

Opportunism and the Related Consequences in the IPO Setting

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Abstract

Recent work by Ball and Shivakumar (2008) finds that financial reporting quality improves just prior to and following an IPO. If this finding results from higher than usual litigation, regulatory, and capital market risks, then one expects to find evidence of a link between opportunistic behavior by IPO managers and those instances where IPO firms actually encounter post-IPO consequences. Consistent with limited opportunism at the IPO, we find that only 72 of the 1,668 IPO firms in our sample face subsequent litigation. At the same time, we document associations between measures of IPO opportunism (i.e., abnormal accruals, subsequent restatements of IPO income, and/or unusual amounts of insider sales) and penalties for IPO firms (i.e., increased incidence of litigation, settlement amounts, and risk of delisting) and for managers (i.e., SEC involvement/action or increased employment turnover). Taken collectively, the evidence presented contributes to our understanding of IPO managers' financial reporting incentives.

Keywords: initial public offering; earnings management; securities litigation; insider trading; restatement; earnings quality

JEL Classification: M41; K22; G14

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1. Introduction

This paper examines the connection between managerial opportunism and negative events following initial public offerings (“IPOs”). Recent work by Ball and Shivakumar (2008) argues that higher than usual litigation risk and regulatory risk, as well as increased scrutiny by market mechanisms (e.g., auditors, underwriters, etc.), combine to limit opportunistic earnings management around the time of IPOs. Consistent with this theory, they find that, on average, firms’ financial reporting quality improves just prior to and following the IPO. Although these findings indicate that incentives to avoid negative, post-IPO repercussions cause managers of IPO firms to report more conservatively, research has yet to connect instances of aggressive behavior by IPO managers with increased litigation risk or other negative post-IPO outcomes (Bohn and Choi 1996; Lowry and Shu 2002; DuCharme et al. 2004; Demer and Joos 2007).¹ Consequently, this paper investigates whether opportunism (in the form of aggressive reporting or trading choices) results in penalties for IPO firms (via increased incidence of shareholder litigation, higher lawsuit settlement amounts, and increased risk of delisting), or for managers (via SEC involvement/action or increased employment turnover).

In highly influential work examining the role of earnings management in the IPO process, Teoh et al. (1998) suggest that managers inflate offer prices by using discretionary accruals to artificially increase reported earnings. Yet, recent findings contradict this opportunistic view (Brav et al. 2000; DuCharme et al. 2004; Fan 2007; Ball and Shivakumar 2008; Lewis 2008). In fact, Ball and Shivakumar (2008) provide evidence that weaknesses in research design bias the previous findings and, instead, offer an alternative view: the change in the firm’s market and

¹ As discussed further in Section 2, DuCharme et al. (2004) investigate the relation between abnormal accruals and subsequent litigation in both the seasoned equity offering (“SEO”) and the IPO setting. Although they detect a relation in the SEO setting, they detect no association between IPO abnormal accruals and subsequent litigation – even for lawsuits that involve allegations of earnings management (Tables 8 and 9, p. 42-43).

regulatory environment that accompanies an IPO causes managers to report more conservatively in fear of negative repercussions. Their evidence focuses on documenting the conservative (rather than aggressive) reporting of IPO firms and, therefore, the absence of adverse post-IPO consequences corroborates their findings of improved reporting quality. At the same time, their theory suggests that managers' opportunistic behavior may play a role in those instances where IPO firms do suffer post-IPO negative events. Indeed, the arguments of Ball and Shivakumar (2008) suggest that post-IPO penalties likely surface when managers behave aggressively and third-party certifiers (e.g., auditors and underwriters) fail. Consequently, we draw upon the theory advanced in Ball and Shivakumar (2008) to examine the link between seemingly opportunistic behavior at the IPO and consequences for IPO firms and their managers.²

To investigate our research question, we examine the reporting and trading behavior of managers of a sample of 1,668 IPOs that occurred following the passage of the Private Securities Litigation Reform Act ("PSLRA") in December of 1995. Inconsistent with the notion of pervasive opportunism at the IPO and consistent with the arguments of Ball and Shivakumar (2008), we find that only 4.3 percent (72) of these IPO firms face subsequent litigation related to their offerings.³ Although these findings suggest that widespread opportunism by IPO managers rarely occurs, the question remains: does opportunistic behavior at the IPO result in increased post-IPO consequences?

² Our investigation assumes the following: even in an efficient capital market, some IPO firm managers have incentives to inflate earnings in hopes of increasing the offer price. When information asymmetries prevent investors from fairly valuing long-term projects in the short run (Shleifer and Vishny 1990), lower quality firms can mimic higher quality firms until the value of the long-term project is revealed (Cadman and Sunder 2007). Although the market expects this behavior and prices IPO securities based on the expected proportion of lower quality firms in the market, managers of lower quality firms might still have incentives to mimic higher quality firms when: (1) the IPO price under asymmetric information is greater than the price a lower quality firm would obtain under full information, and (2) the value of long-term projects is not revealed until some time after the IPO. This line of thinking suggests that some lower quality firms might mimic higher quality firms in the short run. This paper examines whether post-IPO penalties are effective in these instances.

³ Studies that examine IPOs that took place prior to the PSLRA find similar rates of litigation. Bohn and Choi (1996) study 3,519 IPOs that occurred during the period of 1975 through 1986 and report that 3.5 percent (123) face litigation. Likewise, DuCharme et al. (2004) study 5,324 IPOs that occurred during the period of 1988 through 1997 and report that 4.24 percent (226) face subsequent lawsuits.

Because our main hypothesis assumes that third-party certifiers play an important (but imperfect) role in assessing IPO firms' financial reporting quality, we begin our analyses by confirming that third-party certifiers (i.e., underwriters, auditors and venture capitalists) help identify lower quality IPOs, but do so in a less-than-perfect way. Consistent with prior work (Booth and Smith 1986; Hughes 1986; Fang 2005; Fernando et al. 2006), we find that IPO firms associated with reputable third parties enjoy better future performance than IPO firms not associated with reputable third parties. At the same time, we also detect instances where the screening mechanisms of third-party certifiers fail, as the percentage of future "big winners" and "big losers" does not differ significantly based on the quality of the auditor or the reputation of the underwriter. These findings leave room for post-IPO penalties to play an important role in shaping pre-IPO reporting behavior by managers. Consequently, our main analyses focus on establishing a link between pre-IPO opportunism and post-IPO consequences in those instances where increased scrutiny by auditors and underwriters failed to sufficiently limit opportunism.

To test the relation between opportunism and consequences in the IPO setting, we perform a number of analyses that focus on the incidence of litigation, the corresponding lawsuit outcomes, the firm's risk of delisting, and the extent to which IPO managers face SEC action or lose their jobs following behavior that appears opportunistic. We measure opportunism using proxies that focus on reporting behavior (i.e., industry- and size-adjusted abnormal accruals as well as the incidence and amount of a subsequent restatement of IPO earnings) and trading behavior (i.e., the incidence of unusually high insider sales that accompany the offering).⁴

We find that when IPO managers do succumb to the temptation to report or trade in a manner that appears opportunistic, the firm suffers increased consequences. After controlling for

⁴ As discussed in detail in Sections 3 and 5, we adjust our research design to address a number of issues raised by Ball and Shivakumar (2008). For example, we base our measures of aggressive reporting on pre-IPO (rather than post-IPO) financial information.

other factors thought to influence IPO firms' litigation risk, we observe that the incidence of litigation increases when firms report or trade aggressively (as measured by a number of opportunism proxies). In addition, we detect a positive relation between both the incidence (and amount) of a restatement of IPO earnings and the presence of unusual amounts of insider trades and the settlement amounts paid by the firm (and its insurance carrier). Furthermore, our results indicate that measures of opportunism at the IPO are associated with increased incidence of delisting in the three years following the offering. Given evidence of increased consequences for the firm, we then examine whether IPO managers suffer repercussions. Our findings suggest a positive association between the incidence of a restatement of IPO financial information and the likelihood of SEC involvement (in the form of an investigation or related action). At the same time, we find evidence of a relation between opportunistic behavior by IPO managers and subsequent employment turnover. Taken collectively, our results indicate that there is a connection between opportunism at the IPO and post-IPO consequences, suggesting these post-IPO mechanisms function effectively in instances where third parties (i.e., auditors, underwriters and venture capitalists) do not adequately filter opportunistic firms.

This paper contributes to the accounting literature in at least three important ways. First, this study advances the stream of literature examining earnings quality at the IPO. Although early work argues that managers engage in earnings manipulation in order to artificially inflate offer prices (Teoh et al. 1998), recent work contends that the negative consequences associated with opportunism at the IPO cause managers to improve firms' financial reporting quality at the IPO (Ball and Shivakumar 2008). Our study builds upon the work of Ball and Shivakumar (2008) by providing evidence of a link between managerial opportunism and post-IPO penalties,

which is consistent with the existence of *ex ante* motives to report conservatively. Consequently, this paper contributes to our understanding of IPO managers' financial reporting incentives.

Second, this paper also contributes to the ongoing debate about the effectiveness of current US securities laws. Recently, governmental agencies (including the SEC) and private sector groups have focused their attention on the need for litigation reform that potentially reduces auditor and firm liability in class action lawsuits.⁵ Our findings inform this debate by highlighting the important role litigation plays in improving financial reporting quality in the IPO setting.

Finally, this paper adds to the literature that examines employment consequences for managers. Although professional managers often run public firms, founders of firms frequently serve as CEOs of IPO firms. Indeed, many founding CEOs possess firm-specific knowledge that plays an integral role in the continued success of the firm (Willard et al. 1992; Forbes et al. 2004). This suggests that the findings of prior studies that examine CEO turnover in other settings may not generalize to the IPO setting (i.e., factors influencing CEO turnover for IPO firms may differ from those of other public firms). In spite of their particularly unique and important role in the IPO setting, our results indicate that CEOs of IPO firms face increased employment turnover following earnings restatements and lawsuit filings. This is consistent with literature that studies turnover in other settings (Strahan 1998; Niehaus and Roth 1999; Desai et al. 2006; Billings 2008).

The remainder of this paper progresses as follows. Section 2 provides background and discusses related literature. Section 3 supplies the main hypothesis and research design. Section

⁵ For example, in February of 2007 the SEC filed a brief with the Supreme Court urging "the adoption of a legal standard that would make it harder for shareholders to prevail in fraud lawsuits against publicly traded companies and their executives" (*New York Times*, February 13, 2007, "SEC Seeks to Curtail Investor Suits").

4 describes the sample selection criteria and data collection, while Section 5 presents the analyses and results of the study. Finally, Section 6 concludes with a summary and discussion.

2. Background and related literature

The absence of both reporting histories and analyst followings, along with the presence of SEC quiet period rules limiting firms' voluntary disclosures create an environment of increased information asymmetry surrounding most IPOs. As a result, accounting information, the mechanisms that certify its quality, and the incentives that influence financial reporting quality all play particularly valuable roles in the IPO setting. Accordingly, a large body of research focuses on IPO managers' financial reporting decisions.

Research examining managers' financial reporting decisions in the context of IPOs focuses on distinguishing between theories of opportunism and theories of earnings quality signaling. In highly cited work, Teoh et al. (1998) suggest that managers increase offer prices by making aggressive accrual adjustments that artificially inflate reported earnings relative to actual cash flows (Teoh et al. 1998, p. 1936). A number of related and subsequent studies lend support to this notion of opportunism (Friedlan 1994; DuCharme et al. 2001; DuCharme et al. 2004; Darrough and Rangan 2005; and Li et al. 2006).

Recent findings, however, challenge this opportunistic view (Brav et al. 2000; Fan 2007; Ball and Shivakumar 2008; Lewis 2008). In fact, Ball and Shivakumar (2008) argue that higher than usual litigation risk and increased scrutiny by several other market mechanisms combine to limit aggressive reporting by managers of IPO firms.⁶ As a result, they hypothesize that the negative consequences associated with opportunistic behavior actually cause firms' financial

⁶ As highlighted by Ball and Shivakumar (2008), a number of factors potentially limit opportunism at the IPO. For example, large price drops (likely associated with low realizations of earnings) may trigger lawsuit filings (Bohn and Choi 1996; Skinner 1997; Billings 2008). In addition, IPO firms that inflate earnings may bear increased market costs in the form of increased cost of capital and/or loss of reputation. At the same time, firms face increased scrutiny by market mechanisms (e.g., auditors, underwriters, and other third-party certifiers) throughout the IPO process. In fact, the SEC conducts full reviews of nearly all first-time registrants (Beneish 1999).

reporting quality to improve just prior to and following the IPO. Consistent with this notion of enhanced public-firm reporting quality, Ball and Shivakumar (2008) find that IPO firms in the U.K. report more conservatively in anticipation of the offering. If these findings do indeed stem from managers' fear of the negative repercussions, one expects to observe increased consequences when managers actually do appear to behave opportunistically at the IPO.

The theory advanced by Ball and Shivakumar (2008) suggests that managers' behavior at the IPO may play a role in those instances where IPO firms do face adverse post-IPO events. Yet, thus far research has failed to document a link between managerial opportunism at the IPO and increased litigation risk or other negative post-IPO events (Bohn and Choi 1996; Lowry and Shu 2002; and DuCharme et al. 2004). In contrast to Bohn and Choi (1996) and Lowry and Shu (2002) who do not formerly consider the role of earnings management in IPO litigation risk, Ducharme et al.'s (2004) model includes a proxy for IPO earnings management. Although they find a positive relation between a measure of earnings manipulation and the incidence of litigation following SEOs, they find no significant relation in the IPO setting – even when shareholders (via their attorneys) allege earnings manipulation in the lawsuit filing.

Ball and Shivakumar (2008) identify several methodological weaknesses that plague prior work.⁷ Consequently, the lack of results in DuCharme et al. (2004) may stem from the use of a noisy measure of opportunism based on abnormal accruals. For example, like Teoh et al. (1998), DuCharme et al. (2004) measure IPO abnormal accruals using post-IPO financial statements, which means that their measure incorporates reporting behavior that could not influence the offer price. Indeed, the use of post-IPO financials actually allows IPO firms' use of

⁷ In addition to questioning the premise of widespread aggressive reporting in the IPO setting, Ball and Shivakumar (2008) highlight weaknesses in research design that bias the empirical results of previous studies (e.g., Teoh et al. 1998; DuCharme et al. 2004). Consequently, they indicate that the IPO firms previously identified as "extremely aggressive" do not appear aggressive at all. To corroborate these findings, they document an absence of adverse post-IPO events for the 20 firms that represent the most extreme reporters identified in Teoh et al. (1998).

the proceeds from the offering to influence the measure of opportunism at the IPO.⁸ In addition, papers investigating the relation between IPO financial reporting quality and subsequent firm failures either do not consider the role of earnings management (Demer and Joos 2007) or measure earnings management using post-IPO financial information (Li et al. 2006).⁹ Accordingly, whether opportunistic behavior during the IPO process results in negative, post-IPO events remains an open question in the literature.

At the same time, research also has yet to link apparent opportunism at the IPO to consequences (in the form of SEC involvement/action or increased turnover) for the managers themselves. Although recent work by Desai et al. (2006) finds evidence of increased turnover following the incidence of earnings restatements, other studies examining management turnover as a consequence of corporate fraud and shareholder litigation offer mixed results. While Beneish (1999) and Agrawal et al. (1999) find no evidence of increased turnover following SEC enforcement actions and fraud revelations, respectively, both Strahan (1998) and Niehaus and Roth (1999) detect a dramatic increase in turnover following lawsuit filings. Yet, the unique and particularly valuable role played by chief executives (and founders) of IPO firms may limit their employment consequences. Consequently, the evidence observed in other studies investigating the determinants of management turnover may not generalize to this setting.

3. Main hypothesis and research design

Recent work focusing on the financial reporting quality of firms in the IPO setting indicates that opportunism occurs relatively infrequently, and instead, conservative reporting pervades (Ball and Shivakumar 2008). If this finding results from higher than usual litigation,

⁸ Please refer to Ball and Shivakumar (2008) for a detailed discussion of several methodological concerns associated with prior work examining earnings management at the IPO. As detailed in Sections 3 and 5, our research design addresses these and other concerns.

⁹ At the same time, related work studies litigation during sample periods that predate litigation reform introduced by the PSLRA (Lowry and Shu 2002; Ducharme et al. 2004).

regulatory, and capital market risks (i.e., the increased likelihood of negative consequences following the IPO), then one expects to find evidence of a connection between seemingly opportunistic behavior by IPO managers and those instances where IPO firms actually encounter post-IPO consequences.¹⁰ This reasoning provides the basis for the following main hypothesis examined in the paper:

Managerial opportunism at the IPO is positively associated with post-IPO penalties.

Our tests focus on two aspects of opportunism in the IPO setting: managers' aggressive reporting decisions and managers' aggressive trading behavior. Evidence of abnormal accruals (as compared to firms of similar size in the same industry) or the restatement of IPO earnings offers support for the notion that managers made aggressive financial reporting decisions surrounding the IPO. At the same time, insiders who sell their own shares in the offering also may appear opportunistic, as they benefit directly from increased offer prices. Consequently, evidence of unusually high amounts of insider sales at the IPO may increase firms' post-IPO consequences, as one might argue that managers traded opportunistically in an effort to exploit knowledge of the firm's "true" (as opposed to "managed") earnings. Specifically, we measure reporting and trading opportunism using the following proxies:

- **Abnormal Accruals:** We measure unexpected accruals as the IPO firm's total accruals less the mean (*UNEXP_TACC1*) or median (*UNEXP_TACC2*) total accruals for similar-sized firms within the same industry (based on sales and Fama and French (1997) industry classifications). We then define abnormal accrual firms as firms with *UNEXP_TACC1* in the top decile of the sample (*HIGH_TACC1*), or as firms with *UNEXP_TACC2* in the top decile of the sample (*HIGH_TACC2*).¹¹
- **Restatements:** We measure restatements in three ways. First, we set an indicator variable (*RESTATE*) equal to one if the firm restated financial information reported in

¹⁰ It is likely that the firms for which the post-IPO repercussions to aggressive reporting are the highest are the firms that refrain from aggressive reporting. Accordingly, the firms for which we observe aggressive reporting are likely the firms with lower costs to aggressive reporting. This biases against our ability to detect results.

¹¹ Although prior research often measures abnormal accruals as the error term from a cross-sectional Jones model, we avoid this method for two reasons. First, the Jones model is not well specified for high-growth firms (McNichols 2000). Second, deflating by assets, as in most applications of the Jones model, creates a small denominator problem (Ball and Shivakumar 2008).

the prospectus at some point in the four years following the IPO and in doing so revised earnings downward. Second, we calculate the total amount of the earnings restatement (*RESTATE_AMT*). Finally, we determine the percentage of the overstatement of pre-IPO income (*RESTATE_PCT*) by deflating the amount of the restatement by pre-IPO earnings.

- **Insider Trading:** We measure insider sales as either the number of shares sold by insiders divided by the total number of shares in the offering (*ISI*) or the number of shares sold as part of the IPO divided by the number of shares outstanding after the offering (*IS2*). We measure aggressive insider trading as an indicator variable set equal to one if the fraction of insider sales at the IPO falls into the upper quartile of the IPO sample based on our first measure of insider sales (*HIGH_IS1*) or based on our second measure of insider sales (*HIGH_IS2*).

To test the relation between opportunism and consequences in the IPO setting, we perform a number of analyses that focus on the incidence of litigation, the corresponding lawsuit outcomes, the firm's risk of delisting, and the extent to which IPO managers face SEC action/involvement or lose their jobs following behavior that appears opportunistic. In all of our analyses (which we describe in detail in Section 5), we expect to observe a positive relation between the above opportunism proxies and post-IPO consequences.

4. Sample selection and data collection

To conduct our tests, we assemble a sample of IPO firms and a subsample of IPO firms that faced subsequent securities litigation. We identify our initial sample of IPO firms ($n=3,666$) using data obtained from Securities Data Corporation (SDC), augmenting and correcting the SDC data using information supplied on Professor Jay Ritter's website (<http://bear.cba.ufl.edu/ritter/ipodata.htm>). As detailed in Panel A of Table 1, data availability and related concerns reduce the initial IPO sample by 790 firms. In addition, we limit our analysis to IPOs that occurred following the passage of the PSLRA in December of 1995. Consequently, our final IPO sample includes 1,668 IPOs that took place during the period of January 1996 through December 2004.

The litigation database maintained by the Securities Class Action Clearinghouse of Stanford University's Law School supplies the information we use to identify the IPO lawsuit firms (<http://securities.stanford.edu>). We exclude IPOs occurring after 2004 to ensure that we accurately identify those IPO firms that face subsequent lawsuits, as Stanford's database currently includes lawsuits filed through June of 2007. We classify lawsuits with class periods beginning on or before the offering date as IPO lawsuits. At the same time, we exclude allocation-based lawsuits, as they generally focus on the behavior of the underwriter and do not involve allegations of fraud in the IPO firms' financial statements. Similarly, we exclude lawsuits that involve allegations of fraud after (rather than during) the IPO process. To achieve this, we eliminate lawsuits with class periods that begin after the offer date of the IPO. As detailed in Panel B of Table 1, these data restrictions result in a final IPO lawsuit sample of 72 firms.

For the final IPO lawsuit sample (n=72), we obtain relevant lawsuit information (and confirm its accuracy) by hand-collecting data from the following sources:

- **Stanford Securities Litigation Database:** We obtain class period and filing dates from Stanford's database.
- **First Identified Complaint:** We examine the first identified complaint for each lawsuit in order to categorize the nature of the lawsuit (e.g., fraud, IPO-allocation), as well as identify whether plaintiffs' attorneys allege earnings management as evidence of managers' wrongdoing.
- **SEC Filings:** We obtain settlement information, including the amount covered by the company's director and officer liability insurance (net of any deductibles) by reading the firms' quarterly and annual SEC filings following the filing of the lawsuit through the year following the date of settlement (<http://sec.gov>).
- **Lexis-Nexis, Dow Jones News Service:** Performing a full-text search of news articles via Lexis-Nexis and Dow Jones News Service (using the company name and keywords of "lawsuit" and "class action"), we confirm the nature of the lawsuit allegations, class period dates, settlement amount, insurance coverage, and settlement form.

- **CEO Consequences Data:** To examine SEC actions against CEOs, we perform a full-text search (based on company name and/or CEO named on the first identified complaint) of the SEC litigation database to identify enforcement actions that relate to defendant firms and executives (<http://sec.gov>). In addition, we perform a full-text search of news articles via Lexis-Nexis and Dow Jones News Service (using the company name and keywords of “SEC” and “investigate,” “investigation,” or “action”).

In addition to the lawsuit information, we collect data for both the IPO sample (n=1,668)

and the lawsuit subsample (n=72) from the following sources:

- **Accruals Data:** Compustat supplies the necessary financial statement information for the calculation of total accruals. This information on managers’ financial reporting choices serves as one of our proxies of managerial opportunism in the IPO setting. We obtain all financial accounting variables/data from the financial statements issued just prior to the IPO.
- **Restatement Data:** We identify restatements using information supplied by the U.S. Government Accountability Office (GAO) on its website (<http://www.gao.gov>). In addition to searching SEC filings, we perform a full-text search of news articles via Dow Jones News Service (using the company name and keywords of “restate” and “restatement”) to confirm that the identified restatements relate to the financial statements included in the firm’s prospectus as part of the IPO.
- **Insider Trading Data:** We obtain information on the trades of insiders of the IPO firms from Securities Data Corporation. Information on the secondary shares sold by insiders during the offering serves as one of our proxies for managerial opportunism in the IPO setting.
- **CEO Consequences Data:** To examine the employment consequences for the CEOs of the IPO firms, we obtain management turnover data from the firms’ SEC filings. We hand-collect data items from firms’ registration and proxy statements leading up to and following the offering (<http://sec.gov>).

Our analyses also include a number of other control variables (e.g., firm performance, industry membership, firm size). We obtain return, price and other financial statement information from the Center for Research in Security Prices (CRSP) and Compustat. Appendix A supplies a list of the variables used in our analyses, their associated sources, and the ways in which we confirm their accuracy.

5. Analyses and results

Descriptive statistics

Panel A of Table 2 presents descriptive statistics for the sample of IPO firms, partitioned based on the incidence of a securities lawsuit. Although the 1,596 non-litigation firms and the 72 litigation firms exhibit many similarities, not surprisingly, they differ in a number of respects. Comparing the two groups, we find that the sued firms are older, achieve higher offer prices, exhibit less mean underpricing, sell more secondary shares in the offering, and are more likely to restate IPO earnings. In results not tabulated, we find evidence of positive correlations between our measures of opportunism (i.e., *HIGH_TACC1*, *HIGH_TACC2*, *RESTATE*, *RESTATE_AMT*, *RESTATE_PCT*, and *HIGH_IS1*) and the incidence of a lawsuit (i.e., *SUED_IPO*). As discussed in Section 3, one of our measures of opportunism focuses on the restatement of financial information reported in the IPO prospectus. Accordingly, Panel B of Table 2 provides descriptive statistics for the subsample of IPO firms that subsequently restate IPO financial information. Similar to the low overall incidence of litigation in the full IPO sample, we find that 34 IPO firms (representing approximately 2 percent of the full IPO sample) subsequently reduce income reported at the IPO via an earnings restatement.¹² Perhaps not surprisingly, the majority of these restatements (i.e., 56 percent) reduce the previously reported revenue. At the same time, we note that the mean amount of the restatement of \$234 million represents a significant percentage (on average, 45 percent) of the previously reported income. This suggests that although the restatement of IPO financial information occurs infrequently, the

¹² We identify the subsample of IPO restatement firms by flagging all restatements associated with the full sample of IPO firms (n=1,668). This process uncovers an initial IPO restatement subsample of 42 firms. Because our hypothesis focuses on the overstatement of IPO income, we remove five restatements that involve the understatement of IPO income and three observations that do not restate IPO financial information.

incidence of a restatement does indeed represent a substantially important reporting event for the restating firms (and their shareholders).

The role of third-party certifiers

Because our main hypothesis assumes that third-party certifiers play an important (but imperfect) role in assessing IPO firms' financial reporting quality, we begin our analyses by confirming that third-party certifiers (i.e., underwriters, auditors and venture capitalists) help identify lower quality IPOs, but do so in a less-than-perfect way. Accordingly, Table 3 supplies the results of estimating Fama and French (1993), three-factor regressions for portfolios formed based on the quality of third-party certifiers (Panel A) and partitioning firms' future performance based on those same classifications (Panel B). Consistent with prior work (e.g., Catar et al. 1998; Chan et al. 2008), we observe evidence of a connection between more reputable IPO certifiers and higher quality IPO firms. Specifically, the results in Panel A indicate that IPO firms backed by less reputable investment banks (i.e., $UWR = 0$) under-perform the market (i.e., the intercept term exhibits significance at the 5% level for a two-tailed test), while IPO firms with more reputable backing (i.e., $UWR = 1$) exhibit no difference in their performance (i.e., the intercept term is not significant at conventional levels).¹³ In addition, results presented in Panel B show that IPO firms associated with reputable underwriters (i.e., $UWR = 1$) and high quality auditors (i.e., $AUDITOR = 1$) experience lower delisting rates and higher returns in the years following the IPO.

Yet, Panel B of Table 3 also supplies evidence to suggest limitations in the effectiveness of third-party certifiers' screening process: the proportion of post-IPO "big winners" (defined as

¹³ The results indicate that neither the reputable nor less-reputable auditor groups experience abnormal performance following the IPO. The lack of difference, however, between the reputable and less-reputable auditor groups should not be interpreted as an indication that both groups perform equally well in the post-IPO period, as the less-reputable auditor group is extremely small. Indeed, only 67 of the 1,668 firms in our sample employ a regional audit firm to audit pre-IPO financial information. Unfortunately, this lack of variation in auditor quality limits the power of our test.

firms with abnormal or raw returns that exceed 50 percent) and “big losers” (defined as firms with abnormal or raw returns that are less than negative 50 percent) does not differ significantly across underwriter or auditor groups. Indeed, across venture capitalists (“VC”) groups, we find that the proportion of “big winners” (“big losers”) is higher (lower) for the non-VC backed firms. Overall, the evidence presented in Table 3 leaves room for post-IPO penalties to play an important role in creating *ex ante* incentives that influence IPO managers’ financial reporting decisions. Consequently, our main analyses focus on establishing a link between pre-IPO opportunism and post-IPO consequences in those instances where increased scrutiny by third-party certifiers failed to sufficiently limit opportunism.

The incidence of litigation

The first test of our main hypothesis focuses on the relation between opportunism at the IPO and the likelihood of subsequent litigation. Lowry and Shu (2002) indicate that litigation risk is simultaneously determined with initial (first day) returns (i.e., underpricing). Accordingly, we implement a simultaneous equations framework that involves the following two-stage estimation procedure:

$$\begin{aligned}
 INITIAL_RET_i = & \alpha_o + \alpha_1 AGGR_REPORTING_i + \alpha_2 AGGR_TRADING_i + \\
 & \alpha_3 UWR_i + \alpha_4 PROCEEDS_i + \alpha_5 ASSETS_i + \alpha_6 TECHFIRM_i + \\
 & \alpha_7 VC_i + \alpha_8 REVISION_i + \alpha_9 NYSE_AMEX_i + \alpha_{10} PRIORRET_i \\
 & \alpha_{11} LIT_INST_i + \varepsilon_i
 \end{aligned} \tag{1a}$$

$$\begin{aligned}
 SUED_IPO_i = & \beta_o + \beta_1 AGGR_REPORTING_i + \beta_2 AGGR_TRADING_i + \beta_3 UWR_i + \\
 & \beta_4 PROCEEDS_i + \beta_5 VC_i + \beta_6 TECHFIRM_i + \beta_7 NYSE_AMEX_i + \\
 & \beta_8 REVISION_i + \beta_9 TURNOVER_i + \beta_{10} IR_INST_i + \varepsilon_i
 \end{aligned} \tag{1b}$$

We estimate Equation 1a using an ordinary least squares regression and Equation 1b using a probit regression, with *PRIORRET* (the return to the NASDAQ index during the two weeks preceding the issue) and *TURNOVER* (the average share turnover for a industry- and size-matched sample of firms over the year prior to the IPO) serving as the instruments that identify

the equations.¹⁴ As discussed in Section 3, we measure aggressive reporting and trading (i.e., opportunism) using proxies that focus on abnormal accruals (*HIGH_TACC*), restatements (*RESTATE*), and insider trading (*HIGH_IS*).

In addition to our measures of opportunism, we include a number of variables to control for other factors thought to influence attorneys' decisions to file an IPO lawsuit.¹⁵ With respect to underwriter quality (*UWR*), theory offers conflicting predictions for its coefficient. The presence of a high quality underwriter could perhaps suggest decreased likelihood of litigation because reputable underwriters likely associate with higher quality firms. Yet, the presence of a reputable underwriter perhaps offers additional "deep pockets" in the event of a lawsuit. Consistent with the plaintiffs' need to recover the fixed costs of litigation, both Bohn and Choi (1996) and DuCharme et al. (2004) find a positive relation between the size of the offering and the incidence of subsequent litigation. Accordingly, we control for size using either the size of the offering (*PROCEEDS*) or total assets in the year of the offering (*ASSETS*). Morsfield and Tan (2006) suggest that VCs constrain opportunism in the IPO setting.¹⁶ To control for the presence of VCs, we set an indicator variable, *VC*, equal to one if a VC backs the IPO firm.

Finally, we control for additional factors that Lowry and Shu (2002) indicate play an important role in litigation in the IPO setting. First, we include an indicator variable, *TECHFIRM* (which we set equal to one if the firm operates in the technology industry) and an indicator variable, *NYSE_AMEX* (which we set equal to one if the firm trades on the NYSE or

¹⁴ Specifically, we expect to observe a positive coefficient for *TURNOVER*, as past studies observe increased litigation risk associated with increased volume and shares traded (Johnson et al. 2007). Because this paper focuses on litigation risk (as opposed to the determinants of initial IPO returns), we do not tabulate results for Equation 1a and we limit our discussion to Equation 1b.

¹⁵ We exclude a dummy variable for reputable auditors (i.e., national audit firms), as this variable exhibits very little variation, especially within firms that engage high-quality underwriters. In fact, 96 percent of the sample engages a national audit firm to audit pre-IPO financial statements, and 98 percent of the firms with reputable investment banks engage national audit firms to audit pre-IPO financial statements. These findings suggest that obtaining a reputable auditor is a hurdle to going public rather than a signal of firm quality.

¹⁶ In addition, consistent with Morsfield and Tan (2006), in Pearson and Spearman correlation tables not presented, we find evidence of significantly negative correlations between our measures of opportunism and the presence of VCs.

AMEX as opposed to the NASDAQ), to control for the litigation risk associated with increased uncertainty surrounding technology firms and decreased uncertainty associated with non-NASDAQ-exchange-traded firms. Second, to control for aggressiveness in setting the final offer price, we include *REVISION* (which we define as the percentage change from the mid-point of the initial filing range to the final offer price) and expect increased aggressiveness to be associated with increased litigation risk. Last, we include the initial returns instrument (*IR_INST*) that we obtain from estimating Equation 1a, as Lowry and Shu (2002) find that higher initial returns reduce firms' litigation risk.

We present the findings of the second stage of this estimation procedure in Table 4. Consistent with the notion that managerial opportunism at the IPO results in negative, post-IPO consequences, we observe significantly positive coefficients for all five aggressive reporting measures. In contrast to the findings of Ducharme et al. (2004), these results suggest that firms with high levels of abnormal accruals (as compared to firms of similar size in the same industry) and firms that subsequently restate financial information contained in the IPO prospectus suffer increased litigation risk.¹⁷ Also consistent with a link between opportunistic behavior and post-IPO consequences, we detect a significantly positive relation between unusually high sales by insiders in the offering and the likelihood of subsequent litigation. Although a number of the controls do not exhibit significance, the significantly positive coefficient on *PROCEEDS* (or *ASSETS* in results not tabulated) offers evidence to support our expectation of increased litigation risk for larger firms with "deep pockets."¹⁸ Finally, in (untabulated) results we

¹⁷ Ducharme et al. (2004) do not detect a relation between measures of abnormal accruals and IPO firms' litigation risk. The difference in findings might stem from our focus on post-reform IPO litigation as well as our use of alternative proxies of managerial opportunism. Ducharme et al. (2004) limit their analysis to primarily pre-PSLRA IPO litigations and base their measure of opportunism on abnormal accruals obtained from estimating a modified Jones Model using post-IPO financial information.

¹⁸ The insignificant coefficient for the initial returns instrument in all specifications indicates that, in contrast to the findings of Lowry and Shu (2002), underpricing does not reduce litigation risk for the IPO firms in our sample. As noted previously, our

estimate a traditional probit regression that does not incorporate the simultaneous equations framework and the inferences with respect to all of our variables of interest remain unchanged. Given evidence of a link between opportunism and litigation risk, we next assess the extent to which our proxies of opportunism are associated with the ultimate resolution of the lawsuit.

Lawsuit settlements

Our second test focuses on the settlement amounts (if any) paid by the IPO firms that faced litigation. Because the strength of the plaintiffs' (i.e., shareholders') case largely depends on the assertion that managers' reporting decisions artificially inflated the company's stock price, defendants (i.e., managers) may hurt the company's bargaining position in settlement negotiations by engaging in both reporting and trading behavior that appears opportunistic to investors. To examine the relation between opportunism (in the form of reporting and trading behavior) and settlement amounts we estimate the following regression model:

$$SETTLEMENT_i = \gamma_o + \gamma_1 AGGR_REPORTING + \gamma_2 AGGR_TRADING_i + \gamma_3 UWR_i + \gamma_4 DAMAGES_i + \gamma_5 DEEP_POCKETS_i + \varepsilon_i \quad (2)$$

In the above equation, the total dollar amount paid by the company (and its insurance carrier) serves as the dependent variable. Following prior research, we treat dismissed or voluntarily withdrawn lawsuits as zero settlements (Skinner 1997; DuCharme et al. 2004; Billings 2008).

In this regression, we again focus on our proxies for opportunism. In addition, we include control variables thought to influence settlement negotiations. As in the prior analysis, we include *UWR* as a control for underwriter quality, but make no prediction for its coefficient.

sample period focuses on more recent lawsuits that take place in a different legal, regulatory and economic environment. We study IPOs and resulting lawsuits that take place in an environment shaped by, among other things, litigation reform (e.g., the PSLRA), and increased underpricing (e.g., initial returns soared in the late 1990s). Loughran and Ritter (2004) suggest that underpricing increased, in part, due to issuing firms desire to obtain favorable analysts forecasts during the 1990s (i.e., issuers were willing to pay for favorable analyst forecasts with increased underpricing of their shares) and "spinning" (i.e., the practice of allocating securities of hot IPOs to executives of issuing firms who are the decision makers in charge of choosing the lead underwriter, which provides decision makers with the incentive to choose a lead underwriter with a reputation for leaving money on the table). These changes in the factors influencing initial returns might explain the contrasting finding.

Because the inclusion of *DAMAGES* controls for the severity of the news that triggered the lawsuit filing, we expect a positive coefficient.¹⁹ Although the parties negotiate the settlement, a hot debate in the legal literature centers on whether the settlement amount reflects the merits of the plaintiffs' case. Indeed, a considerable body of research argues that defendants feel coerced to settle and that shareholders' attorneys target firms with "deep pockets." Relying on the "deep pockets" argument advanced in the legal literature, we include measures (*ASSETS* or *INSURANCE*) indicative of the firm's ability to pay larger settlements.

Table 5 presents the results of estimating Equation 2. Consistent with the results in Table 4, we detect a significantly positive relation (at the 0.01 level) between the incidence or amount of a restatement of IPO earnings (*RESTATE* or *RESTATE_AMT*) and the amount the company pays to settle the lawsuit (*SETTLEMENT*). At the same time, we also find some evidence to indicate that opportunistic sales by insiders increase the settlement (e.g., *HIGH_IS2* is significant at the 0.10 level using a two-tailed test in three of five specifications). The lack of significance of the accruals proxies (as opposed to the restatement proxies) may stem from both the inherent measurement error in our accruals variables and/or the *ex ante* versus *ex post* nature of the two proxies. That is, the restatement of financial information reported in the IPO may provide a more precise indication of aggressive reporting because it would provide *ex post* evidence of the inflation of earnings that would be known by the parties when they negotiate the settlement. Finally, as expected, we observe a positive relation between a measure of the estimated shareholder damages (*DAMAGES*) and the settlement. Because we observe a high correlation between the size of the firm (*ASSETS*) and the estimated damages (*DAMAGES*), we estimate alternative specifications that include these individually and the results do not change.

¹⁹ We measure *DAMAGES* as the decline in market capitalization from the trading day when it reached its maximum during the class period to the minimum market capitalization in the five trading days immediately following the end of the class period.

Taken collectively, the evidence presented thus far indicates that although negative, post-IPO events (in the form of increased litigation consequences) rarely occur, in those instances where IPO firms do face subsequent litigation and the associated settlement costs, opportunistic behavior (in the form of aggressive reporting and trading) plays a role in increasing the consequences. Our next test of the link between opportunism and negative, post-IPO events focuses on the likelihood that the IPO firm ultimately delists (for negative reasons) in the years following the IPO.

Delistings

The third test of our main hypothesis investigates the relation between measures of IPO opportunism and the likelihood that an IPO firm will fail (i.e., delist for negative reasons) soon after the offering.²⁰ Ball and Shivakumar (2008) argue that increases in cost of capital likely accompany poor reporting quality at the IPO. This suggests that firms with unusually poor financial reporting quality may not be able to raise capital in the future, causing increased likelihood of failure. Consistent with this conjecture, (untabulated) results indicate that only 8 percent of non-restatement IPO firms delist in the three years following the initial offering. This small percentage differs significantly (at the 0.05 percent level for a two-tailed test) from the 26 percent failure rate for the restatement firms.

To more rigorously test the link between opportunism and delistings, we estimate the following regression equation:

$$DELIST_i = \delta_0 + \delta_1 AGGR_REPORTING_i + \delta_2 AGGR_TRADING_i + \delta_3 THIRD_PARTY_CERTIFICATION_i + \delta_4 FIRM_CHARACTERISTICS_i + \delta_5 DEAL/MARKET_CHARACTERISTICS_i + \varepsilon_i \quad (3)$$

We set an indicator variable, *DELIST*, equal to one if the IPO firm delists (for negative reasons within the three years of the IPO); this variable serves as the dependent variable in Equation 3.

²⁰ We define negative delisting as delisting for any reason other than a merger or listing on another exchange.

In this regression, we yet again focus on our proxies for opportunism. In addition, we include control variables suggested by recent work examining delistings (Demer and Joos 2007). We include *UWR*, *AUDITOR*, and *VC* to control for the decreased likelihood of failure associated with firms backed by reputable third parties. We also include firm characteristics that have been shown to be associated with delisting risk. Specifically, we include measures to control for uncertainty/risk (*AGE* and *INTERNET_FIRM*), leverage (*DE_RATIO*), stage of development and size (*R & D* and *SALES*) and productive efficiencies (*GROSS_MARGIN*). Finally, again following Demer and Joos (2007), we include controls for deal characteristics (*OFFER_PRICE* and *INITIAL_RETURNS*) and market characteristics (*AVGUP_3MPRIOR*).

Table 6 lists the predicted relations and provides the results of estimating Equation 3. Following Demer and Joos (2007), we estimate our model separately for technology and non-technology firms, as evidence suggests that failure models are different for these two groups of firms. Consistent with evidence presented in Tables 4 and 5, we find that evidence of a link between aggressive reporting and the likelihood of failure. That is, we observe significantly positive coefficients for our measures of opportunistic reporting and the incidence of delisting in the three years following the IPO. Yet, unlike the results of our prior analyses, we detect no relation between aggressive trading at the IPO and subsequent failure.

SEC involvement

Taken collectively, the evidence presented thus far suggests that IPO managers' reporting and trading behavior influence the penalties borne by the firm. Given these findings, our next tests focus on the post-IPO repercussions to managers. Accordingly, we investigate whether opportunistic behavior at the IPO increases SEC enforcement actions or CEO turnover. Consequently, our fourth test of the relation between opportunism and post-IPO consequences

focuses on the extent to which the company or its top executives face an SEC investigation (including a subsequent enforcement action) in relation to the offering. To accomplish this, we estimate the following logistic regression:

$$SEC_i = \frac{\theta_0 + \theta_1 AGGR_REPORTING_i + \theta_2 AGGR_TRADING_i + \theta_3 DAMAGES_i + \theta_4 FIRM_SIZE_i + \varepsilon_i}{\theta_3 DAMAGES_i + \theta_4 FIRM_SIZE_i + \varepsilon_i} \quad (4)$$

An indicator variable (*SEC*) set equal to one if the firm or its CEO faced an SEC investigation in addition to the class action lawsuit serves as the dependent variable in the regression. In this regression, we yet again focus on our proxies for opportunism. Again, we expect to observe positive coefficients for our opportunism measures. In addition, we include controls for estimated shareholder damages (*DAMAGES*) and firm size (*PROCEEDS*).

Table 7 presents the results of estimating Equation 4. Unfortunately, quasi-complete separation occurs when we include our trading variables in the model. Accordingly, the results reported in Table 7 exclude trading considerations. Nevertheless, the remaining results indicate the expected positive relation between aggressive reporting (*RESTATE*, *RESTATE_AMT*, and *RESTATE_PCT*) and the incidence of SEC involvement.

CEO turnover

Our fifth test of the relation between opportunism and post-IPO consequences focuses on the extent to which CEO turnover increases with opportunistic behavior at the IPO. To accomplish this, we estimate the following logistic regression:

$$CEO_TURNOVER_i = \frac{\lambda_0 + \lambda_1 AGGR_REPORTING_i + \lambda_2 AGGR_TRADING_i + \lambda_3 SUED_IPO_i + \lambda_4 CEO_CHAIRMAN_i + \lambda_5 INSIDE_OWNERSHIP_i + \lambda_6 CEO_AGE_i + \lambda_7 CEO_FOUNDER_i + \lambda_8 ABRET_i + \lambda_9 ROA + \lambda_{10} ASSETS_i + \varepsilon_i}{\lambda_5 INSIDE_OWNERSHIP_i + \lambda_6 CEO_AGE_i + \lambda_7 CEO_FOUNDER_i + \lambda_8 ABRET_i + \lambda_9 ROA + \lambda_{10} ASSETS_i + \varepsilon_i} \quad (5)$$

In the above equation, we set an indicator variable (*CEO_TURNOVER*) equal to one if the CEO of the firm at the time of the offering no longer serves as the CEO in the third year following the

IPO.²¹ As in the prior analyses, we include our measures of opportunism and expect to observe positive coefficients.

In addition to the variables of interest, we include a number of controls that reflect factors thought to influence the likelihood of CEO turnover. Prior work documents a dramatic increase in executive turnover following lawsuit filings (Strahan 1998; Niehaus and Roth 1999); consequently, we include our indicator variable for the incidence of a subsequent shareholder lawsuit as a control in this regression. In this analysis, the litigation variable (*SUED_IPO*) also serves as an opportunism proxy, as our earlier results indicate that opportunistic firms are more likely to face litigation. Following Neihaus and Roth (1999) and Desai et al. (2006), we include two measures of CEO power (*CEO_CHAIRMAN* and *INSIDE_OWNERSHIP*).²² At the same time, we include a control for the age of the CEO (*CEO_AGE*). Prior research also suggests that firm performance influences executive turnover (Desai et al. 2006). Consequently, we include measures of firm performance, predicting negative coefficients for *ABRET* and *ROA*.²³ Finally, we control for the size of the firm (*ASSETS*), but make no prediction for its coefficient.

Table 8 presents the results of estimating Equation 5. Consistent with Desai et al. (2006), we find that CEOs of IPO firms that subsequently restate financial information reported in the prospectus experience increased rates of turnover. In addition, the likelihood of turnover increases with the amount of the restatement relative to reported earnings (*RESTATE_PCT*). Yet, consistent with Billings (2008), we detect no relation between unusual amounts of insider sales and the likelihood of CEO turnover. As expected, we observe a significant and positive coefficient for *SUED_IPO*, suggesting that CEO turnover increases for managers of sued firms.

²¹ Data availability reduces the full IPO sample from 1,668 firms to 1,395 firms for this analysis.

²² Specifically, we set *CEO_CHAIRMAN* equal to 1 if the CEO also serves as the Chairman of the Board at the time of the IPO and we measure *INSIDE_OWNERSHIP* as the percentage of the shares outstanding owned by insiders.

²³ We include a measure of accounting performance (*ROA*), but acknowledge that this may serve as a particularly noisy measure of firm performance in the IPO setting. Accordingly, the predicted relation may not manifest (Engel et al. 2003).

Finding positive and significant coefficients for *RESTATE* and *SUED_IPO* suggests that restatements impact CEO turnover both directly and indirectly via increasing the likelihood of litigation. These findings suggest that aggressive reporting is costly to the CEOs of IPO firms.

Because many founding CEOs possess firm-specific knowledge that plays an integral role in the continued success of the firm (Willard et al. 1992; Forbes et al. 2004) boards of directors might tolerate a higher threshold of poor behavior before terminating a founder CEO. To explore this notion we included two additional terms that capture the interaction between aggressive reporting and the presence of a founding CEO and the interaction between aggressive trading and the presence of a founding CEO. In the results presented in the fourth specification of the model neither interaction term exhibits strong significance; although the interaction of founder and restate exhibits marginal significance (0.06 level for a one-tailed test). At the same time, however, the inclusion of the interaction terms does not change prior inferences. This suggests that although restatements increase the likelihood of CEO turnover for all firms, the magnitude of the impact of a restatement on turnover is attenuated for CEOs who are founders of their firms.

Additional robustness tests

Overall, we find that opportunistic reporting and trading are associated with a higher incidence of litigation and accompanying resolution costs, higher rates of failure, increased incidence of SEC action, and increased CEO turnover. These findings support our hypothesis that IPO opportunism increases post-IPO consequence. As with most studies of earnings management, our paper must overcome the criticism that correlated omitted variables influence our opportunism proxies and, consequently, drive our results. An alternative explanation for our findings is that firm growth influences our measures of aggressive reporting and that firm risk

drives insider sales and, as a result, those factors lead to increased consequences for IPO firms. This explanation, however, is less likely to apply to restatements, and our results continue to hold when we measure opportunism with *RESTATE*.

Further, in untabulated results we observe significantly negative correlations between our accruals measures (*HIGH_TACC1* and *HIGH_TACC2*) and measures of firm-level sales growth and industry-level sales growth measures (based on Fama and French (1997) industry classifications). This suggests that although high-growth firms tend to have higher accruals than low-growth firms, firm- or industry-level sales growth does not appear to drive the unusually high levels of positive accruals we observe. At the same time, we also observe significantly negative correlations between our measures of opportunistic trading and measures of firm risk and/or uncertainty surrounding the offering.²⁴ Taken collectively, the absence of positive correlations between our opportunism proxies and measures of both risk and growth lends added credibility to our interpretations of the findings.

6. Summary and conclusion

This paper examines the link between opportunism at the IPO and negative, post-IPO events. Recent work by Ball and Shivakumar (2008) finds that financial reporting quality improves just prior to and following an IPO. If this finding results from higher than usual litigation, regulatory, and capital market risks, then one expects to find evidence of a link between opportunistic behavior by IPO managers and those instances where IPO firms actually encounter post-IPO consequences. Consistent with the notion of limited opportunism at the IPO, we find that only 72 of the 1,668 IPO firms in our sample face subsequent litigation. At the same time, we document associations between measures of IPO opportunism (i.e., abnormal

²⁴ The risk measures include the following: the width or the initial filing range, the firm's presence in a high-litigation industry, the amount of underpricing associated with the offering, and the age of the firm.

accruals, subsequent restatements of IPO income, and/or unusual amounts of insider sales) and penalties for IPO firms (i.e., increased incidence of litigation, settlement amounts, and risk of delisting) and for managers (i.e., SEC involvement/action or increased employment turnover).

These findings increase our understanding of IPO earnings quality and managers' reporting incentives. Consistent with recent work arguing that earnings management at the IPO is rare (Ball and Shivakumar 2008; Lewis 2008), we find that opportunism at the IPO is unusual. For example, only 2 percent of our sample restates the financial information reported at the IPO. Yet, although infrequent, when opportunistic behavior does occur, the magnitude of the earnings manipulation is economically meaningful. In particular, on average, 45 percent of IPO restatement firms' pre-IPO income resulted from earnings inflation. At the same time, our findings suggest that post-IPO settling-up mechanisms function efficiently in those instances where managers report or trade aggressively and IPO-screening mechanisms fail: we document a connection between measures of opportunism at the IPO and post-IPO consequences.

The implication of our findings is that post-IPO repercussions create *ex ante* incentives for IPO managers to report conservatively at the IPO. That is, effective post-IPO settling-up mechanisms are one reason for the rare incidence of opportunism at the IPO. Our findings may also have important implications for regulators considering litigation reform, as they suggest that post-IPO repercussions (including litigation) are important mechanisms for improving financial reporting quality at the IPO. Regulators contemplating reducing firm liability should consider the impact of this change on IPO managers' reporting incentives and on the quality of financial information reported at the IPO.

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Appendix A
Variable definitions and data sources

IPO Data		
OFFER_PRICE	= the final selling price of the IPO shares.	<p>We identify our initial sample of IPO firms using data obtained from Securities Data Corporation. We augment and/or correct the SDC data using information supplied on Professor Jay Ritter's website (http://bear.cba.ufl.edu/ritter/ipodata.htm). In addition, we obtain relevant information from the Center for Research in Security Prices (CRSP) and Compustat.</p> <p>We limit analysis to IPOs that occurred following the passage of the Private Securities Litigation Reform Act in December of 1995. Consequently, we focus on IPOs that took place during the period of January 1996 through December 2004.</p>
MIDPOINT	= the mid-point of the initial price range given in the prospectus.	
DAY1_PRICE	= the price on the close of the first trading day.	
PROCEEDS	= the proceeds from the issue (i.e., shares offered multiplied by the offer price). We use the natural log (LPROCEEDS) in regressions.	
UNDERPRICING	= the percentage change in the price from the final-offer price to the first day closing price; i.e., underpricing ($\frac{\text{DAY1_PRICE} - \text{OFFER_PRICE}}{\text{OFFER_PRICE}}$).	
VC	= 1 if venture capitalists back the firm; 0 otherwise.	
UWR	= 1 if the firm employs a reputable investment bank to underwrite the issue; 0 otherwise. Reputable investment banks exhibit a Carter-Manaster rank of eight or greater.	
AGE	= the firm's age at the time of the IPO.	
AUDITOR	= 1 if a national ("Big 4/6/8") firm audits the IPO firm; 0 otherwise.	
Reporting and Trading Data		
TACC	= $\text{IBEI} - \text{CFO}$ in the year of the IPO, where CFO equals cash flow from operations (Compustat Data Item #308 less Compustat Data Item #124) and IBEI equals income before extraordinary items (Compustat Data Item #123).	<p>Compustat supplies the necessary financial statement information for the calculation of total accruals. This information on managers' financial reporting choices serves as one of our proxies of managerial opportunism in the IPO setting. We obtain all financial accounting variables/data from the financial statements issued just prior to the IPO.</p>
UNEXP_TACC1	= the IPO firm's total accruals less the mean total accruals for similar-sized firms within the same Fama and French (1997) industry classification.	
UNEXP_TACC2	= the IPO firm's total accruals less the median total accruals for similar-sized firms within the same Fama and French (1997) industry classification.	
HIGH_TACC1	= 1 if UNEXP_TACC1 falls into the top decile of the IPO sample; 0 otherwise.	
HIGH_TACC2	= 1 if UNEXP_TACC2 falls into the top decile of the IPO sample; 0 otherwise.	

Appendix A
Variable definitions and data sources

RESTATE	= 1 if the firm restates earnings included in the financial statements provided in the firm's prospectus; 0 otherwise.	We identify restatements using information supplied by the U.S. Government Accountability Office (GAO) on its website (http://www.gao.gov). In addition to searching SEC filings , we perform a full-text search of news articles via Dow Jones News Service (using the company name and keywords of "restate" and "restatement") to confirm that the identified restatements relate to the financial statements included in the firm's prospectus as part of the IPO.
RESTATE_AMT	= the dollar amount of the restatement (reported in millions of dollars).	
RESTATE_PCT	= the percentage overstatement of pre-IPO income defined as RESTATE_AMT divided by reported (at the IPO) earnings.	
IS1	= the percentage of secondary shares sold in the offering (i.e., secondary shares sold divided by total shares sold in the IPO).	We obtain information on the trades of insiders of the IPO firms from Securities Data Corporation . Information on the shares sold by insiders during the offering serves as one of our proxies for managerial opportunism in the IPO setting. To allow for sales motivated by liquidity concerns, we code indicator variables that focus on unusually high amounts of sales.
IS2	= the percentage of the firm sold to outsiders (i.e., total shares sold in the IPO divided by shares outstanding after the IPO).	
HIGH_IS1	= 1 if IS1 falls into the top quartile of the IPO sample; 0 otherwise.	
HIGH_IS2	= 1 if IS2 falls into the top quartile of the IPO sample; 0 otherwise.	
Post-IPO Consequences Data		
SUED_IPO	= 1 if the firm faces a class action lawsuit subsequent to the initial public offering and in relation information contained in the prospectus; 0 otherwise.	The litigation database maintained by the Securities Class Action Clearinghouse of Stanford University's Law School supplies the information we use to identify the lawsuit firms (http://securities.stanford.edu). We then obtain relevant lawsuit information by hand-collecting data from a number of sources. <ul style="list-style-type: none"> • Stanford Securities Litigation Database: We obtain class period and filing dates by checking the IPO firms to Stanford's database. • First Identified Complaint: We examine the first identified complaint for each lawsuit in order to categorize the nature of the lawsuit (e.g., fraud, IPO-allocation), as well as identify whether plaintiffs' attorneys allege insider trading or earnings management as evidence of managers' wrongdoing. • SEC Filings: We obtain settlement information, including the amount covered by the company's director and officer liability insurance (net of any deductibles) by reading the firms' quarterly and
SETTLEMENT	= the dollar amount for which the lawsuit settles (in millions).	
DELIST	= one if the firm delisted for negative reasons during the three years following the IPO. We define negative delisting as any delisting occurring for a reason other than a merger or move to a new exchange.	
SEC	= 1 if the firm/CEO faced an SEC enforcement involvement or action in addition to the class action lawsuit; 0 otherwise.	
CEO_TURNOVER	= 1 if the CEO of the firm at time of the offering is no longer with the firm the year after the firm settles the lawsuit; 0 otherwise.	
CLASS_PERIOD	= the number of days between the CBDATE and the CEDATE (i.e., the period of time used to calculate plaintiffs' alleged damages).	

Appendix A
Variable definitions and data sources

CB_DATE	= the date plaintiffs allege managers of the company supplied the first false or misleading statement(s) and/or failed to disclose material information.	<p>annual SEC filings following the filing of the lawsuit through the year following the date of settlement (http://sec.gov).</p> <ul style="list-style-type: none"> • Lexis-Nexis, Dow Jones News Service: Performing a full-text search of news articles via Lexis-Nexis and Dow Jones News Service (using the company name and keywords of “lawsuit” and “class action”), we confirm the nature of the lawsuit allegations, class period dates, settlement amount, insurance coverage, and settlement form. <p>We perform a full-text search (based on company name and/or CEO name as of the date of the offering) of the SEC litigation database to identify enforcement actions that relate to defendant firms (http://sec.gov). To examine the employment consequences for the CEOs of the IPO firms, we obtain executive compensation data, including management turnover, from the firms’ SEC filings. We hand-collect data items from firms’ registration and proxy statements leading up to and following the offering, as well as through the date of settlement (http://sec.gov). We perform a full-text search (based on company name and/or CEO named on the first identified complaint) of the SEC litigation database to identify enforcement actions that relate to defendant firms (http://sec.gov).</p>
CE_DATE	= the date the market learns of the negative news that triggers the lawsuit filing.	
INSURANCE	= 1 if the firm’s insurance company covered any portion of the settlement; 0 otherwise.	
<p>Note:</p> <p>We exclude IPOs occurring after 2004 to ensure that we accurately identify those IPO firms that face subsequent lawsuits. We classify lawsuits with class periods beginning <i>on or before</i> the offering date as IPO lawsuits. We exclude allocation-based lawsuits, as they generally focus on the behavior of the underwriter and do not involve allegations of fraud in the IPO firms’ financial statements. Similarly, we exclude lawsuits that involve allegations of fraud <i>after</i> (rather than during) the IPO process. To achieve this, we eliminate lawsuits with class periods that begin after the offer date of the IPO.</p>		
Additional Control Variables		
ASSETS	= assets in the year of the IPO (Compustat Data Item #6).	<p>We obtain firms’ SIC codes from CRSP. Johnson et al. (2004) limits analysis to 64 post-PSLRA lawsuits in the computer hardware (3570-3577) and computer software (7370-7379) industries. Soffer et al. (2000) and Francis et al. (1994) define “high-litigation” industries as: biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7374), electronics (3600-3674), and retailing (5200-5961). Kasznik and Lev (1995) define “high-litigation” using industries with SIC codes 2833-2836, 8731-8734, 7371-7379, 3570-3577, and 3600-3674. We code a high-litigation variable (HILIT_IND) to indicate firms in any of the above SIC codes. We include this variable as a control in a number of our regressions.</p>
SALES	= sales in the year of the IPO (Compustat Data Item #12).	
ROA	= return on assets for the first complete annual period occurring after the IPO where return on assets is defined as IBEL/ASSETS.	
HILIT_IND	= 1 if the firm operates in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); 0 otherwise.	
RAW RETURN	= firm’s unadjusted return beginning the month following the IPO and ending one or two years later.	
ABN RETURN	= the firm’s size adjusted return beginning the month following the IPO and ending one or two years later.	

Appendix A
Variable definitions and data sources

BIG WINNERS	= 1 for firms with 1 year, post-IPO returns (raw or size-adjusted) greater than 50 percent; 0 otherwise.	<p>Jay Ritter's web site (http://bear.cba.ufl.edu/ritter/ipoData.htm.) supplies the following list of SIC codes for technology stocks: 3571–3572, 3575, 3577–3578, 3661, 3663, 3669, 3671–3672, 3674–3675, 3677–3679, 3812, 3823, 3825–3827, 3829, 3841, 3845, 4812–4812, 4899, 7371–7375, and 7378–7379.</p> <p>We calculate a measure of shareholder damages (DAMAGES) based on the way in which attorneys calculate damages. Under the PSLRA, damages cannot exceed the difference between the price paid for the securities and the mean paid for the securities and the mean trading price for the 90-day period day period following the corrective disclosure. Thus, damages may be mitigated if the market price rebounds during the 90-day period following the alleged corrective disclosure. We adjust damage estimates to accommodate the “bounceback” provision of the PSLRA.</p>
BIG LOSERS	= 1 for firms with 1 year, post-IPO returns (raw or size-adjusted) less than 50 percent; 0 otherwise.	
POSITIVE RETURN	= 1 if the firm's one year, post-IPO return (raw or size-adjusted) is greater than zero; 0 otherwise.	
NEGATIVE RETURN	= 1 if the firm's one year, post-IPO return (raw or size-adjusted) is less than or equal to zero; 0 otherwise.	
TECHFIRM	= 1 if the firm is a technology firm, and zero otherwise.	
NYSE_AMEX	= 1 if the firm is initially listed on the New York or American stock exchange; 0 otherwise.	
REVISION	= the percentage price change from the midpoint of the initial range to the final offer price.	
TURNOVER	= the average share turnover for a industry- and size-matched sample of firms over the year prior to the IPO.	
IR_INST	= the initial returns instrument where initial returns is defined as the first trading day's return (i.e., DAY1_PRICE less OFFER_PRICE divided by OFFER_PRICE).	
DAMAGES	= the decline in market capitalization from the trading day when it reached its maximum during the class period to the minimum market capitalization in the five trading days immediately following the end of the class period (in millions).	
INTERNET FIRM	= a 1 if the firm is an Internet firm' and zero otherwise. Internet firms are defined as per Loughran and Ritter (2004).	
DE RATIO	= the firm's debt –to-equity ratio as reported in the financial statements issued just prior to the IPO (Data Item #9/Data Item #216).	
R&D	= the log of research-and-development expense reported in the financial statement issues just prior to the IPO (log Data Item #46).	
GROSS MARGIN	= the firm's gross margin reported in the financial statements issued just prior to the IPO ((Data Item #23 – Data Item #41)/Data Item # 12).	

Appendix A
Variable definitions and data sources

AVGUP_3MPRIOR	= the mean underpricing for all IPOs occurring during the three months prior to the firm's IPO.	
ABRET	= the size-adjusted, buy-and-hold return during the 36 months following the OFFER_DATE .	
CEO_CHAIRMAN	= 1 if the CEO also serves as Chairman of the Board at the time of the IPO.	
CEO_AGE	= the CEO's age at the time of the IPO.	
RET_AGE	= 1 if the CEO's age exceeds 62 at the time of the IPO; 0 otherwise.	
INSIDE_OWNERSHIP	= the percentage of the shares outstanding owned by insiders.	

Table 1
Sample selection

Panel A – IPO sample

	<i>Number of observations</i>
<i>Initial IPO Sample</i>	3,666
<i>Less:</i>	
Observations with an offer price of less than \$5.00	41
American Depository Receipt firms	130
Observations missing underwriter rank data	26
Observations missing COMPUSTAT data	593
Observations for IPOs issued before 1996	1,208 (1,998)
<i>Final IPO Sample</i>	1,668

Panel B – IPO Lawsuit sample

	<i>Number of observations</i>
<i>Final IPO Sample</i>	1,668
<i>Less:</i>	
Observations for IPOs that did not face securities litigation	1,276
Observations for IPOs that faced allocation-based lawsuits	217
Observations for IPOs that faced lawsuits with class periods that begin after the offer date	103 (1,596)
<i>Final IPO Lawsuit Sample</i>	72

Notes: We limit analysis to IPOs that occurred following the passage of the Private Securities Litigation Reform Act in December of 1995. Consequently, we focus on IPOs that took place during the period of January 1996 through December 2004. We identify our initial sample of IPO firms using data obtained from Securities Data Corporation (SDC). We augment/correct the SDC data using information supplied on Professor Jay Ritter's website (<http://bear.cba.ufl.edu/ritter/ipodata.htm>). The litigation database maintained by the Securities Class Action Clearinghouse of Stanford University's Law School supplies the information we use to identify the IPO lawsuit firms (<http://securities.stanford.edu>). We exclude IPOs occurring after 2004 to ensure that we accurately identify those IPO firms that face subsequent lawsuits, as Stanford's database includes lawsuits filed through June of 2007. We classify lawsuits with class periods beginning *on or before* the offering date as IPO lawsuits. We exclude allocation-based lawsuits, as they generally focus on the behavior of the underwriter and do not involve allegations of fraud in the IPO firms' financial statements. Similarly, we exclude lawsuits that involve allegations of fraud *after* (rather than during) the IPO process. To achieve this, we eliminate lawsuits with class periods that begin *after* the offer date of the IPO.

Table 2 – Panel A
Descriptive statistics

	<i>Non-sued IPO firms (n=1,596)</i>			<i>Sued IPO firms (n=72)</i>			<i>Tests of Differences</i>	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
<i>Firm Characteristics</i>								
ASSETS	241.81	23.02	1690.40	427.73	33.80	1686.81		**
SALES	239.74	23.16	1457.67	468.83	32.08	2341.34		
CFO	16.52	-0.11	162.66	15.67	0.59	63.22		
IBEI	1.57	-1.21	105.28	2.51	-0.19	43.78		
TACC	-15.55	103.16	-1.55	-13.32	31.70	-2.73		
PROCEEDS	98.55	53.00	287.61	140.86	64.63	248.23		*
CFO / ASSETS	-0.20	0.00	0.66	-0.07	0.00	0.31	***	
IBEI / ASSETS	-0.34	-0.03	0.96	-0.18	-0.01	0.39	***	
TACC / ASSETS	-0.13	-0.07	0.34	-0.11	-0.05	0.23		
<i>Share Prices and Underpricing</i>								
MIDPOINT	13.09	13.00	3.79	13.77	14.00	4.13		**
OFFER_PRICE	13.65	13.00	5.20	14.84	14.38	4.77	**	**
DAY1_PRICE	19.95	15.38	18.40	18.59	17.00	9.57		*
UNDERPRICING	0.37	0.13	0.67	0.24	0.13	0.47	**	
<i>Signals of Quality</i>								
AGE	13.13	7.00	18.54	15.22	8.50	20.00		**
AUDITOR	0.96	1.00	0.20	0.93	1.00	0.26		
VC	0.50	0.50	0.50	0.51	1.00	0.50		
UWR	0.84	1.00	0.36	0.90	1.00	0.30		
<i>Opportunism Variables</i>								
INSIDER SALES1	0.08	0.00	0.19	0.12	0.00	0.22		**
INSIDER SALES2	0.30	0.25	0.20	0.31	0.27	0.18		
UNEXP_TACC1 (MIL \$)	11.79	1.49	122.77	36.26	3.90	80.51	**	
UNEXP_TACC2 (MIL \$)	-7.26	-0.07	96.69	1.71	0.28	25.42	***	
RESTATE	0.01	0.00	0.10	0.22	0.00	0.41	***	***
RESTATE_AMT	0.07	0.00	1.17	111.10	0.00	923.70		***
RESTATE_PCT	0.00	0.00	0.06	0.13	0.00	0.45	**	***
HIGHLIT_IND	0.51	1.00	0.50	0.53	1.00	0.50		

Notes: ***, **, * denote instances where the characteristic of the non-sued IPO sample differs significantly from that of the sued IPO sample at the 1%, 5%, and 10% level for a two-tailed test. Please refer to Appendix A for variable definitions and sources.

Table 2 – Panel B
Restatements of IPO financial information

<i>Restatement Reason</i>	<i>Restatement Subsample (n=34)</i>	
	<i>N</i>	<i>Pct</i>
Overstated revenue	19	56%
Understated expenses	8	24%
Other	7	21%
Total	34	100%

<i>Restatement</i>	<i>Mean</i>	<i>Median</i>	<i>Std. Dev.</i>
Amount (in millions of \$)	234.40	3.30	1,343.20
Percentage of income	0.45	0.23	0.69

Notes: We identify the subsample of IPO restatement firms by flagging all restatements associated with the full sample of IPO firms (n=1,668). This process identified an initial IPO restatement subsample of 42 firms. Because our hypothesis focuses on the overstatement of IPO income, we remove five restatements that involve the understatement of IPO income and three observations that do not restate IPO financial information.

Table 3 – Panel A

Fama and French three-factor regressions examining performance during the 12 months following the IPO

(n=1,668)

	UWR =		AUDITOR =		VC =	
	0	1	0	1	0	1
Intercept	-0.018 ** 0.04	0.001 0.88	-0.0210 0.21	-0.001 0.82	-0.004 0.45	0.005 0.43
MARKET	1.314 *** <.0001	1.200 *** <.0001	0.520 0.24	1.220 *** <.0001	1.250 *** <.0001	1.180 *** <.0001
SIZE	1.280 *** <.0001	0.870 *** <.0001	0.730 0.09 *	0.915 *** <.0001	0.866 *** <.0001	0.860 *** <.0001
BM	0.118 0.66	-0.900 *** <.0001	-1.540 0.01 ***	-0.789 *** <.0001	-0.246 0.15	-1.270 *** <.0001
Adjusted R²	56%	81%	34%	81%	71%	76%

Notes: ***, **, * denote significance at the 1%, 5%, and 10% level, respectively (two-tailed test). Please refer to Appendix A for variable definitions and sources.

Table 3 – Panel B

Future performance partitioned by underwriter reputation, auditor quality and venture capitalist backing
(n=1,668)

	UWR =			AUDITOR =			VC =		
	0 Mean	1 Mean	Difference	0 Mean	1 Mean	Difference	0 Mean	1 Mean	Difference
<i>Future Performance</i>									
DELIST-1YR	0.008	0.003		0.014	0.003		0.004	0.004	
DELIST-3YR	0.150	0.072	***	0.162	0.080	*	0.083	0.084	
DELIST-5YR	0.247	0.120	***	0.257	0.133	**	0.148	0.129	
RESTATE	0.020	0.026		0.014	0.026		0.035	0.016	**
RAW RETURN -1YR	-0.078	0.015	*	-0.045	0.003		0.032	-0.030	
ABN RETURN - 1YR	-0.159	-0.076		-0.139	-0.086		-0.061	-0.116	
RAW RETURN -2YR	-0.097	0.078	*	-0.209	0.064	**	0.027	0.077	
ABN RETURN - 2YR	-0.332	-0.107	**	-0.408	-0.129	**	-0.180	-0.101	
<i>Proportion of Big Winners and Losers</i>									
BIG WINNERS (AR)	0.138	0.145		0.122	0.145		0.167	0.121	***
BIG WINNERS (RAW)	0.194	0.194		0.203	0.194		0.206	0.182	
BIG LOSERS (AR)	0.599	0.569		0.622	0.572		0.521	0.626	***
BIG LOSERS (RAW)	0.324	0.346		0.338	0.343		0.271	0.414	***
POSITIVE ABN RETURN	0.202	0.256	*	0.162	0.252	**	0.285	0.212	***
POSITIVE RAW RETURN	0.364	0.372		0.365	0.371		0.418	0.325	***
NEGATIVE ABN RETURN	0.798	0.744	*	0.838	0.748	**	0.715	0.788	***
NEGATIVE RAW RETURN	0.636	0.628		0.635	0.629		0.582	0.675	***
<i>N</i>	247	1,421		74	1,594		833	835	

Notes: ***, **, * denote significance at the 1%, 5%, and 10% level, respectively (two-tailed test). Please refer to Appendix A for variable definitions and sources.

Table 4

Probit regression (2nd stage) assuming litigation risk and underpricing are simultaneously determined (n=1,668)

$$SUED_IPO_i = \beta_0 + \beta_1 AGGR_REPORTING_i + \beta_2 AGGR_TRADING_i + \beta_3 UWR_i + \beta_4 PROCEEDS_i + \beta_5 VC_i + \beta_6 TECHFIRM_i + \beta_7 NYSE_AMEX_i + \beta_8 REVISION_i + \beta_9 TURNOVER_i + \beta_{10} IR_INST_i + \varepsilon_i$$

	<i>Predicted Relation</i>	(1)		(2)		(3)		(4)		(5)		(6)	
		SUED_IPO	SUED_IPO	SUED_IPO	SUED_IPO	SUED_IPO	SUED_IPO	SUED_IPO	SUED_IPO	SUED_IPO	SUED_IPO	SUED_IPO	SUED_IPO
		Coeff.	Pr > t 	Coeff.	Pr > t 	Coeff.	Pr > t 	Coeff.	Pr > t 	Coeff.	Pr > t 	Coeff.	Pr > t
Intercept		-4.35	0.00 ***	-3.97	0.00 ***	-5.05	<.0001 ***	-4.73	<.0001 ***	-5.24	<.0001 ***	-4.31	0.00 ***
<i>Opportunism Proxies</i>													
HIGH_TACC1	+	0.44	0.02 **									0.46	0.01 ***
HIGH_TACC2	+			0.46	0.01 ***								
RESTATE	+					1.65	<.0001 ***						
RESTATE_AMT	+							0.09	0.00 ***				
RESTATE_PCT	+									1.59	0.01 ***		
HIGH_IS1	+	0.24	0.06 *	0.27	0.03 **	0.25	0.08 *	0.22	0.14	0.25	0.05 **		
HIGH_IS2	+											0.11	0.41
<i>Controls</i>													
UWR	?	-0.06	0.75	-0.07	0.68	-0.05	0.81	-0.08	0.66	-0.03	0.86	-0.02	0.90
PROCEEDS	+	0.16	0.03 **	0.14	0.07 *	0.19	0.01 ***	0.18	0.02 **	0.21	0.00 ***	0.16	0.03 **
VC	-	0.07	0.64	0.07	0.62	0.12	0.46	0.07	0.63	0.07	0.62	0.05	0.73
TECHFIRM	+	0.04	0.78	0.02	0.88	0.05	0.73	0.07	0.66	0.00	0.98	0.06	0.66
NYSE_AMEX	-	-0.07	0.72	-0.05	0.79	0.10	0.57	-0.01	0.96	0.07	0.67	-0.08	0.68
REVISION	+	-0.95	0.53	-1.06	0.46	-0.79	0.64	-0.81	0.63	-1.19	0.38	-0.89	0.56
TURNOVER	+	-0.17	0.06 *	-0.16	0.06 *	-0.15	0.14	-0.16	0.12	-0.16	0.08 *	-0.18	0.05 **
IR_INST	?	0.71	0.47	0.81	0.38	0.63	0.57	0.61	0.58	0.87	0.32	0.67	0.50
Likelihood Ratio		27.27		34.14		83.81		51.15		62.57		24.23	
Pr > ChiSq		0.00		0.00		<.0001		<.0001		<.0001		0.01	

Notes: ***, **, * denote significance at the 1%, 5%, and 10% level, respectively (two-tailed test). Results remain unchanged when we include the log of assets (LNASSETS) in place of PROCEEDS as our proxy for firm size. In addition, results remain unchanged when we estimate a probit regression that does not assume a simultaneous relation between litigation risk and underpricing. Please refer to Appendix A for variable definitions.

Table 5
OLS regression examining lawsuit settlement amounts
(n=67)

$$SETTLEMENT_i = \gamma_0 + \gamma_1 AGGR_REPORTING + \gamma_2 AGGR_TRADING_i + \gamma_3 UWR_i + \gamma_4 DAMAGES_i + \gamma_5 DEEP_POCKETS_i + \varepsilon_i.$$

	<i>Predicted Relation</i>	(1) Coeff. Pr > t	(2) Coeff. Pr > t	(3) Coeff. Pr > t	(4) Coeff. Pr > t	(5) Coeff. Pr > t	(6) Coeff. Pr > t
Intercept		0.35 0.95	-1.92 0.74	-5.28 0.30	-2.20 0.68	-5.42 0.36	-2.69 0.61
<i>Opportunism Proxies</i>							
HIGH_TACC1	+	4.80 0.35					
HIGH_TACC2	+		4.57 0.35				
RESTATE	+			13.44 0.00 ***			
RESTATE_AMT	+				0.01 0.00 ***		0.01 0.00 ***
RESTATE_PCT	+					3.61 0.31	
HIGH_IS1	+	-1.97 0.56					
HIGH_IS2	+		5.11 0.14	6.74 0.03 **	5.45 0.09 *	5.13 0.14	5.39 0.10 *
<i>Controls</i>							
UWR	?	2.20 0.70	3.04 0.59	3.64 0.47	4.69 0.39	4.75 0.43	5.29 0.30
DAMAGES	+	3.47 0.00 ***	3.82 <.0001 ***	3.77 <.0001 ***	2.54 0.01 ***	3.85 <.0001 ***	2.59 0.01 ***
ASSETS	+	0.47 0.69	0.16 0.90	0.30 0.72	0.26 0.77	0.83 0.37	
INSURANCE	+						2.09 0.47
Adjusted R²		23%	25%	40%	34%	26%	34%

Notes: ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. We exclude 5 of the 72 IPO lawsuit firms in this analysis because settlement information is not yet available for these firms. We use the natural log of assets when estimating the regression. Please refer to Appendix A for variable definitions and sources.

Table 6 – Panel A
Logistic regression examining the likelihood of delisting

$$DELIST_i = \delta_0 + \delta_1 AGGR_REPORTING + \delta_2 AGGR_TRADING_i + \delta_3 THIRD_PARTY_CERTIFICATION_i + \delta_4 FIRM_CHARACTERISTICS_i + \delta_5 DEAL/MARKET_CHARACTERISTICS_i + \varepsilon_i$$

	<i>Predicted Relation</i>	(1a) NON-TECH DELIST		(1b) HIGH-TECH DELIST		(2a) NON-TECH DELIST		(2b) HIGH-TECH DELIST		(3a) NON-TECH DELIST		(3b) HIGH-TECH DELIST	
		Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/
<i>Opportunism Proxies</i>													
HIGH_TACC2	+	0.07	0.89	1.09	0.02 **								
RESTATE	+					1.92	0.00 ***	2.19	0.00 ***				
RESTATE_PCT	+									3.03	0.03 **	5.34	0.01 **
HIGH_IS1	+	-0.09	0.80	-0.31	0.46	-0.12	0.73	-0.31	0.46	-0.16	0.64	-0.28	0.50
<i>Third-party Certification</i>													
UWR	-	-0.66	0.05 **	-0.36	0.41	-0.67	0.05 **	-0.29	0.52	-0.70	0.04 **	-0.28	0.54
AUDITOR	-	-0.25	0.60	-0.49	0.45	-0.25	0.60	-0.53	0.41	-0.30	0.53	-0.54	0.40
VC	-	0.04	0.90	-0.18	0.57	0.00	0.99	-0.11	0.72	0.06	0.86	-0.13	0.67
<i>Firm Characteristics</i>													
AGE	-	-0.55	<.0001 ***	-0.38	0.05 **	-0.59	0.00 ***	-0.41	0.04 **	-0.57	0.00 ***	-0.39	0.05 **
INTERNET FIRM	+	0.98	0.04 **	0.74	0.02 **	0.99	0.03 **	0.75	0.02 **	0.98	0.03 **	0.77	0.01 ***
DE RATIO	+	0.00	0.93	-0.01	0.46	0.00	0.93	-0.01	0.52	0.00	0.92	-0.01	0.53
R&D	-	-0.42	0.01 ***	-0.11	0.38	-0.41	0.02 **	-0.13	0.31	-0.40	0.02 **	-0.12	0.34
SALES	-	0.00	1.00	-0.09	0.10	0.00	0.95	-0.07	0.22	0.00	0.95	-0.07	0.24
GROSS MARGIN	-	0.00	0.72	0.00	0.60	0.00	0.72	0.00	0.61	0.00	0.71	0.00	0.54
<i>Deal Characteristics</i>													
OFFER_PRICE	-	-0.03	0.36	-0.09	0.01 ***	-0.03	0.33	-0.09	0.02 **	-0.03	0.46	-0.09	0.02 **
INITIAL RETURN	+/-	-0.08	0.81	0.04	0.83	-0.03	0.92	0.00	1.00	-0.07	0.83	0.00	0.99
<i>Market Characteristics</i>													
AVGUP_3MPRIOR	+	0.00	0.87	0.01	0.01 ***	0.00	0.93	0.01	0.01 ***	0.00	0.94	0.01	0.01 ***
<i>Likelihood Ratio</i>		55.71		53.93		64.21		57.47		64.87		60.63	
<i>Pr > ChiSq</i>		<.0001		<.0001		<.0001		<.0001		<.0001		<.0001	
<i>Pseudo R²</i>		11.5%		11.4%		13.3%		12.2%		13.4%		12.9%	
<i>N</i>		884		784		884		784		884		784	

Notes: ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. We set the dependent variable, *DELIST*, equal to one if the IPO firm delists for negative reasons within three years of the IPO. Please refer to Appendix A for variable definitions and sources.

Table 7
Logistic regression predicting SEC enforcement actions
(n=72)

$$SEC_i = \theta_o + \theta_1 AGGR_REPORTING + \theta_2 AGGR_TRADING_i + \theta_3 DAMAGES_i + \theta_4 FIRM_SIZE_i + \varepsilon_i.$$

	<i>Predicted Relation</i>	(1)		(2)		(3)		(4)		(5)	
		Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/	Coeff.	Pr > t/
Intercept		-1.55	0.82	0.80	0.91	-7.17	0.28	-0.06	0.99	-10.15	0.15
Opportunism Proxies											
HIGH_TACC1	+	0.50	0.51								
HIGH_TACC2	+			0.82	0.26						
RESTATE	+					2.37	0.00 ***				
RESTATE_AMT	+							0.15	0.01 ***		
RESTATE_PCT	+									5.13	0.00 ***
Controls											
DAMAGES	+	0.00	0.39	0.00	0.33	0.00	0.65	0.00	0.53	0.00	0.40
PROCEEDS	?	0.01	0.98	-0.13	0.76	0.29	0.43	-0.09	0.83	0.45	0.25
Percent Concordant			57%		68%		74%		75%		76%
Likelihood Ratio			2.00		2.81		15.44		13.64		19.80
Pr > ChiSq			0.57		0.42		0.00		0.00		<.0001

Notes: ***, **, * denote significance at the 1%, 5%, and 10% level, respectively (two-tailed test). Unfortunately, quasi-complete separation occurs when we include our trading variables in the model. Accordingly, the results reported exclude trading considerations. Please refer to Appendix A for variable definitions and sources.

Table 8
Logistic regression predicting CEO turnover
(n=1,395)

$$CEO_TURNOVER_i = \lambda_0 + \lambda_1 AGGR_REPORTING_i + \lambda_2 AGGR_TRADING_i + \lambda_3 SUED_IPO_i + \lambda_4 CEO_CHAIRMAN_i + \lambda_5 INSIDE_OWNERSHIP_i + \lambda_6 CEO_AGE_i + \lambda_7 CEO_FOUNDER_i + \lambda_8 ABRET_i + \lambda_9 ROA + \lambda_{10} ASSETS_i + \varepsilon_i$$

	<i>Predicted Relation</i>	(1)			(2)			(3)			(4)		
		CEO TURNOVER YEAR 3			CEO TURNOVER YEAR 3			CEO TURNOVER YEAR 3			CEO TURNOVER YEAR 3		
		Coeff.	Pr > t		Coeff.	Pr > t		Coeff.	Pr > t		Coeff.	Pr > t	
Intercept		-1.48	0.02	**	-1.40	0.03	**	-1.46	0.02	**	-1.47	0.02	**
<i>Opportunism Proxies</i>													
HIGH_TACC1	+	0.08	0.82										
RESTATE	+				0.99	0.03	**				1.61	0.01	***
RESTATE_PCT	+							2.31	0.04	**			
HIGH_IS1	+	-0.02	0.90		-0.04	0.86		-0.06	0.77		0.11	0.64	
SUED_IPO	+	1.16	0.00	***	0.92	0.01	***	0.94	0.01	***	0.88	0.01	***
<i>Controls</i>													
CEO_CHAIRMAN	-	-1.05	<.0001	***	-1.07	<.0001	***	-1.06	<.0001	***	-1.07	<.0001	***
INSIDE_OWNERSHIP	-	-0.06	0.88		-0.10	0.81		-0.07	0.87		-0.12	0.78	
CEO_AGE	+	0.01	0.44		0.01	0.47		0.01	0.45		0.01	0.41	
CEO_FOUNDER	-	-0.39	0.04	**	-0.41	0.03	**	-0.40	0.03	**	-0.25	0.23	
ABRET	-	0.02	0.33		0.01	0.35		0.01	0.35		0.02	0.35	
ROA	-	-0.72	<.0001	***	-0.70	<.0001	***	-0.70	<.0001	***	-0.70	<.0001	***
ASSETS	?	-0.06	0.27		-0.06	0.20		-0.06	0.24		-0.08	0.14	
<i>Interactions</i>													
RESTATE × FOUNDER	-										-1.52	0.12	
HIGH_IS × FOUNDER	-										-2.10	0.19	
<i>Percent Concordant</i>			72%			73%			73%			73%	
<i>Likelihood Ratio</i>			113.96			118.08			120.35			122.90	
<i>Pr > ChiSq</i>			<.0001			<.0001			<.0001			<.0001	

Notes: ***, **, * denote significance at the 1%, 5%, and 10% level, respectively. Please refer to Appendix A for variable definitions and sources.