

Accounting fraud and the market for corporate control

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Abstract

We analyze the acquisition behavior of a sample of 155 firms accused of committing accounting fraud by the SEC during the period 1985 through 2003. Acquisitions can potentially conceal fraudulent misreporting by managers in various ways. During the period leading up to and including the fraud, these firms purchase over 550 targets valued at nearly \$650 billion in the aggregate. We find that firms allegedly engaged in fraud are more likely than non-fraud firms to acquire another company. They are also more likely to purchase foreign firms, subsidiaries, and firms in different industries. During this period, fraud firms are more likely to use termination fee contracts and collared stock offers, and complete acquisitions more rapidly than non-fraud firms. There is no evidence that fraud firms pay significantly higher premiums; however shareholders react more negatively to relatively large acquisitions by fraud firms. Acquisitions are also associated with delayed market recognition of the fraud; the average positive stock returns leading up to the fraud take longer to reverse for firms engaging in acquisitions. Overall, these results suggest that firms engaged in fraud use acquisitions as an ex ante attempt to conceal accounting fraud.

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1. Introduction

Accounting fraud involves the deliberate material omissions or misstatements of financial information. The path to fraud often starts with small misstatements (Jensen 2005). The manager uses discretion in the accounting system to borrow against future earnings in order to support outside perceptions of firm value, possibly in response to a negative economic shock observed by the manager. If the shock persists, the manager must not only continue the prior period's overstatement, but also undertake additional manipulation to cover the current period (Schrand and Zechman, 2010). The manager incurs significant private costs if the fraud is detected (Karpoff et al. 2008b). This creates incentives for these misreporting managers to take real actions that make the fraud harder to detect.

Much of the literature on accounting manipulation addresses why managers manipulate accounting information and how to detect this behavior. An equally interesting, but less studied question is whether the decision to misreport information affects subsequent real decisions. For example, Kedia and Phillipon (2009) provide evidence that managers engaging in fraud over-hire and over-invest so that real activities appear consistent with the misreported earnings. We extend this line of work to understand the implications of accounting manipulation on the firm's acquisition decisions.

Corporate takeovers are usually economically significant transactions, and can be valuable to the manager interested in concealing accounting fraud from auditors, investors, regulators, and the media. In this paper, we take the decision to commit fraud

as given, and ask how the manager's decision to misreport accounting information shapes the firm's acquisitions. Our analysis focuses on several accounting and disclosure considerations. First, the acquisition of another firm can provide direct accounting flexibility or slack that allows the manager to conceal and perhaps unwind the fraud in latter periods. In effect, by targeting certain firms and structuring the deal in specific ways, the transaction can provide accounting slack by reducing the level of misstatements needed to continue the perpetuation of the fraud. Second, the acquisition can impair transparency by making the acquirer's financial statements more difficult to process. Third, while engaging in a major transaction runs the risk of exposing the fraud, the manager can negotiate in ways that minimize external scrutiny of the firm and its financial statements by strategic choices of acquisition method, consideration, and purchase premiums.

We analyze the acquisition decisions of a sample of 155 firms accused by the SEC of engaging in accounting fraud between 1985 and 2003. These firms purchased over 550 entities during the years just prior to and including the period of the alleged fraud and the aggregate value of all acquisitions by fraud firms during this period approached \$650 billion. We first provide evidence on the acquisition activity of firms accused of fraud. If mergers and acquisitions are a vehicle to conceal fraud, we expect such firms will be more likely to engage in takeovers during the fraud period. On the other hand, if acquisitions lead to greater scrutiny and increase the likelihood the fraud will be discovered, fraud firms may actually forgo value enhancing acquisitions.

Taking the acquisitions as given, we next investigate the attributes of entities targeted by fraud firms. If the strategic choice of acquisition targets provides slack in the

accounting that allows the manager to directly maintain or reverse the prior period manipulation, we expect such firms should select targets with comparatively stronger sales and income, as well as those with greater pre-deal write-offs (Chen et al. 2011). If the manager desires to reduce the transparency of the firm's financial statements through their strategic choice of targets, we expect fraud firms will prefer to acquire those entities with less pre-acquisition information (such as private targets, foreign targets, and subsidiaries) and those targets with relatively less correlated accounting earnings (such as those in different industries).

Buyers and sellers negotiate along a number of dimensions, and those buyers engaging in fraud also have incentives to structure the deal in ways that conceal the fraud. In this paper, we consider the source of financing, the choice between purchase and pooling accounting, the use of contractual agreements to reduce the risk of deal failure and renegotiation, and the speed of deal closing. To minimize external scrutiny of the financial statements, we expect fraud firms will finance acquisitions with internal funds, suggesting that fraud firms will tend to purchase targets for cash to minimize the incremental scrutiny of the firm's financial information.

Prior to 2001, firms could structure deals in a way that resulted in use of the pooling of interests method of accounting, and some argued that pooling allowed acquirers to manage earnings post-acquisition (Aboody et al., 1999; Ayers et al., 2002). As a result, we analyze whether fraud firms are more likely to do pooling acquisitions when that option was available.

We also expect fraud firms will demand target termination fees and use collar bids to reduce the likelihood the deal will fail.² Moreover, we predict that fraud firms will complete acquisitions more rapidly during the fraud period, allowing fraud firms to incorporate the target's results into the firm's financial statements sooner and to avoid extended due diligence.

Finally, we consider the economic implications of deals motivated by the desire to conceal misreporting. If the manager perceives net concealment benefits, then we expect such firms to pay more for targets, particularly those that provide the most potential concealment benefits. This prediction is similar in spirit to the findings in Ayers et al. (2002) who document that firms are willing to pay a premium to ensure pooling method treatment. Moreover, if such deals are driven by concealment efforts and are not optimal for the firm, fraud firm shareholders should react more negatively to the announcement of such deals.³

Our results are largely consistent with a concealment motive for corporate acquisitions. We find that during the period of the alleged fraud, fraud firms are more likely than non-fraud firms to make a successful acquisition, and when they acquire, they buy a larger number of targets. This result suggests that misreporting managers perceive net benefits to making acquisitions during the fraud period. These targets are not trivial.

² Target termination fees award a payment to the acquiring firm if the target breaks off the deal. Collar bids are stock offer provisions that reduce the sensitivity of target stock price to the acquiring firm stock price. We discuss these in greater detail later in the paper.

³ There is anecdotal evidence that fraud impacts merger decisions. In the Department of Justice's fraud indictment of Richard Scrushy at HealthSouth, it was alleged that,

"It was further part of the conspiracy that defendant RICHARD M. SCRUSHY and co-conspirators would and did cover up, conceal, and keep secret the fraud, by: (a) controlling and limiting access to HealthSouth's financial information; (b) controlling the internal distribution of financial results; (c) providing fraudulent documentation and false information to its auditors; (d) providing false information to Federal and State taxing authorities; and (e) *fraudulently using the acquisition of other companies to conceal fraudulent assets on HealthSouth's books and in its reports.*" (par. 36. Italics added)

For the 248 acquisition attempts during the fraud years, the average target is valued at about \$910 million, has EBITDA of around \$240 million, and annual sales that approach 15% of acquiring firm sales. We also find some evidence that fraud firms prefer to acquire targets that are more likely to provide the buyer with accounting slack and that have less pre-deal disclosure. For targets in which pre-deal accounting information is available, we find that fraud firms acquire targets with significantly higher profit margins and sales-to-assets ratios.

Fraud firms also appear to prefer targets that reduce the transparency of the acquisition and its effect on the acquiring firm's financial statements by acquiring foreign firms, subsidiaries, and firms in different industries. Consistent with fraud firms desiring to reduce the risk of deal failure, we find that their acquisitions are more likely to include target termination fees and collar bids, and close more rapidly during the fraud window relative to non-fraud firms. This is consistent with a desire by fraud firms to limit the degree of scrutiny of the acquiring firm in the acquisition process and to get the target incorporated into the buyer's financial statements quickly. Fraud firms do not appear to gravitate toward certain consideration structures (e.g. stock vs. cash) and do not show a preference for pooling of interests method when that option was available. Moreover, they do not target private firms more often than non-fraud firms do, even though acquisitions of private firms generally require less disclosure.

We find no evidence that fraud firms pay systematically more for target firms than non-fraud firms based on purchase premiums and price multiples. However, shareholders react much more negatively to large deals announced by fraud firms compared to non-fraud firms. This latter result is consistent with acquisitions by fraud

firms being less optimal and shareholders at least partially realizing this. We also find that acquisition activity during the first year of fraud is associated with delayed market recognition of the fraud. The average positive stock returns leading up to the fraud take longer reverse in firms engaging in acquisitions, and this evidence appears consistent with acquisitions affecting the ability of outside parties to detect the fraud.

Understanding the role of accounting fraud in the market for corporate control can provide several new insights on the link between financial reporting, agency problems, and firm value. Our paper differs from prior work in that we ask whether there is a concealment motive for mergers and acquisitions that arises because of the distinct and material effect these combinations have on the acquirer's financial reporting outcomes. The evidence suggests that it does. The economic impact of using acquisitions to conceal fraud falls not only on the acquiring firm shareholders, but on target shareholders who unknowingly accept overvalued stock consideration. Taken together, our findings contribute to the growing stream of literature on the role of agency costs, overconfidence, and information asymmetry in the market for corporate control.

The remainder of the paper is organized as follows. Section 2 describes the data. Section 3 presents empirical evidence on accounting fraud and corporate acquisitions. Section 4 shows the results on market valuations, and Section 5 concludes.

2. Data and sample

We consider all acquisitions with sufficient data announced between 1982 and 2005. Firms are required to complete at least one acquisition at any point during that window to make it into the sample, and all firm years during the sample period are

included. Fraud firms are those alleged by the SEC to have engaged in fraudulent financial reporting as indicated by an SEC *Accounting and Auditing Enforcement Release* (AAER) between 1982 and 2003 and identified by Dechow et al. (2010).⁴ Among the 279 firms identified in the AAER sample with sufficient data from Compustat and CRSP (i.e., fraud firms), 155 make at least one acquisition during the 1982 through 2005 sample period, and of those, 97 make at least one acquisition during the fraud period. We identify 330 firm-years of data for fraud firms during the alleged frauds with sufficient accounting and stock market information.

In Table 1, we summarize a number of characteristics for fraud and non-fraud firms. On average, the SEC accuses the managers of engaging in fraud over two fiscal years. However, it is widely believed that the fraud begins long before the alleged date. We report distributions for the alleged fraud firms during the fiscal years of the fraud period and three years prior (pre-fraud years), as well as for firms not subject to an AAER during the sample period (non-fraud firms).

For each firm in the sample, we first identify all acquisition attempts during the sample period and categorize them by the formal announcement date of the deal. Deals during the fraud period are those announced during the fiscal period in which the AAER alleged fraud occurred. For each acquisition attempt, we require that the acquirer seek to own 100% of the target firm stock, not own more than 50% prior to the acquisition, and that the deal value of the target be at least \$10 million (in 2000 dollars). An attempt is successful if the firm completes the deal within two years of announcement, otherwise it is unsuccessful. In a given year, 39% of fraud firms made at least one acquisition attempt

⁴ We are grateful to Patty Dechow, Weili Ge, Chad Larson, and Richard Sloan for making this data available.

during the period of alleged fraud, compared to 38% during pre-fraud years. By comparison, only 23% of non-fraud firms attempt an acquisition in a given year, and this is significantly different than the frequency for fraud firms at the 1% level. Among firms that attempt at least one acquisition during the period, fraud firms average 2.31 per fiscal year in which fraud allegedly occurred, compared to 1.41 for non-fraud firms (p -value of difference < 0.01). Relative to non-fraud firms, fraud firms are significantly larger, have higher market-to-book ratios, higher leverage, and a greater percentage of soft assets (not cash or property, plant, and equipment). Fraud firms are actually less profitable during the fraud period, but do appear to spend more on research and development.

In Table 1, Panel B we summarize the characteristics of the attempted acquisitions during the period of the alleged fraud. The average target is valued at \$910 million and has sales of \$820 million and EBITDA of \$240 million. On a relative basis, the value of the target is 13% of the fraud firm's equity value, compared to 2% at the median. However, it appears that fraud firms appear to target relatively smaller firms; the median target is 9% the size of the acquirer in the non-fraud sample and the mean is 33%, and both are significantly different than the mean and median of the fraud firms at the 1% level. Shareholder reactions to the deal announcements are generally positive throughout the sample, averaging 0.46% for the 3-day excess return in fraud firms and 0.78% in non-fraud firms. The average positive reaction in both samples is driven by the large fraction of takeovers of private firms. These tend to generate much more positive reactions on the announcement date relative to acquisitions of public firms (Fuller et al, 2002). At the median, fraud firms can close a deal in 58 days (75 at the mean) during the fraud period, compared to 81 days (110 at the mean) in non-fraud firms. These differences are both

statistically and economically significant. Fraud firms take substantially longer to close the deal during the pre-fraud years.

Finally, we also provide some initial evidence on target type, payment method, and deal structure. 72% of fraud firm targets are private (vs. 74% for non-fraud firms). Fraud firms target subsidiaries 36% of the time compared to 35% for non-fraud firms, and 25% of their targets are foreign compared to 18% for non-fraud firms. Fraud firms are more likely to acquire a target with a different 2-digit SIC code (58% vs. 43% of deals), and appear to pay entirely in cash less often (53% vs. 62% of deal). When fraud firms acquire, target termination fees are more likely (19% of deals vs. 12% for non-fraud firms). Fraud firms appear to have high success rate for deals announced during the fraud period, closing 98% of announced deals compared to 94% for non-fraud firms, and the difference is significant.

3. Evidence on accounting fraud and corporate acquisitions

3.1. Acquisition activity

We first address the link between misreporting and acquisition activity. An acquisition can provide a number of benefits for the manager engaging in fraud. A business combination can generate earnings slack for a manager that has exhausted the firm's existing capacity for additional earnings management. Moreover, acquisition accounting complicates the accounting information used by auditors and shareholders and can make post-deal financial statement analysis – and fraud detection – substantially

more difficult.⁵ Thus, fraud-firm managers can use takeovers to obfuscate the firm's true underlying performance. On the other hand, acquisitions also subject the firm to greater scrutiny from outsiders, particularly when the firm requires external financing. If the fraud firm managers believe that the effect of making a deal on the probability the fraud will be detected is too great, we would expect to see less deal activity. Following Malmendier and Tate (2008), we measure merger activity as a binary variable equal to 1 if the firm announced at least one acquisition attempt during the fraud year that was ultimately successful.

In the first column of Table 2, we report the results of a logit regression explaining the probability of announcing at least one deal during the fraud year that is ultimately successful. The set of control variables includes the log of equity value, the market-to-book asset ratio, profitability, cash holdings, and book leverage, all measured at the beginning of the year. We also include year and industry fixed effects. The variable of interest is an indicator variable equal to one for firm-years in which the AAER alleges the fraud occurred.

Large firms and those with more cash on hand are more likely to make a deal. Consistent with accounting fraud having an impact on acquisition behavior, we find that

⁵ A recent accounting standard, Statement of Financial Accounting Standards No. 141 - *Business Combinations*, explicitly discusses in the introduction to the standard the complexity arising from acquisition accounting, as follows.

“Under Opinion 16 [APB No. 16], business combinations were accounted for using one of two methods, the pooling-of-interests method (pooling method) or the purchase method. Use of the pooling method was required whenever 12 criteria were met; otherwise, the purchase method was to be used. Because those 12 criteria did not distinguish economically dissimilar transactions, similar business combinations were accounted for using different methods that produced dramatically different financial statement results. Consequently:

- Analysts and other users of financial statements indicated that it was difficult to compare the financial results of entities because different methods of accounting for business combinations were used.”

firms are significantly more likely to complete acquisitions during periods of alleged fraud ($p < 0.001$). The average marginal effect indicates that a firm accused of engaging in accounting fraud is nine percentage points more likely to complete an acquisition than a non-fraud firm in a given year. We also examine whether the level of deal activity, conditional on making at least one successful bid during the year, is different for fraud firms. The level of activity is defined as the number of deals announced during the year, and the coefficient of 0.76 reported in Table 2 suggests that a firm engaged in fraud will acquire the equivalent of three more companies than a non-fraud firm over a four year period. An additional three deals translates into \$330 million additional revenues using median sales of the target from Panel B of Table 1, and over \$2.4 billion at the average. Using median values, an additional three deals also implies that fraud firms add over 6% to the acquirer's pre-deal value through acquisitions, and increase sales by 15%. But some acquisitions are quite large; using average values from Table 1, the figures imply an additional 39% of value and 45% of sales.

The results in this section provide support for the conclusion that fraud firms are more likely to complete an acquisition than non-fraud firms and that fraud firms complete more acquisitions than non-fraud firms. In expectation, it appears that managers perceive that the incremental concealment benefits of acquisitions exceed the incremental detection costs.⁶

⁶ Throughout the paper, our analysis is motivated by the contention that firms engaging in accounting fraud can use acquisitions as a mechanism to conceal the fraud from detection from outsiders. Unfortunately, however, we cannot observe firms that engaged in fraud but were never detected. Thus, the coefficients on the fraud firm variable could also reflect the influence of acquisitions on the ex post probability of detection. It is worth noting that nearly all studies of fraud determinants face a similar problem (e.g. Dechow et al. 2011; Armstrong et al. 2009; Hanlon et al. 2006; Schrand and Zechman, 2010). A recent study by Wang (2011) using a bivariate probit approach to model the probability of fraud separately from the probability of detection conditional on fraud.

3.2. *Fraud and target type*

3.2.1. *Accounting slack*

The vast majority of accounting fraud cases involves manipulating earnings upward, arguably as a response to some negative firm-specific news observed by the manager but for which the manager has incentives to hide from the market (Dechow et al. 2011). If the shock persists, the manager must not only continue past misstatements, but find new ways to manipulate earnings to maintain market perceptions or unwind the fraud altogether. In theory, the strategic choice of acquisition targets provides the necessary slack in the accounting to do this. This leads to the prediction that fraud firms are more likely to target companies with stronger relative sales and profitability.

In Table 3, we analyze the relative performance of target and acquiring firms. We focus on three measures of profitability (profit margin, return on assets, and earnings-to-price) and sales-to-assets. Accounting measures for the target are obtained from SDC and reflect performance for the last year before the deal is announced. Market value for the target is based on transaction value. Accounting and market value data for the acquirer is taken from the end of the fiscal year preceding the acquisition announcement.

We focus on the relative profitability defined as the simple difference between the target and acquiring firms' performance measures, or $\theta_T - \theta_A$, where θ is the performance measure of interest and T and A refer to the target and acquiring firm.⁷ The univariate statistics reported in Panel A suggest that in general, acquirers are more likely to acquire

⁷ It should be noted that many of these results are necessarily based on the sample of acquisitions of public targets and private targets in which the acquirer actually disclosed the target's historical results. It could be the case that the targets which bring the most accounting slack are those which the acquirer chooses not to disclose historical results. Moreover, of those we do observe, we only have access to one year historical data and are unable to observe future earnings expectations.

less profitable targets. The -0.013 figure reported for the average profit margin difference in deals during the alleged fraud period in column 1 imply that the average profit margin of a target firm is 1.3% of sales lower than an acquirer engaged in fraud. For non-fraud acquirers in column 3, the average profit margin of the target is about 3.2% of sales lower. In other words, if the acquirer's profit margin is 10%, fraud firms acquire targets with an average profit margin of 8.7% ($10\% - 1.3\%$) and non-fraud firms acquire targets with an average profit margin of 6.8% ($10\% - 3.2\%$). However, the difference between fraud and non-fraud firms is not significant ($p = 0.41$). At the univariate level, we find no significant differences in the relative profitability as measured using ROA and E/P ratios. Compared to non-fraud firms, this table also reveals that on average, fraud firms do tend to acquire targets with a relatively stronger sales-to-assets ratio ($p = 0.06$).

The relative performance of targets can of course be driven by systematic differences in acquiring firm profitability, market valuation, and so on. Thus we analyse the significance of these differences after controlling for acquirer size, the relative size of the target, market-to-book, cash holdings, leverage, and indicators for private targets, foreign targets, and targets in different industries. Based on the profitability metrics in the first three columns, large acquirers purchase less profitable targets, but large targets, private targets, and those based in foreign countries all tend to be relatively more profitable than the acquiring firm. We also find that fraud firms are more likely to buy targets that are more profitable, although the results are only significant when we focus on the return on sales ($t = 2.57$). In that model, fraud firms appear to acquire targets whose relative profit margin is 5.8 percentage points higher than non-fraud firms. Consistent with the prediction that fraud acquirers also seek to purchase firms with strong

sales (relative to assets on hand), we also find in the fourth column that fraud firms acquire targets with a much higher relative sales-to-assets ratio ($t = 2.20$).

3.2.2. Transparency

Managers can also target firms that make the acquirer's financial statement information more difficult to process, and hence can raise uncertainty about the true impact of the acquisition on the financial statements and whether managers are engaging in fraud. Thus, we predict that when fraud-firm managers make acquisitions to conceal fraud from outsiders, they are more likely to seek firms that have less publicly available information pre-acquisition, with assets that are harder to value, and operations less similar to the acquirer.

Buying firms with less publicly available information complicates outsiders' ability to understand what the firm acquired and how it affects post-acquisition results. For acquisitions initiated prior to July 1, 2001 (the effective date of SFAS 141), APB 16 did not require the buyer to disclose the allocation of purchase price to the assets and liabilities of the target in a purchase transaction. SFAS 141 required firms to account for all acquisitions using the purchase method, and acquirers must disclose the allocation of purchase price for material transactions. Allocations are subjective, and Zhang and Zhang (2007) find evidence that managers exploit the discretion to increase earnings.

Unless they have publicly traded debt, private targets will generally not have a history of filings with the SEC. And when an acquirer purchases a private target, the amount of disclosure regarding the target's pre-deal results is generally minimal. Among acquisitions of private targets in our sample, SDC only provides historical accounting data in 27% of these deals. Assuming the target is wholly owned, the SEC looks to the

relative size of the target based on total assets or income. Beginning in 1996, if the target's assets or income is less than 20% of the company's total assets, disclosure of pre-acquisition historical information is not required.⁸ Thus, disclosure would still generally be required if the acquiring firm is paying with stock. However, current regulations would still require no disclosure of historical financial statements for a cash purchase of a \$2 billion target if the combined entity has assets over \$10 billion. Some firms have also been accused of compelling target managers to take a "big bath" prior to deal close so that post-deal earnings appear stronger. But such actions are difficult to detect when acquiring a private firm due to the relative lack of pre-acquisition target firm financial data (Chen et al., 2011).

In Table 4, we analyze the effect of acquiring firm accounting fraud on the type of target acquired. The dependent variable takes a value of 1 when the acquirer purchases a target of a given type (for example, a subsidiary). We control for acquiring firm size, market-to-book, profitability, cash holdings, leverage, and announcement year and industry effects. As the first column of Table 4 indicates, fraud acquirers are not more likely to purchase private targets (the coefficient on the fraud year indicator is insignificant).

There are other dimensions of the target that have potentially important implications for post-deal transparency. Foreign firm takeovers lead to similar limitations

⁸ Between 20% and 40%, only the most recent fiscal year must be disclosed. Between 40% and 50%, two years must be disclosed, and above 50%, three years. This threshold was 10% before 1996, but still only required a single year of results for acquisitions between 10% and 20% of the combined company. Beginning in 2000, no disclosure is required if the payment to target shareholders is entirely in cash and the acquiring firm shareholders do not vote. When the private target is a subsidiary of another corporation, the consideration is almost always in cash. When the unlisted target is a standalone entity, stock is used much more frequently. See Officer (2007) for further analysis of purchase prices of private targets. See 17 C.F.R. §210 generally for current requirements. Rodrigues and Stegemoller (2007) provide a useful discussion of the requirements for disclosure of target financial information, and argue that many material acquisitions do not require disclosure of target financial statements.

in pre-acquisition information as their financial statement will not generally be constructed following U.S. GAAP, even if they are publicly traded. Subsidiary targets can also create transparency problems. Subsidiary financial information is typically private, and Officer (2007) finds that parent firms are willing to sell their subsidiaries at discounts when alternative sources of financing are too costly. This suggests that targeting subsidiaries can be beneficial both because these firms are private and because the acquirer is likely to have comparatively greater bargaining power. Finally, we also consider whether misreporting impacts the preference for targets in different industries as diversifying acquisitions reduce the correlation in economic performance across units and arguably impede efforts to detect misreporting in the parent firm.

In the second column of Table 4, we focus on the propensity to acquire a foreign target, and the results from that analysis indicate that fraud acquirers are almost four percentage points more likely to acquire a foreign firm than non-fraud acquirers, although the difference is only marginally significant ($t = 1.77$). Although fraud firms do not appear to prefer private targets on average, they do show a strong preference for subsidiaries and are seven percentage points more likely to acquire subsidiaries ($t = 2.50$). This suggests that subsidiary targets provide more concealment benefits for fraud firm managers.

In the final column, we ask whether fraud firms appear to prefer targets in the same or different industries. We define industries broadly at the 2-digit SIC level and find that fraud firms are 14.5 percentage points more likely to acquire a target in a different industry ($t = 4.60$). Overall, we interpret this evidence as consistent with the prediction

that fraud firms make acquisitions that provide concealment benefits by reducing the transparency of their financial statements.

3.3. *Fraud and the structure of acquisitions*

For the manager attempting to conceal fraud through takeovers, we expect to observe strategic preferences in how the deal is executed. We consider the source of financing, the choice between purchase and pooling accounting prior to SFAS 141, the use of termination fees and collar bids, and the speed of deal closing. Because the characteristics of the target can be important determinants of how the deal is structured, we control for the relative size of the target and whether or not the target is private or foreign.

To reduce scrutiny by capital providers, firms engaging in fraud should finance the deal with internal funds first. A firm that must borrow to acquire the target for cash subjects the firm to additional scrutiny from lenders, and a buyer offering stock will likely need to register the securities with the SEC, obtain shareholder approval, deal with target directors who have a legal obligation to assess the intrinsic value of stock consideration, and respond to legal challenges mounted by target shareholders.⁹ The predictions, therefore, hinge on whether the acquisition requires external financing, and

⁹ In a control transaction, the target's board of directors has an obligation to pursue transactions that offer the best value reasonably available to shareholders. When stock is offered, the target's board should focus on its value as of the date it will be received by shareholders. As stated by the Supreme Court of Delaware: "In assessing the bid and the bidder's responsibility, a board may consider, among various proper factors, the adequacy and terms of the offer; its fairness and feasibility; the proposed or actual financing for the offer, and the consequences of that financing; questions of illegality...the risk of nonconsummation...the bidder's identity, prior background..." (*Macmillan* 559 A.2d at 1282 Del. 1989)

Moreover, the business judgment rule requires directors to become informed to the extent reasonable under the circumstances. In terms of the assessing the value of an acquirer's stock offer, directors: "...should be entitled to rely on the accuracy of public disclosure reports with respect to the acquirer filed with the Securities and Exchange Commission unless the directors have reason to believe that such reports are inaccurate or require further investigation." (American Law Institute, p. 395)

whether fraud firm managers will prefer to avoid the scrutiny of lenders in a debt-financed acquisition relative to the scrutiny of shareholders, directors, and their advisors (management, advisors, etc.) in a stock-for-stock transaction. Evidence in Dyck et al. (2007) suggests that capital providers, particularly debt holders, are usually not the first parties to detect fraud. Thus, we have no clear predictions for the influence of fraud on the method of payment.

If acquiring firm equity is overvalued as a result of the accounting fraud, stock financing should be relatively cheap. Following Shleifer and Vishny (2003), we therefore expect that such overvalued firms are more likely to pay with stock. However, non-fraud firms can face similar overvaluation-driven incentives and this should be captured largely by the market-to-book ratio. As Table 5, Panel A reveals, high market-to-book firms are more likely to use stock as expected, while fraud firms appear similar to non-fraud firms in their method of payment.

Fraud firm managers may prefer to use the pooling method when it is available because that method of accounting provides additional accounting slack to an acquirer. Ayers et al. (2002) among others find that managers structure the deal in ways that permit the use of the pooling method when doing so provides the most accounting benefits – targets with large differences between market and book value (which proxy for the incremental expenses recorded under the purchase method), and those that are more profitable (which can be incorporated onto the buyer's books under pooling as of the beginning of the year). In the second column of Table 5, Panel A we investigate the frequency of pooling method accounting for stock deals announced prior to 2001. We focus on all stock deals announced before 2001. However, we find no evidence that fraud

firms behave any differently with respect to accounting choice of the deal even though the firm is allegedly engaging in fraud.

Suppose managers engaging in fraud desire to minimize the risk of deal failure or drawn out negotiations and consummation of the deal. If so, we expect acquiring firm managers to take steps to ensure the deal will close and in a timely manner. Target termination fee agreements raise the target's cost of breaking off deal negotiations, and are associated with an increased likelihood of deal completion (Bates and Lemmon, 2003; Officer, 2003). Thus, we expect fraud firms are more likely to demand their use in merger negotiations. In Panel B of Table 5, we find that fraud firms have a 2.6 percentage point higher probability of including a target termination fee than non-fraud firms ($t = 1.77$),

Stock offers are usually expressed in terms of an exchange ratio in which the target shareholders will receive a specified number of acquiring firm shares for each share they own in the target. Since the value of the offer is tied to value of the acquiring firm, target firms could demand renegotiation or walk away from the deal if there is an adverse change in the acquiring firm's stock price before the deal closes. However, a collar bid provides some insurance against this renegotiation (Officer, 2004). We examine fixed exchange collars here. A fixed exchange collar provides that the exchange ratio is fixed within some range of acquiring firm share prices. If the buyer's share price climbs past an upper bound, the exchange ratio is adjusted down to cap target shareholders proceeds. More importantly, if the acquiring firm's share price declines below a lower bound, the exchange ratio is adjusted upward to provide a floor. Given that fraud firm managers understand that their share prices are already overvalued, negotiating

this provision ex ante reduces the likelihood the target will demand renegotiation in the case of a stock price decline. In the second column of Table 5, Panel B we examine the propensity of stock deals to include fixed exchange collars. We find that fraud firms are over 4 percentage points more likely to include a collar ($t = 2.26$). Since 10% to 15% of stock deals include some form of collar (depending on the year), this effect also appears economically significant.

Finally, misreporting managers have incentives to minimize the risk of fraud detection and to ensure the financial reports reflect the combined firm's results, thus, we expect fraud firms will close deals faster. The results in the final column of Table 5 imply that fraud firms complete deals 24 days faster than non-fraud firms ($t = -2.78$). Overall, the results for termination fees, collars, and closing speed are consistent with the view that managers engaged in fraud demand provisions that minimize the risk of deal failure, prevent renegotiation by the target, and lead to a faster close and more rapid incorporation of the target's financial results into the acquirer's financial statements.

3.4. Do misreporting firms pay more to acquire?

If acquisitions do help conceal the fraud in expectation, we expect managers of fraud firms will offer higher prices as compensation for a fast close, lower competition, and reduced information sharing with the target. To measure purchase prices, it is typical to use the purchase price paid relative to a pre-announcement benchmark stock price, that is, the premium. Following prior work, we measure the premium as either the initial offer premium, defined as the log of the initial offer price per SDC divided by the target's stock price three months before announcement, or the realized premium, defined as the log of the target's stock price at the deal close divided by the price three months before

announcement. Naturally, this metric can be measured only for firms with publicly traded equity.

Because acquisitions of private firms are a major part of our analyses, we also focus on comparing purchase price multiples based on the ratio of deal value to various accounting measures (see for example, Officer 2007). We consider price to book value of equity, price to sales, price to EBITDA, and price to net income. Negative multiples are dropped. Price multiples are not available for the majority of acquisitions since the acquiring firm is not required to disclose the target's historical financial statement information for targets below a certain size (e.g. 20% of combined assets or income). Thus, our results must be interpreted with this in mind.

In Table 6, Panel A, we report the mean and median premiums and multiples for successful acquisitions by fraud firms and non-fraud control firms. During the years of the alleged fraud, fraud firms offer premiums averaging 40.7%. Although this is larger than both the 33.5% premium in deals before alleged fraud period and the 34.9% premium for non-fraud firms, the differences are insignificant. Realized premiums tend to be smaller, an effect driven by stock offers in which the acquirer's price falls before deal close, but again the difference between fraud and non-fraud firms is not significant. Price multiples are also generally higher, and significantly so comparing deals during the alleged fraud to deals by non-fraud firms. For example, for the 107 deals by fraud firms with historical target data the price-to-sales ratio is 1.9 at the median. For the 8,432 deals by non-fraud acquirers, the median ratio is 1.4 and significantly smaller at the 1% level.

Turning to the multivariate results in Panel B, we model the target's price as a function of several factors considered in prior work (e.g. Schwert, 1996). Control

variables include the log of deal value, acquirer's market-to-book, the relative size of the target, and indicator for payment method, hostility, competition, and private and foreign targets. The sample size varies across test based on data availability. While the coefficients on the fraud deal indicator are generally positive (with the exception of price-to-net income), the differences are insignificant. Thus, we have no clear evidence that fraud firms pay consistently more than non-fraud acquirers. One plausible explanation is that fraud firms do pay higher premiums for the firms with the most concealment benefits, but these also happen to be the targets for which we are unable to actually measure purchase prices (because they are not traded or the acquirer does not need to disclose historical accounting data).

3.5. *Shareholder reactions to acquisitions by fraud firms*

How do acquiring firm shareholders react to these deals? Undertaking acquisitions to conceal fraud is inefficient and leads to low quality deals. Therefore, if these deals are being driven by concealment motives, the market reaction to an acquisition announcement should be more negative in fraud firms. This assumes that the market understands that the acquisition is inefficient, that is, the target is a poor strategic fit or the buyer offered too high of premium. The univariate evidence in Table 1 reveals no significant differences in announcement returns between fraud and non-fraud firms, and the reactions tend to be positive.

Announcement returns are potentially related to the fundamental characteristics of the acquirer (e.g., firm size, market-to-book), the deal (e.g., method of payment, competition, hostility, relative size), and the target (e.g. private, subsidiary, foreign, and diversifying). We therefore control for these factors and include industry and year fixed

effects. The results, reported in the first column of Table 7, suggest that market participants do not appear to react any more negatively to acquisitions announced by fraud firms ($t = 0.67$).

Size potentially matters here. Fraud firms tend to be larger and acquire relatively smaller firms. Thus, even if these acquisitions are viewed negatively by the market, we will have difficulty indentifying measurable effects if they exist. In the second column of Table 7, we interact the fraud deal indicator with the indicator for large deals, defined as purchase price of at least 10% of the acquirer's pre-deal value. About 25% of the acquisitions by fraud firms occurring during the alleged fraud cross this threshold, and among those, announcement returns are 3.19% smaller than large deals done by non-fraud firms ($t = -2.67$). Interestingly, among small deals, announcement returns are 1.15% larger than non-fraud firms ($t = 1.92$). Overall, the results suggest that among large acquisitions, those by firms engaged in fraud tend to be the most value destroying.

4. Fraud, M&A activity, and market valuations around alleged fraud

4.1. The characteristics of fraud firms that do and do not do fraud

To this point, the paper has centered on the attributes of deals done by firms engaged in fraud. While the firms in our sample were required to make an acquisition attempt at least one time during a 23 year period, several firms made no acquisitions during the fraud window. In this section, we provide evidence on the characteristics of fraud firms that make acquisitions and the impact of deal-making on the capital market recognition of the accounting fraud.

We partition fraud firms based on whether or not they announced a successful acquisition in the first year of the fraud. This approach avoids a potential mechanical relation between deal activity and duration of fraud that would arise if we looked to multiple years. In Table 8, Panel A we report the mean and median firm characteristics, measured at the end of the last pre-fraud year, for firms that announce a deal (38%) in the first year and those that do not (62%). Based on a comparison of the medians, the firms are largely similar in terms of size, profitability, and cash holdings, and leverage. Firms that do deals have slightly higher market-to-book ratios.

Do acquisitions have an important impact on the market valuations of firms accused of fraud? If the purported role of accounting fraud is to mislead investors about the fundamental value of the firm, then actions that conceal that fraud should lead to a slower detection and market adjustments. Thus, if mergers and acquisitions have the effect of concealing underlying, we would expect over-valuations to persist longer in acquiring firms than in others.

Figure 1 reports the median cumulative raw returns surrounding the beginning of the fraud period, where month zero is defined as the calendar month ending during the first month of the alleged fraud. Firms are partitioned on the basis of announcing a completed deal in the first year of fraud. The figure suggests that in the last year leading up to the fraud, returns are similar. However, as the fraud begins, firms with no acquisitions during the first year appear to see their returns reversing starting a few months into the year, earlier than firms with at least one acquisition. In Table 8, Panel A, we report descriptive statistics on cumulative raw returns over various windows before and after the start of the alleged fraud period. At the univariate level, only long-run pre-

fraud returns appear significantly different between the two groups.

A concealment explanation for acquisitions implies that to the extent the misreporting is impounded in stock prices and results in overvaluation, acquisitions will delay the recognition of fraud and the adjustment to stock price. To test this formally, we adopt a model of return reversal. The dependent variable is the stock return starting in the month the fraud is alleged to have occurred and ending 3, 6, 12, 24, or 48 months out. The primary independent variable is the prior stock returns over an equally long window ending just before the fraud period, and serve as a proxy for overvaluation. To test whether firms that do deals appear able to conceal the fraud, we interact prior returns with an indicator for M&A activity in the first year of fraud. We control for firm size and market-to-book.

The results, reported in Table 8, Panel B, imply that the reversal of stock returns is slower for firms doing deals in year 1 for windows between 6 and 24 months. For example, the results suggest that firms with strong returns leading up the fraud period are less likely to experience a reversal in the months following the fraud if they make an acquisition (when return period equals 24 months, coefficient on interaction between prior returns and acquisition activity is 0.25 ($t = 2.25$)). In our study, we do not know exactly when the fraud was detected. However, given that returns appear to decline six to twelve months following the start of the alleged fraud period, we appear to be capturing fraud detection for a large fraction of the set of fraud firms in our sample

5. Conclusion

In this paper, we analyze the implications of fraudulent financial reporting on corporate acquisitions. A recent stream of literature in accounting and finance has produced many interesting results on how agency costs, executive personality traits, and corporate governance shape the frequency and form in which acquisitions are executed. We add to this body of evidence by analyzing the acquisition behavior of a set of firms that were engaged in fraud.

For a sample of 155 firms accused of committing accounting fraud by the SEC during 1985 through 2003, we find that fraud firms are more likely to make successful acquisitions during the period of the alleged fraud. We also find that during the fraud window, acquirers are more likely to purchase foreign targets, make diversifying acquisitions, and purchase subsidiaries relative to non-fraud acquiring firms. We also find that fraud firms are more likely to demand termination fee agreements, agree to certain collar bids, and complete acquisitions more rapidly during the fraud window than do non-fraud firms.

Overall, these results are consistent with the conclusion that fraud acquirers engage in more acquisitions to help conceal and perpetuate the fraud. Moreover, our results suggest that acquirers choose acquisitions that are likely subject to less scrutiny and disclosure requirements in order to reduce the likelihood the fraud is uncovered. Interestingly, we find no significant differences in the prices paid by fraud firms, although fraud firm shareholders appear to react more negatively to large deals announced during the alleged fraud. There is also evidence that capital market recognition of the fraud is delayed in deals in which the firm made an acquisition in the first year of the fraud.

Firms engaged in fraud are active acquirers. To the extent fraud firm managers use acquisitions to perpetrate the ongoing fraud, shareholders lose even more. The costs are even borne by target shareholders to the extent they accept the stock of a misreporting buyer as compensation for their shares.

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Figure 1
Median cumulative raw returns starting 12 months before alleged fraud start date for firms with and without M&A during first year alleged fraud

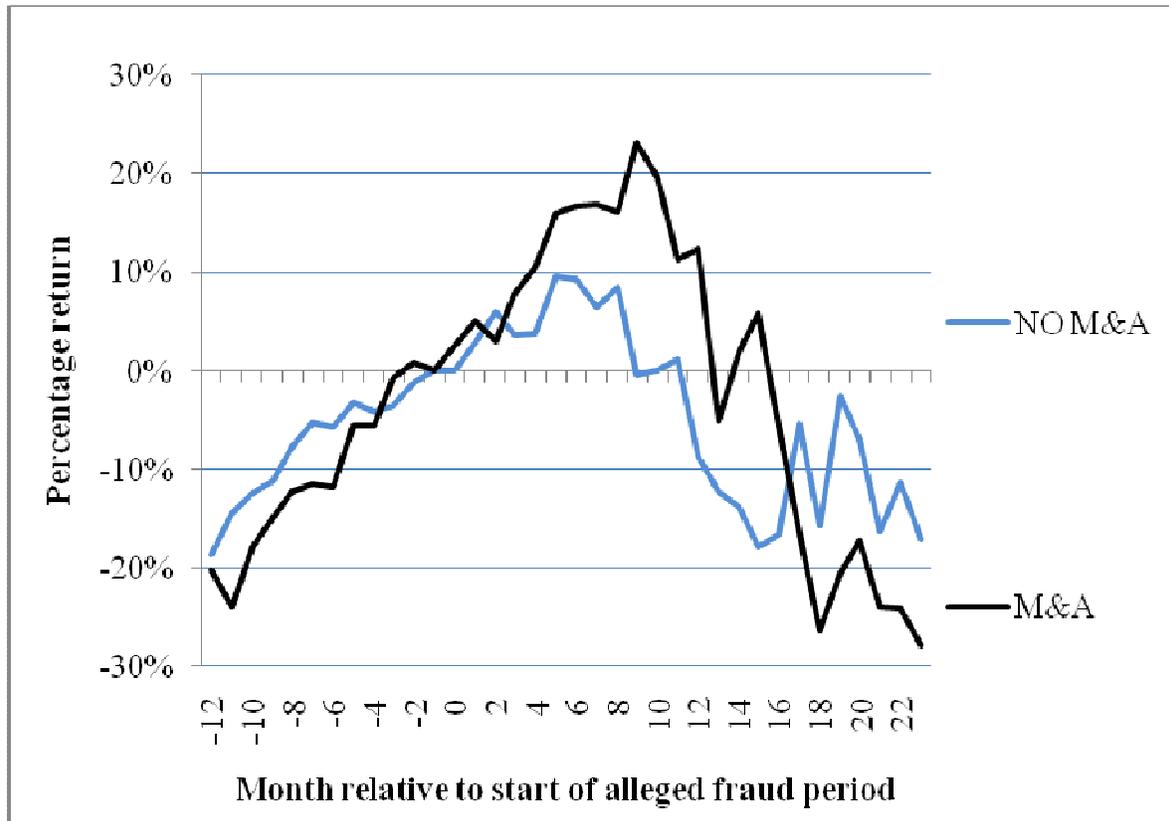


Table 1 - Descriptive statistics

This table provides descriptive statistics of fraud firms identified using the AAER sample. Pre-fraud AAER years include up to three years prior to the first year of the alleged fraud. AAER years include the fiscal years in which the alleged fraud occurred. Non-fraud firms are all firms not in the AAER sample at any point. MVE is market value of equity at the end of the year per Compustat. Market-to-book is equal to (Total assets – book equity + market equity) / Total assets. Soft assets is equal to (Total assets – PPE – Cash) / Total assets. Sales growth is relative to prior year. Total accruals is net income less operating cash flows. WC accruals is equal to the change in non-cash current assets less the change in current liabilities (excluding debt in current liabilities and taxes payable). The change in receivables and inventory is relative to the prior year. EBITDA is operating income before depreciation. Transaction value is the price paid for target equity based on SDC. Target sales and EBITDA are for the last year before the acquisition and reported by SDC. Sample statistics cover the period 1982 through 2005. Means are reported with medians in brackets. Value is the price paid for the target, or the equity value of the acquirer 3 months before deal announcement. Assets_A and Sales_A are the book value of assets and sales of the acquiring firm before the acquisition. Announcement CAR is the 3-day return relative to the value-weighted market return surrounding the announcement of the deal. Completion time is the number of days between announcement and close and is defined only for successful deals that closed on a different date than announcement. Diversifying deals are those in which the target's 2-digit SIC code differs from the acquirer. All other target and deal variables drawn from SDC. *p*-value of difference based on *t*-test for means, Wilcoxon rank-sum test for medians. Firm characteristics are reported in Panel A, with deal characteristics in Panel B. Firm variables are measured at the end of the year.

Panel A: Acquiring firm characteristics

	AAER firms		Non-AAER firms (3)	<i>p</i> -value of difference in means [medians]	
	Fraud years (1)	Pre-fraud years (2)		(1) v. (2)	(1) v. (3)
Firm-years	330	358	59,008		
MVE (\$B)	9.35 [0.58]	8.49 [0.54]	2.74 [0.33]	0.68 [0.80]	<0.01 [<0.01]
Sales (\$B)	5.37 [0.62]	4.24 [0.46]	2.41 [0.33]	0.14 [0.27]	<0.01 [<0.01]
Market-to-book	2.01 [1.62]	2.22 [1.68]	1.69 [1.31]	0.04 [0.04]	<0.01 [<0.01]
Debt / Assets	0.28 [0.25]	0.23 [0.21]	0.25 [0.22]	<0.01 [<0.01]	0.01 [0.01]
Cash / Assets	0.13 [0.05]	0.16 [0.08]	0.14 [0.07]	0.04 [0.11]	0.38 [0.55]
CapEx / Assets	0.34 [0.06]	0.11 [0.07]	1.17 [0.04]	0.09 [0.15]	0.05 [<0.01]
Soft assets / Assets	0.66 [0.69]	0.62 [0.66]	0.58 [0.61]	0.04 [0.05]	<0.01 [<0.01]
Sales growth	0.59 [0.16]	0.75 [0.24]	0.46 [0.10]	0.23 [<0.01]	0.16 [<0.01]
Total acc. / Assets	-0.07 [-0.04]	-0.03 [-0.02]	-0.04 [-0.03]	<0.01 [<0.01]	<0.01 [0.08]
WC acc. / Assets	0.02 [0.01]	0.04 [0.02]	0.01 [0.01]	0.21 [0.05]	0.23 [0.13]
ΔRec / Assets	0.04 [0.02]	0.05 [0.03]	0.02 [0.01]	0.21 [0.01]	0.02 [0.06]
ΔInv / Assets	0.02 [0.00]	0.02 [0.00]	0.01 [0.00]	0.82 [0.46]	<0.01 [0.01]
EBITDA/Assets	0.07 [0.09]	0.12 [0.13]	0.09 [0.11]	<0.01 [<0.01]	0.01 [0.01]
Net income / Assets	-0.04 [0.01]	0.02 [0.04]	0.00 [0.03]	<0.01 [<0.01]	<0.01 [<0.01]
R&D / Sales	0.08 [0.00]	0.06 [0.00]	0.05 [0.00]	0.10 [0.36]	<0.01 [<0.01]
Adv / Sales	0.01 [0.00]	0.01 [0.00]	0.01 [0.00]	0.96 [0.98]	0.17 [0.60]
≥ 1 bid attempt?	0.39	0.38	0.23	0.70	<0.01
≥ 1 successful bid?	0.39	0.37	0.22	0.66	<0.01
Comp. deals / year	2.32 [1.00]	1.95 [1.00]	1.41 [1.00]	0.12 [0.73]	<0.01 [0.01]

Table 1 (cont'd) - Descriptive statistics**Panel B: Deal Characteristics**

	AAER firms			<i>p</i> -value (1) v. (2)	<i>p</i> -value (1) v. (3)
	Fraud deals	Pre-fraud deals	Non-AAER firm years		
	(1)	(2)	(3)		
# of deals	248	308	19,447		
Transaction value (\$B)	0.91 [0.07]	1.35 [0.09]	0.38 [0.06]	0.41 [0.22]	0.07 [0.01]
Target sales* (\$B)	0.82 [0.11]	0.86 [0.08]	0.52 [0.07]	0.89 [0.26]	0.24[0.05]
Target EBITDA** (\$B)	0.24 [0.01]	0.20 [0.01]	0.08 [0.01]	0.72 [0.84]	0.10 [0.29]
Value _T / Value _A	0.13 [0.02]	0.20 [0.04]	0.33 [0.09]	0.08 [<0.01]	<0.01 [<0.01]
Value _T / Assets _A	0.15 [0.04]	0.20 [0.05]	0.30 [0.06]	0.16 [0.01]	0.08 [<0.01]
Sales _T / Sales _A *	0.15 [0.05]	0.21 [0.07]	0.31 [0.11]	0.24 [0.17]	<0.01 [<0.01]
Announcement CAR (%)	0.46 [0.61]	0.80 [0.40]	0.78 [0.22]	0.65 [0.96]	0.58 [0.66]
Comp. time (in days)***	75 [58]	99 [75]	110 [81]	0.06 [0.02]	0.01 [<0.01]
<i>Target is:</i>					
Private (0,1)	0.72	0.61	0.74	0.03	0.37
Subsidiary (0,1)	0.38	0.24	0.35	<0.01	0.27
Foreign (0,1)	0.28	0.18	0.18	<0.01	<0.01
Difersifying (0,1)	0.61	0.42	0.43	<0.01	<0.01
All cash (0,1)	0.56	0.48	0.62	0.04	0.09
All stock (0,1)	0.31	0.41	0.27	0.02	0.14
Term. fee (0,1)	0.19	0.21	0.12	0.51	<0.01
Collar bid (0,1)	0.16	0.16	0.10	0.95	0.27
Successful (0,1)	0.98	0.95	0.94	0.09	0.02

*107, 165, and 8,433 observations respectively

**79 ,123, and 5,331 observations respectively

***Where deal is not effective on date announced. 182, 228, and 14,446 observations respectively

Table 2 - Fraud firms and deal activity

This table provides evidence on acquisition activity of firm alleged to have engaged in fraud by the SEC. The sample includes all available firm-year observations between 1982 and 2005 for firms completing at least one deal in that period. The first column reports the results from a logistic regression of the likelihood of announcing a successful deal during the fiscal year. The second column reports the results from an OLS regression of the number of successful deals conditional on the firm announcing at least one successful deal during the year. Independent variables are measured at the beginning of the year. Market-to-book assets are equal to (Total assets – book equity + market equity) / Total assets. EBITDA is calculated using prior year operating income before depreciation. The fraud year indicator equals one for fraud firms during periods of alleged fraud according to an AAER. Year and industry dummies (based on Fama-French 12 industry classifications) are included. Coefficients reported with marginal effects in brackets (logistics model) and *t*-statistics in parenthesis.

Dependent variable =	Pr(Successful bid = 1)		# of successful bids	
	Coeff. [ME]	(<i>t</i> -stat)	Coeff.	(<i>t</i> -stat)
log(MVE)	0.226 [0.037]	(40.76)	0.140	(29.23)
Market-to-book assets	0.001 [0.000]	(0.09)	-0.003	(-0.27)
EBITDA / Assets	-0.064 [-0.010]	(-0.78)	-0.638	(-8.40)
Cash / Assets	0.364 [0.059]	(5.24)	-0.182	(-2.98)
Debt / Assets	-0.011 [-0.002]	(-0.24)	0.164	(4.87)
AAER fraud year (0,1)	0.549 [0.088]	(4.46)	0.761	(8.13)
Industry and announcement- year dummies	Yes		Yes	
Firm-year observations	61,247		13,784	
Pseudo-R ² / Adj. R ²	9.42%		8.22%	

Table 3 – Fraud and the relative performance of target firms

This table provides evidence on the relative performance of firms targeted by firms accused of fraud. Sample includes all available acquisition attempts for firms completing at least one deal between 1982 and 2005. In Panel A we provide summary statistics on relative performance measures, where T and A denote target and acquirer. Profit margin is net income divided by sales. ROA is net income divided by total assets. E/P is net income divided by transaction value. p -value of difference based on t -test for means, Wilcoxon rank-sum test for medians. In Panel B we provide the results from regressing performance differences on control variables. The fraud deal indicator equals one for deals by fraud firms during periods of alleged fraud. Year and industry (Fama-French 12 industries) fixed effects included. Coefficients reported with t -statistics in parenthesis

Panel A: Relative performance of target and acquirer

		AAER firms			p -value of difference	
		Fraud deals	Pre-fraud deals	Non-AAER firm deals	(1) v. (2)	(1) v. (3)
		(1)	(2)	(3)		
Profit margin _T	N	86	139	6,286		
- Profit margin _A	Mean	-0.013	-0.028	-0.032	0.58	0.41
	Med.	-0.014	-0.007	-0.016	0.65	0.45
	% > 0	44.2%	41.0%	39.5%	0.64	0.37
ROA _T - ROA _A	N	85	140	6,200		
	Mean	-0.032	-0.036	-0.021	0.88	0.62
	Med.	-0.013	-0.005	-0.003	0.60	0.94
	% > 0	45.9%	43.6%	42.8%	0.73	0.57
[E/P] _T - [E/P] _A	N	86	140	6,430		
	Mean	-0.020	-0.025	-0.020	0.80	0.99
	Med.	-0.003	-0.015	-0.019	0.16	0.10
	% > 0	45.3%	32.8%	34.9%	0.06	0.05
[Sales / Assets] _T	N	86	141	6,187		
- [Sales / Assets] _A	Mean	0.427	0.191	0.242	0.08	0.06
	Med.	0.224	0.081	0.018	0.29	0.18
	% > 0	64.0%	58.8%	58.1%	0.44	0.27

Table 3 (cont'd)**Panel B: Fraud and the relative performance of acquisition targets**

Dependent variable equals $\theta_T - \theta_A$, where θ is:

	Profit margin	ROA	E/P	Sales / Assets
log(MVE)	-0.019 (-14.40)	-0.017 (-14.66)	-0.018 (-17.52)	0.012 (2.23)
Relative size	0.006 (1.88)	0.016 (1.52)	0.005 (2.11)	-0.025 (-1.83)
Market-to-book assets	-0.005 (-1.75)	-0.006 (-2.16)	0.012 (5.20)	-0.079 (-6.35)
Cash / Assets	-0.032 (-1.80)	-0.046 (-2.96)	-0.032 (-2.25)	0.709 (9.53)
Debt / Assets	0.131 (10.53)	0.134 (12.22)	0.131 (13.14)	0.392 (7.48)
Private	0.013 (2.19)	0.014 (2.55)	0.024 (5.03)	0.422 (16.34)
Foreign	0.025 (3.27)	0.029 (4.15)	0.025 (4.07)	-0.037 (-1.14)
Diversified	0.002 (0.44)	0.007 (1.53)	-0.002 (-0.53)	0.130 (5.70)
Fraud deal	0.058 (2.57)	0.027 (1.35)	0.018 (0.96)	0.210 (2.20)
Number of deals	6,720	6,634	6,868	6,620
Adjusted R^2	10.15%	12.72%	11.19%	9.93%

Table 4 - Fraud firms and ownership, location, and industry of target firms

This table provides evidence on the types of targets chosen by firms accused of fraud. Sample includes all available acquisition attempts for firms completing at least one deal between 1982 and 2005. Logistic regression estimated for binary dependent variable categorizing target type. Private targets are those not publicly traded. Foreign targets are those headquartered outside the U.S. Subsidiaries are those targets owned by another corporation as coded by SDC. Diversifying deals are targets with 2-digit SIC codes different from the acquirers. All control variables are measured at the beginning of the year. The fraud deal indicator equals one for fraud firms during periods of alleged fraud. Year and industry (Fama-French 12 industries) fixed effects included. Coefficients reported with marginal effects in brackets and *t*-statistics in parenthesis.

Dependent var. =	Pr(Private = 1)		Pr(Foreign = 1)		Pr(Subsidiary = 1)		Pr(Diversifying = 1)	
	Coeff. [ME]	(<i>t</i> -stat)	Coeff. [ME]	(<i>t</i> -stat)	Coeff. [ME]	(<i>t</i> -stat)	Coeff. [ME]	(<i>t</i> -stat)
log(MVE)	-0.116 [-0.021]	(-13.99)	0.257 [0.034]	(26.25)	0.090 [0.019]	(11.86)	0.101 [0.023]	(13.77)
Market-to-book	0.097 [0.018]	(5.03)	-0.125 [-0.017]	(-5.54)	-0.188 [-0.039]	(-9.73)	-0.023 [-0.005]	(-1.37)
EBITDA / Assets	0.839 [0.154]	(5.52)	-0.420 [-0.055]	(-2.17)	0.706 [0.147]	(4.52)	-0.217 [-0.051]	(-1.64)
Cash / Assets	0.441 [0.081]	(3.63)	0.894 [0.118]	(6.47)	-0.387 [-0.081]	(-3.27)	-0.012 [-0.003]	(-0.12)
Debt / Assets	0.845 [0.155]	(9.07)	0.532 [0.070]	(5.83)	0.816 [0.170]	(10.85)	0.353 [0.082]	(4.96)
Fraud deal	-0.020 [-0.004]	(-0.14)	0.268 [0.036]	(1.77)	0.343 [0.072]	(2.50)	0.621 [0.145]	(4.60)
Number of deals	20,598		20,598		20,598		20,598	
Pseudo-R ²	6.50%		14.13%		10.38%		6.63%	

Table 5 - Fraud firms and deal characteristics

This table provides evidence on the deal characteristics for firms accused of fraud. Sample includes all available acquisition attempts for firms completing at least one deal between 1983 and 2005. Logistic regression estimated for binary dependent variable. Panel A examines payment method and accounting treatment. All cash deals are those in which target shareholders are paid solely in cash. The pooling method estimation include all completed deals in which the buyer offered solely stock and which were announced before 2001. Panel B examines termination fees, collars, and closing speed. The existence of target termination fees is taken from SDC. For deals involving at least partial acquirer stock consideration, FEX collar is a dummy variable equal to one if SDC reports the use of fixed exchange ratio collar, zero otherwise. The number of days between announcement and completion are based on SDC data. All control variables are measured at the beginning of the year. The fraud deal indicator equals one for fraud firms during periods of alleged fraud. Announcement year and industry (Fama-French 12 industries) fixed effects included. Coefficients reported with marginal effects in brackets (logit model) and *t*-statistics in parenthesis.

Panel A: Payment method and accounting treatment

Dependent variable =	Pr (All cash = 1)		Pr (Pooling = 1 All Stock)	
	Coeff. [ME]	(<i>t</i> -stat)	Coeff. [ME]	(<i>t</i> -stat)
log(MVE)	0.169 [0.030]	(18.81)	-0.022 [-0.004]	(-1.11)
Relative size	-0.040 [-0.007]	(-1.64)	-0.398 [-0.073]	(-5.72)
Market-to-book assets	-0.357 [-0.064]	(-18.59)	0.149 [0.028]	(4.26)
EBITDA / Assets	2.207 [0.395]	(13.88)	1.090 [0.202]	(4.06)
Cash / Assets	-0.196 [-0.035]	(-1.69)	-0.214 [-0.040]	(-0.94)
Debt / Assets	0.985 [0.176]	(11.92)	-0.407 [-0.075]	(-2.41)
Private	1.334 [0.239]	(34.66)	-0.958 [-0.178]	(-12.72)
Foreign	0.887 [0.159]	(17.44)	-0.822 [-0.153]	(-5.89)
Fraud year (0,1)	-0.084 [-0.015]	(-0.57)	0.162 [0.030]	(0.60)
Industry and announcement year dummies	Yes		Yes	
N	20,598		4,817	
Pseudo-R ²	31.56%		31.80%	

Table 5 (cont'd)

Dependent variable =	Pr (Termination fees = 1)		Pr(FEX collar = 1 stock)		# of days between announcement and completion	
	Coeff. [ME]	(<i>t</i> -stat)	Coeff.	(<i>t</i> -stat)	Coeff.	(<i>t</i> -stat)
log(MVE)	0.049 [0.003]	(3.22)	-0.143 [-0.004]	(-1.80)	1.287	(2.64)
Relative size	0.162 [0.010]	(4.15)	-0.649 [-0.017]	(-1.76)	12.074	(8.73)
Market-to-book assets	0.060 [0.004]	(1.80)	-0.001 [-0.000]	(-0.00)	-2.063	(-1.92)
EBITDA / Assets	0.107 [0.007]	(0.40)	1.604 [0.041]	(1.21)	-53.216	(-6.36)
Cash / Assets	-0.076 [-0.005]	(-0.36)	0.652 [0.017]	(0.70)	-23.144	(-3.47)
Debt / Assets	-0.167 [-0.010]	(-1.09)	-0.955 [-0.024]	(-0.97)	-7.277	(-1.99)
Private	-3.900 [-0.236]	(-54.38)			-42.651	(-20.42)
Foreign	-2.462 [-0.149]	(-20.97)	-1.117 [-0.029]	(-1.51)	-3.516	(-1.31)
Fraud deal	0.429 [0.026]	(1.77)	1.599 [0.041]	(2.26)	-24.020	(-2.78)
N	20,598		1,688		15,320	
Pseudo-R ² / Adj. R ²	53.02%		13.05%		10.19%	

Table 6 – Fraud and purchase premiums

This table provides evidence on fraud and purchase premiums paid for a sample of acquisitions with available date. Panel A provides the mean and median premium and non-negative price multiple paid across AAER and non-AAER firms. Pre-fraud (post-fraud) refers to the three years before (after) the first (last) year of the alleged fraud. Offer premium is $\ln(\text{offer price}/\text{price 63 days before announcement})$. Realized premium is the cumulative returns from 63 days before deal announcement through close less the cumulative returns on the value-weighted market index. Price multiples are based on the reported deal value divided by the target's pre-deal book value, sales, EBITDA, or net income all per SDC. Negative multiples are dropped. Panel B provides the results of regressions of premiums and multiples on various determinants, including an indicator for fraud firms. Coefficients reported with *t*-statistics in parenthesis.

Panel A: Summary statistics on purchase prices

		AAER firm deals			Non-AAER	<i>p</i> -value of difference	
		During fraud	Before fraud	firm deals	(1) v. (2)	(1) v. (3)	
		(1)	(2)	(3)			
Offer premium (%)	N	33	43	1,832			
	Mean	40.7	33.5	34.9	0.30	0.30	
	Med.	39.9	32.9	33.7	0.46	0.25	
Realized premium (%)	N	52	87	3,272			
	Mean	33.1	38.5	31.6	0.31	0.75	
	Med.	38.1	43.9	32.1	0.44	0.55	
Price / BVE	N	79	129	5,748			
	Mean	5.1	4.8	3.8	0.94	<0.01	
	Med.	4.3	3.7	2.7	0.73	<0.01	
Price / Sales	N	107	165	8,432			
	Mean	3.6	3.6	2.7	0.51	0.04	
	Med.	1.9	2.0	1.4	0.35	<0.01	
Price / EBITDA	N	63	104	4,410			
	Mean	16.6	17.0	14.1	0.83	0.08	
	Med.	12.7	11.9	10.3	0.70	0.04	
Price / Net income	N	56	96	4,657			
	Mean	36.9	47.4	30.2	0.03	0.04	
	Med.	27.7	36.7	21.4	0.09	<0.01	

Table 6 (cont'd) – Fraud and purchase premiums

Dependent variable =	<i>Price premiums</i>		<i>Price multiples</i>			
	Offer prem. (%)	Realized prem. (%)	Price / BVE	Price / Sales	Price / EBITDA	Price / Net inc.
Log(MVE)	-0.31 (-0.87)	1.76 (5.70)	0.07 (4.03)	0.06 (2.82)	-0.08 (-0.88)	0.24 (1.27)
Market-to-book	0.84 (1.53)	0.45 (0.93)	0.40 (14.25)	0.30 (9.10)	1.23 (9.17)	2.39 (8.05)
Relative size	-2.63 (-3.09)	-1.79 (-2.49)	0.20 (4.88)	0.24 (4.63)	-0.09 (-0.43)	2.08 (4.77)
All cash deal	4.32 (3.03)	7.03 (5.55)	-0.48 (-6.51)	-1.10 (-12.35)	-1.86 (-5.34)	-1.31 (-1.68)
Hostile deal	-6.59 (-2.60)	-3.50 (-1.66)	-0.49 (-3.35)	-0.28 (-1.40)	-1.97 (-2.99)	-5.18 (-3.43)
Competition	2.55 (1.12)	6.81 (3.30)	-0.14 (-1.10)	-0.29 (-1.61)	0.21 (0.34)	3.48 (2.48)
Private target			1.79 (21.50)	0.23 (2.56)	-0.29 (-0.71)	-3.64 (-4.34)
Foreign target	-4.31 (-1.22)	-3.26 (-1.02)	0.15 (1.50)	-0.04 (-0.38)	-1.39 (-2.77)	-4.92 (-4.53)
Fraud deal	2.65 (0.53)	3.44 (0.73)	0.31 (1.05)	0.01 (0.03)	0.32 (0.23)	-0.70 (-0.21)
N	1,964	3,544	6,147	8,982	4,723	4,955
Adjusted R ²	5.53%	6.41%	23.35%	16.26%	15.22%	11.98%

Table 7 – Fraud and acquirer announcement returns

This table provides evidence on the 3-day cumulative abnormal returns surrounding the announcement of a deal by AAER and non-AAER firms. The benchmark return is the value-weighted market return. Large deal is an indicator variable equal to 1 if the price paid for the target exceeds 10% of the acquirer's market value before the deal announcement. All other variables previously defined. Coefficients reported with *t*-statistics in parenthesis.

	Dependent variable = CAR(-1,1)			
	Coeff.	<i>t</i> -stat	Coeff.	<i>t</i> -stat
Log(MVE)	-0.41	(-12.85)	-0.41	(-12.89)
Market-to-book	0.13	(2.86)	0.13	(2.84)
Large deal	0.08	(0.58)	0.97	(0.74)
Stock deal	-0.75	(-5.22)	-0.74	(-5.18)
Hostile deal	0.47	(1.20)	0.47	(1.21)
Competition	2.53	(7.07)	2.53	(7.07)
Private target	2.29	(14.65)	2.29	(14.65)
Foreign target	-0.41	(-2.66)	-0.41	(-2.67)
Subsidiary target	0.07	(0.47)	0.06	(0.44)
Different industry	0.49	(4.20)	0.49	(4.18)
Successful deal	1.02	(3.76)	1.02	(3.76)
Fraud deal	0.35	(0.67)	1.15	(1.92)
Fraud deal X Large deal			-3.19	(-2.67)
N	20,598		20,598	
Adjusted R ²	4.76%		4.79%	

Table 8 – Characteristics and returns to firms that make deals during fraud

This table provides evidence on characteristics of firms that make acquisitions during the fraud period. * denotes significantly different from firms with M&A at the 0.10 level using a t-test for means and a Wilcoxon rank-sum test for medians

Panel A: Firms that make deals and firms that do not make deals during 1st year of fraud

	Firms w/ M&A		Firms w/o M&A	
	Mean	Median	Mean	Median
MVE before alleged fraud	14.01	0.53	6.34	0.54
Market-to-book equity	3.03	2.84	2.59*	2.12*
EBITDA / Assets	0.10	0.12	0.09	0.12
Cash / Assets	0.16	0.10	0.15	0.07
Debt / Assets	0.21	0.21	0.25	0.21
Raw returns surrounding initiation of alleged fraud:				
(-48,-1)	280.69	130.94	144.77*	43.24*
(-24,-1)	107.95	58.18	64.57	21.99*
(-12,-1)	44.64	31.21	34.63	23.47
(-6,-1)	19.25	11.97	15.67	5.55
(-3,-1)	6.27	5.88	12.34	4.25
(0,2)	13.13	3.95	13.33	6.03
(0,5)	12.99	15.49	19.11	9.62
(0,11)	16.31	11.32	29.55	1.15
(0,23)	4.99	-27.88	8.01	-19.64
(0,47)	30.83	-51.53	-12.26	-33.88

Table 8 (cont'd)**Panel B: Acquisitions and the reversal of pre-fraud returns**

	Raw return over the period starting in month 0 and ending T months later, where $T =$				
	3 mo.	6 mo.	12 mo.	24 mo.	48 mo.
Prior returns ($-T,-1$)	0.53 (2.41)	-0.40 (-1.62)	0.66 (1.45)	0.51 (1.95)	0.39 (1.71)
M&A in year 1 of fraud (0,1)	7.91 (1.00)	-8.40 (-0.86)	-21.36 (-0.73)	-32.92 (-1.55)	20.93 (0.58)
Prior returns x M&A in year 1	-0.10 (-0.43)	0.48 (2.78)	0.55 (1.77)	0.25 (2.25)	0.11 (1.10)
ln(MVE)	-4.73 (-2.75)	-7.90 (-3.79)	-11.19 (-1.86)	-3.16 (-0.71)	2.50 (0.33)
Prior returns x ln(MVE)	-16.84 (-4.19)	5.28 (1.43)	-6.85 (-1.06)	-3.95 (-1.22)	-5.56 (-1.93)
MTB	-2.22 (-0.78)	2.99 (0.88)	-0.63 (-0.06)	8.22 (1.09)	8.03 (0.66)
Prior returns x MTB	21.98 (3.01)	-0.82 (-0.18)	-8.77 (-0.90)	-8.82 (-1.86)	-1.68 (-0.38)
Adjusted R^2	24.1%	11.2%	5.7%	4.5%	-0.3%