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**Investor Demand for Internal Control Audits of
Large U.S. Companies: Evidence from a
Regulatory Exemption for M&A Transactions**

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**Investor Demand for Internal Control Audits of Large U.S. Companies:
Evidence from a Regulatory Exemption for M&A Transactions***

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Investor Demand for Internal Control Audits of Large U.S. Companies: Evidence from a Regulatory Exemption for M&A Transactions

Abstract

Because internal control audits never existed before the passage of the Sarbanes-Oxley Act (SOX), and these audits became mandatory for all U.S. accelerated filer companies at the same time, it has been difficult to assess the extent of investor demand for these audits. To understand whether investors demand internal control audits for these large companies, we exploit a regulatory exemption that permits companies to exclude acquired operations from an internal control audit. Using this voluntary setting, we find that investors react negatively if a company excludes acquired operations from their internal control audit. This negative reaction is larger when more of the company's operations are excluded from audit and when there is greater information uncertainty. Further, companies that exclude acquired operations from internal control audits are more likely to have a subsequent restatement. Collectively, these findings are consistent with investors perceiving value in (i.e., demanding) internal control audits for large U.S. public companies.

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I. INTRODUCTION

When politicians signed the Sarbanes-Oxley Act of 2002 (SOX) into law, they effectively mandated a new form of external assurance that previously had not been supplied in the market. Specifically, section 404(b) of SOX requires auditors of large U.S. public companies to opine on the quality of their clients' internal controls over financial reporting. This costs U.S. companies, in aggregate, several billion dollars every year (SEC 2009). The intended benefit of internal control audits is to "increase market efficiency by improving investor confidence in the reliability of a company's financial disclosure and system of internal control over financial reporting" (SEC 2003). However, because financial statement audits already provide investors with (a) assurance over company financial reports and (b) a legal claim against auditors (Dye 1993), it is unclear whether investors demand, or value, additional assurance over a company's internal controls (Kinney et al. 2013).

Because SOX 404(b) went into effect at the same time for all large U.S. public companies (i.e., accelerated filers), quantifying the value that investors place on internal control audits for these large companies has proven difficult (Leuz and Wysocki 2016; Leuz 2007; Karolyi 2009; Dey 2010). Furthermore, due to the presence of mandated internal control audits, we still do not know the answer to the following basic question: if regulation did not require large U.S. companies to have internal control audits, would investors demand this external assurance? In other words, would investors demand, or value, internal control audits for large companies if they were voluntary? This is a particularly important question given that politicians and regulators have begun to question the merits of these audits.¹

¹ For example, the President of the New York Stock Exchange recently testified before the House Financial Services Committee about internal control audits, and said "[Section 404(b)] put such a great cost on corporate America, and the benefits are not entirely clear.... The data doesn't show clearly that we have reduced fraud or greatly inspired

A key innovation in this study is that we exploit a regulatory exemption that allows companies the option to exclude acquired operations from an internal control audit in the year of acquisition. Regulators granted this exemption based on the expectation that it might not always be possible for a company and its auditors to complete an assessment of an acquired business's internal control over financial reporting in the period between the effective date of acquisition and the year-end reporting date (SEC 2004; 2007a; PCAOB 2004; 2007).² This exemption provides a setting in which we can observe variation in the “amount” of assurance over internal controls for a sample of large U.S.-based public companies. This allows us to provide insight on whether investors in large companies demand assurance on internal control quality, *regardless* of the outcome of those internal control audits.

Because short-window market reactions measure average investor perceptions of net costs and benefits (DeFond and Zhang, 2014), we examine investors' perceived value (i.e., demand) of internal control audits using one-day abnormal returns at the release of the auditor's report, which is the first revelation that acquired operations were excluded from the internal control audit.³ Because internal control assurance is voluntary in this setting, this abnormal return should capture the value that investors perceive from (a) internal control audits improving information quality, and (b) information revealed in management's decision to have (or not have) the audit (i.e., signaling) (Lennox and Pittman 2011). Therefore, in this setting, demand for internal control audits is driven by both the verification and signaling roles of internal control audits, which has not been previously examined.

confidence... (Michaels 2017).” Consistent with these concerns, politicians are currently working on legislation to expand exemptions to SOX 404(b) (US Congress 2017).

² See PCAOB Auditing Standard No. 5, paragraph B16, and PCAOB Auditing Standard No. 2 (now superseded), paragraphs B16, E115, and associated Staff Q&A paragraph A19. Also see Question 3 in the SEC's FAQ documents.

³ The extent, or scope, of the internal control audit is disclosed in the managers' and auditors' reports on internal controls included in a company's Form 10-K (SEC 2004).

If investors demand internal control assurance either because of (a) expected improvements in information quality, or (b) information signaled by management's choice to have the audit, we hypothesize that investors will respond negatively to the revelation that an internal control audit did not include acquired operations. Further, we expect investor reactions will be magnified as the percentage of a company excluded from an internal control audit increases.⁴ Similarly, the investor reaction should also be magnified when there is greater information uncertainty ex ante about the consolidated company.

Descriptively, we find that 35 percent of material acquisitions completed from 2005 to 2013 were excluded from large U.S. companies' internal control audits. When we examine determinants of the decision to exclude acquired operations from internal control audits (i.e., "opt-out"), we find that larger acquisitions and more complex companies are positively associated with an opt-out decision, while more time to complete an audit, domestic acquisitions, company size and book-to-market ratios are negatively associated with the decision to opt-out.

With respect to our hypotheses, we find that companies that exclude acquired operations from the internal control audit experience negative and statistically significant abnormal returns on the day that the opt-out decision is revealed (i.e., the Form 10-K release date). The economic effect is a 17 to 44 basis point difference in one-day abnormal returns between opt-out and opt-in companies. This finding suggests that, in a setting where internal control assurance is essentially voluntary, investors perceive value in (i.e., demand) internal control audits for these large companies. This result is robust to controlling for the observable determinants of opt-out decisions, and industry-, year-, audit firm-, and company-fixed effects.

⁴ While all of the companies in our sample completed a merger or acquisition, it is important to note that the merger or acquisition was previously disclosed and the earnings announcement was previously publicized in all cases. Thus, investors' beliefs about the quality of the acquisition and earnings, should already be impounded in stock price prior to the Form 10-K release, which is the focal event in our study.

In cross-sectional tests we find that, as expected, abnormal returns are even more negative for a) large acquisitions that are scoped out and b) companies that have lower information quality ex ante; as measured by higher previous stock return volatility and higher bid-ask spreads.

We also exploit a presumably exogenous shock to the cost of internal control audits using the passage of PCAOB Auditing Standard (AS) No. 5 in 2007.⁵ Given AS5 reduced the cost of internal control audits, we expect demand for internal control assurance will increase following AS5. Therefore, investors should discount more heavily companies that opt-out of internal control audits in the AS5 regime. As expected, we find that companies are less likely to opt-out of internal control audits in the period after the adoption of AS5 and abnormal returns are more negative for those companies that do opt-out in the AS5 period. Thus, investors appear to have higher demand for assurance on internal control quality as the cost of the assurance declines.

Additionally, in a placebo test, we examine investor reactions to earnings announcements, which occur immediately prior to the revelation of the extent of the internal control audit in companies' Form 10-K. Because the market should be unaware of the extent of internal control audits at the earnings announcement, we expect no difference in abnormal returns for companies that opt-in vs. opt-out. We find results consistent with this expectation, which further strengthens our inferences that the main findings capture investors responding to the opt-out news.

To further corroborate that investors are indeed reacting to the opt-out revelation, we examine whether investors are more surprised if companies opt-out despite having more time to complete the internal control audit. Specifically, for acquisitions with effective dates in the first

⁵ AS5 was adopted on November 15, 2007 by the PCAOB with the objective of reducing the costs of internal control audits while materially maintaining the same level of internal control audit assurance (PCAOB 2007). Refer to PCAOB Release 2007-005A for additional detail regarding AS5.

half of the fiscal year, there is more time available to conduct the internal control audit than if the acquisition's effective date is in the second half of the fiscal year. Thus, investors should find opt-outs to be more unexpected for acquisitions completed in the first half of the year, and consequently should react more negatively to these opt-outs. Consistent with this intuition, we find that investors react even more negatively to opt-out disclosures when operations acquired in the first half of a company's fiscal year are excluded from the internal control audit.

Having found evidence that investors demand internal control audits in a relatively homogenous group of large U.S. companies, we next examine whether investors' reactions are justified. Specifically, in supplemental analyses we examine the relation between the extent of internal control assurance and financial reporting quality. If opt-out disclosures provide relevant information about financial reporting quality, then the negative investor reactions at the time of the revelation of the opt-out decision seem justified. Restatements provide a direct measure of financial reporting quality that has high construct validity and low measurement error (DeFond and Zhang 2014). Thus, we examine and find that the likelihood of an accounting restatement in the 12 months following an acquisition's effective date, the period most likely to be affected by a reduction in assurance of internal control quality, is higher for companies who opt-out of internal control audits. Therefore, investors' negative reactions to opt-out decisions appear to be justified.

Our study contributes to the literature by providing evidence that investors demand internal control assurance for large U.S. companies. Even though these large companies would seemingly have high quality financial reporting ex ante, we find that investors react negatively if these companies exclude a portion of their operations from their internal control audit.

Additionally, these findings suggest that voluntary internal control audits provide verification and/or signaling benefits for large U.S. public companies. Therefore, our findings

complement Lennox and Pittman (2011), who examine financial statement audits that became voluntary for very small privately-held U.K. companies. They find that “credit ratings drop when companies abandon the [financial statement] audit, which conveys a negative signal about their type and reduces financial reporting credibility; i.e., both signaling and the drop in assurance are responsible for their ratings falling” (p.1657-1658).⁶ Our findings provide evidence that these inferences can be applied to broader settings, such as: a) internal control audits, b) large U.S. public companies with rich information environments, and c) the equity market. Taken together with our study, the evidence suggests that the choice to voluntarily obtain an audit (financial or internal control) conveys information to financial statement users.

Our study also extends the literature that examines how internal control assurance impacts various market and corporate outcomes. Prior studies on internal control audits have generally investigated small public companies around the size-cutoff (\$75 million in market capitalization) for mandated internal control audits (Iliev 2010; Kinney and Shepardson 2011; Schroeder and Shepardson 2016; Ge, Koester and McVay 2017).⁷ This previous design choice is likely due to the lack of identified variation in internal control audits within larger companies. However, both internal control processes and audits are fundamentally different for large versus small companies (SEC 2011; Leone 2007).⁸ Therefore, researchers have noted that inferences

⁶ Kausar, Shroff and White (2016) also examine very small private U.K.-based companies’ choice to voluntarily obtain a financial statement audit and find that this choice “provides external financiers with incremental information about the firm, which helps reduce information asymmetry and financing frictions (p.157).”

⁷ SOX Section 404(b) initially mandated internal control audits for all public companies (SEC 2005), but the SEC delayed implementation of this provision for non-accelerated filers (i.e., companies with a public float less than \$75 million). Congress formalized this exemption for non-accelerated filers in the Dodd-Frank Act of 2010 such that non-accelerated filers have never been subject to mandated internal control audits. Also note that “public float is the part of equity not held by management or large shareholders” (Iliev 2010). For ease of exposition, we use the phrase market capitalization rather than market float throughout the paper.

⁸ The SEC concluded in its Dodd-Frank mandated report to Congress on Section 404(b) that large companies are “...significantly different from the population of all [small companies], particularly in relation to size (by revenue and assets), audit fees relative to size, restatement rates, and internal control issues discovered by management and auditors” (SEC 2011, p. 3). Leone (2007) makes a similar observation, noting that company size appears to play a significant role in company incentives to discover and disclose control weaknesses. In response to these differences,

from these prior studies are not necessarily generalizable to companies that are significantly larger than \$75 million in market capitalization (Coates and Srinivasan 2014; Leuz and Wysocki 2016). Furthermore, as companies with market capitalization below \$75 million represent less than one percent of the total U.S. market capitalization (Coates and Srinivasan 2014), it is important to understand investors' perceptions of internal control audits for large U.S. public companies as they make up the vast majority of the U.S. equity markets. In sharp contrast to prior studies on internal control audits, the average company in our study has a market capitalization of \$10.1 billion, making the companies in our study more representative of the large companies that make up the overall U.S. market capitalization. Furthermore, the average size of an acquisition in our sample is \$1.0 billion.

The results of our study should also be informative to policy makers. Aside from the PCAOB's recent focus and inspection efforts on internal control audits (Franzel 2014; PCAOB 2015), regulators have continually reduced the scope and extent of mandated internal control audits.⁹ Our results suggest that future reductions in internal control assurance for large companies may be viewed negatively by investors.¹⁰ Further, because the extent of internal

the SEC (2006b), COSO (2006), and PCAOB (2009) have released separate guidance on internal control audits of small companies.

⁹ Since the enactment of SOX, the extent of mandated internal control audits has continued to decline (see Ge, Koester and McVay 2017). For example, in 2004, newly acquired M&A targets were exempted from year-one Section 404(b) requirements (SEC 2004). In 2006, IPO companies were exempted from year-one Section 404(b) requirements (SEC 2006a). In 2007, AS5 allowed auditors to take a risk based approach to Section 404(b) compliance for accelerated and large accelerated filers (PCAOB 2007). In 2010, the Dodd-Frank Act permanently exempted non-accelerated filers from Section 404(b) requirements and mandated a study on exempting companies with market capitalizations between \$75 million and \$250 million (US Congress 2010). In 2016, the Fostering Innovation Act extended the JOBS Act's Section 404(b) exemption to companies with gross revenues of less than \$50 million and who exceeded the JOBS Act's five year exemption window (US Congress 2016). Policymakers are now considering exempting companies with a public float of less than \$500 million from Section 404(b) (US Congress 2017).

¹⁰ Several anecdotes corroborate this. For example, in a survey of investors by the Center for Audit Quality, 81 percent of investors said they are concerned about the possibility that Congress may extend 404(b) exemptions to accelerated and large accelerated filers (CAQ 2010). Similarly, the Council of Institutional Investors and CFA Institute have sent comment letters to the SEC noting that they do not support expanding 404(b) exemptions for accelerated filers with a public float between \$75 million and \$250 million (SEC 2011).

control audits is associated with future restatements, reductions in mandated internal control audits may have a negative impact on future reporting quality.

Lastly, our findings complement those of a contemporaneous study (Kravet, McVay, and Weber 2017), which also exploits the Section 404 exemption for acquisitions. Our study focuses on whether investors demand internal control audits for large companies, while Kravet et al. focus on whether Section 404 compliance provides operating and financial reporting benefits to companies. They find that companies that use the internal control audit exemption (i.e., “opt-out”) are more likely to have future restatements and goodwill impairments, and lower future return-on-assets and future stock returns. In a supplemental analysis, they also find that the market reacts negatively to opt-outs, corroborating our primary findings. Taken together, both studies suggest that investors perceive value in the internal control audit, and the decision to opt-out can convey information to investors.

While the results suggest investors demand internal control audits, there are limitations to our study. First, because our tests capture the joint impact of the verification and signaling roles of internal control assurance, we are not able to speak to the relative weights that investors are putting on these two roles. Second, in this setting, auditors and company management are both excluding acquired operations from their internal control assessments (i.e., SOX 404a and 404b). Thus, we cannot empirically rule out the possibility that our findings may be driven by investors reacting to the fact that management has not assessed internal controls of the acquired entity. However, given that (a) management lacks strong incentives to disclose identified internal control weaknesses and (b) investors discount unaudited information relative to audited information (e.g., Schroeder 2016), it seems unlikely that this alternative explanation is driving our results. Despite these limitations, we believe our collective findings provide compelling

evidence regarding market demand for internal control audits for large U.S. public companies.

II. Background, Prior Literature and Hypothesis Development

Prior Research

Section 404(b) of the Sarbanes-Oxley Act mandated annual audits of internal controls over financial reporting for all public companies. Beginning in 2004, all U.S. public companies classified as “accelerated” or “large accelerated filers” (i.e., large companies) were mandated to obtain this new form of assurance, but non-accelerated filers (i.e., small companies) were given a temporary exclusion from these mandated audits.¹¹ Ultimately, after multiple implementation delays, non-accelerated filers were never required to comply with Section 404(b) and obtain external assurance on internal control quality (U.S. Congress 2010).

Prior to 2004, internal control audits were not among the services offered by audit firms.¹² Whether investors actually demand this relatively new assurance service has been difficult to assess, because internal control audits were imposed by regulation in the U.S. for all accelerated and large-accelerated filers at the same time, making it hard to find a valid counterfactual (Leuz and Wysocki 2016). Iliev (2010) attempts to address this problem by using a regression-discontinuity design around the \$75 million market capitalization cutoff, which separates companies that must have an internal control audit from those that are not required to have one. He finds that, for companies just above this cutoff, audit fees nearly doubled after the

¹¹ Filer status is primarily based on the market capitalizations (market caps) of companies. As a general guideline, large accelerated filers are companies with market caps of \$700M or above, accelerated filers are companies with market caps between \$75M and \$700M, and non-accelerated filers are companies with market caps below \$75M (SEC 2005).

¹² While the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) required auditors of FDIC insured banks to attest to management’s assertions regarding internal control, these requirements were far more limited in scope and did not constitute an audit (Gupta et al. 2013; Altamuro and Beatty 2010). For example, unlike the PCAOB rules to carry out Section 404, FDICIA did *not* require auditors to a) issue an opinion on the effectiveness of internal controls, b) perform extensive testing of internal control design and operating effectiveness, or, c) publicly disclose material weaknesses (Gupta et al. 2013; Altamuro and Beatty 2010; PCAOB 2004; FDIC 2005).

rule took effect and buy and hold stock returns were 17 percent lower over the two year period starting from the announcement of the rule through the filing of 2004 annual reports.¹³ While these findings are intriguing, Leuz and Wysocki (2016) note, “as is often the case with a regression-discontinuity design, these estimates do not generalize to companies that are much larger (or smaller) [than the \$75 million cutoff]. They also do not capture subsequent changes to SOX implementation that likely have decreased audit fees and compliance costs (e.g., the switch from Auditing Standard 2 to Auditing Standard 5) (p.564).” Given that companies around this cutoff represent less than one percent of the market capitalization in the U.S., it is very difficult to generalize these findings to the large companies which capture the majority of the U.S. market capitalization and that have greater resources and ability to implement the legislation.

Because of the lack of variation in obtaining an internal control audit, other studies have focused on variation in the *output* from an internal control audit. Specifically, these studies examine, conditional on both treatment and control companies receiving internal control audits, whether internal control audit opinion types (i.e., unqualified or adverse) have economic consequences. For example, studies have found that companies with reported material weaknesses tend to have a higher cost of debt (Dhaliwal et al. 2011; Kim et al. 2011). However, evidence relating to the equity market is mixed (e.g., Ashbaugh-Skaife et al. 2009; Beneish et al. 2008; Ogneva et al. 2007).¹⁴ This mixed evidence on investors’ perceptions of reported internal control failures leads to a need for a deeper understanding of the informativeness of internal

¹³ Kinney and Shepardson (2011) find similar results for audit fees. Additionally, Schroeder and Shepardson (2016) find that internal control audits appear to improve internal control quality.

¹⁴ Ashbaugh-Skaife et al. (2009) use long event windows and a mixed sample of un-audited [pre-Section 404(b)] and audited [post-Section 404(b)] disclosures of internal control deficiencies in their event study analysis. Ashbaugh-Skaife et al. (2009) find a negative stock price reaction around reported internal control deficiencies. Beneish et al. (2008), on the other hand, use short event windows and separate their event study analyses by un-audited and audited company disclosures of internal control deficiencies. Beneish et al. (2008) find a negative stock price reaction related to unaudited internal control deficiency disclosures but do not find a stock price reaction to audited internal control deficiency disclosures.

control audits to investors (DeFond and Zhang 2014).

We address this need by exploiting a one-year exemption for internal control audits of acquired operations. Therefore, our study overcomes many of the limitations of these prior studies.¹⁵ Specifically, we are able to observe variation in the extent of internal control assurance for large U.S. public companies, which allows us to more directly assess whether investors demand internal control audits for these economically important companies.

Background on Setting

Recognizing the cost and time involved in an audit of internal controls, the SEC and PCAOB gave companies the option to exclude entities acquired in the year of acquisition from the internal control audit (SEC 2004; SEC 2007; PCAOB 2004; PCAOB 2007). This exemption was given due to a potential lack of sufficient time to complete an audit of internal controls over newly acquired operations. However, this exemption only applies to the audit of internal controls, as the consolidated entity is still required to receive a traditional financial statement audit. If managers utilize this exemption and “opt-out” of the internal control audit, then management’s and the auditor’s report in the 10-K filing must (a) disclose that the acquired entity was excluded from the internal control audit and (b) describe the significance of the acquisition to the consolidated financial statements.¹⁶ This exclusion provides a unique opportunity to observe variation in the extent of internal control audits for a group of companies that are generally assumed to have high quality financial reporting and who have not been previously investigated due to the mandated nature of internal control audits for large companies.

¹⁵ For example, a disclosed internal control deficiency (ICD) can send conflicting signals to investors (DeFond and Zhang 2014). Although an ICD may seem like bad news, managers have strong incentives to remediate ICDs quickly, which they usually do (e.g., Bedard et al. 2012). Thus, a reported ICD may be a positive signal because it reveals that an area for improvement has been identified and internal controls are now in the process of being improved (DeFond and Zhang 2014). In contrast, the exclusion of material acquired operations from an internal control audit seems to be an unambiguous reduction in assurance to investors.

¹⁶ See Appendix A for examples of these opt-out disclosures. If a company does not opt-out, its audit opinion for internal controls does not include any explanatory language regarding the acquisition.

Hypothesis Development

The value of internal control audits stems from how they motivate companies to implement and maintain effective internal controls over financial reporting. Consequently, effective internal controls can help ensure that processes and procedures for assembling financial information are reliable. Thus, *external* information supplied by management should be of higher quality (Schroeder and Shepardson 2016; Goodman et al. 2013), which should help reduce investors' estimation risk. Moreover, companies' *internal* information should also be of higher quality, which can help managers make better operating decisions (Kinney and Shepardson 2011). When internal control audits are voluntary, they can also provide a "signal" to financial statement users, which is otherwise hidden when audits are mandated. Specifically, when management has a choice whether to obtain an audit, the mere decision to obtain an internal control audit conveys information to investors (Lennox and Pittman, 2011; Kausar et al. 2016). For example, if managers opt-out of an internal control audit, it may convey that managers are intentionally hiding something or that managers do not value the audit. In contrast, if managers choose to have the internal control audit, it can convey that managers have confidence in their financial reporting processes, or that they see the value of assurance on the internal control quality.

All these benefits come at a cost though. Not only does a company have to pay the external auditor to perform the internal control audit, but the company must also invest significant resources (e.g., hiring consultants and personnel) to develop and maintain effective internal controls.

If investors demand internal controls audits because they believe that there is a net benefit due to information quality and/or signaling, then investors should respond negatively when

internal control assurance is reduced by excluding acquired operations from the internal control audit. We formalize the above discussion into our following hypothesis:

H1: Investors react negatively to the revelation that a company's internal control audit did not include acquired operations.

If investors view internal control audits favorably, then we expect a stronger negative reaction in certain settings. Specifically, as the size of an acquisition increases, relative to the size of the company making the acquisition, a greater proportion of the company will be excluded from the internal control audit. Thus, if investors demand internal control assurance, then we would expect an even more negative reaction when larger acquisitions are excluded from the internal control audit. Similarly, if there is higher information uncertainty (e.g., Zhang, Cai, and Keasey 2013) for a company immediately prior to the release of the auditor's report in the 10-K filing, then we would expect investors to react more negatively if acquired operations are excluded from an internal control audit. This reasoning leads to the following cross-sectional predictions:

H2: Investor reactions to the revelation of a partial internal control audit are more negative when larger acquisitions are excluded from audit.

H3: Investor reactions to the revelation of a partial internal control audit are more negative for companies with higher ex ante information uncertainty.

III. RESEARCH DESIGN

In this section, we describe the empirical design of our study. First, we model the determinants of the exclusion of newly acquired operations from internal control audits. Second, we investigate whether investors perceive value in voluntary internal control assurance for large

U.S. companies.

Determinants of Internal Control Audit Opt-Out Decisions

We begin by examining the factors that could influence whether acquired operations are excluded from internal control audits. In general, we expect that characteristics of the acquisition and the company influence the likelihood of excluding the acquired assets from the internal control audit. Thus, we estimate the following probit model:

$$Opt-Out_{i,t} = \beta_0 + \sum \beta_j Deal\ Characteristics_{i,t} + \sum \beta_k Company\ Characteristics_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

where $Opt-Out_{i,t}$ is an indicator variable that equals one if the company does not purchase an internal control audit for target i during company fiscal year t , zero otherwise; *Deal Characteristics* and *Company Characteristics* represent variables that are expected to be associated with company opt-out decisions as described below. Variable definitions are provided in Appendix B.

We identify potentially relevant deal characteristics based on practice guidance from PricewaterhouseCoopers (2007). First, we include a measure of time constraints, because if an acquisition occurs later in a company's fiscal year, then there is less time available to complete an internal control audit on the acquired operations, which should increase the likelihood of excluding those operations from the internal control audit. This variable captures the amount of time between the acquisition's effective date (i.e., completion date) and the company's fiscal year end (*Months Out_{i,t}*).¹⁷ Second, because the likelihood of obtaining an internal control audit may depend upon the quality of internal controls already in place at the acquired company, we include three indicator variables to capture whether the target is likely to have reliable internal controls prior to the acquisition. These attributes include whether the target: a) previously

¹⁷ Results are similar if we instead measure time constraints using the number of days, rather than months, between the effective date of acquisition and the company's fiscal year end (untabulated).

received an internal control audit report (*Target 404(b) Experience_{i,t-1}*), b) previously received an adverse opinion on internal controls (*Target ICD_{i,t-1}*), or c) is a privately-held company (*Private_{i,t}*).¹⁸ Third, we include variables to measure the level of effort and costs associated with an internal control audit for acquired operations, including whether the target is foreign or domestic (*Domestic_{i,t}*), whether the acquisition is in a different industry (*Diversifying_{i,t}*), and importantly, the size of the acquired company (*Target Size_{i,t}*). Finally, we include variables capturing the abnormal return around the acquisition announcement (*M&A Announcement_{t-1,t+1}*) and the percentage of the acquisition paid for using stock financing (*Stock Financing_{i,t}*). We include these two measures because prior literature indicates that negative announcement returns (Bens et al. 2012) and stock financing (Louis, 2004; Gong et al., 2008) are associated with managers' incentives to inflate company performance, which may reduce the extent of internal control monitoring.

Because an acquirer's control environment also likely affects the decision to exclude acquired assets from an internal control audit, we include measures that capture company (i.e., acquirer) characteristics that have been found to help explain variation in internal control environments. Following prior literature that examines internal control reporting *outcomes* (e.g., Ashbaugh-Skaife et al. 2007; Doyle et al. 2007), we include variables to proxy for the reporting company's complexity (*Segments_{t-1}*), internal control quality (*ICD_{t-1}*), and resources (*Size_{t-1}*). We also include measures for factors that may influence company incentives to provide voluntary disclosure (*Leverage_{t-1}*, *ROA_{t-1}*, *SalesGrowth_{t-1}*, *Std Stock Return_{t-1}*, and *Book to Market_{t-1}*). Additionally, we include a measure that captures whether the company's fiscal year-end

¹⁸ Our inferences are unchanged if the *Target ICD* variable also includes material weaknesses reported via SOX 302 and SOX 404(a).

corresponds with auditors' busy season (*Busy Season_{it}*).¹⁹ Lastly, we include year, industry, and auditor fixed-effects and cluster standard errors by company.²⁰

Demand for Internal Control Audits: Market Reaction

To test whether equity investors demand (i.e., perceive value in) internal control audits, regardless of the outcomes, we estimate the following ordinary least squares model:

$$CAR_{10-K} = \beta_0 + \beta_1 Opt-Out_{i,t} + \sum \beta_k Controls + \varepsilon_{i,t} \quad (2)$$

where CAR_{10-K} is the cumulative abnormal return for the company on the day of the company's 10-K release, which is the first revelation of the extent of the internal control audit.²¹ In cases where a company filed its 10-K after hours (Berkman and Truong 2009), we treat the following trading day as day zero. We calculate CAR_{10-K} using the Carhart (1997) four-factor model.²² We describe *Controls* below and provide variable definitions in Appendix B. Hypothesis 1 predicts that the sign on β_1 is negative.

Based on prior research (e.g., Beneish et al. 2008; Griffin 2003), *Controls* consists of variables that may help explain the market's reaction to a company's 10-K filing. To control for potentially new information disclosed to investors via the 10-K, we control for whether the company's internal control audit report has an adverse opinion (ICD_{10K}), and for restatement

¹⁹ We present a parsimonious model of determinants of opting-out of internal control audits. In supplemental analysis we also controlled for institutional ownership, analyst following, recent restructuring, recent auditor change, and prior year loss, but do not tabulate them due to low explanatory power of these variables. Our primary findings are unchanged after including these variables.

²⁰ We find similar results (untabulated) if we cluster the standard errors by both company and time (year-end or 10-K announcement date). In untabulated tests, our results also hold if we exclude auditor fixed effects.

²¹ As the large companies in our sample have rich information environments where information should be quickly incorporated into price (Brogaard et al. 2014; Collins et al. 1987), we perform our analyses using a one-day window to mitigate the influence of confounding events on our results (e.g., Christensen et al. 2016). With that said, we find qualitatively similar results if CAR_{10K} is measured over the three-day trading window surrounding the company's 10-K release ($t-1, t+1$).

²² The results are similar if we instead use size-adjusted or market-adjusted returns (untabulated).

announcements ($Restatement_{(t-1,t+1)}$).²³ Following Beneish et al. (2008), we also control for concurrent events during the 10-K release period, including auditor changes ($Auditor\ Change_{(t-1,t+1)}$), director and officer changes ($D\&O\ Change_{(t-1,t+1)}$), delayed 10-K releases ($Non-Timely_{(t-1,t+1)}$), and equity market events, including announcement of dividends, reorganizations, stock issuances, and stock splits ($Financial\ News_{(t-1,t+1)}$).²⁴ To capture the content of earnings announcements that fall near the 10-K release period, and potential earnings announcement drift, we control for the company's abnormal return around its immediately preceding earnings announcement ($Earnings\ Ann_{(t-1,t+1)}$). Lastly, we include year and industry fixed effects to control for variation across time and industry and we cluster standard errors by company.

Endogeneity

Because correlated omitted variables and measurement error have the potential to influence findings in any empirical archival study, we employ multiple methods to address these potential endogeneity concerns. First, we perform a short window event study, which is less subject to the influence of confounding factors (McWilliams and Siegel 1997). Second, we mitigate the influence of time invariant factors by using company fixed effects. Third, we also include controls for the observable determinants of opt-out decisions. Finally, in Section V we perform several additional analyses, including using an exogenous shock to the demand for internal control assurance and placebo tests.

Sample selection

The sample we examine consists of 1,803 acquisitions completed by 925 companies between 2005 and 2013 from the Security Data Corporation (SDC) Merger and Acquisitions

²³ In our sample, no company received a going concern, qualified, or adverse financial statement audit opinion.

²⁴ As a robustness test, instead of controlling for concurrent events (e.g., reported material weakness, restatement, late 10-K filing, dividend announcement, stock split), we drop observations where another concurrent event occurred during the three day window around the 10-K release. Our inferences are unchanged.

database.²⁵ An acquisition is included in the sample if it satisfies the following criteria: (1) the company is a U.S. accelerated filer subject to Section 404(b) requirements for internal control audits; (2) the company purchased 100% ownership of the target; (3) the target is material to the company (transaction value $\geq 1\%$ of the company's prior year-end market cap); (4) the target is representative in size and complexity to a U.S. accelerated filer subject to Section 404(b) requirements (transaction value $\geq \$75\text{M}$); and (5) the company has requisite auditor, financial, and market data available in Audit Analytics, Compustat, CRSP, and I/B/E/S.²⁶ We additionally require the 10-Ks for the consolidated entities be released after their earning's announcement window $(t-1, t+1)$ to isolate the market effects attributed to 10-K releases. To minimize differences in audit quality/resources across observations, we also require post-transaction consolidated entities be audited by a Big 4 audit firm. Lastly, we delete observations where there was information leakage regarding whether the acquired operations would be excluded from the internal control audit.²⁷ Table 1 summarizes this sample construction process.

IV. EMPIRICAL RESULTS

²⁵ Of the 1,803 acquisitions, there are 1,557 unique company-years and 925 companies (i.e., acquirers). There is also within company variation in our sample, as 123 out of 925 companies (473 out of 1,803 acquisitions) switch between opt-in and opt-out across acquisitions, which allows for sufficient within-company variation to use company fixed effects in our multivariate tests.

²⁶ Given the SEC uses \$75 million as its market cap threshold for determining whether a company is defined as small or large for Section 404(b) requirement purposes, we use this threshold in our empirical tests. This helps ensure that the acquired entities have internal controls that would be sufficiently important to the acquirer's internal control audit. Results are generally similar when alternatively using a \$50 million or \$100 million threshold.

²⁷ To see if the extent of internal control audits was previously disclosed through an alternative communication channel, we searched Audit Analytics for quarterly SOX 302 disclosures by management made prior to the 10-K. We found that for 30 observations in our sample, companies had explicitly stated whether or not the acquired entity would be scoped out of the internal control audit at year end. If these observations are included in the sample, we find similar results (untabulated). We also find that for these observations, the market reaction to *Opt-Out* disclosures at the 10-K filing was insignificantly different from zero, as expected (untabulated). To see whether information leakage was occurring via other channels, we also randomly selected 25 observations from our sample and searched Factiva for public disclosures of the anticipated extent of internal control audits made prior to the filing of the 10-K. This search produced no instances that the anticipated extent of the internal control audit was disclosed prior the 10-K filing.

Descriptive Statistics

Table 2 reports descriptive statistics for our sample starting with the distribution of acquisitions across company fiscal quarters (Panel A), fiscal years (Panel B), industries (Panel C), and Big 4 audit firms (Panel D). The observations are partitioned based on whether the acquired operations were excluded from the internal control audit (*Opt-Out* = 1 or 0). Panel A illustrates that the percentage of companies that exclude acquired operations from internal control audits increases each fiscal quarter as companies approach the end of their fiscal year and the corresponding internal control reporting deadline. Panel B shows the frequency of opt-out decisions is higher in 2005-2007, which corresponds to the PCAOB Audit Standard 2 regime, which required more rigorous internal control audits than Audit Standard 5 did after its initial implementation.²⁸ Additionally, opt-out decisions appear to be more common in some industries, such as manufacturing (Panel C), and are more common when certain Big 4 audit firms (e.g., Deloitte, PWC) are the external auditor (Panel D), which highlights the importance of including industry and audit firm fixed effects in our multivariate analysis.

Table 2, Panel E reports the descriptive statistics for the variables in our determinants and abnormal return models (Equations 1 and 2 respectively). With respect to determinants of opt-out decisions, the univariate results indicate that companies are more likely to exclude acquired operations from the internal control audit if the acquisition is larger, closer to year-end, more positively received by the market, and when the target is a non-U.S. company.²⁹ Further, important company factors in the decision to opt-out include company size, leverage, market position, complexity, and whether a company's fiscal year-end falls during the auditor's busy

²⁸ In the last few years of our sample, the rate at which companies "opted-out" began to rise, possibly due to increased scrutiny that the PCAOB has put on audits of internal controls (Franzel 2014; PCAOB 2015).

²⁹ In our sample, 46 percent of the targets are public, but only 15 percent of targets received a prior internal control audit report. This is primarily due to some targets not being listed on US stock exchanges (i.e., foreign targets), or targets that were a subsidiary of a public company and did not receive their own standalone report.

season.

Table 2, Panel E also indicates that investors respond negatively to acquirer opt-out disclosures, which is consistent with Hypothesis 1. The difference in mean $CAR_{10-K,(t)}$ across opt-out and opt-in companies is 21 basis points and is statistically significant.

Table 3 reports the correlations of the variables. We see that $Opt-Out_{i,t}$ is significantly correlated with $CAR_{10-K,(t)}$, and a number of company and deal characteristics highlighting the importance of multivariate analysis. We note that variance inflation factors (VIFs) are below 10 for all regressions (untabulated), indicating multicollinearity does not have an impact on our results (Kennedy 2008).

Determinants

Table 4 reports the results from estimating the opt-out determinants model (Equation 1) using probit estimation. The results indicate that the determinants model appears to have sound predictive ability, as evidenced by the area under the ROC curve of 0.790 (Hosmer and Lemeshow 2000). In particular, these results illustrate that acquired operations are more likely to be excluded from internal control audits when the acquisition is completed later in the year, the size of the acquisition is larger, and the acquiring company is smaller.

Main Analysis

Table 5 reports the event study results from our test of H1, which predicts that the market will react negatively if the company's internal control audit excluded operations that were acquired during the year. The first two models report the results using: a) OLS with industry and year fixed effects, and b) OLS with company and year fixed effects. In the next two models, we repeat these analyses and add additional controls for the opt-out determinants included in Equation 1. In each of these tests, we find a negative and statistically significant coefficient on

$Opt-Out_{i,t}$.³⁰ These results suggest that, on average, when it is revealed to the market that an internal control audit did not include the company's acquired operations, the company's stock price tends to drop by 17 to 44 basis points. These results are consistent with H1.³¹

Cross-Sectional Analyses

We next examine whether investor reactions to opt-out revelations are more negative when more of the company's operations are excluded from the internal control audit (H2), or when there is greater information uncertainty surrounding the company prior to the 10-K release (H3). We predict that investors will discount more heavily companies who exclude large targets from the internal control audit (H2) and companies that have greater ex ante information uncertainty (H3).

We measure information uncertainty prior to the 10-K release using three proxies: higher stock return volatility, higher bid-ask spreads, and a larger adverse-selection component of the bid-ask spread.³² We measure each proxy over the one month window prior to a company's 10-K filing and then create high/low indicator variables for each proxy that are set to one if the proxy is above its sample median, zero otherwise (*High Return Volatility*, *High Bid-Ask Spread*, *High Adverse-Selection*). We also create a high/low indicator variable if the size of the target relative to the size of the acquirer is above the sample median, zero otherwise (*Large Target*).

Table 6 reports the event study results from re-estimating Equation 2 with $Opt-Out_{i,t}$ interacted with these proxies for the magnitude of the excluded operations and investor uncertainty. Columns 1 and 2 report the test of H2 with *Large Target* using OLS with industry

³⁰ We find similar results if we winsorize CAR_{10-K} at the top and bottom 5 percent or 10 percent, which suggests that the results do not appear to be driven by potential outliers in abnormal returns.

³¹ In our sample, only 2 restatements reduced income, and only 10 internal control weaknesses related to entity-level controls. Consequently, the statistically insignificant coefficients on *Restatement* and *ICD_i* are not surprising.

³² Baker and Wurgler (2006) argue that companies with high stock return volatility are more difficult for investors to value. Bid-ask spreads and, specifically, the adverse selection component of bid-ask spreads have a strong theoretical link to information differences between companies and investors (Stoll 1978; Copeland and Galai 1983; Callahan et al. 1997).

fixed effects, and OLS with company fixed effects, respectively. In columns 3 through 8, we repeat these analyses and test H3 by replacing *Large Target* with each of the measures of information uncertainty. In each of these columns, the interaction terms and the joint tests of $Opt-Out_{i,t}$ plus the interaction terms are negative and statistically significant, as predicted. All else equal, companies who exclude large targets from the internal control audit experience a decrease in cumulative abnormal returns relative to companies who exclude smaller targets from the internal control audit. Similarly, companies with higher pre-10-K uncertainty experience a negative incremental reaction compared to opt-out companies with lower pre-10-K uncertainty.³³ Overall, these findings are consistent with H2 and H3.

V. ADDITIONAL ANALYSES

Exogenous Shock to the Price of Section 404(b) Audits: Auditing Standard No. 5

While the findings from the main analyses are consistent with our predictions, it is still possible that the observed results may be driven by a correlated omitted variable. To further address this concern, we exploit an exogenous shock to the cost of internal control audits using the passage of PCAOB Auditing Standard (AS) No. 5 in 2007. The primary goal of AS5 was to reduce the cost of internal control audits (PCAOB, 2007). Consistent with this goal, prior studies find that audit fees significantly declined after the adoption of AS5 (Doogar et al. 2010; Krishnan et al. 2011; Wang and Zhou, 2012). If internal control audits are valued, then we expect the lower costs of internal control audits in the post-AS5 period should increase both company and investor demand for the audits and, thus, (a) companies should be more likely to purchase

³³ In additional untabulated analyses we find that the negative market reaction to opt-out disclosures is more severe if the acquired entity had reported a material weakness in its internal controls in the year prior to the acquisition. We do not find evidence that the market reaction to opt-out disclosures is any different for acquired entities that had an internal control audit in the prior year, for companies that subsequently had a restatement, or for serial acquirers.

internal control assurance and (b) investors should discount more heavily those companies that opt-out of internal control audits after AS5.

To test for these effects, we analyze the two years immediately before and after the passage of AS5 and exclude the year of transition, 2007.³⁴ In Table 7 Panel A we find that companies are less likely to opt-out of internal control audits post-AS5. Additionally, consistent with our expectations of investor behavior, in Table 7 Panel B we find abnormal returns around the 10-K filing are more negative in the period after implementation of AS5 for companies that opt-out of internal control audits for acquired operations.³⁵ More specifically, the coefficient on $Opt-Out_{i,t} * AS5$ is negative and statistically significant, while the coefficient on $Opt-Out_{i,t}$ is statistically insignificant, indicating that the observed results are driven by investor responses during the post-AS5 period. In untabulated results, we include all observations (n=1,803), rather than just the two years before and after AS5 implementation, and find similar results. Furthermore, the incrementally negative market reaction post-AS5 is unlikely to be an artifact of the financial crisis occurring in the post-AS5 regime. If investors did not see in value internal control audits, then they should have reacted more *positively* during the financial crisis when companies conserved resources by opting-out of internal control audits for acquired operations, which is the opposite result of what we find.³⁶

³⁴ The PCAOB filed AS5 with the SEC on May 25, 2007, and the SEC approved it on July 27, 2007. AS5 became effective for fiscal year ends beginning November 15, 2007 with early adoption permitted beginning as of the SEC approval date (SEC 2007b). We find similar results if we include the AS5 transition year and use the following pre- and post-AS5 windows: November 15, 2005 to November 14, 2007 and November 15, 2007 to November 14, 2009 (untabulated).

³⁵ Note that the main effect of AS5 is not included in this test because it is absorbed by the year fixed effects.

³⁶ We find similar results if we exclude all financial companies or if we include filing date fixed effects, (untabulated). Also in untabulated analyses, we re-run all of our cross-sectional tests reported in Table 6 partitioned on the pre- and post-SOX periods. We note that the results are not concentrated in one particular time period, rather there is cross-sectional variation in investor's response to *Opt-Out* in both time periods. Additionally in untabulated analyses we use Factiva to search for possible confounding news events in the announcement window for the 50 most negative opt-out returns and the 50 most positive opt-in returns. Our overall inferences are unchanged if we explicitly control for the few concurrent events we identified. Lastly, in untabulated tests we winsorize abnormal returns at the top and bottom 5 percent and find similar results.

Impact of Acquisition Timing

To further corroborate our findings, we examine if the timing of an acquisition's completion influences investors' reactions to opt-out disclosures. As previously noted, we find that the amount of time available to complete an internal control audit on acquired operations influences the likelihood that a company will opt-out, which is consistent with regulators' motivation to allow companies to opt-out of an internal control audit for acquired operations.³⁷ To the extent that investors recognize this, the amount of time available to conduct an internal control audit should affect investors' ex-ante expectations about whether companies will opt-out of an internal control audit. At the 10-K filing, if investors' are updating their prior beliefs about the probability of the company scoping out the acquired operations from the internal control audit, then investors should be more surprised when companies that had more time available to complete the audit actually opt-out. Thus, investors should react more negatively in these circumstances, as the opt-out disclosure should be more unexpected.

To empirically test this, we run a cross-sectional analysis on the full sample where we interact $Opt-Out_{i,t}$ with an indicator variable equal to one if the acquisition's effective date is in the first half of the acquiring company's fiscal year ($First\ Half_{i,t}$). We expect that the coefficient on $Opt-Out_{i,t} * First\ Half_{i,t}$ should be negative and statistically significant. As reported in Table 8, we find that the coefficient on the interaction term ($Opt-Out_{i,t} * First\ Half_{i,t}$) is indeed negative and statistically significant in explaining variation in $CAR_{10-K(t)}$. These findings further strengthen our inferences that investors are responding to the lack of internal control audits for acquired

³⁷ Internal control audits are likely *not* a key consideration when the effective date of an acquisition is set, as other matters are likely to be of primary importance (e.g., the integration of operations), and companies can opt-out of the internal control audit regardless of the timing in the first year of acquisition. Thus, the effective date of the acquisition is unlikely to be manipulated by management to influence the internal control audit.

operations.

Placebo Test – Market Reaction to Earnings Announcements

To further address the possibility that the findings may be due to a correlated omitted variable, we next conduct a placebo test where we re-estimate Equation (2) centered on earnings announcement dates rather than 10-K filing dates. We do this because no information regarding the extent of the internal control audit is disclosed at the earnings announcement, therefore if $Opt-Out_{i,t}$ is associated with the market reaction to company earnings announcement dates, then our primary findings are likely spurious.

Table 9 provides the results from our placebo test. As expected, the coefficients on $Opt-Out_{i,t}$ across all columns are statistically insignificant. These findings suggest that the results from our main analyses are not driven by earnings news, but instead capture investors responding to the opt-out disclosures.

Market Overreaction

Given the magnitude of the abnormal returns we document for opt-out disclosures, one question that may arise is whether or not investors are overreacting. If this is the case, we should see a subsequent reversal in returns after the opt-out disclosure (i.e., positive future returns) over the following days, weeks, or year. To assess this, we examine future CARs over several windows beginning the day after the 10-K filing, including 1, 2, 3, and 4 days, 1, 2, 3, and 4 weeks, and 3, 6, 9, and 12 months. In untabulated analyses, we find that the CARs for opt-out firms are negative, rather than positive, and that these returns are not statistically more positive than the returns of opt-in firms. These findings provide no evidence of a return reversal, and are inconsistent with investors over-reacting to the opt-out disclosure.³⁸

³⁸ Another possible explanation for our main results is that opt-out disclosures may signal that there are underlying problems with the acquisition that will subsequently be reflected in operating performance. For example, if a

Subsequent Restatements

Although our results thus far suggest that investors demand internal control audits for large companies, these tests do not address whether investors' perceptions are appropriate or not. If investors' perceptions are justified that internal control audits are valuable due to improving information quality or sending a signal about financial reporting quality, then companies that exclude acquired operations from their internal control audit should have relatively lower financial reporting quality, *ceteris paribus*. Consequently they should (a) be more likely to misstate their financial reports and (b) have lower internal control quality.

To test whether voluntary internal control assurance is associated with the likelihood that large companies misstate their financial reports, we estimate the following probit model:

$$Restatement_{i,(Effective\ Date+1,Effective\ date+365)} = \beta_0 + \beta_1 Opt-Out_{i,t} + \sum \beta_k Controls + \varepsilon_{i,t} \quad (3)$$

where *Restatement* is an indicator variable for whether a company begins misstating its financial statements over the twelve month window ($t+1, t+365$) following the effective date of M&A transaction i . *Controls* consists of deal and company characteristics potentially associated with the probability of financial statement misstatements. As prior literature has included the majority of the variables from our determinants model as control variables when examining restatements (e.g., Bens et al. 2012), we include all the variables from our determinants model as controls (See Appendix B for variable definitions). We also include year and industry fixed effects and cluster standard errors by company. If investors' perceptions regarding voluntary internal control

company is struggling to integrate an acquired entity into its operations, and expects that these struggles may lead to poor future performance (e.g., unexpected higher costs), the company may opt-out of an internal control audit to allow it to focus on fixing the integration problems. To investigate this possibility empirically, we re-estimate our main CAR analyses and control for future operating performance (ROA_{t+1}), which captures the potential for underlying issues with the acquisition. We find our results are not changed when controlling for future performance (untabulated). We also find similar results if we control for the company's cumulative abnormal return for the one year period beginning right after the 10-K filing (untabulated). Thus, the information contained in the opt-out disclosure does not just merely capture future performance.

assurance are justified, we would expect the sign on β_1 to be positive.

Table 10 reports the results. Across both of the models we find that $Opt-Out_{i,t}$ is positively associated with the likelihood of having a subsequent restatement. In practical terms, this result suggests that when an internal control audit excludes acquired operations, companies have a 2.3 to 3.0 percent higher likelihood of subsequently having to restate their financial statements, relative to companies that include acquired operations in the internal control audit. This suggests that investors' reactions to opt-out disclosures are not misguided.³⁹

Future Internal Control Deficiencies

Next, we examine whether opt-out companies have a higher likelihood of reporting future internal control deficiencies. We do this by replacing the dependent variable in our restatements model (equation 3) with an indicator equal to one if the company reports a material weakness at the end of year $t+1$ (i.e., the first year an internal control audit must be performed on the acquired operations if the company opted out of having a full internal control audit in year t), zero otherwise (ICD_{t+1}). If companies are opting-out for fear of having to report an expected material weakness in the acquired entity, then perhaps opt-out companies would be more likely to have control failures in the future. On the other hand, if companies opt-out in order to remedy and improve internal controls before the next internal control audit, then there may be no difference in the likelihood of a future reported internal control weakness. Although financial reporting quality appears to be lower when acquired entities are not included in the internal control audit (as evidenced by increased likelihood of restatement), in Table 11 we find that there

³⁹ Accruals measures have also been used to capture future reporting quality in previous studies on internal control quality (Schroeder and Shepardson 2016). Because our setting, by necessity, examines companies that participate in M&A activity, which is known to influence future earnings and distort accruals measures (Collins and Kim 2015), we do not examine accruals measures.

is no significant difference in future reported internal control weaknesses for companies that opt-out relative to companies that opt-in.

Taken together, it appears that in our sample of large companies, those that opt-out of internal control audits are more likely to have a subsequent restatement, but not more likely to report an internal control failure. These findings are consistent with auditors having a difficult time either identifying material control weaknesses or convincing clients to report a known material weakness (Rice and Weber 2012). Thus, we are cautious to draw strong conclusions on the relation between opt-out and subsequent internal control reporting quality.

VI. CONCLUSION

In this study we examine whether investors demand internal control audits of large U.S. public companies. Because SOX mandated that all accelerated and large-accelerated filers in the U.S. implement internal control audits at the same time, the lack of a counterfactual has made it difficult to assess whether investors demand these audits for large U.S. companies, which comprise the bulk of U.S. market capitalization. We exploit a regulatory exemption that allows companies to exclude acquired companies from their internal control audit, but requires both auditors and management to disclose the excluded operations in their internal control reports. Using this setting, we are able to observe variation in the extent of internal control audits of large U.S. public companies, which allows us to examine whether investors demand these audits, regardless of the outcome of the audits.

We find that investors react negatively when it is revealed that a company's acquired operations were excluded from the internal control audit. This effect is even stronger for large acquisitions (relative to the size of the company), and when there is greater uncertainty about the

value of the company. These results hold after a battery of tests to address omitted variables and endogeneity. Further, we find that companies that have a partial internal control audit are more likely to have a restatement, suggesting that investors' perceptions are justified. Overall, our results are consistent with investors valuing (i.e., demanding) internal control audits for large U.S. companies, in a setting where internal control audits are voluntary.



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APPENDIX A

Examples of Acquirer Opt-Out Disclosures in Section 404(b) Internal Control Audit Reports

CEDAR FAIR, L.P., Fiscal Year 2006 10-K (Market Capitalization of \$1.5 billion)

“As described in Management’s Report on Internal Control over Financial Reporting, management excluded from its assessment the internal control over financial reporting at Paramount Parks, Inc. which was acquired on June 30, 2006 and whose financial statements constitute 58 percent of total assets and 32 percent of revenues of the consolidated financial statement amounts as of and for the year ended December 31, 2006. Accordingly, our audit did not include the internal control over financial reporting at Paramount Parks, Inc.”

PFIZER INC, Fiscal Year 2009 10-K (Market Capitalization of \$146.8 billion)

“The scope of management’s assessment of the effectiveness of internal control over financial reporting includes all of the Company’s consolidated operations except for the operations of Wyeth, which the Company acquired on October 15, 2009. Wyeth’s operations represent 7% of the Company’s consolidated revenues for the year ended December 31, 2009, and assets associated with Wyeth’s operations (including intangible assets and goodwill) represent 38% of the Company’s consolidated total assets, as of December 31, 2009. Our audit of internal control over financial reporting of Pfizer Inc. and Subsidiary Companies also excluded an evaluation of the internal control over financial reporting of Wyeth.”

ORACLE CORPORATION, Fiscal Year 2010 10-K (Market Capitalization of \$113.4 billion)

“As indicated in the accompanying Management’s Report on Internal Control Over Financial Reporting, management’s assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Oracle America, Inc. (formerly known as Sun Microsystems, Inc.), which is included in the May 31, 2010 consolidated financial statements of Oracle Corporation and constituted 6 percent and 3 percent of total and net assets, respectively, as of May 31, 2010 and 10 percent of revenues, for the year then ended. Our audit of internal control over financial reporting of Oracle Corporation also did not include an evaluation of the internal control over financial reporting of Oracle America, Inc.”

INTERNATIONAL PAPER CO., Fiscal Year 2012 10-K (Market Capitalization of \$17.5 billion)

“As described in the Report of Management on Internal Control over Financial Reporting, management excluded from its assessment the internal control over financial reporting at Temple-Inland Inc. (Temple-Inland) which was acquired on February 13, 2012. Temple-Inland constitutes 19% of total net sales and 25% of total assets of the consolidated financial statements as of and for the year ended December 31, 2012. Accordingly our audit did not include internal control over financial reporting at Temple-Inland.”

CONAGRA FOODS, INC., Fiscal Year 2013 10-K (Market Capitalization of \$14.1 billion)

“ConAgra Foods, Inc. acquired Ralcorp Holdings, Inc. (Ralcorp) during the year ended May 26, 2013, and management excluded from its assessment of the effectiveness of the Company’s internal control over financial reporting as of May 26, 2013, Ralcorp’s internal control over financial reporting associated with total assets of \$8.18 billion and total net sales of \$1.25 billion included in the consolidated financial statements of the Company as of and for the year ended May 26, 2013. Our audit of internal control over financial reporting also excluded an evaluation of the internal control over financial reporting of Ralcorp.”

CHURCHILL DOWNS INC, Fiscal Year 2013 10-K (Market Capitalization of \$1.6 billion)

“As described in Management’s Report on Internal Control over Financial Reporting appearing under Item 9A, management has excluded Oxford Casino from its assessment of internal control over financial reporting as of December 31, 2013 because it was acquired by the Company in a purchase business combination during 2013. We have also excluded Oxford Casino from our audit of internal control over financial reporting. Oxford Casino is a wholly-owned subsidiary whose total assets and total revenues represent 12.5% and 4.4% respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2013.”

APPENDIX B
Variable Definitions

Variable Name	Description	Source
Variable of Interest		
Opt-Out _{i,t}	Indicator variable equal to one if the company's Section 404(b) audit report indicated the company opted-out of receiving a Section 404(b) internal control audit for M&A deal <i>i</i> during company fiscal year <i>t</i> (Opt-Out _{i,t} = 1 if Audit Analytics EXE_REAS_KEYS = Item 1; hand collected from company 10-K filings for companies with more than one M&A deal in fiscal year <i>t</i> per SDC), zero otherwise.	Audit Analytics, SDC
Determinants Model		
Months Out _{i,t}	The number of months between the M&A effective date of deal <i>i</i> and the acquirer's fiscal year-end date in fiscal year <i>t</i> .	SDC, Compustat
Private _{i,t}	Indicator variable that equal to one if the target of deal <i>i</i> was private per SDC and, if applicable, the target's parent company was private per SDC, zero otherwise.	SDC
Target 404(b) Experience _{i,t-1}	Indicator variable equal to one if the target received a Section 404(b) audit report in the year prior to the target's acquisition per Audit Analytics, zero otherwise.	Audit Analytics
Target ICD _{i,t-1}	Indicator variable equal to one if the target reported a material weakness in its internal controls as part of SOX 404(b) in the 10-K in the year prior to the acquisition, zero otherwise.	Audit Analytics, SDC
Domestic _{i,t}	Indicator variable equal to one if the target in deal <i>i</i> was domiciled in the U.S., zero otherwise.	SDC
Target Size _{i,t}	Value of deal <i>i</i> per SDC divided by the acquirer's prior fiscal year-end market capitalization (CSHO*PRCC_F).	SDC, Compustat
M&A Announcement _(t-1,t+1)	Cumulative abnormal return over the [-1,+1] day trading window surrounding the acquirer's earnings announcement for fiscal year <i>t</i> . Abnormal returns are calculated using the Carhart (1997) four-factor model.	CRSP, SDC
Diversifying _{i,t}	Indicator variable equal to one if the acquirer and target of deal <i>i</i> do not share the same two-digit SIC code, zero otherwise.	SDC
Stock Financing _{i,t}	Indicator variable equal to one if at least 50 percent of the value of deal <i>i</i> was financed with company stock, zero otherwise.	SDC
ICD _{t-1}	Indicator variable equal to one if a material weakness in the company's internal controls is reported in the company's 10-K Section 404(b) audit report in year <i>t-1</i> , zero otherwise.	Audit Analytics
Busy Season _t	Indicator variable equal to one if the acquirer's fiscal year-end falls in December or January, zero otherwise.	Compustat
Segments _{t-1}	Natural log of the number of acquirer operating segments as of the acquirer's prior fiscal year-end.	Compustat
Size _{t-1}	Natural log of the company's prior fiscal year-end market capitalization, calculated as (CSHO* PRCC_F).	Compustat
Std Stock Return _{t-1}	Standard deviation of the company's daily stock returns over the one-year period ending one month prior to the M&A deal effective date.	CRSP, SDC
ROA _{t-1}	Company's prior fiscal year return on assets, calculated as operating income before depreciation (OIADP) divided by total	Compustat

	assets (AT).	
SalesGrowth _{t-1}	Company's prior sales growth, calculated as follows: (SALE _{t-1} – SALE _{t-2})/SALE _{t-2} .	Compustat
Book to Market _{t-1}	Company's prior fiscal year book to market ratio, calculated as total common equity (CEQ) divided by the acquirer's year-end market capitalization (CSHO* PRCC_F).	Compustat
Leverage _{t-1}	Company's prior fiscal year leverage, calculated as total liabilities (LT) divided by total assets (AT).	Compustat
Variables in CAR Analyses		
CAR _{10-K, (t)}	Cumulative abnormal return over on the day of the company's 10-K release date for fiscal year <i>t</i> . The abnormal return is calculated using the Carhart (1997) four-factor model. The parameters of the model are estimated over the window [-250,-21] days prior to the 10-K release (Bens, Goodman, and Neamtiu 2012).	CRSP, Compustat, SDC
Earnings Ann _(t-1,t+1)	Cumulative abnormal return over the [-1,+1] day trading window surrounding the company's earnings announcement date for fiscal year <i>t</i> . The parameters of the model are calibrated the same as CAR _{10-K, (t-1,t+1)} above.	CRSP, Compustat
ICD _t	Indicator variable equal to one if a material weakness in the company's internal controls is reported in the company's 10-K Section 404(b) audit report in year <i>t</i> , zero otherwise.	Audit Analytics
Restatement _(t-1,t+1)	Indicator variable equal to one if a financial statement misstatement was announced during the [-1,+1] day 10-K release period, zero otherwise.	Audit Analytics
D&O Change _(t-1,t+1)	Indicator variable equal to one if a director or officer change was announced during the [-1,+1] day 10-K release period, zero otherwise.	Audit Analytics
Auditor Change _(t-1,t+1)	Indicator variable equal to one if an auditor change was announced during the [-1,+1] day 10-K release period, zero otherwise.	Audit Analytics
Non-Timely _(t-1,t+1)	Indicator variable equal to one if a Form NT 10-K untimely 10-K filing notice was released during the [-1,+1] day 10-K release period, zero otherwise.	Audit Analytics
Financial News _(t-1,t+1)	Indicator variable equal to one if an equity market event in the CRSP event file occurred during the [-1,+1] day 10-K release period, including announcement of dividends, reorganizations, stock issuances, and stock splits, zero otherwise.	CRSP
Cross-Sectional Variables		
Large Target _{i,t}	Indicator variable equal to one if Target Size _{i,t} is above the sample median, zero otherwise. TargetSize _{i,t} is calculated as the value of deal <i>i</i> per SDC divided by the acquirer's prior fiscal year-end market capitalization (CSHO*PRCC_F).	SDC, Compustat
High ReturnVolatility _t	Indicator variable equal to one if the variance of the company's daily returns over the [-30,-2] day window prior to the company's 10-K release date is above the sample median, zero otherwise.	CRSP, Audit Analytics

High Bid-Ask Spread _t	Indicator variable equal to one if company's average Bid-Ask Spread over the [-30,-2] day window prior to the company's 10-K release date is above the sample median, zero otherwise. Bid-Ask Spread is calculated as the natural log of the average percentage daily bid-ask spread for the acquirer of deal <i>i</i> over the period of interest, defined as: $100 ((ASK - BID) / 0.5 (ASK + BID))$.	CRSP, Audit Analytics
High Adverse Selection _t	Indicator variable equal to one if the adverse selection component of the company's Bid-Ask Spread _t is above the sample median, zero otherwise. The adverse selection component is the error term from the following equation, calculated over the [-30,-2] day window prior to the acquirer's 10-K release date: $\text{LogBid-Ask}_t = \beta_0 + \beta_1 \text{LogPrice}_t + \beta_2 \text{LogTradingVolume}_t + \beta_3 \text{LogStdReturns}_t + \varepsilon_t$	CRSP, Audit Analytics
Additional Analyses		
AS5	Indicator variable equal to one for acquirer fiscal years ending after the effective date of Auditing Standard No. 5 (November 15, 2007), zero otherwise.	PCAOB (2007)
First Half _{i,t}	Indicator variable equal to one if acquisition's effective date was during the first six months of the company's fiscal year, zero otherwise.	SDC, Compustat
Earnings Surprise _t	The decile ranked earnings surprise, where earnings surprise is measured as the difference between actual earnings and the median analyst forecast, scaled by stock price at the fiscal year end date.	CRSP, I/B/E/S
Restatement _(Effective Date +1, Effective Date + 365)	Indicator variable equal to one if the consolidated entity restates its financial statements and the start of the restatement period falls in the 365 days following the M&A deal effective date, zero otherwise.	Audit Analytics, SDC
ICD _{t+1}	Indicator variable equal to one if the consolidated entity received a material weakness in its Section 404(b) audit report during fiscal year <i>t+1</i> following the M&A deal effective date, zero otherwise.	Audit Analytics, SDC

TABLE 1
Sample Construction

	<u>Observations</u>
Acquisitions from 2005-2013 completed by U.S. companies that are subject to SOX 404(b) requirements (i.e., accelerated filers)	13,785
Less observations that do not meet the following criteria:	
- the company purchased 100% ownership of the target	(1,642)
- the target is material to the company (transaction value \geq 1% of the company's prior year-end market cap)	(7,016)
- the target is representative in size and complexity to a U.S accelerated filer subject to SOX 404(b) requirements (transaction value \geq \$75M)	(2,532)
- the company's 10-K is released after its earning's announcement window	(499)
- the company has requisite auditor, financial, and market data available in Audit Analytics, Compustat, CRSP, and I/B/E/S	(139)
- the company is audited by a Big 4 firm	(124)
- no information leakage event was identified	<u>(30)</u>
Final Sample	1,803

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TABLE 2
Descriptive Statistics

Panel A: Distribution of M&A Deal Effective Dates by Acquirer Fiscal Quarter

Fiscal Quarter	Observations	Opt-Out	Opt-In	Opt-Out Percent	Total Percent
1	386	77	309	20%	21%
2	423	141	282	33%	23%
3	445	170	275	38%	25%
4	549	242	307	44%	30%
	<u>1,803</u>	<u>630</u>	<u>1,173</u>	<u>35%</u>	<u>100%</u>

Panel B: Distribution of M&A Deal Effective Dates by Acquirer Fiscal Year

Fiscal Year	Observations	Opt-Out	Opt-In	Opt-Out Percent	Total Percent
2005	250	105	145	42%	14%
2006	253	99	154	39%	14%
2007	238	85	153	36%	13%
2008	186	60	126	32%	10%
2009	97	25	72	26%	5%
2010	178	56	122	31%	10%
2011	195	54	141	28%	11%
2012	211	70	141	33%	12%
2013	195	76	119	39%	11%
	<u>1,803</u>	<u>630</u>	<u>1,173</u>	<u>35%</u>	<u>100%</u>

Panel C: Distribution of M&A Deals by Acquirer Industry (Fama French 12)

Industry	Observations	Opt-Out	Opt-In	Opt-Out Percent	Total Percent
NonDurables	68	32	36	47%	4%
Durables	23	7	16	30%	1%
Manufacturing	214	128	86	60%	12%
Oil & Gas	126	28	98	22%	7%
Chemicals	42	19	23	45%	2%
Business Equip	336	114	222	34%	19%
Telecom	57	22	35	39%	3%
Utilities	55	19	36	35%	3%
Retail	89	39	50	44%	5%
Healthcare	138	57	81	41%	8%
Finance	447	62	385	14%	25%
Other	208	103	105	50%	12%
	<u>1,803</u>	<u>630</u>	<u>1,173</u>	<u>35%</u>	<u>100%</u>

Panel D: Distribution of M&A Deals by Audit Firm

Fiscal Quarter	Observations	Opt-Out	Opt-In	Opt-Out Percent	Total Percent
PwC	492	186	306	38%	27%
EY	597	209	388	35%	33%
Deloitte	348	133	215	38%	19%
KPMG	366	102	264	28%	20%
	<u>1,803</u>	<u>630</u>	<u>1,173</u>	<u>35%</u>	<u>100%</u>

TABLE 2 (continued)
Descriptive Statistics

Panel E – Univariate Analysis

Variables	Full Sample (n = 1,803)					Opt-Out (n=630)	Opt-In (n=1,173)	Difference in Means
	Mean	S.D.	25%	Median	75%			
Determinants Model								
Months Out _{i,t}	6.1620	3.4707	3.0000	6.0000	9.0000	5.3159	6.6164	-1.3005 ***
Target SOX Experience _{i,t-1}	0.1509	0.3580	0.0000	0.0000	0.0000	0.1524	0.1500	0.0023
Target ICD _{i,t-1}	0.0089	0.0938	0.0000	0.0000	0.0000	0.0127	0.0068	0.0059
Private _{i,t}	0.5402	0.4985	0.0000	1.0000	1.0000	0.5508	0.5345	0.0163
Domestic _{i,t}	0.8314	0.3745	1.0000	1.0000	1.0000	0.7937	0.8517	-0.0580 ***
Target Size _{i,t}	0.2181	0.3061	0.0442	0.1029	0.2596	0.2934	0.1776	0.1158 ***
M&A Announcement _(t-1,t+1)	0.0051	0.0563	-0.0196	0.0024	0.0260	0.0099	0.0025	0.0073 ***
Diversifying _{i,t}	0.4493	0.4976	0.0000	0.0000	1.0000	0.4095	0.4706	-0.0611 **
Stock Financing _{i,t}	0.1353	0.3422	0.0000	0.0000	0.0000	0.1286	0.1390	-0.0104
ICD _{t-1}	0.0166	0.1279	0.0000	0.0000	0.0000	0.0190	0.0153	0.0037
Busy Season _t	0.8026	0.3982	1.0000	1.0000	1.0000	0.7302	0.8414	-0.1113 ***
Segments _{t-1}	0.8361	0.7390	0.0000	1.0986	1.3863	0.9044	0.7994	0.1050 ***
Size _{t-1}	8.0892	1.3962	7.1207	7.9671	9.0358	7.6829	8.3074	-0.6245 ***
Std Stock Return _{t-1}	0.0215	0.0095	0.0146	0.0195	0.0259	0.0224	0.0211	0.0013 ***
ROA _{t-1}	0.0862	0.0691	0.0407	0.0791	0.1238	0.0975	0.0802	0.0173 ***
Sales Growth _{t-1}	0.1863	0.3464	0.0270	0.1194	0.2457	0.1950	0.1816	0.0134
Book to Market _{t-1}	0.4790	0.2857	0.2868	0.4393	0.6223	0.4446	0.4975	-0.0529 ***
Leverage _{t-1}	0.5556	0.2149	0.4151	0.5555	0.6868	0.5132	0.5784	-0.0652 ***
CAR Analyses								
CAR _{10-K, (t)}	-0.0002	0.0171	-0.0086	-0.0006	0.0069	-0.0016	0.0005	-0.0021 **
Earnings Ann _(t-1,t+1)	0.0027	0.0679	-0.0321	0.0013	0.0380	0.0023	0.0029	-0.0007
ICD _t	0.0277	0.1642	0.0000	0.0000	0.0000	0.0413	0.0205	0.0208 **
Restatement _(t-1,t+1)	0.0144	0.1192	0.0000	0.0000	0.0000	0.0143	0.0145	-0.0002
D&O Change _(t-1,t+1)	0.0333	0.1794	0.0000	0.0000	0.0000	0.0317	0.0341	-0.0024
Auditor Change _(t-1,t+1)	0.0033	0.0576	0.0000	0.0000	0.0000	0.0063	0.0017	0.0046
Non-Timely _(t-1,t+1)	0.0055	0.0743	0.0000	0.0000	0.0000	0.0079	0.0043	0.0037
Financial News _(t-1,t+1)	0.0427	0.2023	0.0000	0.0000	0.0000	0.0254	0.0520	-0.0266 ***
Cross-Sectional Measures								
Large Target _{i,t}	0.4997	0.5001	0.0000	0.0000	1.0000	0.6730	0.4066	0.2664 ***
High ReturnVolatility _t	0.4997	0.5001	0.0000	0.0000	1.0000	0.6000	0.4459	0.1541 ***
High Bid-Ask Spread _t	0.4992	0.5001	0.0000	0.0000	1.0000	0.5556	0.4689	0.0867 ***
High Adverse Selection _t	0.4997	0.5001	0.0000	0.0000	1.0000	0.5540	0.4706	0.0834 ***
Additional Analyses								
First Half _{i,t}	0.4487	0.4975	0.0000	0.0000	1.0000	0.3460	0.5038	-0.1578 ***
Earnings Surprise _t	5.4742	2.8803	3.0000	5.0000	8.0000	5.3667	5.5320	-0.1653
Restatement _(Effective Date, + 365)	0.0549	0.2279	0.0000	0.0000	0.0000	0.0746	0.0443	0.0303 ***
ICD _{t+1}	0.0194	0.1380	0.0000	0.0000	0.0000	0.0270	0.0153	0.0116 *

*, **, *** Indicate that the estimated coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively, using two-tailed tests. All continuous variables have been winsorized at the 1% and 99% levels. See Appendix B for variable definitions.

TABLE 3
Pearson Correlations

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
1. Opt Out																	
2. Months Out _{i,t}	-0.18																
3. Target SOX Experience _{i,t-1}	0.00	0.01															
4. Target ICD _{i,t-1}	0.03	0.01	0.22														
5. Private _{i,t}	0.02	-0.02	-0.45	-0.10													
6. Domestic _{i,t}	-0.07	-0.01	0.18	0.04	-0.02												
7. Target Size _{i,t}	0.18	0.01	0.20	0.02	-0.17	0.11											
8. M&A Announcement _(t-1,t+1)	0.06	0.03	-0.12	-0.04	0.05	-0.04	0.01										
9. Diversifying _{i,t}	-0.06	-0.06	-0.11	-0.04	0.12	-0.05	-0.12	-0.01									
10. Stock Financing _{i,t}	-0.01	0.06	0.28	0.12	-0.21	0.11	0.19	-0.10	-0.17								
11. ICD _{t-1}	0.01	-0.02	0.05	0.08	-0.01	0.00	0.00	0.01	-0.01	-0.03							
12. Busy Season _t	-0.13	-0.07	-0.02	-0.06	0.00	0.09	0.04	0.00	0.00	0.05	-0.01						
13. Segments _{t-1}	0.07	-0.05	0.00	-0.02	-0.03	-0.10	-0.10	0.00	0.11	-0.20	-0.01	-0.04					
14. Size _{t-1}	-0.21	-0.02	0.23	0.04	-0.16	-0.07	-0.39	-0.09	0.03	-0.06	-0.03	-0.01	0.27				
15. Std Stock Return _{t-1}	0.07	0.03	-0.05	-0.04	0.00	-0.06	0.17	0.07	-0.07	0.08	0.02	-0.05	-0.11	-0.28			
16. ROA _{t-1}	0.12	-0.03	0.02	0.00	0.02	-0.06	-0.12	0.06	-0.03	-0.19	-0.04	-0.10	0.15	0.24	-0.12		
17. Sales Growth _{t-1}	0.02	-0.05	-0.03	-0.03	0.01	0.07	0.06	0.00	-0.02	0.01	-0.02	0.07	-0.10	-0.13	0.00	0.03	
18. Book to Market _{t-1}	-0.09	0.02	-0.02	0.00	-0.02	0.00	0.13	-0.06	0.03	-0.01	0.00	0.09	0.01	-0.15	0.11	-0.40	-0.10
19. Leverage _{t-1}	-0.14	0.03	0.04	-0.03	-0.08	0.05	0.04	0.01	-0.05	0.20	-0.02	0.20	0.07	0.08	-0.12	-0.21	-0.08
20. CAR _{10-K, (t)}	-0.06	0.03	-0.02	-0.01	-0.01	0.03	-0.03	0.02	-0.01	0.01	-0.01	0.03	-0.04	-0.01	0.00	-0.02	0.04
21. Earnings Ann _(t-1,t+1)	0.00	0.01	0.05	0.01	0.02	-0.01	0.02	0.03	-0.08	0.02	0.03	-0.03	0.05	-0.02	0.01	0.01	-0.02
22. ICD _t	0.06	0.02	-0.02	0.06	0.01	0.00	0.08	-0.02	0.00	0.04	0.19	-0.06	-0.07	-0.13	0.03	-0.06	0.07
23. Restatement _(t-1,t+1)	0.00	0.02	0.00	0.04	0.01	-0.03	0.05	0.00	0.01	-0.01	-0.02	0.00	-0.03	-0.03	-0.01	-0.01	-0.05
24. D&O Change _(t-1,t+1)	-0.01	0.00	-0.02	-0.02	-0.06	-0.06	-0.02	0.02	0.02	-0.01	0.00	0.03	0.09	0.03	0.00	0.05	-0.02
25. Auditor Change _(t-1,t+1)	0.04	-0.02	0.00	-0.01	0.01	0.00	0.00	0.01	-0.03	-0.02	-0.01	0.00	0.03	-0.01	-0.01	0.02	0.01
26. Non-Timely _(t-1,t+1)	0.02	0.01	0.01	-0.01	-0.02	-0.01	0.05	0.05	-0.01	-0.01	-0.01	0.04	-0.01	-0.05	0.01	-0.01	0.00
27. Financial News _(t-1,t+1)	-0.06	0.01	0.01	0.01	0.01	-0.01	-0.04	-0.01	0.04	-0.02	-0.03	0.07	0.08	0.13	-0.10	0.01	-0.02
28. Large Target _{i,t}	0.25	0.00	0.12	0.01	-0.11	0.11	0.56	0.04	-0.10	0.14	0.00	0.01	-0.15	-0.51	0.21	-0.14	0.10
29. High ReturnVolatility _t	0.15	0.04	0.02	0.01	0.02	-0.04	0.13	0.05	-0.12	0.03	0.08	-0.10	-0.10	-0.23	0.33	0.01	0.08
30. High Bid-Ask Spread _t	0.08	0.10	-0.05	-0.01	0.02	0.10	0.19	0.00	-0.06	0.10	0.10	0.00	-0.16	-0.43	0.10	-0.12	0.10
31. High Adverse Selection _t	0.08	0.09	-0.06	-0.02	0.02	0.08	0.21	0.00	-0.06	0.11	0.09	0.01	-0.17	-0.46	0.14	-0.17	0.09
32. First Half _{i,t}	-0.15	0.87	-0.01	0.00	-0.02	-0.03	0.02	0.06	-0.04	0.06	-0.01	-0.05	-0.05	-0.03	0.04	-0.02	-0.07
33. Earnings Surprise _t	-0.03	-0.02	-0.02	0.01	0.03	-0.07	-0.06	-0.03	0.05	-0.10	-0.01	-0.01	0.11	0.07	0.06	0.07	-0.04
34. Restatement (Effective Date, + 365)	0.06	-0.02	0.01	0.03	0.00	-0.02	0.04	0.01	0.00	0.02	0.01	-0.03	0.02	-0.04	0.07	-0.05	0.00
35. ICD _{t+1}	0.04	0.03	-0.04	-0.01	0.00	0.00	0.06	0.02	0.00	0.00	0.08	-0.02	-0.04	-0.12	0.05	-0.01	0.05

TABLE 3 (Continued)

Pearson Correlations

	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.	33.	34.
18. Book to Market _{t-1}																	
19. Leverage _{t-1}	-0.08																
20. CAR _{10-K, (t)}	0.02	0.01															
21. Earnings Ann _(t-1,t+1)	-0.01	-0.04	0.03														
22. ICD _t	0.01	-0.05	0.03	-0.02													
23. Restatement _(t-1,t+1)	0.03	-0.02	0.01	-0.02	0.04												
24. D&O Change _(t-1,t+1)	-0.05	0.02	0.03	-0.02	0.01	0.00											
25. Auditor Change _(t-1,t+1)	-0.04	0.00	0.00	0.00	0.11	-0.01	0.04										
26. Non-Timely _(t-1,t+1)	-0.03	0.01	-0.06	0.05	-0.01	0.05	0.03	0.00									
27. Financial News _(t-1,t+1)	0.02	0.04	0.01	0.01	-0.04	-0.03	0.02	0.04	0.02								
28. Large Target _t	0.14	-0.03	0.02	0.02	0.08	0.00	-0.02	0.00	0.04	-0.08							
29. High Return Volatility _t	-0.06	-0.12	0.01	0.05	0.05	0.04	0.02	0.02	0.04	-0.09	0.15						
30. High Bid-Ask Spread _t	0.00	-0.04	0.02	0.00	0.11	-0.02	-0.02	0.00	0.06	-0.07	0.22	0.36					
31. High Adverse Selection _t	0.05	-0.05	0.01	0.04	0.10	0.00	-0.03	0.00	0.06	-0.11	0.25	0.42	0.83				
32. First Half _{i,t}	0.02	0.03	0.02	0.01	0.00	0.02	0.01	-0.03	0.02	0.03	0.00	0.04	0.08	0.07			
33. Earnings Surprise _t	0.00	-0.07	-0.04	0.24	-0.04	-0.05	0.00	-0.01	0.01	-0.02	-0.05	-0.03	-0.08	-0.07	-0.02		
34. Restatement _(Effective Date, + 365)	0.03	0.00	0.02	0.04	0.06	0.01	0.00	-0.01	-0.02	0.00	0.03	0.04	-0.02	0.00	-0.01	0.00	
35. ICD _{t+1}	0.00	-0.02	0.00	0.01	0.20	0.05	-0.03	0.06	0.10	-0.03	0.06	0.04	0.08	0.08	0.03	0.02	0.11

Bold indicates statistical significance at the 0.05 level or better, two-tailed. N = 1,803.

All continuous variables have been winsorized at the 1% and 99% levels. See Appendix B for variable definitions.

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TABLE 4
Determinants of Opt-Out Decisions for Internal Control Audits

Model: $\text{Opt-Out}_{i,t} = \beta_0 + \sum \beta_k \text{Determinants} + \varepsilon_{i,t}$

	Probit Model	
	Coefficient	P-Value
Constant	3.1965 ***	(0.000)
Months Out _{i,t}	-0.0886 ***	(0.000)
Target SOX Experience _{i,t-1}	0.1850	(0.132)
Target ICD _{i,t-1}	0.2966	(0.377)
Private _{i,t}	0.0274	(0.733)
Domestic _{i,t}	-0.2923 ***	(0.002)
Target Size _{i,t}	0.5560 ***	(0.000)
M&A Announcement _(t-1,t+1)	0.5110	(0.413)
Diversifying _{i,t}	-0.1794 **	(0.027)
Stock Financing _{i,t}	0.1357	(0.283)
ICD _{t-1}	-0.0795	(0.752)
Busy Season _t	-0.3131 ***	(0.003)
Segments _{t-1}	0.1436 **	(0.024)
Size _{t-1}	-0.2338 ***	(0.000)
Std Stock Return _{t-1}	6.2116	(0.259)
ROA _{t-1}	1.3010 *	(0.075)
Sales Growth _{t-1}	-0.0920	(0.459)
Book to Market _{t-1}	-0.3755 **	(0.030)
Leverage _{t-1}	-0.7616 ***	(0.001)
Industry F.E.	Yes	
Year F.E.	Yes	
Audit Firm F.E.	Yes	
Cluster S.E. by Company	Yes	
Pseudo R ²	0.201	
Area under ROC curve	0.790	
N	1,803	

*, **, *** Indicate that the estimated coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively, using two-tailed tests. All continuous variables have been winsorized at the 1% and 99% levels. See appendix B for variable definitions.

TABLE 5
Market Reaction to 10-K Revelation of Opt-Out Decisions: Cumulative Abnormal Returns

Model: $CAR_{10-K, (t)} = \beta_0 + \beta_1 \text{Opt-Out}_{i,t} + \sum \beta_k \text{Controls} + \varepsilon_{i,t}$

	Pred. Sign	Parsimonious Model				Full Set of Controls			
		OLS		OLS w/ Company F.E.		OLS		OLS w/ Company F.E.	
		Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
Opt-Out _{i,t}	(-)	-0.0021 **	(0.023)	-0.0043 ***	(0.009)	-0.0017 *	(0.059)	-0.0044 ***	(0.007)
Earnings Ann _(t-1,t+1)		0.0094	(0.339)	-0.0037	(0.802)	0.0100	(0.316)	0.0006	(0.967)
ICD _i		0.0035	(0.296)	-0.0038	(0.635)	0.0035	(0.322)	-0.0054	(0.489)
Restatement _(t-1,t+1)		0.0012	(0.553)	0.0025	(0.661)	0.0016	(0.417)	0.0036	(0.524)
D&O Change _(t-1,t+1)		0.0032	(0.485)	0.0019	(0.687)	0.0033	(0.447)	0.0022	(0.644)
Auditor Change _(t-1,t+1)		-0.0008	(0.929)	0.0083	(0.239)	-0.0007	(0.941)	0.0069	(0.153)
Non-Timely _(t-1,t+1)		-0.0142 **	(0.016)	-0.0210 **	(0.014)	-0.0142 **	(0.019)	-0.0258 ***	(0.001)
Financial News _(t-1,t+1)		0.0007	(0.711)	0.0032	(0.189)	0.0007	(0.714)	0.0014	(0.594)
<i>Determinants of Opt-Out_{i,t}</i>									
Months Out _{i,t}						0.0001	(0.346)	0.0000	(0.764)
Target SOX Experience _{i,t-1}						-0.0019	(0.194)	-0.0025	(0.195)
Target ICD _{i,t-1}						0.0002	(0.941)	-0.0037	(0.474)
Private _{i,t}						-0.0010	(0.289)	-0.0010	(0.412)
Domestic _{i,t}						0.0016	(0.169)	0.0044 **	(0.022)
Target Size _{i,t}						-0.0019	(0.286)	0.0025	(0.393)
M&A Announcement _(t-1,t+1)						0.0039	(0.672)	0.0174	(0.213)
Diversifying _{i,t}						-0.0007	(0.417)	0.0012	(0.330)
Stock Financing _{i,t}						0.0006	(0.717)	-0.0038	(0.118)
ICD _{t-1}						-0.0020	(0.641)	-0.0062	(0.552)
Busy Season _t						0.0009	(0.430)	-0.0260	(0.190)
Segments _{t-1}						-0.0005	(0.434)	0.0020	(0.361)
Size _{t-1}						0.0000	(0.995)	0.0006	(0.792)
Std Stock Return _{t-1}						0.0049	(0.946)	-0.0418	(0.718)
ROA _{t-1}						-0.0027	(0.777)	0.0241	(0.352)
Sales Growth _{t-1}						0.0023	(0.202)	0.0025	(0.370)
Book to Market _{t-1}						0.0007	(0.708)	0.0057	(0.181)
Leverage _{t-1}						-0.0005	(0.877)	-0.0164 *	(0.091)
Intercept		-0.0048 **	(0.027)	0.0007	(0.702)	-0.0058	(0.289)	0.0257	(0.341)
Company F.E.		No		Yes		No		Yes	
Industry F.E.		Yes		No		Yes		No	
Year F.E.		Yes		Yes		Yes		Yes	
Audit Firm F.E.		No		No		Yes		Yes	
Cluster S.E. by Company		Yes		Yes		Yes		Yes	
Adj R ²		0.010		0.235		0.006		0.255	
N		1,803		1,803		1,803		1,803	

*, **, *** Indicate that the estimated coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively, using a one-tailed test when a prediction is indicated and a two-tailed test otherwise. P-values are provided in parentheses next to the estimated coefficients. All continuous variables have been winsorized at the 1% and 99% levels. See Appendix B for variable definitions.

TABLE 6
Cross-Sectional Tests: Market Reaction to 10-K Revelation of Opt-Out Decisions

Model: $CAR_{10-K, (t)} = \beta_0 + \beta_1 \text{Opt-Out}_{i,t} + \beta_2 \text{XS}_t + \beta_3 \text{Opt-Out}_{i,t} * \text{XS}_t + \sum \beta_k \text{Controls} + \varepsilon_{i,t}$

		CAR_{10-K, (t)}							
	Pr	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Opt-Out _{i,t}	(-)	-0.0005 (0.366)	-0.0027 (0.105)	0.0008 (0.765)	-0.0005 (0.379)	0.0000 (0.503)	-0.0018 (0.166)	0.0009 (0.807)	-0.0005 (0.391)
Large Target _{i,t}		0.0025 * (0.068)	0.0031 * (0.077)						
Opt-Out _{i,t} *Large Target _{i,t}	(-)	-0.0027 * (0.078)	-0.0035 * (0.099)						
High Return Volatility _t				0.0017 (0.163)	0.0018 (0.395)				
Opt-Out _{i,t} *High Volatility _t	(-)			-0.0045 *** (0.007)	-0.0079 *** (0.003)				
High Bid-Ask Spread _t						0.0010 (0.449)	0.0018 (0.445)		
Opt-Out _{i,t} *High Bid-Ask _t	(-)					-0.0034 ** (0.031)	-0.0059 ** (0.020)		
High Adverse Selection _t								0.0010 (0.456)	0.0016 (0.534)
Opt-Out _{i,t} *High Adverse _t	(-)							-0.0052 *** (0.003)	-0.0092 *** (0.001)
Full set of controls included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company F.E.	No	Yes	No	Yes	No	Yes	No	Yes	
Industry F.E.	Yes	No	Yes	No	Yes	No	Yes	No	
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Audit Firm F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cluster S.E. by Company	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Adj R ²		0.007	0.257	0.009	0.263	0.007	0.258	0.01	0.266
N		1,803	1,803	1,803	1,803	1,803	1,803	1,803	1,803
Joint Test:	(-)	-0.0032 **	-0.0062 **	-0.0037 **	-0.0084 ***	-0.0034 **	-0.0077 ***	-0.0043 **	-0.0097 ***
$\beta_{\text{Opt-Out}} + \beta_{\text{Interaction}} = 0$		(0.024)	(0.010)	(0.025)	(0.003)	(0.045)	(0.006)	(0.013)	(0.001)

*, **, *** Indicate that the estimated coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively, using a one-tailed test when a prediction is indicated and a two-tailed test otherwise. P-values are provided in parentheses beneath the estimated coefficients. All continuous variables have been winsorized at the 1% and 99% levels. See Appendix B for variable definitions.

TABLE 7
Exogenous Shock to the Price of Section 404(b) Audits: Auditing Standard No. 5

Panel A – Determinants Model: $\text{Opt-Out}_{i,t} = \beta_0 + \beta_1 \text{AS5} + \sum \beta_k \text{Determinants} + \varepsilon_{i,t}$

	Pred. Sign	Probit
AS5	(-)	-0.2850 ** (0.016)
Full set of determinants included		Yes
Industry F.E.		Yes
Audit Firm F.E.		Yes
Cluster by Firm		Yes
Pseudo R ²		0.250
Area under ROC curve		0.823
N		786

Panel B – Outcome Model: $\text{CAR}_{10-K, (t)} = \beta_0 + \beta_1 \text{AS5} + \beta_2 \text{Opt-Out}_{i,t} * \text{AS5} + \sum \beta_k \text{Controls} + \varepsilon_{i,t}$

	Pred. Sign	OLS
Opt-Out _{i,t}	(-)	-0.0003 (0.444)
Opt-Out _{i,t} *AS5	(-)	-0.0134 *** (0.002)
Full set of controls included		Yes
Industry F.E.		Yes
Year F.E.		Yes
Audit Firm F.E.		Yes
Cluster S.E. by Company		Yes
Adj R ²		0.035
N		786
Joint Test: $\beta_{\text{Opt-Out}} + \beta_{\text{Interaction}} = 0$	(-)	-0.0137 *** (0.004)

*, **, *** Indicate that the estimated coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively, using a one-tailed test when a prediction is indicated and a two-tailed test otherwise. P-values are provided in parentheses beneath the estimated coefficients. The main effect of AS No. 5 is not identified in Panel B above because it is absorbed by the year fixed effects. All continuous variables have been winsorized at the 1% and 99% levels. See Appendix B for variable definitions.

TABLE 8
Cross-Sectional Test: Acquisitions with Effective Dates in the First Half of the Fiscal Year

Model: $CAR_{10-K, (t)} = \beta_0 + \beta_1 Opt-Out_{i,t} + \beta_2 First\ Half_{i,t} + \beta_3 Opt-Out_{i,t} * First\ Half_{i,t} + \sum \beta_k Controls + \varepsilon_{i,t}$

	Pr	CAR_{10-K, (t)}	
		OLS	OLS w/ Company F.E.
Opt-Out _{i,t}	(-)	-0.0001 (0.470)	-0.0028 * (0.080)
First Half _{i,t}		0.0021 ** (0.037)	0.0014 (0.213)
Opt-Out _{i,t} *First Half _{i,t}	(-)	-0.0041 ** (0.010)	-0.0046 ** (0.030)
Full set of controls included		Yes	Yes
Company F.E.		No	Yes
Industry F.E.		Yes	No
Year F.E.		Yes	Yes
Audit Firm F.E.		Yes	Yes
Cluster S.E. by Company		Yes	Yes
Adj R ²		0.007	0.257
N		1,803	1,803
Joint Test:	(-)	-0.0042 ***	-0.0074 ***
$\beta_{Opt-Out} + \beta_{Interaction} = 0$		(0.008)	(0.003)

*, **, *** Indicate that the estimated coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively, using a one-tailed test when a prediction is indicated and a two-tailed test otherwise. P-values are provided in parentheses beneath the estimated coefficients. All continuous variables have been winsorized at the 1% and 99% levels. See Appendix B for variable definitions.

TABLE 9
Placebo Test: Market Reaction to Earnings Announcements

Model: $CAR_{Earnings, (t)} = \beta_0 + \beta_1 Opt-Out_{i,t} + \sum \beta_k Controls + \varepsilon_{i,t}$

	Parsimonious Model				Full Set of Controls			
	OLS		OLS w/ Company F.E.		OLS		OLS w/ Company F.E.	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
Opt-Out _{i,t}	-0.0008	(0.713)	-0.0003	(0.944)	-0.0029	(0.237)	-0.0033	(0.416)
Earnings Surprise _t	0.0029 ***	(0.000)	0.0022 ***	(0.005)	0.0030 ***	(0.000)	0.0023 ***	(0.001)
ICD _t	-0.0002	(0.971)	0.0063	(0.274)	0.0003	(0.956)	0.0061	(0.419)
Restatement _(t-1,t+1)	-0.0044	(0.480)	-0.0249	(0.175)	-0.0045	(0.491)	-0.0214	(0.234)
D&O Change _(t-1,t+1)	-0.0090	(0.124)	-0.0011	(0.898)	-0.0086	(0.150)	0.0009	(0.916)
Auditor Change _(t-1,t+1)	-0.0084	(0.357)	-0.0065	(0.669)	-0.0096	(0.279)	0.0083	(0.557)
Non-Timely _(t-1,t+1)	0.0302	(0.143)	0.0374	(0.299)	0.0291	(0.155)	0.0344	(0.383)
Financial News _(t-1,t+1)	-0.0039	(0.317)	-0.0007	(0.896)	-0.0033	(0.416)	-0.0027	(0.641)
<i>Determinants of Opt-Out_{i,t}</i>								
Months Out _{i,t}					-0.0003	(0.355)	-0.0007 *	(0.059)
Target SOX Experience _{i,t-1}					-0.0004	(0.892)	-0.0056	(0.214)
Target ICD _{i,t-1}					-0.0038	(0.584)	-0.0037	(0.581)
Private _{i,t}					0.0011	(0.604)	0.0014	(0.663)
Domestic _{i,t}					0.0035	(0.187)	0.0036	(0.431)
Target Size _{i,t}					0.0032	(0.490)	0.0076	(0.350)
M&A Announcement _(t-1,t+1)					0.0459 **	(0.030)	0.0724 **	(0.036)
Diversifying _{i,t}					-0.0035 *	(0.087)	-0.0076 **	(0.022)
Stock Financing _{i,t}					0.0063 **	(0.047)	0.0064	(0.160)
ICD _{t-1}					-0.0073	(0.357)	-0.0024	(0.923)
Busy Season _t					-0.0013	(0.676)	0.0326 *	(0.063)
Segments _{t-1}					0.0016	(0.361)	-0.0010	(0.844)
Size _{t-1}					-0.0013	(0.167)	-0.0036	(0.448)
Std Stock Return _{t-1}					-0.0709	(0.668)	0.0862	(0.700)
ROA _{t-1}					0.0214	(0.296)	0.0239	(0.612)
Sales Growth _{t-1}					-0.0003	(0.903)	-0.0080	(0.179)
Book to Market _{t-1}					0.0049	(0.291)	-0.0166	(0.163)
Leverage _{t-1}					-0.0022	(0.776)	-0.0164	(0.489)
Intercept	-0.0067	(0.358)	-0.0034	(0.614)	-0.0005	(0.967)	-0.0076	(0.882)
Company F.E.	No		Yes		No		Yes	
Industry F.E.	Yes		No		Yes		No	
Year F.E.	Yes		Yes		Yes		Yes	
Audit Firm F.E.	No		No		Yes		Yes	
Cluster S.E. by Company	Yes		Yes		Yes		Yes	
Adj R ²	0.053		0.233		0.057		0.246	
N	1,803		1,803		1,803		1,803	

*, **, *** Indicate that the estimated coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively, using a one-tailed test when a prediction is indicated and a two-tailed test otherwise. P-values are provided in parentheses next to the estimated coefficients. All continuous variables have been winsorized at the 1% and 99% levels. See Appendix B for variable definitions.

TABLE 10
Opt-Out Decisions and Subsequent Financial Statement Misstatements

Model: $\text{Restatement}_{(\text{Effective Date}+1, \text{EffectiveDate}+365)} = \beta_0 + \beta_1 \text{Opt-Out}_{i,t} + \sum \beta_k \text{Controls} + \varepsilon_{i,t}$

	Pred. Sign	Probit	OLS w/ Company F.E.
Opt-Out _{i,t}	(+)	0.2689 ** (0.014)	0.0299 * (0.067)
Full set of Determinant Controls Included		Yes	Yes
Company F.E.		No	Yes
Industry F.E.		Yes	No
Year F.E.		Yes	Yes
Audit Firm F.E.		Yes	Yes
Cluster S.E. by Company		Yes	Yes
Adj R ²			0.261
Pseudo R ²		0.084	
Area under ROC curve		0.724	
N		1,803	1,803

*, **, *** Indicate that the estimated coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively, using a one-tailed test when a prediction is indicated and a two-tailed test otherwise. P-values are provided in parentheses beneath the estimated coefficients. All continuous variables have been winsorized at the 1% and 99% levels. See appendix B for variable definitions.

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TABLE 11
Opt-Out Decisions and Subsequent Internal Control Deficiencies

Model: $ICD_{t+1} = \beta_0 + \beta_1 \text{Opt-Out}_{i,t} + \sum \beta_k \text{Controls} + \varepsilon_{i,t}$

	Pred. Sign	Probit	OLS w/ Company F.E.
Opt-Out _{i,t}	(+)	0.0828 (0.321)	-0.0046 (0.679)
Full set of Determinant Controls Included		Yes	Yes
Company F.E.		No	Yes
Industry F.E.		Yes	No
Year F.E.		Yes	Yes
Audit Firm F.E.		Yes	Yes
Cluster S.E. by Company		Yes	Yes
Adj R ²			0.660
Pseudo R ²		0.198	
Area under ROC curve		0.867	
N		1,803	1,803

*, **, *** Indicate that the estimated coefficient is statistically significant at the 10 percent, 5 percent, and 1 percent levels, respectively, using a one-tailed test when a prediction is indicated and a two-tailed test otherwise. P-values are provided in parentheses beneath the estimated coefficients. All continuous variables have been winsorized at the 1% and 99% levels. See appendix B for variable definitions.

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