

Earnings Management, Stock Issues, and Shareholder Lawsuits*

by

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Abstract

We study the relations among abnormal accounting accruals measures of earnings management, stock offers, post-offer stock returns, and related shareholder lawsuits. We find that accruals are abnormally high around stock offers, especially high for firms that are subsequently sued about their offers. These accruals tend to reverse after stock offers and are negatively related to post-offer stock returns. Reversals are more pronounced and stock returns are much lower for sued firms than for those that are not sued. In multivariate logistic regressions the incidence of lawsuits involving stock offers is significantly positively related to abnormal accruals around the offer and significantly negatively related to post-offer stock returns. Moreover, settlement amounts in the lawsuits are also significantly positively related to the abnormal accruals and significantly negatively related to post-offer stock returns. These results support the view that some firms opportunistically manipulate earnings upward before stock issues rendering themselves vulnerable to litigation.

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1. Introduction

Earnings are one of the most frequently cited firm performance statistics. It is well known that accounting earnings convey information about firm values to investors. Ball and Brown (1968), Beaver (1968), and Rendleman, Jones and Latané (1982) were among the first to show that earnings surprises are positively related to contemporaneous stock returns. More recently, Bernard and Thomas (1990) also report a positive relation between earnings surprises and stock returns, though they emphasize that investors apparently under-react to the information contained in earnings. Nevertheless, investors do react and there is little doubt that earnings disclosures move stock prices.

Managers may exercise some discretion in computing earnings without violating generally accepted accounting principles. For example, firms can affect reported earnings by accelerating revenue recognition and deferring expense recognition. This effectively shifts earnings to the current period from a subsequent period. Alternatively, firms may affect earnings by changing methods of inventory accounting, revising estimated quantities such as bad debt expense, or a variety of other techniques.

It is possible that firms use discretionary accounting choices to manage earnings disclosures around the time of certain types of corporate events. Jones (1991), for example, argues that firms manage earnings strategically to influence the outcomes of import relief investigations. Similarly, DeFond and Jiambalvo (1994) find evidence consistent with earnings manipulation by firms that violate debt covenants. In light of the well-established link between earnings and stock prices, earnings management activity seems particularly plausible around the time of new stock issues. That is because a firm's

recently reported earnings are likely to influence its issue proceeds and, therefore, its cost of capital.

There are two competing views about earnings management and stock issues. One view holds that some firms opportunistically manipulate earnings upward before stock issues. According to this opportunism hypothesis, investors are deceived and led to form overly optimistic expectations regarding future, post-issue earnings. Thus, offering firms would be able to obtain a higher price than they otherwise would for their stock issue, but subsequent earnings would tend to be disappointing. This view stresses the incentives that entrepreneurs, venture capitalists, and managers have to maximize issue proceeds, given the number of shares offered.

The second, competing view stresses instead the penalties arising from false earnings signals. These include explicit legal remedies that are available to investors who are damaged by defective accounting disclosures and implicit costs stemming from reputation effects. A poor reputation may adversely affect the firm's ability to raise additional capital. Entrepreneurs and venture capitalists must also consider the possible negative effects of false signaling on their ability to take other firms public in the future. In conjunction, these penalties tend to impel firms to signal validly. In this view, firms may manage earnings to achieve a *fair* value for stock issues, not an excessive one. This implies that investors are informed, not deceived, by discretionary accounting choices made by firms.¹

¹ Dechow, Sloan, and Sweeney (1996) also discuss possible adverse consequences of earnings management. They study a sample of firms that are alleged to have engaged in earnings management and that are subjected to enforcement action by the U. S. Securities and Exchange Commission. They show that these firms tend to be cash poor and subsequently to issue stock.

Several studies, including DuCharme (1994), Friedlan (1994) and Shivakumar (1996), find that earnings reported by firms making stock offers contain on average abnormally high levels of positive accruals around offer dates. Moreover, according to Rangan (1998) and Teoh, Wong and Rao (1998), these accruals tend to reverse in later reporting periods. Rangan (1998) and Teoh, Welch, and Wong (1998a) also find that abnormal accruals around seasoned equity offers (SEOs) are significantly negatively related to post-offer stock returns. Teoh, Welch and Wong (1998b) report a similar finding for abnormal accruals during the years of IPOs. Moreover, DuCharme, Malatesta, and Sefcik (2001) show that abnormal accruals around IPOs are negatively related to post-offer returns *and* positively related to initial firm value. Indeed, Xie (2001) reports that abnormal accruals are negatively correlated with subsequent stock returns in the population of firms. Therefore, the relationship between abnormal accruals and post-offer stock returns appears to be part of a more general empirical regularity.

These results raise serious questions regarding market efficiency with respect to widely available accounting information. They are consistent with the interpretation that offering firms opportunistically manage earnings upward around offer dates, temporarily inflating their stock prices, which later fall as less favorable earnings information arrives after the offer. The results, however, do not uniformly support this conclusion. Eckbo, Masulis, and Norli (2000) and Eckbo and Norli (2000) argue that post-offer stock returns are consistent with a multifactor capital asset pricing model. This implies that the post-offer returns anomaly is a spurious result arising from improper risk-adjustment. Furthermore, Brous, Datar and Kini (2001) find that abnormal stock returns around earnings announcements differ insignificantly from zero for periods of up to five years

after SEOs. Hence, the evidence is somewhat mixed and it is dangerous to draw sweeping conclusions about the role of earnings management, as manifested by abnormal accruals, in stock offers.

Firms that employ discretionary accounting practices that mislead investors are liable to be sued. Section 10b-5 of the Securities and Exchange Act of 1934 generally prohibits firms from disseminating false or misleading information, or failing to disclose materially relevant information to investors. Section 11 of the Securities Act of 1933 governs information disclosure in public stock issues specifically. Investors who are harmed by relying on defective information supplied by a firm may sue to recover damages. To recover damages under 10b-5 of the 1934 Act, the investor must prove that the information was defective, that he relied on it, and that this reliance led to his loss. In lawsuits brought under Section 11 of the 1933 Act, however, investors do not have to prove that they relied on false or misleading information or omissions in the offering registration statement. Instead, the burden of proof falls on the defendant firm. Thus, the incidence of Section 11 lawsuits is relatively high.

If high average levels of abnormal accruals around stock offers reflect deceptive accounting by some offering firms, we would expect those firms to be particularly likely targets for subsequent, offer-related lawsuits by disgruntled investors. Moreover, if reliance on misleading earnings information harms investors, damage settlements in the lawsuits should be positively related to measures of earnings management just before the stock offers. Abnormal accruals for reporting periods before offers would be positively related both to litigation risk and to expected damage awards. Alternatively, earnings management around stock offers may generate valid information signals. If so, there

would be no reason to expect that abnormal accruals contained in earnings reported by offering firms to be related to the incidence of lawsuits or the magnitude of damages.

We study the relations among earnings management, abnormal accruals, stock offers, post-offer stock returns, and shareholder lawsuits using a very large sample of offers made during the period from 1988 through 1997. Confirming earlier studies, we find that earnings reported around stock offers on average contain positive abnormal accrual components, that the accruals are negatively related to post-offer stock returns, and that they tend to reverse during the post-offer period. We also find that stock returns are much lower and reversals much more pronounced for firms that are sued in connection with their offers than for those that are not sued. In multivariate logistic regressions, controlling for a variety of factors, we find that the incidence of these lawsuits is significantly positively related to abnormal accruals and significantly negatively related to post-offer stock returns. Moreover, settlement amounts in the lawsuits are also significantly positively related to the abnormal accruals and significantly negatively related to post-offer stock returns. These results support the view that some firms opportunistically manipulate earnings upward before stock issues rendering themselves vulnerable to litigation.

The following section of this paper describes our data and method of measuring earnings management. Section 3 describes the tests and empirical results. Section 4 concludes.

2. Data and Measure of Earnings Management

2.1 Sample Selection and Data Sources

Our analysis treats both SEOs and IPOs. The sample of equity offer firms was drawn from Thomson Financial's Global New Issues database.² This database contains all firm commitment new issues of publicly traded corporate securities made in the United States from 1970 to the present. From this database we determined details of the offers: firm auditors and underwriters, the registered dollar amounts of the offers, the proportions of the offers that were secondary, and the issue dates. Only firms making offers from 1988 through 1997 were considered. The accounting data we used to estimate abnormal accruals was taken from the COMPUSTAT research file. Some of our tests also require stock returns. These we took from the CRSP tape.

We identified those firms that were later sued in connection with their offers by examining issues of *Securities Class Action Alert* published from April 1988 through February 2001.³ Information regarding the lawsuits, such as class periods, the nature of the allegations made therein, and settlement amounts, was taken from that source and from the LEXIS/NEXIS Academic Universe Business News, searching on company name and "class action."

Offers occurring after 1997 were excluded from the sample to ensure that we correctly identified those offers prompting lawsuits. In principle, offer-related lawsuits may be filed many years after offers. In practice, however, it is very rare for suits to be

² It is also commonly referred to as the SDC (Security Data Corporation) New Issues database.

³ *Securities Class Action Alert* notes virtually all security class action lawsuits. The Investors Research Bureau, Inc. publishes it monthly. From April 1988 through August 1989 it was named *Investors Class Action Monitor* before changing its name to *Securities Class Action Alert*.

filed more than three years after offers. Our sample contains only two such lawsuits and the maximum time from offer to filing was 1138 days, a little more than three years and one month. Hence, it seems very probable that we have correctly identified all the sued firms.

Table 1 shows the distribution of sample firms by year of offer. As the table indicates, most of the offers were made fairly recently, with more than half occurring in 1994, or after. The total sample comprises 10,232 offers, 314 of which involved lawsuits. The sample is almost evenly split between SEOs and IPOs. IPO firms are more likely than SEO firms to have been sued regarding their stock offers. 226 of the 5324 IPOs, 4.24%, engendered subsequent related lawsuits. For the SEO sample, 1.79%, 88 of 4908, offers prompted lawsuits. The proportions of sued firms differ between the offer types significantly at the one percent level.

Table 2 gives the industry composition of the sample. The sample is distributed across a broad range of industries. The distribution for IPOs does not appear to differ systematically from that for SEOs.

In table 3 we summarize the allegations made in the lawsuits examined in this study. Nearly all of these cite multiple causes of action. Some suits had as many as 11 separate allegations. Following the language of the Securities Act and the Securities and Exchange Acts, the vast majority of suits allege "material misstatements" and "failure to disclose" relevant information to investors. This was the single most common allegation, occurring in almost 90% of the suits.⁴ In nearly 40% of the cases firms were accused of

⁴ This finding is consistent with the observation of Francis, Philbrick, and Schipper (1994) regarding allegations made in typical cases brought under section 10b-5 of the Securities and Exchange Act.

providing false revenue or earnings projections. Additionally, over one-fifth of the suits charged firms with inflating the offering price.

It is intriguing that of the 282 lawsuits where we know the specific allegations made, 123 (nearly 44%) explicitly allege some form of earnings management. We define earnings management allegations to include those of revenue management, channel stuffing, improper revenue recognition, expense management, and improper or non-GAAP accounting practices, as well as non-specific allegations of earnings management. As table 3 shows, 72.4% of the earnings management lawsuits alleged non-specific earnings management. In an equal number of cases management was charged with inflating revenues by, for example, improperly accelerating revenue recognition or channel stuffing. Though it is not shown in the table, earnings management allegations are highly correlated with the incidence of lawsuits naming firm auditors as codefendants. 92.5% of the suits naming the auditor as codefendant also allege some form of earnings management.

2.2 Empirical Methods

A major objective of this study is to determine if pre-offer earnings management activity by firms affects the probability that stock issues will engender lawsuits or affects the settlement amounts in such lawsuits. The measure of earnings management activity, therefore, is a key independent variable in our analysis.

Recent studies in accounting and finance have used models of expected accruals based on time-series or cross-sectional regressions to measure earnings management.⁵

⁵ See Boynton, et al. (1993), Cahan (1992), Dechow, Sloan, and Sweeney (1995), Guenther (1994), Jones (1991), Perry and Williams (1994), and Teoh, Welch and Wong (1998a, 1998b) for examples.

Actual accruals are compared to conditional expected accruals predicted by the regression model and the differences, the abnormal accruals, are attributed to earnings management activity. We proceed in a similar fashion.

Our approach is closely related to the work of Defond and Jiambalvo (1994). We estimate a modified version of the Jones (1991) model using cross-sectional data. Each offering firm is pooled with other firms in the same two-digit SIC code industry and the coefficients of the following equation are estimated by weighted least squares:

$$WAC_{ijp} = \alpha_{jp} + \phi_{jp}[\Delta REV_{ijp}] + \nu_{ijp} \quad (1)$$

where:

WAC_{ijp} = working capital accruals in year p for the i'th firm in the industry group matched with offering firm j.

ΔREV_{ijp} = change in revenues in year p for the i'th firm in the industry group matched with offering firm j.

ν_{ijp} = regression disturbances, assumed cross-sectionally uncorrelated and normally distributed with zero means.

Our estimation method reflects the assumption that the disturbance standard deviation is proportional to assets, A_{ijp-1} . Each observation is weighted by the inverse of total assets for the corresponding firm in year p-1, $1/A_{ijp-1}$.⁶ Separate cross-sectional regressions are performed for each industry group matched with an offering firm. The estimated regression models provide benchmarks for expected (or normal) accruals for each of the offering firms. The differences between the actual accruals and the expected

accruals from the benchmark models, the abnormal accruals, are proxies for the managed components of reported earnings.

Using the estimated coefficients from these regressions we estimate the abnormal component of accruals, $ABWAC_{ijp}$:

$$ABWAC_{ijp} = WAC_{ijp} - \alpha_{jp} - \phi_{jp}[\Delta REV_{ijp} - \Delta REC_{ijp}] \quad (2)$$

where:

ΔREC_{ijp} = change in net receivables in year p for the i'th firm in the industry group matched with offering firm j.

This procedure is identical to that of Teoh, et al. (1998a, 1998b).⁷

We mark time in relation to the offer year. Year 0 is the offer year itself; year 1 is the year after, and so forth. For SEOs we examine abnormal accruals in years -1 through 3. COMPUSTAT does not contain accounting data for IPO firms, however, for years prior to the offer year. Therefore, for IPO firms we examine abnormal accruals in years 0 through 3. We focus on abnormal working capital accruals, which are most readily subject to manipulation. Also, in most of our analysis, we divide the abnormal accruals

⁶ In this we follow established practice. See Jones (1991, p. 212).

⁷ The procedure described above is common practice in the accounting and finance research on earnings management. It is, nevertheless, unusual from an econometric viewpoint because the regressor in equation (1), the change in revenue, is not identical to the conditioning variable in equation (2). In equation (2) the change in receivables is subtracted from the change in revenue. We adopt this convention, which we refer to as the "standard model," so that our results are readily comparable to those reported in other studies. In this context, DuCharme, et al. (2001) compare results using the standard model to those derived from two other models, which they call the "forecast" and "cash flow" models. We also examine results using these two alternative specifications and find that they differ little from those obtained from the standard model. Our inferences are qualitatively robust across the three model specifications.

by firm assets to control for differences in firm size. In this respect our approach mirrors that of Teoh, et al. (1998a, 1998b).⁸

Table 4 presents summary statistics on abnormal accruals and offer characteristics for the samples of SEO and IPO firms.⁹ Offer sizes (TREG) vary widely from less than \$1 million for the smallest SEO to over \$2.6 billion for the largest IPO. The average IPO was for \$51.1 million and 12.7% of the offering was secondary (FSEC). The average SEO was somewhat larger at \$73.3 million, with 23.7% secondary. AUD and UND are binary variables that distinguish offers involving prestigious auditing firms and underwriters, respectively. AUD equals one if the offering firm's auditor was a Big Eight accounting firm, and equals zero otherwise.¹⁰ Prestigious underwriters are those among the top 25 underwriting firms in terms of dollar volume, as reported in *Institutional Investor* magazine.¹¹ UND equals one if the lead underwriter for the offer was among this prestigious group, and equals zero otherwise. As table 4 shows, prestigious accounting firms are associated with the great majority of offers, auditing 87.4% of IPO firms and 92.6% of SEO firms. Prestigious underwriters lead 59.1% of the SEOs, but only 43.1% of the IPOs. As one would expect, IPO firms have smaller average assets than SEO firms.

⁸ Teoh, et al. (1998a, 1998b) calculate abnormal working capital accruals using the same model as we do here, also scaling by firm assets. They refer to the abnormal working capital accrual as the "discretionary current accrual."

⁹ In Table 4, and subsequent tables, we exclude offers with extreme ABWACs, defined as the top and bottom one-half of one percent. Our results for the full sample, however, are very similar to those for the censored sample.

¹⁰ The Big Eight firms were: Arthur Andersen, Arthur Young, Coopers & Lybrand, Ernst & Whinney, Deloitte, Haskins, & Sells, Peat Marwick, Price Waterhouse, and Touche Ross. Due to mergers among these firms, there are only five large, prestigious accounting partnerships surviving today, the Big Five.

¹¹ Underwriters are deemed prestigious if they are ever listed among the top 25 at any time during our sample period. The top 25 lists do not change much over the period. Changes occur primarily due to mergers and acquisitions among underwriting firms.

Table 4 also shows that firm shares perform poorly after stock offers, as many earlier studies have reported.¹² We measure buy-and-hold returns on offering firm shares for 36 months beginning one month after the offer month. We subtract the contemporaneous buy-and-hold return on the equally-weighted CRSP index to obtain the market-adjusted return, denoted RETURN in the table. IPO firm shares under perform the market over the three-year holding period by 9.8%, on average. This differs significantly from zero at the 1% level of confidence. SEO firm shares under perform the market by nearly 21%, on average and this, too, differs significantly from zero at the 1% level.¹³

There is some evidence in table 4 that firms systematically manage earnings upward around the time they make stock offers. The table reports average abnormal working capital accrual scaled by firm assets (ABWAC/A) measured over year -1 for SEOs and year 0 for IPOs. The average is positive for IPOs and SEOs alike. Simple parametric t-tests indicate that both averages differ significantly from zero at the one percent level. The figures for IPO firms are similar to those of Teoh, et al. (1998b) who report that the average scaled abnormal working capital accrual for the year before IPOs is 9.95% and statistically significant.¹⁴ This is only slightly larger than our corresponding figure of 8.5%. In table 4, the average scaled abnormal accrual for SEO firms is 1.6%, which is less than the 5.37% found by Teoh, et al. (1998a).¹⁵

¹² See, e.g., Ritter (1991) on IPOs and Loughran and Ritter (1995) on SEOs.

¹³ The simple t-statistics for tests of the hypotheses that mean offering firm RETURNs equal zero are -2.67 and -9.85 for IPO and SEO firms, respectively.

¹⁴ See their table II, p. 46-47.

¹⁵ See their table 3, panel A, p. 74.

3. Tests and Empirical Results

3.1 Determinants of Lawsuit Risk

Table 5 reports the results of univariate tests for differences between the characteristics of sued and non-sued offering firms. We examine the influence of auditor and underwriter prestige, offer size, and the fraction of the offer that is secondary, as well as stock returns and abnormal accruals.

Carter and Manaster (1990) develop an IPO model in which offer risk is negatively related to underwriter prestige. By analogy to their model, one could argue that offers involving prestigious underwriters and auditors are unlikely to attract lawsuits because the risk of dramatically poor post-offer stock returns is low. Underwriters and auditors may be named as codefendants, however, alongside offering firms. The deep pockets that tend to accompany prestige may attract lawsuits.

Offer size may also affect the incidence of lawsuits. If the offer is small, the potential for dollar damages to participating investors is also small. It may not be worth suing a firm over a small offer if there are fixed costs of litigation. On the other hand, well-known established firms make most of the large offers. These offers may be among the least risky and therefore least likely to precede very low rates of return to stockholders. Unless rates of return are very poor, it may be difficult to persuade a court that investors have suffered losses beyond those consistent with the ordinary (fully disclosed) risks of owning common stocks. The difficulty of proving damages may tend to discourage lawsuits involving large offers.

The fraction of the offer that is secondary also has a theoretically ambiguous impact on lawsuit risk. This fraction may be large when a firm's principal shareholders are substantially divesting their stakes. These holders often control the firm and direct its public disclosures. In these circumstances, the divesting principals benefit directly from a higher offer price and may seek to deceive investors about factors affecting firm value. Deceptive behavior in connection with a stock offer would tend to increase the risk of a subsequent lawsuit. The motives of controlling insiders who are divesting much of their stock are, however, *obviously* suspect. For this reason, investors and regulatory authorities may closely scrutinize offers that contain large secondary fractions. Other things equal, this would increase the chances that illegal deceptive behavior is later exposed and punished. The increased risk of punishment would tend to discourage deceptive behavior and reduce the incidence of related lawsuits. Hence, it is not clear whether, on balance, the incidence of lawsuits should be positively or negatively related to the fraction of an offer that is secondary. Under the efficient contracting hypothesis discussed by Holthausen (1990) managers would rationally anticipate the heightened litigation risk associated with secondary offers. In response, they would endogenously modify other aspects of the offer so as to offset this incremental risk. In this view, the incidence of lawsuits would be unrelated cross-sectionally to secondary offering fractions.

The results in table 5 suggest that auditor prestige (AUD), underwriter prestige (UND), offer size (TREG), and secondary fraction (FSEC), may all play a role in determining lawsuit risk. The average values for each of these variables for both IPOs and SEOs are greater for sued firms than for non-sued firms. Sued IPO firms are more

likely than non-sued firms to have prestigious auditors and underwriters. The differences in averages have marginal significance levels (p-values) for the associated t-statistics and Wilcoxon rank sum test statistics that are all less than 3%. The differences for SEO firms, however, are statistically insignificant. Secondary fraction is significantly greater for sued firms than for non-sued firms, both in IPOs and SEOs. The same is true for offer size according to the Wilcoxon statistic, but the t-test is insignificant for the IPO sample.

Post-offer stock returns differ dramatically between sued and non-sued firms. In table 5, the average market-adjusted return over 36 months after IPOs is -84.2% for sued firms and -6.2% for non-sued. For sued SEO firms, the average market-adjusted returns are -92.8% and -19.0% for sued and non-sued firms, respectively. The differences between the average returns for sued and non-sued firms are highly statistically significant for both the IPO and SEO groups.

The evidence in table 5 also indicates that abnormal accruals around stock offers are related to lawsuits, at least for SEOs. In the year before SEOs abnormal working capital accruals average 9.3% of firm assets for sued firms, but only 1.4% of assets for non-sued firms. The difference is statistically significant. Average abnormal accruals as a fraction of firm assets in the year of IPOs for sued firms exceeds the average for non-sued firms, also, but the difference is not significant.

Working capital and abnormal working capital accruals tend to decline after stock offers. Table 6 reports evidence on the changes in accruals for offering firms. For IPOs, changes are measured from year 0 to years 1, 2, and 3. For SEOs, changes are measured starting in year -1. For sued firms the changes in working capital and abnormal working capital accruals as a fraction of assets on average are always negative, regardless of the

measurement interval. For non-sued firms, the average changes are either negative or negligible ($< 1\%$). In every instance the post-offer changes in accruals and abnormal accruals are more pronounced for sued firms than for non-sued firms and the differences between the two types are statistically significant.

Thus, abnormally large accruals posted around offering dates tend to revert to normal subsequently. Large accruals around the offer effectively increase reported net income. The later reversion has the opposite effect on net income. This pattern of accruals may result in investors forming excessively optimistic expectations at the offer date regarding future earnings growth. If so, then accruals around the offering date should be negatively related to subsequent stock returns.

Table 7 reports the results of regressions of post-offer market-adjusted stock returns on abnormal working capital accruals as a fraction of assets. Sued and non-sued firms are pooled and regressions are performed with and without intercept (DSUE) and slope (DSUE \times ABWAC/A) variables distinguishing the observations for sued firms. The simple pooled regressions reveal a highly significant negative relation between post-offer stock returns and the earnings management measure.

Table 8 contains the results of logistic regressions of lawsuit incidence on pre-offer abnormal accruals, market-adjusted return, auditor and underwriter prestige, offer size, and secondary fraction. Lawsuit probability is significantly negatively related to market-adjusted return for both IPOs (panel A) and SEOs (panel B). Moreover, lawsuits are positively related to abnormal accruals. Consider the results in panel A for the IPO sample. When abnormal accrual and market-adjusted return are both included as regressors, only the return is significant. When return is excluded from the regression,

abnormal accrual attains a marginal significance level of 10.9%. This suggests that the effect of abnormal accruals on lawsuit probability operates entirely through their effect on post-offer stock returns. However, the results shown in panel B for the SEO sample differ. Here the abnormal accrual is significant whether or not return is included as a regressor. This indicates that abnormal accruals affect lawsuit probability in some way independently of their effect on stock returns. This could occur if large abnormal accruals increase plaintiffs' chances of prevailing in lawsuits. Abnormal accruals may be correlated with tortious behaviors that are relatively easy to prove in court. Regardless, these findings tend to support the opportunism hypothesis, that firms manage accounts to induce excessive optimism among investors regarding future earnings.

The results in table 8 regarding the other regressors are less robust than those for abnormal accruals and stock returns. For example, in the IPO sample auditor prestige has significantly positive coefficients in all of the regressions. This is consistent with the theory that deep pockets attract lawsuits. The results for the SEO sample, however, are insignificant. Similarly, lawsuits involving IPOs appear to be positively related to underwriter prestige, but the evidence that this relation applies to lawsuits involving SEOs is not strong.

Most of the results in table 8 indicate that lawsuits are positively related to offer size. This lends credence to the idea that lawyers avoid filing class action lawsuits unless prospective damages are large in dollar terms, but the evidence is quite weak. There is also some evidence that lawsuits are positively related to secondary offering fraction, but it is not compelling.

3.2 Abnormal Accruals and Allegations of Earnings Management in Lawsuits

In table 9 we focus on sued firms alone. We investigate the incidence of specific allegations of earnings management in lawsuits. If abnormal accruals correctly gauge opportunistic and deceptive earnings manipulation, then sued firms with large abnormal accruals may be accused of improperly managing earnings more often than are sued firms with small abnormal accruals. The evidence in table 9, though, does not bear out this prediction. There is little evidence that allegations of earnings management are positively related to abnormal accruals. In the logistic regressions the estimated coefficients of abnormal accrual measures are unstable and insignificant. Indeed, for the IPO sample the estimated coefficients are negative. This suggests that abnormal accruals do not correspond well to the legal notion of improper earnings management. Firms that, by our measure, aggressively manage earnings may have a propensity to engage in other tortious acts. It may be these acts rather than the earnings management that attract lawsuits.

To examine this possibility we considered the 159 lawsuit cases where earnings management was not specifically alleged. We had sufficient data to calculate abnormal accruals for 133 of these sued firms. The firms were then sorted by abnormal accruals and we investigated the reasons why they were sued. A relatively high proportion of firms with large accruals were alleged to have made false sales growth or earnings projections. In the top quartile of abnormal accruals (33 firms) 58% (19) were accused of making such false projections versus only 37% (37 firms) for the rest of the sample. This is consistent with managers attempting to manage investors' perceptions through both

earnings management and their public forecast, and it being easier to bring successful lawsuits against firms based on their unrealized projections.¹⁶

3.3 Analysis of Lawsuit Settlement Amounts

Poor stock returns are the primary source of damages, without which lawsuits are pointless, to investors. For this reason, firms that are sued over stock offers should tend to have poor returns preceding the lawsuit. Moreover, settlement amounts should be directly related to stock returns. Larger settlements should be associated with smaller returns.

For each sued firm we calculated the market-adjusted return in dollars over the lawsuit class period plus the first trading day following the class period.¹⁷ We focus on the class period because securities class action lawsuits allege that it is over this interval that defendant firms mislead investors. One additional trading day is added to capture the valuation impact of the public information release that ends the class period. We refer to the overall interval as the augmented class period.

Table 10 reports summary statistics on the settlement amounts and market-adjusted dollar returns, and abnormal working capital accruals for the firms in our lawsuit sample. We measure stock returns in dollars because we want to explain lawsuit settlements, which are naturally measured in dollars as well. For the same reason,

¹⁶ We also estimated the logistic regressions in table 9 excluding the 62 cases where earnings management was not alleged, but allegations of false revenue or earnings projections were made. For the IPO sample, the results changed slightly. For the full model, including all of the regressors, the estimated coefficient of abnormal accrual takes on the expected sign (positive) but it remains insignificantly different from zero. For the SEO sample, however, the coefficient on abnormal accruals is positive and significant at the 10% level.

¹⁷ We first adjust daily firm returns by subtracting the contemporaneous returns on the CRSP equally-weighted market index. Each adjusted return is then multiplied by the closing total market value of the

abnormal accruals are given in dollars, not as a fraction of firm assets. Dismissed or withdrawn suits are treated as zero settlements. IPO settlements range up to \$44 million, but average just over \$4 million. SEO settlements tend to be larger, averaging over \$10 million and going up to \$87 million. Average market-adjusted stock returns over the augmented class period, as expected, are negative. Tests based on t-statistics indicate that these averages are significantly less than zero at the one percent level. The average abnormal dollar accruals, however, are insignificant. This is somewhat surprising in light of the results in table 3 showing that the average abnormal accrual as a fraction of assets is significantly positive for both IPOs and SEOs.

We examine further the determinants of lawsuit settlements by regressing settlement amounts on abnormal accruals, market-adjusted dollar stock returns, and control variables. Table 11 summarizes the regression results.¹⁸ These results clearly support the opportunism hypothesis, which predicts a positive relation between settlements and abnormal accruals. All of the estimated slope coefficients on the accrual regressors are positive and all but one of these is significant at the 10 percent level, or better.¹⁹ Moreover, the results tend to reject the signaling hypothesis. The signaling hypothesis holds that abnormal accruals should be unrelated to settlements.

Furthermore, table 11 shows that the estimated coefficients of market-adjusted dollar stock returns, ABDOL, are significantly negative for all of the regressions where

related firm's equity as of the preceding trading day. The resulting daily market-adjusted dollar returns are then summed over time.

¹⁸ We also performed regressions including the natural logarithm of total assets or of sales as controls for firm size. The coefficients of the size variables were insignificant and our other estimates were materially unaffected.

¹⁹ The significance levels in table 11 refer to conventional, parametric t-tests conducted under the assumption that the regression disturbances are uncorrelated, homoskedastic, and normally distributed. Using White's (1980) specification test we fail to reject homoskedasticity at conventional confidence levels.

ABDOL appears. Note that the coefficient on abnormal accruals remains significant in regressions where ABDOL is among the regressors. This result is similar to that from the logistic analysis of lawsuit incidence reported for SEOs in table 8. It indicates that abnormal accruals act to increase lawsuit settlements independently of their effect on stock returns. Indeed, it appears that the impact of abnormal accruals on settlements is more significant *economically* than is the impact of post-offer stock returns over the augmented class period. In every relevant regression, the estimated coefficient of ABWAC is quite a bit greater in absolute value than that of ABDOL.

In table 11, SUEM refers to a binary variable that equals one if earnings management is explicitly alleged in the lawsuit complaint and equals zero otherwise. This simple indicator of earnings management is strongly positively related to settlements, at least for IPOs. Where SUEM and ABWAC are both included among the regressors the estimated coefficients of both are always positive. Moreover, the coefficients of ABWAC are statistically significant in all but one case. Thus, some pernicious forms of earnings management probably induce damages and influence settlements. Abnormal accruals, however, seem to have an effect on settlements that is independent of the types of behavior that prompt explicit allegations of earnings management in lawsuit complaints.

There is very little evidence in table 11 that offer size affects settlements. If ABDOL is included in a regression, the estimated coefficient of TREG is always insignificant. For IPOs, the coefficients of secondary fraction, FSEC, are most often insignificant and switch signs across the regressions. For SEOs, however, FSEC is significantly negatively related to settlements.

Table 11 also reports results about the influence on settlements of auditor and underwriter prestige. The evidence indicates that settlements are negatively related to underwriter prestige. All of the estimated coefficients of UND are negative and for SEOs these estimates are significant. The estimates for the IPO sample are not significant. In a pooled regression with slope and intercept dummies distinguishing IPOs from SEOs, though, the coefficient of UND differs insignificantly between IPOs and SEOs. Indirectly, this casts doubt on the idea that the deep pockets of prestigious underwriters attract lawsuits. Unfortunately, it is difficult to rationalize these results within a model that is also consistent with our findings for auditor prestige. In table 11, AUD is positively related to settlements, significantly so for SEOs. Also, the results in table 8 suggested a positive relation between lawsuit incidence and both auditor and underwriter prestige.

4. Conclusions

We find that firm earnings reported around stock offers contain positive abnormal working capital accrual components, on average, and that post-offer stock returns are significantly negatively related to the abnormal accruals. Moreover, abnormal working capital accruals tend to decline after stock offers. This decline is significantly more pronounced for firms that are later sued regarding their offers than for those that are not sued. In addition, abnormal working capital accruals around stock offers are negatively related to post-offer stock returns and significantly positively related to the incidence of these lawsuits. Furthermore, they are significantly positively related to the lawsuit settlement amounts.

This evidence strongly supports the opportunism hypothesis. Apparently, some firms manage earnings upward before stock issues. This increases measured earnings growth rates and causes investors to form overly optimistic expectations regarding future earnings growth. As a consequence, firms are able to obtain more than fair value for their shares. The increased growth rate, however, is only temporary and quickly reverses after the offer as abnormal accruals decline. Investors revise downward their growth expectations and offering firms exhibit low stock returns, reflecting investors' disappointment. The revisions are particularly large for firms with especially high accruals around the stock offer, and these firms also exhibit especially poor stock price performance. Very poor stock price performance, in turn, prompts lawsuits from disgruntled investors.

Most of our results indicate that abnormal accruals around stock offers also affect lawsuit risk and settlement amounts independently of their significant effect on post-offer stock returns. Furthermore, we find that the abnormal accruals are *unrelated* to explicit allegations of earnings management in lawsuits concerning stock offers. Hence, our statistical measure of earnings management does not correspond well to the legal notion of improper earnings management but it appears to be correlated with other factors that increase the probability of lawsuits and expected settlement amounts. Firms that, by our measure, manage earnings aggressively may also engage in other behaviors that render them vulnerable to litigation regarding their stock offers.

References

- Ball, R. J. and P. Brown, 1968, An empirical evaluation of accounting income numbers, *Journal of Accounting Research* 6, 159-178.
- Beatty, R. P. and J. R. Ritter, 1986, Investment banking, reputation and the underpricing of initial public offerings, *Journal of Financial Economics* 15, 213-232.
- Beaver, W. H., 1968, The information content of annual earnings announcements, *Empirical Research in Accounting: Selected Studies 1968*, supplement to Volume 6 of *Journal of Accounting Research*, 67-92.
- Bernard, Victor L. and Jacob K. Thomas, 1990, Evidence that stock prices do not fully reflect the implications of current earnings for future earnings, *Journal of Accounting and Economics* 13, 304-340.
- Brous, Peter A., Datar, Vinay and Omesh Kini, 2001, Is the market optimistic about the future earnings of seasoned equity offering firms?, *Journal of Financial and Quantitative Analysis* 36, 141-168.
- Breusch, T. S. and A. R. Pagan, 1979, A simple test for heteroscedasticity and random coefficient variation, *Econometrica* 47, 1287-1294.
- Boynton, C. E., P. S. Dobbins and G. A. Plesko, 1993, Earnings management and the corporate alternative minimum tax, *Journal of Accounting Research* 30, 131-153.
- Cahan, S. F., 1992, The effect of antitrust investigations on discretionary accruals: A refined test of the political cost hypothesis, *The Accounting Review* 67, 77-95.
- Carter, Richard and Steven Manaster, 1990, Initial public offerings and underwriter reputation, *Journal of Finance* 45, 1045-1067.

- Dechow, P. M., 1994, Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals, *Journal of Accounting and Economics* 18, 3-42.
- Dechow, P. M., Sloan, R. G., and A. P. Sweeney, 1995, Detecting earnings management, *The Accounting Review* 70, 193-225.
- Dechow, P. M., Sloan, R. G., and A. P. Sweeney, 1996, Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC, *Contemporary Accounting Research* 13, 1-36.
- DeFond, M. L. and J. J. Jiambalvo, 1994, Debt covenant violation and manipulation of accruals, *Journal of Accounting and Economics* 17, 145-1476.
- DuCharme, L., 1994, IPOs: Private information and earnings management, dissertation, The University of Washington.
- DuCharme, L. L., Malatesta, P. H., and Stephan E. Sefcik, 2001, Earnings management: IPO valuation and subsequent performance, *Journal of Accounting, Auditing & Finance* 16, 369-396.
- Eckbo, B. E., R. W. Masulis, and Ø. Norli, 2000. Seasoned public offerings: resolution of the 'new issues puzzle,' *Journal of Financial Economics* 56, 251-291.
- Eckbo, B. E. and Ø. Norli, 2000. Leverage, liquidity, and long-run IPO returns, working paper, Dartmouth College.
- Francis, J., D., Philbrick, and K. Schipper, 1994, Shareholder litigation and corporate disclosures, *Journal of Accounting Research* 32, 137-164.

- Friedlan, J. M., 1994, Accounting choices of issues of initial public offerings, *Contemporary Accounting Research* 11, 1-32.
- Guenther, D. A., 1994, Earnings management in response to corporate tax rate changes: Evidence from the 1986 tax reform act, *The Accounting Review* 69, 230-243.
- Holthausen, R. W., 1990, Accounting method choice: Opportunistic behavior, efficient contracting, and information perspectives, *Journal of Accounting and Economics* 12, 207-218.
- Horn, S. D., Horn, R. A., and D. B. Duncan, 1975, Estimating heteroscedastic variances in linear models, *Journal of the American Statistical Association* 70, 380-385.
- Jones, J., 1991, Earnings management during import relief investigations, *Journal of Accounting Research* 29, 193-228.
- Loughran, T. and J. R. Ritter, 1995, The new issues puzzle, *Journal of Finance* 50, 23-51.
- MacKinnon, J. G. and H. White, 1985, Some heteroskedasticity consistent covariance matrix estimators with improved finite sample properties, *Journal of Econometrics* 29, 305-325.
- Perry, S. E. and T. H. Williams, 1994, Earnings management preceding management buyout offers, *Journal of Accounting and Economics* 18, 157-179.
- Rangan, Srinivasan, 1998, Earnings management and the performance of seasoned equity offerings, *Journal of Financial Economics* 50, 101-122.
- Rendleman, R. J. Jr., C. P. Jones, and H. A. Latané, 1982, Empirical anomalies based on unexpected earnings and the importance of risk adjustments, *Journal of Financial Economics* 10, 269-287.

Ritter, J. R., 1991, The long-run performance of initial public, *Journal of Finance* 46, 2-27.

Shivakumar, L., 2000, Do firms mislead investors by overstating earnings before seasoned equity offerings?, *Journal of Accounting and Economics* 29, 339-370.

Teoh, Siew Hong, Ivo Welch and T. J. Wong, 1998a, Earnings management and the underperformance of seasoned equity offerings, *Journal of Financial Economics* 50, 63-99.

Teoh, Siew Hong, Ivo Welch and T. J. Wong, 1998b, Earnings management and the long-run market performance of initial public offerings, *Journal of Finance* 53, 1935-1974.

Teoh, Siew Hong, T. J. Wong and Gita R Rao, 1998, Are accruals during initial public offerings opportunistic?, *Review of Accounting Studies* 3, 175-208.

White, Halbert, 1980, A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity, *Econometrica* 48, 817-838.

Xie, Hong, 2001, The mispricing of abnormal accruals, *The Accounting Review* 76, 357-373.

Table 1

Distribution of Sample Firms Issuing Stock by Year of Offer

Summary statistics for firms making IPOs or SEOs from 1988 through 1997. All offers were underwritten firm commitments. The offers were identified using Thomson Financial's Global New Issues Database. We determined which firms were subject to class action lawsuits about their stock offers using issues of *Securities Class Action Alert* published from 1988 through 2000 and LEXIS/NEXIS.

Year	IPOs:		SEOs:		All offers:	
	Sued	Non-sued	Sued	Non-sued	Sued	Non-sued
1988	10	279	3	139	13	418
1989	11	244	7	222	18	466
1990	10	204	6	183	16	387
1991	26	378	11	466	37	844
1992	32	575	6	501	38	1076
1993	39	780	9	734	48	1514
1994	24	621	9	473	33	1094
1995	25	558	12	613	37	1171
1996	29	843	13	757	42	1600
1997	20	616	12	732	32	1348
Totals:	226	5,098	88	4,820	314	9,918

Table 2

Distribution of Sample Firms Issuing Stock by Industry

Summary statistics for firms making IPOs or SEOs from 1988 through 1997. All offers were underwritten firm commitments. The offers were identified using Thomson Financial's Global New Issues Database. We determined which firms were subject to class action lawsuits about their stock offers using issues of *Securities Class Action Alert* published from 1988 through 2000 and LEXIS/NEXIS. Firms were grouped according to their one-digit SIC code obtained from the COMPUSTAT files.

Industry	IPOs:		SEOs:		All offers:	
	Sued	Non-sued	Sued	Non-sued	Sued	Non-sued
Agriculture, forestry, fishing	0	11	0	19	0	30
Mining, oil and gas	4	102	2	237	6	339
Construction	4	56	0	41	4	97
Non-durables manufacturing	30	607	10	592	40	1,199
Durables manufacturing	74	1,187	24	973	98	2,160
Transport, utilities, communication	9	382	9	577	18	959
Wholesale and retail trade	24	547	15	548	39	1,095
Finance, insurance, real estate	21	1,064	4	1,127	25	2,191
Services	50	843	19	475	69	1,318
Health services	7	184	2	162	9	346
Miscellaneous, unclassifiable	3	115	3	69	6	184
Totals	226	5,098	88	4,820	314	9,918

Table 3

Lawsuit Allegations

Distribution of allegations in shareholder lawsuits. We identified 314 stock offers over the period from 1988 through 1997 that attracted class-action lawsuits. There were 123 lawsuits where earnings management was explicitly alleged. In another 159 cases only charges unrelated to earnings management were made. We had insufficient information to identify specific allegations in 32 of the lawsuits.

Allegations	Earnings Management Alleged		Earnings Management Not Alleged	
	N	%	N	%
Unrelated to earnings management:				
False/misleading statements including failure to disclose material information	106	86.2	156	98.1
False revenue or earnings projections	51	41.5	62	38.9
Falsifying records or inaccurate financial statements	53	43.1	7	4.4
Inadequate internal controls	12	9.8	4	2.5
Failed to disclose financing terms	14	11.4	1	0.6
Inflated stock price	28	22.8	33	20.8
Management team problems	16	13.0	14	8.8
Inadequate disclosure of debt terms	6	4.9	1	0.6
Failed to disclose acquisition problems	8	6.5	7	4.4
Related to earnings management:				
Revenue management including channel stuffing, improper revenue recognition	89	72.4		
Expense management	53	43.1		
Earnings management	89	72.4		
Improper accounting practices including non-GAAP or improper balance sheet	61	49.6		

Table 4

Summary Statistics for Firms Making Stock Offers

Summary statistics for firms making IPOs or SEOs from 1988 through 1997. AUD equals one if the offering firm's auditor is a Big Eight accounting firm, and equals zero otherwise. Similarly, UND equals one if the lead underwriter for the offer is among the top 25 underwriting firms in terms of dollar volume, as reported in *Institutional Investor* magazine, and zero otherwise. TREG equals the total dollar value for the offer registered with the Securities and Exchange Commission and FSEC is the fraction of the offer that is secondary. RETURN is the buy-and-hold return on the offering firms' stock measured over 36 months starting with the month following the offer, less the buy-and-hold return on the equally-weighted CRSP market index over the same period. The earnings management measure is derived from a modified Jones (1991) regression model. ABWAC denotes abnormal working capital accruals from that model and A equals firm assets. For SEOs, ABWAC and A are calculated for the year before the offer year. For IPOs, they are calculated for the year of the offer. We exclude offers with extreme ABWACs, defined as the top and bottom one-half of one percent.

Variable	Mean	Standard deviation	Minimum	Maximum	Sample size
Panel A: IPOs					
AUD	0.874	0.331	0	1	3806
UND	0.431	0.495	0	1	3806
TREG (\$ millions)	51.076	102.719	1.000	2646.999	3806
FSEC	0.127	0.224	0.000	1.000	3806
A (\$ millions)	452.510	6146.584	0.011	280176.900	3806
RETURN	-0.098	2.225	-2.312	40.832	3675
ABWAC/A	0.085	0.530	-3.595	4.471	3806
Panel B: SEOs					
AUD	0.926	0.261	0.000	1.000	3717
UND	0.591	0.491	0.000	1.000	3717
TREG (\$ millions)	73.331	96.750	0.750	1344.375	3717
FSEC	0.237	0.357	0.000	1.000	3717
A (\$ millions)	1165.943	7410.052	0.021	188200.900	3717
RETURN	-0.206	1.256	-2.116	21.658	3607
ABWAC/A	0.016	0.245	-1.778	1.970	3717

Table 5

Comparisons of Sued and Non-sued Firms

Results of tests for differences between the populations of offering firms that are subsequently sued in connection with their offers and offering firms that are not sued are reported below. AUD equals one if the offering firm's auditor is a Big Eight accounting firm, and equals zero otherwise. Similarly, UND equals one if the lead underwriter for the offer is among the top 25 underwriting firms in terms of dollar volume, as reported in *Institutional Investor* magazine, and zero otherwise. TREG equals the total dollar value for the offer registered with the Securities and Exchange Commission and FSEC is the fraction of the offer that is secondary. RETURN is the buy-and-hold return on the offering firms' stock measured over 36 months starting with the month following the offer, less the buy-and-hold return on the equally-weighted CRSP market index over the same period. The earnings management measure is derived from a modified Jones (1991) regression model. ABWAC denotes abnormal working capital accruals from that model and A equals firm assets. For SEOs, ABWAC and A are calculated for the year before the offer year. For IPOs, they are calculated for the year of the offer. We exclude offers with extreme ABWACs, defined as the top and bottom one-half of one percent. P-values given are for two-tailed tests.

Variable	Sued firms:		Non-sued firms:		t-statistic (p-value)	Wilcoxon statistic (p-value)
	Mean	Sample size	Mean	Sample size		
<u>Panel A: IPOs</u>						
AUD	0.954	175	0.870	3631	5.003 (0.001)	3.271 (0.001)
UND	0.514	175	0.427	3631	2.240 (0.026)	2.265 (0.023)
TREG (\$ millions)	54.488	175	50.912	3631	0.526 (0.598)	4.287 (0.001)
FSEC	0.153	175	0.125	3631	1.765 (0.079)	3.650 (0.001)
RETURN	-0.842	169	-0.062	3506	-8.556 (0.000)	-8.815 (0.000)
ABWAC/A	0.124	175	0.083	3631	1.040 (0.299)	0.372 (0.709)
<u>Panel B: SEOs</u>						
AUD	0.948	78	0.926	3639	0.866 (0.389)	0.742 (0.457)
UND	0.602	78	0.595	3639	0.125 (0.900)	0.125 (0.899)
TREG (\$ millions)	93.448	78	77.897	3639	1.579 (0.118)	3.548 (0.001)
FSEC	0.298	78	0.238	3639	1.514 (0.133)	3.011 (0.002)
RETURN	-0.928	77	-0.190	3530	-10.227 (0.000)	-7.730 (0.000)
ABWAC/A	0.093	78	0.014	3639	2.173 (0.032)	2.248 (0.024)

Table 6

Changes in Accruals for Offering Firms

Results of tests for differences between the populations of offering firms that are subsequently sued in connection with their offers and offering firms that are not sued are reported below. Working capital accruals (WAC) are divided by firm assets (A) and changes around the offering dates are compared for sued and non-sued firms. For IPOs, changes are measured from the year of the offer (year 0) to one, two, and three years afterward. For SEOs, changes are measured from the year before the offer (year -1) to one, two, and three years afterward. Changes in abnormal working capital accruals (ABWAC) divided by firm assets are calculated for the same periods. The earnings management measure ABWAC is derived from a modified Jones (1991) regression model. We exclude offers with extreme ABWACs, defined as the top and bottom one-half of one percent. P-values given are for one-tailed tests.

Variable	Sued firms:		Non-sued firms:		t-statistic (p-value)	Wilcoxon statistic (p-value)
	Mean	Sample size	Mean	Sample size		
Panel A: IPOs						
Change in WAC/A from year 0 to year:						
1	-0.240	154	-0.105	3452	-2.974 (0.001)	-3.903 (0.000)
2	-0.222	135	-0.132	3070	-1.994 (0.023)	-2.229 (0.012)
3	-0.222	112	-0.153	2415	-1.356 (0.088)	-2.395 (0.008)
Change in ABWAC/A from year 0 to year:						
1	-0.157	154	-0.047	3443	-2.411 (0.008)	-2.816 (0.002)
2	-0.115	135	-0.045	3057	-1.490 (0.069)	-1.358 (0.087)
3	-0.123	112	-0.049	2405	-1.427 (0.077)	-1.312 (0.094)
Panel B: SEOs						
Change in WAC/A from year -1 to year:						
1	-0.190	71	-0.017	3448	-3.420 (0.000)	-4.110 (0.000)
2	-0.172	63	-0.022	3192	-3.461 (0.000)	-4.144 (0.000)
3	-0.166	44	-0.035	2507	-2.396 (0.010)	-2.855 (0.002)
Change in ABWAC/A from year -1 to year:						
1	-0.113	71	0.002	3441	-2.699 (0.004)	-2.287 (0.011)
2	-0.088	63	0.007	3184	-2.650 (0.005)	-2.528 (0.005)
3	-0.113	44	-0.002	2501	-1.603 (0.057)	-1.530 (0.062)

Table 7

Regression Analysis of Market-Adjusted Returns for Offering Firms

Results of ordinary least squares regressions of market-adjusted returns on abnormal working capital accruals divided by assets. The dependant variable is the buy-and-hold return on the offering firms' stock measured over 36 months starting with the month following the offer, less the buy-and-hold return on the equally-weighted CRSP market index over the same period. DSUE equals one if an offering firm was subsequently sued in connection with its offer, and equals zero otherwise. The earnings management measure is derived from a modified Jones (1991) regression model. ABWAC denotes abnormal working capital accruals from that model and A equals firm assets. For SEOs, ABWAC and A are calculated for the year before the offer year. For IPOs, they are calculated for the year of the offer. We exclude offers with extreme ABWACs, defined as the top and bottom one-half of one percent. t-statistics are shown in parentheses. Superscripts a, b, and c denote significance at the .10, .05, and .01 levels, respectively, for one-tailed tests.

Coefficients:						
Intercept	DSUE	ABWAC/A	DSUE x ABWAC/A	Sample Size	F-statistic	Adjusted R ²
<u>Panel A: IPOs</u>						
-0.075 (-2.032 ^b)		-0.275 (-3.998 ^c)		3675	15.987 ^c	0.004
-0.039 (-1.046)	-0.790 (-4.414 ^c)	-0.278 (-3.974 ^c)	0.166 (0.451)	3675	11.950 ^c	0.008
<u>Panel B: SEOs</u>						
-0.203 (-9.724 ^c)		-0.206 (-2.392 ^c)		3607	5.723 ^c	0.001
-0.188 (-8.933 ^c)	-0.731 (-4.878 ^c)	-0.189 (-2.161 ^b)	0.090 (0.197)	3607	10.301 ^c	0.007

Table 8
Logistic Analysis of Lawsuit Incidence

Results of logistic regressions that investigate the incidence of lawsuits brought against firms making stock offers are reported below. The dependent variable equals one if an offering firm is subsequently sued in connection with its offer, and equals zero otherwise. AUD equals one if the offering firm's auditor is a Big Eight accounting firm, and equals zero otherwise. Similarly, UND equals one if the lead underwriter for the offer is among the top 25 underwriting firms in terms of dollar volume, as reported in *Institutional Investor* magazine, and zero otherwise. TREG equals the total dollar value (\$millions) for the offer registered with the Securities and Exchange Commission and FSEC is the fraction of the offer that is secondary. RETURN is the buy-and-hold return on the offering firms' stock measured over 36 months starting with the month following the offer, less the buy-and-hold return on the equally-weighted CRSP market index over the same period. The earnings management measure is derived from a modified Jones (1991) regression model. ABWAC denotes abnormal working capital accruals from that model and A equals firm assets. For SEOs, ABWAC and A are calculated for the year before the offer year. For IPOs, they are calculated for the year of the offer. We exclude offers with extreme ABWACs, defined as the top and bottom one-half of one percent. P-values for chi-square tests of significance are shown in parentheses under the estimated coefficients. Under the null hypothesis that all regression slope coefficients equal zero, the likelihood ratio test statistic is asymptotically distributed chi-square with degrees of freedom equal to the number of slope coefficients.

Slope Coefficients:							
ABWAC/A	RETURN	AUD	UND	TREG	FSEC	Sample size	Likelihood ratio statistic
<u>Panel A: IPOs</u>							
	-0.901 (0.000)	1.117 (0.002)	0.356 (0.038)	0.000 (0.875)	0.557 (0.111)	3675	89.511 (0.000)
0.242 (0.109)		1.069 (0.004)	0.246 (0.141)	-0.000 (0.596)	0.346 (0.287)	3806	19.127 (0.001)
0.150 (0.329)	-0.900 (0.000)	1.143 (0.002)	0.369 (0.032)	0.000 (0.862)	0.564 (0.107)	3675	90.436 (0.000)
<u>Panel B: SEOs</u>							
	-1.705 (0.000)	0.547 (0.302)	0.240 (0.341)	0.001 (0.073)	0.503 (0.110)	3607	72.524 (0.000)
1.067 (0.003)		0.373 (0.476)	-0.039 (0.873)	0.000 (0.356)	0.382 (0.204)	3717	10.153 (0.071)
0.868 (0.021)	-1.676 (0.000)	0.515 (0.331)	0.267 (0.289)	0.001 (0.076)	0.513 (0.106)	3607	77.220 (0.000)

Table 9
Logistic Analysis of Earnings Management Allegations in Lawsuits

Results of logistic regressions that investigate allegations of earnings management in lawsuits brought against firms making stock offers are reported below. The dependent variable equals one if an offering firm is subsequently sued in connection with its offer and the complaint includes specific allegations of earnings management. The dependent variable equals zero if the firm is sued, but no allegation of earnings management is made. AUD equals one if the offering firm's auditor is a Big Eight accounting firm, and equals zero otherwise. Similarly, UND equals one if the lead underwriter for the offer is among the top 25 underwriting firms in terms of dollar volume, as reported in *Institutional Investor* magazine, and zero otherwise. TREG equals the total dollar value (\$millions) for the offer registered with the Securities and Exchange Commission and FSEC is the fraction of the offer that is secondary. RETURN is the buy-and-hold return on the offering firms' stock measured over 36 months starting with the month following the offer, less the buy-and-hold return on the equally-weighted CRSP market index over the same period. The earnings management measure is derived from a modified Jones (1991) regression model. ABWAC denotes abnormal working capital accruals from that model and A equals firm assets. For SEOs, ABWAC and A are calculated for the year before the offer year. For IPOs, they are calculated for the year of the offer. We exclude offers with extreme ABWACs, defined as the top and bottom one-half of one percent. P-values for chi-square tests of significance are shown in parentheses under the estimated coefficients. Under the null hypothesis that all regression slope coefficients equal zero, the likelihood ratio test statistic is asymptotically distributed chi-square with degrees of freedom equal to the number of slope coefficients.

Slope Coefficients:						Sample size	Likelihood ratio statistic
ABWAC/A	RETURN	AUD	UND	TREG	FSEC		
<u>Panel A: IPOs</u>							
	-0.065 (0.663)	13.737 (0.984)	0.157 (0.661)	-0.006 (0.106)	-0.221 (0.821)	150	7.632 (0.177)
-0.149 (0.675)		13.722 (0.984)	0.200 (0.569)	-0.007 (0.100)	-0.144 (0.882)	153	7.692 (0.174)
-0.070 (0.854)	-0.067 (0.672)	13.751 (0.984)	0.143 (0.688)	-0.006 (0.107)	-0.212 (0.828)	150	7.657 (0.264)
<u>Panel B: SEOs</u>							
	-0.765 (0.135)	-1.539 (0.255)	0.028 (0.959)	-0.005 (0.134)	-0.786 (0.337)	72	9.481 (0.091)
0.685 (0.390)		-1.527 (0.261)	-0.084 (0.877)	-0.005 (0.187)	-0.682 (0.392)	73	7.333 (0.197)
0.617 (0.441)	-0.749 (0.139)	-1.581 (0.248)	0.082 (0.885)	-0.005 (0.151)	-0.829 (0.314)	72	10.107 (0.120)

Table 10

Lawsuit Settlement Amounts, Firm Stock Returns, and Abnormal Accruals

Summary statistics for settlement amounts, market-adjusted stock returns, and abnormal working capital accruals for firms subjected to lawsuits in connection with their stock offers. The settlement sample is restricted to cases where figures are available to compute abnormal accruals. The stock return sample is restricted to cases where both settlements and abnormal accruals are available. The settlement amount is zero if a lawsuit is dismissed or withdrawn (28 IPOs and 6 SEOs). We calculate daily market-adjusted stock returns using the CRSP equally-weighted index. Daily market-adjusted returns are expressed in dollar terms by the product of daily adjusted rates of return and the closing total market value of firm stock from the day before. The resulting daily market-adjusted dollar stock returns are then summed over the lawsuit class period, plus one trading day. For SEOs the abnormal accrual is calculated for the year before the offer. For IPOs it is calculated for the year of the offer.

	Mean	Standard deviation	Minimum	Lower quartile	Upper quartile	Maximum	Sample size
<u>Settlements (\$millions):</u>							
IPOs	4.28	5.94	0	0.60	5.30	44.30	144
SEOs	10.55	15.79	0	1.97	12.00	87.10	54
<u>Market-adjusted stock returns (\$millions):</u>							
IPOs	-130.48	195.61	-1648.58	-157.42	-35.86	64.07	129
SEOs	-632.52	1426.39	-8298.95	-549.66	-91.82	-33.87	51
<u>Abnormal working capital accruals (\$millions):</u>							
IPOs	2.07	31.05	-266.06	-1.513	6.78	149.86	144
SEOs	-0.85	71.82	-341.74	-6.52	12.25	182.68	54

Table 11

Regression Analysis of Lawsuit Settlement Amounts

Results of ordinary least squares regressions of lawsuit settlement amounts on abnormal working capital accruals, residual market-adjusted dollar stock returns, and other explanatory variables. AUD equals one if the offering firm's auditor is a Big Eight accounting firm, and equals zero otherwise. Similarly, UND equals one if the lead underwriter for the offer is among the top 25 underwriting firms in terms of dollar volume, as reported in *Institutional Investor* magazine, and zero otherwise. TREG equals the total dollar value for the offer registered with the Securities and Exchange Commission and FSEC is the fraction of the offer that is secondary. The earnings management measure is derived from a modified Jones (1991) regression model. ABWAC denotes abnormal working capital accruals from that model. For SEOs, ABWAC is calculated for the year before the offer year. For IPOs, it is calculated for the year of the offer. We exclude offers with extreme ABWACs, defined as the top and bottom one-half of one percent. The market-adjusted dollar stock return is denoted by ABDOL. These are the market-adjusted dollar stock returns over the lawsuit class periods plus one day. SUEM equals one if the lawsuit complaint alleges earnings management explicitly and zero otherwise. All dollar amounts are measured in millions. Influential observations identified with the Belsley-Kuh-Welsch (1980) measure of influence are eliminated. t-statistics are shown in parentheses. Superscripts a, b, and c denote significance at the .10, .05, and .01 levels, respectively, for one-tailed tests.

	Panel A: IPOs				Panel B: SEOs			
Regressor	Coefficients:							
ABWAC	0.034 (2.186 ^b)	0.028 (2.556 ^c)	0.024 (1.423 ^a)	0.025 (2.265 ^b)	0.037 (1.970 ^b)	0.055 (3.669 ^c)	0.016 (0.875)	0.049 (3.126 ^c)
ABDOL		-0.013 (-5.316 ^c)		-0.008 (-3.222 ^c)		-0.005 (-3.810 ^c)		-0.004 (-3.327 ^c)
SUEM			2.435 (2.327 ^b)	1.668 (2.308 ^b)			2.341 (0.565)	0.314 (0.126)
AUD	1.382 (0.523)	0.161 (0.077)	1.405 (0.333)	0.844 (0.299)	10.729 (1.751 ^b)	8.271 (1.423 ^a)	10.514 (1.887 ^b)	8.777 (1.476 ^a)
UND	-0.485 (-0.481)	-0.102 (-0.135)	-0.629 (-0.585)	-0.352 (-0.474)	-4.718 (-1.762 ^b)	-5.436 (-2.075 ^b)	-6.002 (-2.384 ^b)	-5.865 (-2.249 ^b)
TREG	0.031 (3.205 ^c)	-0.007 (-0.806)	0.037 (3.626 ^c)	0.003 (0.334)	0.058 (2.758 ^c)	0.020 (0.830)	0.046 (2.283 ^b)	0.024 (0.935)
FSEC	-3.537 (-1.429 ^a)	1.243 (0.613)	-2.364 (-0.852)	1.687 (0.855)	-7.384 (-1.779 ^b)	-7.628 (-1.966 ^b)	-5.922 (-1.526 ^a)	-7.348 (-1.911 ^b)
Intercept	2.171 (0.836)	2.523 (1.217)	0.928 (0.227)	1.120 (0.409)	-2.153 (-0.338)	2.165 (0.356)	-1.265 (-0.205)	1.526 (0.233)
Sample Size	144	128	131	122	52	50	49	49
F-statistic	3.073 ^b	8.321 ^c	3.323 ^c	5.183 ^c	2.085 ^a	13.095 ^c	1.646	9.985 ^c
Adjusted R ²	0.067	0.257	0.096	0.194	0.096	0.596	0.074	0.567