Taken together, our results suggest that SOX 302/404 disclosures provide incremental information in evaluating firm value in the market for corporate control. Furthermore, the results are consistent with the notion that: (1) firms with ICW have weak corporate governance; and (2) acquisitions made by acquirers with ICW may be motivated by empire-building and/or managers suffering from hubris. If one views SOX 302/404 solely to be a narrow requirement over financial reporting, the results are surprising. Our hypotheses, however, were developed based on the conjecture that ICFR is one manifestation of corporate governance – a tip of the iceberg – but nonetheless an integral part of corporate governance and therefore informative about the overall quality of a firm’s corporate governance.

Our findings are consistent with the hypothesis that the market is skeptical of acquisitions made by firms with weak corporate governance, since the managers are likely to be engaged in empire-building. Unfortunately, managers who are infected by hubris appear to abound. The aforementioned survey conducted by Kelly *et al.* (1999) found that 82% of respondents believed the major deal they were involved in had been a success. However, the researchers found that only “17% of deals had added value to the combined company, 30% produced no discernible difference, and as many as 53% actually destroyed value.” That is, even though 82% thought acquisitions were successful, 83% were actually “unsuccessful” in increasing shareholder wealth.

Given the abundance of overconfidence and hubris, it is important that investors have access to all relevant information in valuing M&A deals. Our results show that the market participants use SOX 302/404 disclosures to differentiate M&A deals. Acquirers without ICW appear to be using the information to calculate an appropriate premium to offer to their targets. Targets without ICW in turn command a substantially higher premium compared with those with ICW. That is, effective internal controls are valuable and ineffective internal controls are costly. This suggests that even though SOX 302/404 compliance costs may be high, the process of internal

control evaluation can promote effective internal controls. Granted, one does not need SOX to improve its internal controls; however, if SOX 302/404 improves internal controls, then it is the intended consequence of SOX.

## Appendix

In this Appendix, we explain the relation between the acquisition premium and CARs for targets when acquirers' stock is used to purchase the targets. We derive the conditions under which the CARs of ICW-targets ( $ICW\_CAR$ ) are larger than those of non-ICW targets ( $non-ICW\_CAR$ ), while the premium offered to ICW-targets ( $ICW\_Premium$ ) are smaller than those offered to non-ICW targets ( $non-ICW\_Premium$ ).

$$\begin{aligned} ICW\_CAR &> non-ICW\_CAR \\ ICW\_Premium &< non-ICW\_Premium, \end{aligned} \tag{1}$$

We consider the following setting:

- An acquirer is considering an acquisition of one of the two potential targets.
- The two targets are identical in potential value to the acquirer EXCEPT for ICW
- Target 1 has no ICW, but Target 2 has ICW.
- The acquirer (Acq) has one share

### Notation:

$p_0$ :	Target 1's price at time = 0 (prior to the acquisition announcement)
$p_0 - d_1$ :	Target 2's price at time = 0
$p_1$ :	Acq's offer price to Target 1
$p_1 - d_2$ :	Acq's offer price to Target 2
$d_3$ :	the expected cost to fix ICW of Target 2

### Interpretation:

Since the ICW status of Target 2 is publicly known, its stock price is discounted by  $d_1$  compared to Target 1. When Acquirer considers an offer to Target 1, it evaluates the synergy to be created by incorporating Target 1. Thus,  $p_1 > p_0$ , otherwise the acquisition does not make sense for Acquirer and Target 1 will not accept the offer. Acquirer will offer  $p_1 - d_2$  to Target 2, since Acquirer has to use resources to fix the ICW problem in Target 2.

### Premium:

To show that the premium for Target 1 is larger than that for Target 2, we need

$$\frac{p_1}{p_0} - 1 > \frac{p_1 - d_2}{p_0 - d_1} - 1 \quad \Leftrightarrow \quad \frac{p_1}{p_0} < \frac{d_2}{d_1}. \tag{1}$$

For example, let  $p_0 = \$10$ ,  $p_1 = \$14$ ,  $d_1 = \$3$ ,  $d_2 = \$5$ . That is, the pre-announcement stock price of Target 1 is \$10, while Target 2 is \$7 with a discount of \$3. Acq offers \$14 to Target 1, with a premium of 40%, because Target 1 is worth that much to Acq, while due to ICW, Acq is willing to pay only \$9 to Target 2 (or able to bargain down to \$9, even though Target 2 can be as valuable as Target 1 once ICW is fixed.).

Condition (1) shows that for Target 1's premium to be higher than that of Target 2, the discount in the offer is larger (in percentage) than the percentage premium .

### CAR: Target 1

To simplify the explanation we evaluate raw returns. Over a very short window, CARs and raw returns are identical. Further, we assume that the acquisition announcement is about the completion of the acquisition transaction so that there is no residual uncertainty about the

acquisition. Thus, the stock price should fully reflect the potential synergy of the combined company.

Acq uses its stock to purchase a target. The number of shares that should be offered to a target depends on its offer price and the value of the shares of the combined company. For simplicity, assume that both Target 1 and Acq have 1 share each. Let Acq's share price at time =0 be  $p_1$ . (These numbers are for convenience.)

To buy a target, Acq needs to issue new shares. To buy Target 1, Acq needs to issue one share to be offered to Target 1. (The combined company will be worth  $p_1 + p_1 = 2p_1$ . The target shareholder would have 1 of the 2 shares, which would be worth  $p_1$  (equaling to the offer price). The CAR for Target 1 is exactly the same as the premium (in percentage).

Using the figures for the example, we see that Acq offers one share worth \$14 (offer price). The combined company is worth \$14+\$14=\$28. The target shareholder owns one share worth \$14.

### CAR: Target 2

Since Acq offers only  $p_1 - d_2$  to Target 2, it does not need to offer the same number of shares as in the case of Target 1. It needs to offer  $\frac{p_1 - d_2}{p_1}$  share (< one share). The total number of shares outstanding would be  $\frac{p_1 - d_2}{p_1} + 1 = \frac{2p_1 - d_2}{p_1}$ . The value of the combined company would be  $2p_1 - d_3$ , where  $d_3$  is the expected cost to fix ICW of Target 2 in order fully to realize the potential synergy of the combined company. The target shareholder now owns  $\frac{p_1 - d_2}{2p_1 - d_2}$  fraction of the combined company, whose value is  $2p_1 - d_3$ .

If CAR (or raw returns) is to be larger than the (%) premium of Target 1, then we must have:

$$\frac{p_1 - d_2}{2p_1 - d_2} \cdot \frac{2p_1 - d_3}{p_0 - d_1} > \frac{p_1}{p_0} \Leftrightarrow d_3 < 2p_1 - \frac{p_1(p_0 - d_1)(2p_1 - d_2)}{p_0(p_1 - d_2)}. \quad \text{Condition (2)}$$

That is, the expected cost of remedying ICW of Target 2 is sufficiently small (less than the right-hand side).

In the numerical example above, because Acq needs to offer \$9 worth of stock, it offers 9/14 of one share. The total number of share is now (9+14)/14 = 23/14. The combined company is worth \$28 -  $d_3$ , where  $d_3$  is the expected cost of correcting ICW. The value of the target shareholder's new share would be:  $9/23 * (28 - d_3)$ . Its CAR would be  $9/23 * (28 - d_3)/7$ . The % premium of Target 1 is  $(\$14-\$10)/\$10$  or 40%. Plugging relevant figures in Condition (2), we see that we need  $d_3 < 2.956$  to have Target 2's CAR to be larger than premium (%) of Target 1. That is, the

expected cost of remedying ICW cannot be too large so that the value of the Target 2's shareholder's share is sufficiently valuable to make its CAR larger than the (%) premium embedded in the offer price to Target 1.

If we want a more general case, let:

- A: the number Acq's shares at t=0
- T: the number of Target's share at t=0
- $p_A$ : the stock price of Acq at t=0
- $p_c$ : the share price of the combined company

Target 1 (w/o ICW): let x be the number of shares Acq has to pay to buy  
 Combined company  $(A+x)p_c = (p_A A + p_1 T)$ ,

where  $x p_c = p_1 T$ . Since  $(A+x)p_c = p_A A + p_1 T$ ,  $p_c = p_A$ . So  $x = \frac{p_1 T}{p_A}$ .

The target shareholder will have  $\frac{x}{A+x}(p_1 A + p_1 T) = p_1 T$ .

Both the premium and CAR are  $\frac{p_1}{p_0}$  as before.

Target 2 (with ICW):

Total number of shares for the combined company  $A + \frac{(p_1 - d_2)T}{p_A}$ .

The combined company's value  $p_A A + (p_1 - d_2)T$ .

Condition (2) in this case;

$d_3 < p_A A + p_1 T - \frac{p_1(p_0 - d_1)[(p_1 - d_2)T + p_A A]}{p_0(p_1 - d_1)T}$ . The numerical example is a special case

with  $A=1, T=1, p_A = p_1$ .

## References

- Agrawal, A., Jaffe, J., Mandelker, G., 1992. The post-merger performance of acquiring firms: A re-examination of an anomaly. *Journal of Finance* 47, 1605-1621.
- Ahmeda, A., Duellman, S., 2007. Accounting conservatism and board of director characteristics: An empirical analysis, *Journal of Accounting and Economics* 43, 411–437.
- Aktas, N., De Bodt, E., Roll, R., 2006. Hubris, learning, and M&A decisions: Empirical evidence. Working paper, EMLYON Business School.
- Altman, E., 1968. Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *Journal of Finance* 23, 589-609.
- Anderson, C., Mandelker, G., 1993. Long run return anomalies and the book-to-market effect: Evidence on mergers and IPOs. Working paper, Joseph M. Katz Graduate School of Business, University of Pittsburgh.
- Andrade, G., Mitchell, M., Stafford, E., 2001. New evidence and perspectives on mergers. *Journal of Economic Perspectives* 15,103–120.
- Ashbaugh-Skaife, H., Collins, D., Kinney Jr., W., 2007. The discovery and reporting of internal control deficiencies prior to SOX-mandated audits. *Journal of Accounting and Economics* 44, 66–192.
- Ashbaugh-Skaife, H., Collins, D., Kinney Jr., W., Lafond, R., 2009. The effect of SOX internal control deficiencies on firm risk and cost of equity. *Journal of Accounting Research* 47, 1-43.
- Barber, B., Lyon, J., 1997. Detecting long-run abnormal stock returns: The empirical power and specification of test statistics. *Journal of Financial Economics* 43, 341-372.
- Bargeron, L., Schlingemann., F., Stulz, R., Zutter, C., 2007. Why do private acquirers pay so little compared to public acquirers? *Journal of Financial Economics* 89, 375-390.
- Basu, S., 1997. The conservatism principle and the asymmetric timeliness of earnings. *Journal of Accounting and Economics* 24, 3-37.
- Bates, T., Lemmon, M., 2003. Breaking up is hard to do? An analysis of termination fee provisions and merger outcomes. *Journal of Financial Economics* 69, 469-504.
- Bates, T., Lemmon, M., Linck, L., 2006. Shareholder wealth effects and bid negotiation in freeze-out deals: Are minority shareholders left out in the cold? *Journal of Financial Economics* 81 (3), 681-708.
- Beatty, R., Santomero, A., Smirlock, M., 1987. Bank merger premiums: Analysis and evidence. Solomon Brothers Center for the Study of Financial Institutions Monograph Series in Finance and Economics, Monograph 1987-3.
- Berger, P., Ofek, E., 1996. Bustup takeovers of value-destroying diversified firms. *Journal of Finance* 51(4), 1175-1200.

- Bild, M., Guest, P., Runsten, M., 2005. The effect of takeover on the fundamental value of acquirers. Working Paper, ESRC Centre for Business Research, University of Cambridge.
- Bradley, M., Desai, A., Kim, E., 1983. The rationale behind interfirm tender offers: Information or synergy. *Journal of Financial Economics* 11, 183-206.
- Cain, M., Denis, D., 2009. Do fairness opinion valuations contain useful information? Working Paper, University of Notre Dame.
- Calomiris, C., Hitscherich, D., 2007. Banker fees and acquisition premia for targets in cash tender offers: Challenges to the popular wisdom on banker conflicts. *Journal of Empirical Legal Studies* 4 (4), 909-938.
- Chang, S., 1998. Takeovers of privately held targets, method of payment, and bidder returns. *Journal of Finance* 53, 773–784.
- Coates, J., 2007. The goals and promise of the Sarbanes-Oxley Act. *Journal of Economic Perspectives* 21 (1), 91-116.
- DeFond, M., Hung, M., Karaoglu, E., Zhang, J., 2007. Was the Sarbanes-Oxley Act good news for corporate bondholders? Working Paper, University of Southern California.
- Doyle, J., Ge, W., McVay, S., 2007a. Accruals quality and internal control over financial reporting. *The Accounting Review* 82(5), 1141-1170.
- Doyle, J., Ge, W., McVay, S., 2007b. Determinants of weaknesses in internal control over financial reporting. *Journal of Accounting and Economics* 44, 193–223.
- Eldridge, S., Kealey, B., 2005. SOX costs: Auditor attestation under Section 404. Working Paper, University of Nebraska at Omaha.
- Engel, E., Hayes, R., Wang, X., 2007. The Sarbanes–Oxley Act and firms’ going-private decisions. *Journal of Accounting and Economics* 44, 116–145.
- Fama, E., French, K., 1992. The cross-section of expected stock returns. *Journal of Finance* 47, 427-465.
- Fama, E., French, K., 1993. Common risk factors in the returns on stock and bonds. *Journal of Financial Economics* 33, 3-56.
- Fama, E., French, K., 1997. Industry costs of equity. *Journal of Financial Economics* 43: 153-193.
- Francis, J., Martin, X., 2009. Acquisition profitability and timely loss recognition. *Journal of Financial Economics*, forthcoming.
- Fuller, K., Netter, J., Stegemoller, M., 2002. What do returns to acquiring firms tell us? Evidence from firms that make many acquisitions. *Journal of Finance* 57, 1763–1794.
- Gao, F., Wu, J., Zimmerman, J., 2008. Unintended consequences of granting small firms exemptions from securities regulation: Evidence from the Sarbanes-Oxley Act. *Journal of Accounting Research*, forthcoming.

- Garcia, L., 2009. Accounting conservatism and corporate governance. *Review of Accounting Studies* 14, 161–201.
- Ge, W., McVay, S., 2005. Disclosure of material weaknesses in internal control after the Sarbanes-Oxley Act. *Accounting Horizons*, 19(3), 137-158.
- G.A.O., 2002. Financial statement restatements: Trends, market impacts, regulatory responses, and remaining challenges. GAO-03-138, United States General Accounting Office, Washington, D.C.
- G.A.O., 2002. Financial restatements: Update of public company trends, market impacts, and regulatory enforcement activities. GAO-06-678, United States Government Accountability Office, Washington, D.C.
- Halpern, P., 1983. Corporate acquisitions: A theory of special cases? A review of event studies applied to acquisitions. *Journal of Finance* 38, 297-317.
- Healy, P., Palepu, K., Ruback, R., 1992. Does corporate performance improve after mergers? *Journal of Financial Economics* 31, 135–175.
- Hoitash, U., Hoitash, R., Bedard, J., 2009. Corporate governance and internal control over financial reporting: A comparison of regulatory regimes. *The Accounting Review* 84 (3), 839—867.
- Iliev, P., 2007. The effect of the Sarbanes-Oxley Act (Section 404) on audit fees, accruals and stock returns. Working Paper, Brown University.
- Jensen, M., Ruback, R., 1983. The market for corporate control: The scientific evidence. *Journal of Financial Economics* 11, 5-50.
- Kang, J., Shivdasani, A., Yamada, T., 2000. The effect of banks on investment decisions: An investigation of Japanese takeover bids. *Journal of Finance* 55, 2197-2218.
- Kelly, J., Cook, C., Spitzer, D., 1999. Unlocking shareholder value: The keys to success. KPMG Mergers and Acquisition: Global Research Report.
- Leuz, C., Triantis, A., Wang, T., 2008. Why do firms go dark? Causes and economic consequences of voluntary SEC deregistrations. *Journal of Accounting and Economics* 45: 181-208.
- Loughran, T., Vijh, A., 1997. Do long-term shareholders benefit from corporate acquisitions. *Journal of Finance* 52, 1765-1790.
- Louis, H., 2004. Earnings management and the market performance of acquiring firms. *Journal of Financial Economics* 74, 121–148.
- Louis, H., 2005. Acquirers' abnormal returns and the non-big 4 auditor clientele effect. *Journal of Accounting and Economics* 40, 75-99.
- Masulis, R., Wang, C., Xie, F., 2007. Corporate governance and acquirer returns. *Journal of Finance* 62 (4), 1851 -1889.

- Moeller, T., 2005. Let's make a deal! How shareholder control impacts merger payoffs. *Journal of Financial Economics* 76, 167-190.
- Moeller, S., Schlingemann, F., Stulz, R., 2004. Firm size and the gains from acquisitions. *Journal of Financial Economics* 73: 201-228.
- Ogneva, M., Subramanyam, K., Raghunandan, K., 2007. Internal control weakness and cost of equity: Evidence from SOX Section 404 disclosures. *The Accounting Review* 82 (5), 1255-1297.
- Palia, D., 1993. The managerial, regulatory, and financial determinants of bank merger premiums. *The Journal of Industrial Economics* 16 (1), 91- 102.
- Powell, R., Stark, A., 2005. Does operating performance increase post-takeover for UK takeovers? A comparison of performance measures and benchmarks. *Journal of Corporate Finance* 11, 293–317.
- Roll, R., 1986. The hubris hypothesis of corporate takeovers. *The Journal of Business* 59 (2), 197-216.
- Stanton, R., 1987. Accounting rates of return as measures of post merger performance. *Australian Journal of Business* 12, 293–394.
- Zhang, I., 2007. Economic consequences of the Sarbanes–Oxley Act of 2002. *Journal of Accounting and Economics* 44: 74 - 115.

**Table I****Sample****Panel A: Sample Selection Procedure**

	<i>Number of Acquisition Deals</i>
Acquisition deals for years 2003-2008	41,068
Less:	
Deals without value information	21,206
Deals in which the acquirer owned <i>more</i> than 50% of the target's shares <i>before</i> the transaction	3,227
Deals in which the acquirer owned <i>less</i> than 51% of the target's shares <i>after</i> the transaction	2,647
Deals not covered by Audit Analytics	9,831
Number of acquisition deals in the final sample	4,157
Less:	
Deals with missing Compustat/CRSP data	779
Number of deals in our final database	3,378
Less:	
Deals in which both acquirer and target have ICW	12
The Entire Sample	<b>3,366</b>
<i>Of which</i>	
Deals in which neither acquirer nor target has ICW (Control Sample)	<b>2,929</b>
Number of deals with ICW	<b>437</b>
<i>Of which</i>	
Completed deals	<b>369</b>
Withdrawn deals	<b>68</b>

**Panel B: Sample Distribution by Announcement Year**

<i>Year</i>	<i>Number of Acquisitions with no ICW</i>	<i>Number of ICW-Acquirers</i>	<i>Number of ICW-Targets</i>	<i>Total</i>
2003	518	9	6	533
2004	584	14	6	604
2005	561	56	42	659
2006	533	57	45	635
2007	468	85	35	588
2008	265	61	21	347
<b>Total</b>	<b>2,929</b>	<b>282</b>	<b>155</b>	<b>3,366</b>

This table describes the sample selection process for the final acquisition sample. Panel A describes the sample selection procedure, while Panel B summarizes the number of deals in each year. The final database consists of 3,366 acquisition deals announced between 2003 and 2008 that are listed in SDC and made by firms covered by the Audit Analytic database. The control sample consists of 2,929 deals in which neither the acquirer nor the target had reported ICW under Section 302 or 404 prior to the merger announcement. The ICW sample consists of 437 deals in which either the acquirer (*ICW-Acquirer*) or the target (*ICW-Target*) has ICW. Deals in which both the acquirer and target have ICW are deleted from our empirical tests.

**Table II**  
**Descriptive Statistics**

Panel A: Entire Sample

	Acquirer's Characteristics				Target's Characteristics					
	Mean	Median	Q1	Q3	Std. Dev.	Mean	Median	Q1	Q3	Std. Dev.
<i>Total assets (\$M)</i>	1,248	786	214	914	947	467	126	24	675	491
<i>Market value (\$M)</i>	2,148	786	214	2,634	3,122	615	263	83	945	692
<i>Book-to-Market</i>	0.464	0.431	0.269	0.621	0.344	0.506	0.496	0.295	0.717	0.494
<i>CFO</i>	0.018	0.006	-0.011	0.104	0.033	0.013	-0.000	-0.007	0.009	0.204
<i>Leverage</i>	0.249	0.199	0.055	0.365	0.378	0.195	0.145	0.018	0.278	0.222
<i>Dividend Payer</i>	0.266	0.000	0.000	1.000	0.442	0.198	0.000	0.000	0.000	0.399
<i>ROA</i>	0.019	0.038	0.010	0.076	0.156	-0.064	0.013	-0.023	0.046	0.371
<i>Firm Age</i>	8.437	7.000	4.000	7.000	49.091	6.304	6.000	3.000	5.000	41.391
<i># Segments</i>	1.293	1.000	0.000	1.000	1.593	1.215	1.000	0.000	1.000	1.361
<i># Investment Banks</i>	0.297	0.000	0.000	0.397	0.456	0.365	0.000	0.000	0.431	0.458
<i>Big 4</i>	0.649	1.000	0.000	1.000	0.458	0.266	0.000	0.000	1.000	0.441
<i>CEO not Chair</i>	0.250	0.000	0.000	1.000	0.432	0.355	0.000	0.000	1.000	0.484
<i>% Inside Directors</i>	0.287	0.272	0.166	0.388	0.143	0.228	0.250	0.125	0.300	0.107
<i>% Outside Directors Shares</i>	10.006	3.018	1.466	7.519	28.680	5.831	2.923	0.900	6.318	7.895

Deal Characteristics

	Mean	Median	Q1	Q3	Std. Dev.
<i>Deal Value</i>	239	43	12	141	1,129
<i>Stocks owned before deal (%)</i>	3.080	0.000	0.000	0.000	11.028

<i>Stocks owned after deal (%)</i>	97.063	100.000	100.000	100.000	6.215
<i>Premium (%)</i>	24.303	16.430	0.000	75.380	191.921
<i>% of Cash</i>	64.757	85.580	26.880	100.000	40.115
<i>% of Stock</i>	33.586	11.810	0.000	67.290	39.557
<i>Friendly Deals (%)</i>	7.53				
<i>Private target (%)</i>	35.257				
<i>Same Industry (%)</i>	68.332				

**Panel B: Deals in which Acquirers have ICW**

	Acquirer's Characteristics				Target's Characteristics					
	Mean	Median	Q1	Q3	Std. Dev.	Mean	Median	Q1	Q3	Std. Dev.
<i>Total assets (\$M)</i>	1,836	946	337	2809	945	1417	802	252	2583	697
<i>Market value (\$M)</i>	3,885	2,994	1,591	4,163	2,248	3,086	1,735	594	5,240	2,117
<i>Book-to-Market</i>	0.472	0.412	0.211	0.675	0.455	0.460	0.462	0.426	0.493	0.050
<i>CFO</i>	-0.018	-0.001	-0.013	0.010	0.101	0.030	0.001	-0.001	0.062	0.061
<i>Leverage</i>	0.249	0.165	0.021	0.351	0.651	0.258	0.282	0.086	0.448	0.210
<i>Dividend Payer</i>	0.125	0.000	0.000	0.000	0.332	0.100	0.000	0.000	0.000	0.316
<i>ROA</i>	0.108	0.021	-0.036	0.074	1.217	0.053	0.055	0.006	0.082	0.035
<i>Firm Age</i>	6.934	6.000	3.000	6.000	33.106	5.705	5.000	3.000	5.000	38.879
<i># Segments</i>	1.437	1.000	0.000	2.000	1.671	1.237	1.000	0.000	1.000	1.084
<i># Investment Banks</i>	0.189	0.000	0.000	0.249	0.325	0.359	0.000	0.000	0.418	0.438
<i>Big 4</i>	0.583	1.000	0.000	1.000	0.467	0.271	0.000	0.000	1.000	0.435
<i>CEO not Chair</i>	0.233	0.000	0.000	1.000	0.378	0.312	0.000	0.000	1.000	0.419

<i>% Inside Directors</i>	0.259	0.241	0.158	0.375	0.182	0.241	0.250	0.125	0.375	0.128
<i>% Outside Directors Shares</i>	13.531	5.812	2.037	11.981	22.894	5.720	2.235	1.012	6.102	6.914

	Deal Characteristics									
	Mean	Median	Q1	Q3	Std. Dev.	Mean	Median	Q1	Q3	Std. Dev.
<i>Deal Value</i>	215	32	5	177	373					
<i>Stocks owned before deal (%)</i>	3.029	0.000	0.000	0.000	13.715					
<i>Stocks owned after deal (%)</i>	98.829	100.000	100.000	100.000	6.202					
<i>Premium (%)</i>	28.909	17.690	0.000	84.16	201.510					
<i>% of Cash</i>	66.752	82.760	39.910	100.000	37.126					
<i>% of Stock</i>	30.191	13.330	0.000	57.140	35.678					
<i>Friendly Deals (%)</i>	16.426									
<i>Private Targets (%)</i>	23.758									
<i>Same Industry (%)</i>	63.314									

### Panel C: Deals in which Targets have ICW

	Acquirer's Characteristics					Target's Characteristics				
	Mean	Median	Q1	Q3	Std. Dev.	Mean	Median	Q1	Q3	Std. Dev.
<i>Total assets (\$M)</i>	1,260	443	150	1,320	1,512	513	201	81	642	853
<i>Market value (\$M)</i>	2.213	1,023	538	2,097	4,371	1,336	643	183	951	1,139
<i>Book-to-Market</i>	0.445	0.430	0.252	0.629	0.419	0.376	0.311	0.027	0.511	0.498
<i>CFO</i>	0.010	0.004	-0.012	0.015	0.110	0.004	-0.002	-0.006	0.003	0.120
<i>Leverage</i>	0.325	0.160	0.022	0.323	1.411	0.222	0.168	0.151	0.241	0.204
<i>Dividend Payer</i>	0.180	0.000	0.000	0.000	0.384	0.280	0.000	0.000	1.000	0.458

<i>ROA</i>	0.061	0.023	-0.016	0.069	3.712	-0.051	-0.016	-0.223	0.004	1.537
<i>Firm Age</i>	8.985	8.000	5.000	8.000	37.577	5.627	5.000	2.000	4.000	41.391
<i># Segments</i>	1.275	1.000	0.000	1.000	1.617	1.257	1.000	0.000	1.000	1.577
<i># Investment Banks</i>	0.303	0.000	0.000	0.349	0.419	0.163	0.000	0.000	0.185	0.382
<i>Big 4</i>	0.625	1.000	0.000	1.000	0.438	0.251	0.000	0.000	1.000	0.461
<i>CEO not Chair</i>	0.234	0.000	0.000	1.000	0.425	0.276	0.000	0.000	1.000	0.511
<i>% Inside Directors</i>	0.2 37	.181	0.153	0.300	0.143	0.216	0.220	0.100	0.275	0.135
<i>% Outside Directors Shares</i>	9.831	2.954	1.417	7.691	23.484	5.846	3.004	0.975	6.443	7.659

Deal Characteristics

	Mean	Median	Q1	Q3	Std. Dev.
<i>Deal Value</i>	475	152	31	343	475
<i>Stocks owned before deal (%)</i>	2.554	0.000	0.000	0.000	12.452
<i>Stocks owned after deal (%)</i>	99.332	100.000	100.000	100.000	5.173
<i>Premium (%)</i>	14.708	9.520	0.000	24.075	20.901
<i>% of Cash</i>	73.221	96.700	50.000	100.000	35.738
<i>% of Stock</i>	25.657	3.300	0.000	45.000	35.228
<i>Friendly Deals (%)</i>	1.410				
<i>Private Targets (%)</i>	0.000				
<i>Same Industry (%)</i>	74.639				

Panel D: Method of Payments

		Only Stock	Only cash	Comb	Total
ICW-Acquirers	# of Firms	21	103	158	282
	% of Firms	7.4%	36.5%	56.0%	
ICW-Targets	# of Firms	7	71	77	155
	% of Firms	4.5%	45.8%	49.7%	
Control	# of Firms	191	1,113	1,625	2,929
	% of Firms	6.5%	37.9%	55.6%	

This table summarizes the characteristics of acquiring and target firms in our samples. Panel A presents the descriptive statistics for the acquirers and targets in all the deals during 2003 to 2008. Panel B (C) presents the descriptive statistics for the acquirers and targets in all the deals in which acquirers (targets) have ICW. The variables are accounting data during or at the end of the year prior to the acquisition announcement date. *Total Assets* is the total assets in millions of dollars of the company (AT). *Market Value* is the dollar value of common equity in the end of the year prior to the acquisition (CSHO\*PRCC\_F). *Book-To-Market* is the book value of total assets minus total liabilities divided by stock's market value of equity (CEQ/CSHO\*PRCC\_F). *CFO* is cash flow from operation (AOLOCH/AT). *Leverage* is the total debt divided by total assets ((DLTT+DLC)/AT). *Dividend Payer* is an indicator =1 when the firms pays dividends (DVC), and =0 otherwise. *ROA* is the return-on-assets (IB/AT). *Firm Age* is number of years the firm has CRSP data as of the announcement date. # *Investment Banks* is the number of investment bankers identified by SDC. *Big 4* is an indicator variable that is equal to 1 when the auditor belongs to Big four and 0 otherwise. *CEO not Chair* is an indicator =1 when the CEO the Chairman are two distinct individuals, and =0 otherwise. % *Outside Directors Shares* is the percentage of common stocks held by the outside directors of the firm. *Deal Value* is the value in millions of dollars of the M&A deal (from SDC). *Stocks owned before deal* (%) is the percentage of target's stocks owned by the acquirer prior to the current acquisition (from SDC). *Stock owned after deal* (%) is the percentage of target's stocks the acquirer bought or sought of buying in the current acquisition (from SDC). *Premium* (%) is the offer price in excess of the target closing stock price 1 day prior to the original announcement date (from SDC). % *of Cash* is the percentage of the transaction financed with cash (from SDC). % *of Stock* is the percentage of the transaction financed with common stock (from SDC). All data are winsorized at the 1% and 99% levels. For each variable the mean, median, Q1, Q3, and standard deviation are reported. Panel D summarizes the method of payments used by the three groups of deals: deals in which ICW-acquirers acquire non-ICW targets; deals in which non-ICW acquirers acquire ICW-targets; and deals in which neither acquirers nor targets have ICW (control sample).

**Table III**  
**CARs Surrounding the Announcement Dates**

Panel A: CARs for Deals in which Acquirers have ICW

Variable	CAR (-1, +1)		CAR (-2,+2)		CAR (-21,+1)	
	<i>Adj-Acquirer</i> Mean CAR [Median]	<i>Target</i> Mean CAR [Median]	<i>Adj-Acquirer</i> Mean CAR [Median]	<i>Target</i> Mean CAR [Median]	<i>Adj-Acquirer</i> Mean CAR [Median]	<i>Target</i> Mean CAR [Median]
ICW-Sample	-2.61%*** [-1.29%]**	20.19%*** [14.91%]***	-2.49%*** [-1.36%]**	19.93%*** [14.65%]***	-2.07*** [-1.19]**	22.87*** [18.39]***
Control Sample	1.30%** [0.93%]*	13.90%*** [10.69%]***	1.55%** [1.13%]**	13.28%*** [10.48%]***	1.23%** [0.47%]*	17.31%*** [14.52%]***
<i>T</i> -statistic [ <i>Z</i> -statistic] for difference between Sample and Control	-3.47*** [-3.08]***	1.67* [1.44]	-4.41*** [-3.78]***	1.71* [1.50]	-4.05*** [-3.60]***	1.68* [1.63]

Panel B: CARs for Deals in which Targets have ICW

Variable	CAR (-1, +1)		CAR (-2,+2)		CAR (-21,+1)	
	<i>Adj-Acquirer</i> Mean CAR [Median]	<i>Target</i> Mean CAR [Median]	<i>Adj-Acquirer</i> Mean CAR [Median]	<i>Target</i> Mean CAR [Median]	<i>Adj-Acquirer</i> Mean CAR [Median]	<i>Target</i> Mean CAR [Median]
ICW-Sample	0.49% [0.26%]	22.99%*** [16.08%]***	0.48% [0.23%]	22.53%*** [14.80%]***	0.31% [0.11%]	24.65%*** [18.31%]***
Control Sample	1.30%** [0.93%]*	13.90%*** [10.69%]***	1.55%** [1.13%]**	13.28%*** [10.48%]***	1.23%** [0.47%]*	17.31%*** [14.52%]***
<i>T</i> -statistic [ <i>Z</i> -statistic] for difference between Sample and Control	-2.83*** [-1.76]*	2.24** [2.18]**	-2.89*** [-1.81]*	2.14** [1.99]**	-2.27** [-1.68]*	2.09** [1.83]*

This table reports the market-model adjusted stock returns (CARs) surrounding the acquisition announcement dates for acquiring and target firms, cumulated over the periods (-1, +1), (-2, +2), and (-21, +1), where day 0 is the announcement date. The acquirer's CAR is adjusted for the toehold the acquirers already owned (<50%) of the target shares. Panel A presents the CARs for the 282 deals in which acquirers have ICW. Panel B presents the CARs for the 155 deals in which targets have ICW. Both panels also report *t*-statistic (*Z*-statistic) testing the differences between the ICW sample and control sample's mean (median). All data are winsorized at the 1% and 99% levels. \*\*\*, \*\*, and \* denote significance at the 0.01, 0.05, and 0.10 level, respectively.

**Table IV**  
**Regression Analysis of Acquirer Returns**

Panel A: Deals in which Acquirers have ICW (and Control Sample)

Dependent Variable = Acquirer CAR (-1, +1)					
Variable	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Intercept</i>	0.104*** (8.72)	0.109*** (8.54)	-0.089** (-2.13)	-0.078** (-2.01)	-0.075* (-1.94)
<i>Acq ICW</i>	-0.106*** (-3.79)	-0.103*** (-3.51)	-0.059** (-2.36)	-0.051** (-2.09)	-0.050** (-2.05)
<i>Serious ICW</i>	-0.042 (-0.53)				
<i>Ln (Num Weakness)</i>		-0.029* (-1.91)			
<b>Deal Characteristics</b>					
<i>Stock Owned after Deal (%)</i>			-0.029** (-2.03)	-0.023** (-1.98)	-0.028** (-2.01)
<i>Only Cash</i>			0.814** (2.29)	0.796** (2.21)	0.763** (2.13)
<i>Private Target</i>			2.819*** (4.25)	2.812*** (4.22)	2.791*** (4.06)
<i>Same Industry</i>			0.041 (1.53)	0.040 (1.53)	0.036 (1.41)
<i>Relative Size</i>			-0.011 (-0.05)	-0.008 (-0.03)	-0.005 (-0.01)
<i>Friendly</i>			-0.031 (-0.00)	-0.026 (-0.00)	-0.025 (-0.00)
<i># Investment Banks</i>			-0.453 (-1.29)	-0.438 (-1.16)	-0.423 (-1.06)
<b>Acquirer ICW Characteristics</b>					
<i>Acq Leverage</i>				0.121 (0.95)	0.115 (1.06)
<i>Acq CFO</i>				-0.432** (-2.27)	-0.450** (-2.16)
<i>Acq Book-to-Market</i>				0.297*** (4.19)	0.291*** (4.05)
<i>Acq ROA</i>				-1.824*** (-3.21)	-1.821*** (-3.19)
<i>Acq Ln(Market Value)</i>				-0.267*** (-3.85)	-0.252*** (-3.46)
<i>Acq Dividend Payer</i>				-0.076 (-0.66)	-0.069 (-0.63)
<i>Acq Segment</i>				-0.005 (-1.03)	-0.004 (-1.09)
<i>Acq Inventory</i>				-0.029* (-1.86)	-0.031* (-1.85)
<i>Acq Firm Age</i>				0.169 (0.62)	0.176 (0.59)
<i>Acq Big 4</i>				-1.018** (-2.29)	-1.023** (-2.21)

Acquirer Corporate Governance Characteristics					
<i>Acq CEO not Chair</i>					-0.067*** (-4.11)
<i>Acq % Inside Directors</i>					0.042 (1.06)
<i>Acq % Outside Directors Shares</i>					0.001 (0.50)
<i>N</i>	3,211	3,211	3,211	3,211	2,573
<i>Adj R-Sq</i>	0.017	0.019	0.039	0.045	0.052

Panel B: Deals in which Targets have ICW (and Control Sample)

Dependent Variable = Acquirer CAR (-1, +1)					
Variable	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Intercept</i>	-0.181*** (7.23)	-0.172*** (6.95)	-0.267 (-1.61)	-0.261 (-1.60)	-0.168 (-1.49)
<i>Target ICW</i>	-0.094** (-2.05)	-0.091** (-2.00)	-0.085** (-1.98)	-0.076* (-1.93)	-0.073* (1.85)
<i>Serious ICW</i>	-0.016 (-0.25)				
<i>Ln(Num Weakness)</i>		-0.015 (-1.39)			

Deal Characteristics					
<i>Stock Owned after Deal (%)</i>			-0.033** (-2.05)	-0.028** (-1.99)	-0.025* (-1.95)
<i>Only Cash</i>			0.802** (2.34)	0.808** (2.30)	0.809** (2.31)
<i>Private Target</i>			2.816*** (4.21)	2.809*** (4.15)	2.790*** (4.02)
<i>Same Industry</i>			0.040 (1.52)	0.043 (1.55)	0.044 (1.55)
<i>Relative Size</i>			-0.016 (-0.07)	-0.011 (-0.08)	-0.006 (-0.12)
<i>Friendly</i>			-0.029 (-0.00)	-0.027 (-0.00)	-0.022 (-0.00)
<i># Investment Banks</i>			-0.443 (-1.24)	-0.437 (-1.21)	-0.425 (-1.12)

Target ICW Characteristics					
<i>Target Leverage</i>				-0.019 (-0.24)	-0.015 (-0.21)
<i>Target CFO</i>				0.006 (0.01)	0.005 (0.01)
<i>Target Book-to-Market</i>				0.091 (1.51)	0.094 (1.46)
<i>Target ROA</i>				0.039 (0.46)	0.033 (0.41)
<i>Target Ln(Market Value)</i>				-0.143** (-2.17)	-0.139** (-2.10)
<i>Target Dividend Payer</i>				0.014 (0.99)	0.013 (0.95)

<i>Target Segment</i>				-0.037 (-1.37)	-0.040 (-1.42)
<i>Target Inventory</i>				-0.006 (-1.13)	-0.005 (-1.11)
<i>Target Firm Age</i>				-0.218 (-1.38)	-0.211 (-1.33)
<i>Target Big 4</i>				-0.837 (-0.69)	-0.844 (-0.71)
<b>Acquirer Corporate Governance Characteristics</b>					
<i>Acq CEO not Chair</i>					-0.083*** (-4.38)
<i>Acq % Inside Directors</i>					0.029 (0.89)
<i>Acq % Outside Directors shares</i>					0.001 (0.48)
<i>N</i>	3,084	3,084	3,084	2,058	1,793
<i>Adj R-Sq</i>	0.009	0.012	0.033	0.038	0.049

Panel A of Table IV presents the results for the OLS regression using the 282 deals in which the acquirer reported ICW and the 2,929 deals in which neither the acquirer nor the target reported ICW. Panel B presents the results for the OLS regression using the 155 deals in which the target reported ICW and the 2,929 deals in which neither the acquirer nor the target reported ICW. The dependent variable is the acquirer's 3-day CAR in percentage. In parentheses are t-statistics. The accounting variables are measured at the fiscal-year end prior to the acquisition announcement date. *Acq (Target) ICW* is an indicator variable that is equal to 1 when the acquirer (target) reported ICW and 0 otherwise. *Serious ICW* is an indicator variable equal to 1 when the acquirer (target) reported ICW that is classified as serious one and 0 otherwise. *Num Weakness* is the number of material weaknesses disclosed by the acquirer in its 10-Q or 10-K report.  $\ln(\text{Num Weakness})$  is one plus the natural logarithm of weaknesses when weakness is larger than 0 and equal to 0 otherwise. *Stock owned after deal (%)* is the percentage of target's stocks the acquirer bought or sought of buying in the current acquisition (from SDC). *Only cash* is an indicator variable equal to 1 when the entire deal value was paid in cash and 0 otherwise. *Private Target* is an indicator variable equal to 1 when the target is not a publicly traded company and 0 otherwise. *Same Industry* is an indicator variable equal to 1 when the target and acquirer are in the same industry and 0 otherwise. Industry is defined according to the Fama and French (1997) 48 industry classifications. *Relative Size* is the ratio of the total assets of the target to the total assets of its acquirer. *Friendly* is an indicator variable equal to 1 if the target's attitude to the proposed acquisition is characterized as friendly by SDC, and zero otherwise. *# Investment Banks* is the number of investment bankers identified by SDC. *Acq (Target) leverage* is the acquirer (target) total debt divided by the total assets. *Acq (Target)* is the acquirer (target) is the cash flow from operations divided by total assets. *Acq (Target) Book-to-Market* is the book value of equity divided by the market value of equity. *Acq (Target) ROA* is the return-on-assets of the acquiring (target) firm. *Acq (Target) Ln (Market Value)* is defined as the natural log of market value of equity. *Acq (Target) Dividend Payer* is an indicator variable equal to 1 if the firm pays dividends and 0 otherwise. *Acq (Target) Segment* is the number of reported business segments. *Acq (Target) Inventory* is the inventory of the acquirer (target) to total assets. *Acq (Target) Firm Age* is the number of years the firm has price data available on Compustat, with a maximum of 30 years. *Acq (Target) Big 4* is an indicator variable equal to 1 when the acquirer (target) auditor belongs to Big four and 0 otherwise. *Acq CEO not Chair* is an indicator variable equal to 1 if the Acquirer CEO is not Chairman of the board and 0 otherwise. *Acq % Inside Directors* is the percentage of acquirer directors who are currently employed or have been employed by the firm for the past 3 years, are related to current management, and/or are related to the firm-founder. *Acq % Outside Directors Shares* is the common shares held by the acquirer's outside directors divided by total common shares outstanding. All data are winsorized at the 1% and 99% levels. \*\*\*, \*\*, and \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively.

**Table V**  
**Regression Analysis of Target Returns**

Panel A: Deals in which Acquirers have ICW (and Control Sample).

Dependent Variable = Target CAR (-1, +1)					
Variable	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Intercept</i>	0.212*** (20.52)	0.123*** (19.83)	-0.095 (-0.98)	-0.218 (-0.26)	-0.161 (-0.18)
<i>Acq ICW</i>	0.049* (1.93)	0.047* (1.92)	0.012* (1.76)	0.008* (1.70)	0.007* (1.68)
<i>Serious ICW</i>	0.051 (0.87)				
<i>Ln (Num Weakness)</i>		0.096 (1.09)			
<b>Deal Characteristics</b>					
<i>Stock owned after deal (%)</i>			0.001 (1.15)	0.006 (1.07)	0.006 (0.96)
<i>Only Cash</i>			0.076*** (3.19)	0.075*** (2.82)	-0.071*** (2.73)
<i>Same Industry</i>			0.032*** (2.70)	0.021** (2.21)	0.019** (2.03)
<i>Relative Size</i>			0.325 (0.91)	0.452 (1.06)	0.550 (1.20)
<i>Friendly</i>			-0.362*** (-3.21)	-0.418** (-2.37)	-0.339 (-1.04)
<i># Investment Banks</i>			-0.087 (-0.67)	-0.040 (-0.14)	-0.037 (-0.11)
<b>Acquirer ICW Characteristics</b>					
<i>Acq Leverage</i>				-1.057** (-2.28)	-1.173** (-2.46)
<i>Acq CFO</i>				-1.320 (-0.82)	-0.584 (-0.32)
<i>Acq Book-to-Market</i>				0.071 (0.21)	0.079 (0.22)
<i>Acq ROA</i>				1.764 (1.35)	1.662 (1.21)
<i>Acq Ln (Market Value)</i>				0.000 (1.46)	0.000 (1.54)
<i>Acq Dividend Payer</i>				-0.144 (-1.14)	-0.126 (-0.91)
<i>Acq Segment</i>				0.006 (0.31)	0.004 (0.26)
<i>Acq Inventory</i>				0.346 (0.54)	0.246 (0.36)
<i>Acq Firm Age</i>				0.640 (0.59)	0.609 (0.55)
<i>Acq Big 4</i>				0.019 (0.05)	0.018 (0.05)

Target Corporate Governance Characteristics					
<i>Target CEO not Chair</i>					0.050 (0.39)
<i>Target % Inside Directors</i>					0.594 (1.03)
<i>Target % Outside Directors</i>					0.000 (0.40)
<i>Shares</i>					
<i>N</i>	2,118	2,118	2,118	2,118	1,817
<i>Adj R-Sq</i>	0.001	0.003	0.083	0.108	0.096

Panel B: Deals in which the Targets have ICW.

Dependent Variable = Target CAR (-1, +1)					
Variable	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Intercept</i>	0.287*** (3.29)	0.265*** (3.62)	0.241 (1.32)	0.215 (1.39)	0.206 (0.93)
<i>Target ICW</i>	0.089** (2.19)	0.084** (2.12)	0.083** (2.03)	0.079* (1.91)	0.078* (1.88)
<i>Serious ICW</i>	0.048 (0.73)				
<i>Ln (Num Weakness)</i>		0.078 (1.21)			

Deal Characteristics					
<i>Stock owned after deal (%)</i>			0.005 (0.63)	0.001 (0.70)	0.001 (0.91)
<i>Only Cash</i>			0.054** (2.48)	0.065 (1.64)	0.068 (1.62)
<i>Same Industry</i>			0.024*** (2.84)	0.021** (2.38)	0.028*** (3.08)
<i>Relative Size</i>			0.097 (0.34)	0.080 (0.25)	0.072 (0.21)
<i>Friendly</i>			-0.175*** (-2.82)	-0.138** (-2.23)	-0.121** (-2.00)
<i># Investment Banks</i>			-0.054 (-0.46)	-0.080 (-0.44)	-0.071 (-0.41)

Target ICW Characteristics			
<i>Target Leverage</i>		0.004 (0.08)	-0.021 (-0.47)
<i>Target CFO</i>		0.007 (0.19)	0.056 (0.78)
<i>Target Book-to-Market</i>		-0.081* (-1.66)	-0.097** (-2.51)
<i>Target ROA</i>		-0.253*** (-4.22)	-0.387*** (-3.67)
<i>Target Ln (Market Value)</i>		-0.000** (-2.42)	-0.000* (-1.67)
<i>Target Dividend Payer</i>		-0.093** (-2.11)	-0.084** (-2.41)
<i>Target Segment</i>		0.116 (1.48)	-0.060 (-0.93)
<i>Target Inventory</i>		0.067	-0.283

		(0.57)	(-1.47)
<i>Target Firm Age</i>		0.073	0.061
		(0.30)	(0.19)
<i>Target Big 4</i>		0.127	0.091
		(1.56)	(0.89)
Target Corporate Governance Characteristics			
<i>Target CEO not Chair</i>			-0.025
			(-0.45)
<i>Target % Inside Directors</i>			0.424*
			(1.86)
<i>Target % Outside Directors</i>			0.001
<i>Shares</i>			(1.37)
<i>N</i>	2,058	2,058	2,058
<i>Adj R-Sq</i>	0.006	0.007	0.097
			2,058
			1,793
			0.149
			0.167

Panel A of Table V presents the results for the OLS regression using the 282 deals in which the acquirer reported ICW and the 2,929 deals in which neither the acquirer nor the target reported ICW. Panel B presents the results for the OLS regression using the 155 deals in which the target reported ICW and the 2,929 deals in which neither the acquirer nor the target reported ICW. The dependent variable is the acquirer's 3-day CAR in percentage. In parentheses are t-statistics. The accounting variables are measured at the fiscal-year end prior to the acquisition announcement date. *Acq (Target) ICW* is an indicator variable equal to 1 when the acquirer (target) reported ICW and 0 otherwise. *Serious ICW* is an indicator variable equal to 1 when the acquirer (target) reported ICW that is classified as serious one and 0 otherwise. *Num Weakness* is the number of material weaknesses disclosed by the acquirer in its 10-K report. *Log(weakness)* is one plus the natural logarithm of weaknesses when weakness is larger than 0 and equal to 0 otherwise. *Stock owned after deal (%)* is the percentage of target's stocks the acquirer bought or sought of buying in the current acquisition (from SDC). *Only cash* is an indicator variable equal to 1 when the entire deal value was paid in cash and 0 otherwise. *Same Industry* is an indicator variable equal to 1 when the target and acquirer are in the same industry and 0 otherwise. Industry is defined according to the Fama and French (1997) 48 industry classifications. *Relative Size* is the ratio of the total assets of the target to the total assets of its acquirer. *Friendly* is an indicator variable equal to 1 if the target's attitude to the proposed acquisition is characterized as friendly by SDC, and zero otherwise. *# Investment Banks* is the number of investment bankers identified by SDC. *Acq (Target) Leverage* is the acquirer (target) total debt divided by the total assets. *Acq (Target) CFO* is the acquirer's (target's) cash flow from operations divided by total assets. *Acq (Target) Book-to-Market* is the book value of equity divided by the market value of equity. *Acq (Target) ROA* is the return-on-assets of the acquiring (target) firm. *Acq (Target) Ln(Market Value)* defined as the natural log of market value of equity. *Acq (Target) Dividend Payer* is an indicator variable equal to 1 if the firm pays dividends and 0 otherwise. *Acq (Target) Segment* is the number of reported business segments. *Acq (Target) Inventory* is the inventory of the acquirer (target) to total assets. *Acq (Target) Firm Age* is the number of years the firm has price data available on Compustat with a maximum of 30 years. *Acq (Target) Big 4* is an indicator variable equal to 1 when the acquirer (target) auditor belongs to Big 4 and 0 otherwise. *Acq CEO not Chair* is an indicator variable equal to 1 if the Acquirer CEO is not chairman of the board and 0 otherwise. *Acq % Inside Directors* is the percentage of acquirer directors who are currently employed or have been employed by the firm for the past 3 years, are related to current management, and/or are related to the firm-founder. *Acq % Outside Directors Shares* is the common shares held by acquirer outside directors divided by total common shares outstanding. All data are winsorized at the 1% and 99% levels. \*\*\*, \*\*, and \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively.

**Table VI**  
**The Value of the Premium**

Panel A: The Premium for Deals in which Acquirers have ICW

	The Premium (%) over Target Stock Price 1 Day Prior to Announcement Mean [Median]	The Premium (\$M) over Target Stock Price 1 Day Prior to Announcement Mean [Median]	N
Paid by ICW-Acquirers	28.909%*** [17.690%]***	\$ 156.496*** [\$ 113.794]***	179
Control Sample	24.303%*** [16.430%]***	\$ 132.228*** [\$ 106.495]***	1,638
The difference between Sample and Control t-statistic [Z-statistic] for difference between Sample and Control	4.606%* [1.260%]  1.91* [1.63]	\$ 24.268** [\$ 7.299]*  2.13** [1.79]*	

Panel B: The Premium for Deals in which Targets have ICW

	The Premium (%) over Target Stock Price 1 Day Prior to Announcement Mean [Median]	The Premium (\$M) over Target Stock Price 1 Day Prior to Announcement Mean [Median]	N
Paid to ICW-Targets	14.708%*** [9.520%]***	\$ 95.306*** [\$ 66.039]***	155
Control Sample	24.303%*** [16.430%]***	\$ 132.228*** [\$ 106.495]***	1,638
The difference between Sample and Control t-statistic [Z-statistic] for difference between Sample and Control	-9.595%*** [-6.910%]***  -3.62*** [-3.14]***	\$ -36.922*** [\$ -40.456]***  -3.21*** [-2.97]***	

Panel C: Regression Analysis of Premium (%)

Dependent Variable = The Premium (%)			
Variable	Model 1	Model 2	Model 3
<i>Intercept</i>	0.350*** (5.47)	0.250*** (3.67)	0.238*** (3.27)
<i>Acq ICW</i>	0.461* (1.82)	0.428* (1.69)	0.410 (1.62)
<i>Target ICW</i>	-0.096** (-2.30)	-0.084** (-2.15)	-0.079** (-2.04)
<i>% Shares Acquired</i>		-0.794*** (-4.16)	-0.788*** (-4.04)

<i>Toehold</i>		-0.412 (-1.14)	-0.481 (-1.32)
<i>Acq Ln(Market Value)</i>		0.013 (0.38)	0.005 (0.27)
<i>Target Ln(Market Value)</i>		0.035 (0.32)	0.043 (0.18)
<i>Target ROA</i>		-0.577* (-1.84)	-0.589* (-1.88)
<i>Relative Size</i>		-0.378 (0.49)	-0.276 (0.34)
<i>Completed</i>			-0.036 (-0.16)
<i>N</i>	1,972	1,972	1,972
<i>Adj R-Sq</i>	0.018	0.240	0.231

This table reports the analysis of the premium paid in our Sample. Panel A compares the premium paid by ICW-acquirers to the premium paid by acquirers in the control sample. Panel B compares the premium paid to ICW-targets to the premium paid to targets in the control sample. Panel C reports the result of OLS regressions with the premium as the dependent variable. The Premium (%) over the Target Stock Price 1 Day Prior to Announcement is the offer price in excess of the target closing stock price 1 day prior to the original announcement date, reported in percentage. The Premium (\$M) over the Target Stock Price 1 Day Prior to Announcement is the offer price in excess of the target closing stock price 1 day prior to the original announcement date, reported in dollars. It is calculated as the Premium (%) \* Target Equity Value \* % of stock bought in the deal. *Acq (Target) ICW* is an indicator variable equal to 1 when the acquirer (target) reported ICW and 0 otherwise. *% Shares Acquired* is the percentage of target's stocks bought or sought to be bought by the acquirer (from SDC). *Toehold* is the percentage held by the acquirer prior to the current deal. *Acq (Target) Ln(Market Value)* is defined as the natural log of market value of equity. *Target ROA* is the return-on-assets of the target firm. *Relative Size* is the ratio of the total assets of the target to the total assets of its acquirer. *Completed* is an indicator variable equal to 1 when the deal is completed and 0 if withdrawn. All data are winsorized at the 1% and 99% levels. \*\*\*, \*\*, and \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively.

**Table VII**

**The Wealth Creation around the M&A Announcement**

Panel A: Deals in which Acquirers have ICW.

	ICW-Acquirers	ICW-Targets
	Change in Combined Abnormal Market Value of the Target and Acquirer (-1, +1)	Change in Combined Abnormal Market Value of the Target and Acquirer (-1, +1)
	Mean [Median]	Mean [Median]
ICW Sample	473.297*** [459.018]***	319.208*** [312.751]***
Control Sample	106.113*** [102.294]***	106.113*** [102.294]***
<i>t</i> -statistic [Z-statistic] for difference between Sample and Control	4.14*** [3.95]***	2.83*** [2.64]***

Panel B: Bid Completion

Dependent Variable = 1 if completed, 0 otherwise

Variable	Model 1	Model 2	Model 3
<i>Intercept</i>	1.4732*** (<0.0001)	1.1648*** (<0.0001)	1.1443*** (<0.0001)
<i>Acq ICW</i>	-0.2525 (0.6573)	-0.2445 (0.4300)	-0.185 (0.5628)
<i>Target ICW</i>	-0.5861** (0.0429)	-0.4838** (0.0485)	-0.4659* (0.0603)
<i>Tender Offer</i>		0.7567** (0.0286)	0.6879* (0.0553)
<i>Stock Offer</i>		0.1028 (0.1072)	0.0778 (0.7805)
<i>Prior Bidding</i>		-1.1050*** (0.0014)	-1.0958*** (0.0016)
<i>Hostile</i>		-1.4675*** (0.0087)	-1.4531*** (0.0093)
<i>Litigation</i>		-0.8208* (0.0991)	-0.8396* (0.0990)
<i>Family Firm</i>		-0.0049 (0.8513)	-0.0043 (0.8943)
<i>Premium</i>			-0.0672 (0.5022)
<i>Deal Value</i>			-0.0036 (0.6456)
<i>Same Industry</i>			0.0164*** (<0.0001)
<i>Relative Size</i>			0.0009 (0.6481)
<i>N</i>	3,366	3,366	1,972
Likelihood Ratio	3.9493	22.4081	24.3454

Panel C: One-year-ahead CARs

	One Year Ahead CARs	N		One Year Ahead CARs	N
	Mean [Median]			Mean [Median]	
Acquisitions made by ICW-Acquirers	-8.15%*** [-4.70%]***	241	Acquisitions of ICW-Targets	-6.03%*** [-3.93%]***	128
Control Sample	-2.80%** [-2.57%]**	2,545	Control	-2.80%** [-2.57%]**	2,545
The difference between Sample and Control	-5.35% [-2.13%]		The difference between Sample and Control	-3.23% [-1.36%]	
<i>t</i> -statistic [Z-statistic] for difference between Sample and Control	-2.02** [-1.75]*		<i>t</i> -statistic [Z-statistic] for difference between Sample and Control	-1.59 [-1.32]	

Panel D: Pre- and Post-merger Accounting Performance

Mean Industry-adjusted performance	Acquisitions made by ICW-Acquirers (N=241)			Acquisitions of ICW-Targets (N=128)			Control sample (N=2,545)		
	Pre	Post	Diff	Pre	Post	Diff	Pre	Post	Diff
<i>Pre-tax operating CF</i>	0.052	0.021	-0.031**	0.069	0.083	0.014**	0.029	0.034	0.005
<i>Pre-tax operating margin</i>	0.102	0.030	-0.072***	0.026	0.059	0.033**	0.091	0.087	-0.004
<i>Asset turnover</i>	0.271	0.078	-0.193***	0.091	0.148	0.057**	0.093	0.147	0.054**
<i>Employee growth rate</i>	0.045	0.105	0.060**	0.026	0.278	0.252***	0.102	0.165	0.063*
<i>Pension expense/employee</i>	1.083	0.475	-0.608***	1.397	1.108	-0.289***	1.017	0.860	-0.157***
<i>Capital expenditure rate</i>	0.088	0.028	-0.060**	0.011	0.014	0.003	0.012	0.013	0.001

Panel A reports the average of the change in the abnormal market values of the acquirer and the target combined, calculated over the announcement window of (-1,+1). The change in the abnormal market value is calculated as the abnormal returns multiplied by the market value of the firms in \$M. The first column presents the change in the abnormal market value of the deals in which the acquirer had ICW, and for the deals in which neither the acquirer nor the target had ICW (the control sample). The second column presents the change in the abnormal market value of the deals in which the target had ICW and the control sample. Both columns also report t-statistic (Z-statistic) to test for the differences between sample and control's means (median). All data are winsorized at the 1% and 99% levels. \*\*\*, \*\*, and \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively

Panel B reports the result from the logistic regression of bid completion (Completed=1, Withdrawn=0). *Acq (Target) ICW* is an indicator variable equal to 1 when the acquirer (target) reported ICW and 0 otherwise. *Tender Offer* is an indicator variable equal to 1 when the acquisition was made by a tender offer (from SDC) and 0 otherwise. *Stock Offer* is an indicator variable equal to 1 when the offered price was 100% in stock exchange (from SDC) and 0 otherwise. *Prior Bidding* is an indicator variable equal to 1 if the bid follows a prior bid within 365 days and zero if it is an initial bid (from SDC). *Hostile* is an indicator variable equal to 1 if target managers rebuff bidder's offer and 0 otherwise (from SDC). *Litigation* is an indicator variable equal to 1 if the bid has associated litigation and 0 otherwise (from SDC). *Family Firm* is an indicator variable equal to 1 if a family, group of families, firm founder, or non-founding chairman controls more than 20% of the outstanding equity of the target and 0 otherwise (from SDC). *Premium (%)* is the offer price in excess of the target closing stock price 1 day prior to the original announcement date (from SDC). *Same Industry* is an indicator variable equal to 1 when the target and acquirer are in the same industry and 0 otherwise. Industry is defined according to the Fama and French (1997) 48 industry classifications. *Relative Size* is the ratio of the total assets of the target to the total assets of its acquirer. All data are winsorized at the 1% and 99% levels. \*\*\*, \*\*, and \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively.

Panels C and D report the one-year-ahead post-merger market-based and accounting-based performance for the three groups of acquisitions that were completed. The columns labeled "Post" present one-year-ahead size and book-to-market adjusted returns. We calculate 12-month abnormal buy-and-hold portfolio returns adjusted for size and book-to-market cumulated from the end of the month in which the deal was announced. Size for year  $t$  is the market value of equity at the end of June of year  $t$ . The book-to-market value for year  $t$  is the book value of equity at the end of the fiscal year ending in  $t-1$  divided by the market value of equity at December of  $t-1$ . *Pre-tax operating CF* is defined as sales minus cost of goods sold, minus selling, general, and administrative expenses, plus depreciation, scaled by the market value of assets at the beginning of the year (the market value of common equity plus the book value of debt and preferred stock); *Pre-tax operating margin* is defined as earnings before depreciation, interest, and taxes scaled by sales; *Asset turnover* is defined as sales divided by market value of assets at the beginning of the year; *Employee growth rate* is defined as change in number of employees scaled by number of employees in the previous year; *Pension expense/employee* is defined as pension expense per employee; *Capital expenditure rate* is defined as capital expenditure scaled by the market value of assets at the beginning of the year. \*\*\*, \*\*, and \* denote significance at the 0.01, 0.05, and 0.10 levels, respectively.