

THE EFFECT OF ACCOUNTING-BASED DEBT COVENANT DISCLOSURES ON SHAREHOLDER WEALTH

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ABSTRACT

This study examines whether disclosures of the terms of accounting-based debt covenants affect shareholder wealth. Specifically, I focus on market reaction at the time of the announcement of technical default. I find that firms that disclosed the terms of the covenants in prior Securities and Exchange Commission (SEC) filings experience less negative price response during the three-day window surrounding the announcements. I also provide evidence that the market reaction to technical default varies systematically with the size of the debt contract over total liabilities, which I use as a proxy for the materiality of the contract. Further analyses show that through such disclosure, first, there is less shareholder wealth loss, in particular, at firms where the contracts are less material, and, second, the relation between market reaction to technical default and the materiality of the contract is significant only when the contracts are material. These findings have financial reporting implications for standard setters.

JEL: M41, M48

KEYWORDS: Shareholder Wealth, Debt Covenants, Technical Default, Voluntary Disclosures, Materiality

INTRODUCTION

The purpose of this study is to investigate whether disclosures of the terms of accounting-based debt covenants affect shareholder wealth. In particular, it examines whether prior disclosures of the terms of accounting-based debt covenants affect market reaction to the announcements of technical default. This research question is important to financial communities and standard setters as it has implications for financial reporting decisions as well as regulation on disclosures.

Prior literature has documented the importance of debt covenants as contributing to efficient debt contracting (Billett et al., 2007; Spiceland et al., 2015; Zhang, 2008), and mitigating agency problems by providing a tool to implement contingent control arrangements for an efficient governance structure (Aghion and Bolton, 1992; Jensen and Meckling, 1976). Another strand of research finds that accounting-based debt covenants affect companies' accounting choices (Betty and Weber, 2003; DeFond and Jiambalvo, 1994; Press and Weintrop, 1990; Sweeney, 1994) and business operations (Chava and Roberts, 2008). However, limited research has been done that examines the relation between accounting-based debt covenants and shareholder wealth. Beneish and Press (1995a) provide empirical evidence that shareholders experienced a 3.52 percent wealth loss during a three-day technical default announcement window. Loosely related to this study is Christensen et al. (2009), who find that market reactions to International Financial Reporting Standards (IFRS) reconciliation announcements are more pronounced among firms that face a greater likelihood of covenant violation, suggesting that covenant violation results in wealth transfer between shareholders and lenders. Griffin et al. (2014) document that insiders are net sellers before

covenant disclosures and net purchasers of shares after the disclosures, supporting the hypothesis that insiders time their trades in anticipation of debt covenant violation disclosures.

The negative market reaction to the technical default announcement and the insider trading associated with covenant violation clearly suggest that such information is important to investors. One would think that investors would welcome information that helps them more accurately evaluate the likelihood of technical default in a timely fashion. Information on the terms of debt covenants is one piece of such information, but is not necessarily always available. In fact, practitioners have complained about the underreporting of the terms of debt covenants because lack of information on the actual terms leaves investors blind as to if and when the company might breach a covenant level, as argued in an article in the High Yield Report. An article in The New York Times (2003) also claimed that many companies do not disclose financial covenants or where they stand with regard to the covenants until it is *too late* or they are in danger of violating them. Furthermore, the finding in Griffin et al (2014) suggests that insiders benefit from an information advantage in anticipating debt covenant violation, thus putting other investors at a disadvantage. Nevertheless, to the best of my knowledge, the question whether disclosures of the terms of financial covenants affect shareholder wealth has not been addressed in the literature.

As of today, the Securities and Exchange Commission (SEC) and Financial Accounting Standards Board (FASB) have few regulations and rules governing debt covenant disclosure. The only regulation that explicitly requires disclosure of debt covenants is Regulation S-K item 202 (b), which is applicable exclusively to registered public debt but not to private debt. Press and Weintrop (1991) posit that accounting standards do not expressly require disclosure of debt covenants except in instances where there has been covenant violation. Of course, Generally Accepted Accounting Principles (GAAP) require full and fair disclosures of “relevant” information. Since the SEC and GAAP provide only basic guidelines for debt covenant disclosures, when a firm enters into a debt contract as above, considerable latitude remains as to how much detailed covenant information a firm should provide to the public.

Whether investors wish to take action *before* technical default announcements officially hit the market depends on two conditions. The first is whether the investors are concerned about covenant violations and consider technical default important in their valuations. Beneish and Press (1995a) and Griffin et al. (2014) provide direct evidence that technical default negatively affects share price. The second is whether investors are able to evaluate the probability of covenant violation. To do so, investors need to know the terms of the financial covenants such as the exact amount (e.g., a minimum of \$160 million in net worth) and the definitions being used in the computation of the covenants (e.g., the definition of the net worth used in the contract), as well as forthcoming financial performance information. Without the specifics on financial covenants, investors are unable to assess the likelihood of covenant violation.

Core and Schrand (1999) show that investors do price the probability of technical default. Thus, it is reasonable to expect that disclosures of the terms of financial covenants (disclosures of financial covenants, hereafter) can help investors evaluate a firm’s covenant positions and firm value *before* the announcement of technical default. Using a similar setting as the one used by Beneish and Press (1995a) that investigates violation of financial covenants, I directly test whether prior disclosures of financial covenants reduces the shareholder wealth loss (i.e., the magnitude of negative market reaction) on the date the company announces technical default.

Drawing on analytical models and empirical results in the literature, I first hypothesize that, *ceteris paribus*, firms disclosing financial covenants in their public filings in prior periods vis-à-vis those not disclosing financial covenants suffer less on the dates they announce technical default. Second, since the disclosure requirement is based on the “relevance” or “materiality” of the information rather than a “bright-line,” I examine whether the market reaction to the announcements of technical default varies systematically with the materiality of the lending contracts. I interpret materiality as the importance of the contract to investors

and use the size of the debt contract over total liabilities as the proxy for materiality. Heitzman et al. (2010) document that the materiality of information plays a role in disclosure decisions and, consequently, studies that relate to voluntary disclosure should consider information materiality.

I test the above hypotheses using a sample of 66 firms that meet criteria similar to those in Beneish and Press (1995a). To test the first hypothesis, I regress cumulative abnormal returns (*CAR*) on a dummy variable of earlier disclosure decision (*DIS*) and several control variables. Consistent with the first hypothesis, I find that firms disclosing financial covenants in prior SEC filings experience less negative price responses during the three-day window surrounding announcements of technical default. To test the second hypothesis, I use the same model but replace the disclosure decision variable with the materiality variable, proxied by the size of the debt contract over total liabilities, and find that the level of materiality varies systematically with *CAR*. The results show that the market reaction is less negative for a more material contract. One potential explanation is that when a contract is more material, firms tend to disclose the specifics of the covenants earlier and investors are more likely to pay close attention to the firm's financial situation. Another potential explanation is that managers are more likely to discuss the risk of violating the covenants of a more material contract in MD&A, conference calls, etc. Thus, the surprise around technical default is smaller.

Further analysis provides more insights regarding these two hypotheses. By partitioning all samples by the median of the materiality measure, I assume that materiality is likely to be binding for the group above the median and not binding for the other group below the median. The results show that, first, disclosure of financial covenants in prior SEC filings reduces shareholder wealth losses for firms where the materiality condition is not binding. This result suggests that "voluntary" disclosure is especially effective in providing useful information to investors: investors are not caught off guard when the technical default is announced. Second, market responses vary systematically with the relative size of a contract when the materiality condition is binding. Investors in firms with more material contracts are better able to anticipate technical defaults, and therefore, are less surprised when technical default is announced.

This study's contributions are four fold. First, building on Beneish and Press (1995a), this study directly tests the value relevance of accounting-based covenants to shareholders. The covenants are useful as they can signal potential financial trouble on a timely basis. Second, this study expands on prior technical default research by shedding light on how (1) prior disclosure of the terms of covenants, and (2) the materiality of the violated contract, are associated with stock price reactions to technical default. Third, the evidence of this study also contributes to the ongoing debate on firm disclosure decisions discussed by Heitzman et al. (2010). While it is not the purpose of this study to examine disclosure decisions, it does provide evidence that disclosure decisions around financial covenants are positively related to the materiality of the contracts. This evidence supports the argument that the materiality of the information disclosed should be controlled for in the disclosure decision model. Finally, my findings suggest that investors benefit from information on the specifics of debt covenants since they are able to better assess the financial status of the firms on a timely basis. Since not all firms disclose this information, mandating the disclosure of debt covenants could help investors.

The remainder of the paper is organized as follows. Section 2 reviews related literature and regulations. The development of my hypotheses is presented in Section 3. Section 4 introduces research design. Sample selection is provided in section 5. Section 6 presents empirical results and Section 7 concludes.

INSTITUTIONAL BACKGROUND

Related Literature

A few studies have examined the effect of financial covenant violation on shareholder wealth and business operations. Beneish and Press (1995a) document a strong association between technical default and shareholder wealth loss. In examining 87 firms with technical defaults, they find that in the three-day announcement window, the average abnormal return is negative 3.52 percent. Chava and Roberts (2008) find that capital investment declines in response to covenant violations by approximately 1 percent per quarter. These studies document the losses in shareholder wealth and changes in business operations when accounting-based covenants are breached. Griffin et al. (2014) document the association between insider trading and an information advantage around first-time debt covenant violation disclosures, potentially resulting from early access to information about such disclosures.

Moreover, a number of studies show the impact of debt covenants on accounting choices (Beatty and Weber, 2003; Franz, et al, 2014; Jaggi and Lee, 2002; Press and Weintrop, 1990; Sweeney, 1994). For example, Dichev and Skinner (2002) provide large-sample evidence that an unusually large number of firms financially perform at or just above covenant thresholds, suggesting that managers are trying to avoid covenant violations. Franz et al, (2014) find that firms close to violation or in technical default engage in higher levels of earnings management than far-from-violation firms do.

While the findings in the literature indicate the importance of financial covenants, the question as to whether disclosures of financial covenants benefits shareholders has not been empirically examined and is worth exploring.

Current Debt Covenant Disclosure Requirements

I review the disclosure requirements on covenants in general. Disclosure requirements on covenant violation are not specifically reviewed here because the subject of this study is firms that have already disclosed their violation of covenants in SEC filings. The question, however, is whether a firm discloses the specifics of covenants in its filings prior to covenant violation.

The general disclosure requirements related to my study are the following two provisions. Securities Act of 1933 section 3 (77c) requires that any public debt offering that exceeds five million dollars be registered with the SEC. In addition, SEC Regulation S-X item 5-02 states that “the amount and terms of used commitments for long-term financing arrangements shall be disclosed in the notes to the financial statements if significant.” Regulation S-K also has a more detailed filing instruction on the disclosure of registered debt securities, but there is no such guidance for private placed securities. One example of the instruction on the debt covenant disclosure of Regulation S-K is item 202 (b) (4) that requires disclosures of provisions restricting the declaration of dividends or provisions requiring the maintenance of any asset ratio or reserve of debt securities. However, this applies only to registered securities, and private placements are excluded from this requirement. Regulation S-K item 601 (b) (4) requires companies to file exhibits for debt securities being registered and for long-term debt, with the exception of long-term debt not being registered if the total amount does not exceed 10 percent of total assets on a consolidated basis.

In addition, form 8-K filing item 1.01 requires the disclosure of “material definitive agreements.” However, item 1.01 parallels item 601 b (10) of Regulation S-K with regard to the types of agreements that are material to a company. Item 2.03 asks for a brief description of the material terms under which it may be accelerated or increased. Covenant disclosure may also fall into this requirement.

Last but not least, materiality has been the focus of the FASB's recent effort. In September 2015, FASB proposed an Accounting Standards Update with regard to assessing whether disclosures are material. It highlights the importance of considering materiality when examining disclosure decisions.

In sum, I conclude that regulatory disclosure requirements on the terms of covenants are somewhat vague, and thus managers use their discretion in deciding whether to disclose the information.

HYPOTHESES DEVELOPMENT

If financial covenants have been disclosed in previous SEC filings, presumably, investors would include them along with other financial information to assess the status of a company's compliance with financial covenants (status of financial covenants, hereafter). When firms violate accounting-based debt covenants, they may incur costs. Core and Schrand (1999) develop such a model of equity valuation, which predicts that the probability of violating financial covenants affects firm value. Furthermore, they provide evidence that earnings response coefficients on losses and non-permanent earnings are positive and significant only for thrift institutions that are near the minimum regulatory capital requirement. This suggests that investors price information about the status of financial covenants into their valuations, especially for firms close to technical default. Thus, if accounting information (e.g., earnings information) is available, investors can use it to evaluate the covenant status and their evaluation is impounded into the firm's security price.

Demski and Feltham (1994), Holthausen and Verrecchia (1988), and Kim and Verrecchia (1991) predict that price response to earnings announcements is negatively related to price response to information contained in pre-earnings announcements. Empirical research supports this prediction. For example, Shores (1990) documents that market reactions to annual earnings announcements decrease as the amount of interim information increases. In addition, as pointed out in Francis et al. (2002), the financial press has focused on the superiority of analyst forecasts in terms of both timeliness and content. Overall, both analytical and empirical evidence suggest that earnings information and other accounting information are likely to be revealed through different types of pre-announcements such as analyst forecasts and management forecasts. Therefore, the accounting information necessary to compute financial covenant ratios is likely available to investors before current period earnings announcement, 10-Q, or 10-K filing dates.

In sum, the literature has documented that (1) investors evaluate the status of financial covenants even before they are informed about the technical default; and (2) firms disclose information necessary for investors to compute the impact of financial covenants. As a result, I expect that prior disclosures of financial covenants can preempt some portion of the negative stock-price response on the technical default announcement date. Thus, I hypothesize that (the disclosure effect):

H1: Ceteris paribus, firms disclosing financial covenants in prior public filings will suffer less on the dates they announce technical default compared to those not previously disclosing financial covenants.

My second hypothesis relates to the impact of relative debt-contract size on the market reactions to technical default announcements. Although Securities Act of 1933 section 3 (77c) requires that any public debt offering that exceeds five million dollars be registered with the SEC, there is no such requirement for private debt. Since my sample is comprised of private debt, the disclosure requirement that governs this sample is Regulation S-X item 5-02, which requires that the amount and terms of used commitments for long-term financing arrangements be disclosed in the notes to the financial statements, *if significant*. In addition, Regulation S-K requires companies to file exhibits for long-term debt when the total amount exceeds 10 percent of total assets on a consolidated basis. These regulatory requirements mandate disclosures about

contracts if they are “significant” or “material” to a company. The recent study by Heitzman et al. (2010) argues that materiality indeed plays an important role in disclosure decisions.

For material contracts, the market reaction to technical default would be twofold. On the one hand, if the contract is material to the company, it is more likely that the covenant violation will be a significant event to the company, and consequently, the market will react more negatively to the violation announcement (hereafter, the materiality effect). On the other hand, although regulations do not have specific provisions regarding the disclosure of accounting-based covenants, the larger the debt contract, the more likely companies are to disclose the covenant terms in their SEC filings. If the first hypothesis holds, then the negative market reaction would be reduced. In addition, firms are more likely to discuss the default risk of material contracts in their SEC filings under MD&A, and in their conference calls. Material contracts are more likely to attract investors’ attention, and thus, the negative reaction to the announcement of technical default may be smaller. This effect is similar in spirit to the disclosure effect in Hypothesis 1. Because these two effects move in opposite directions, I state the second hypothesis in null form:

H2: The market reaction on the announcement date of the technical default does not vary systematically with the materiality of the lending contract.

RESEARCH DESIGN

To test *H1* and *H2*, I use models similar to Beneish and Press (1995a):

Model 1 (*H1*):

$$CAR = \alpha_0 + \alpha_1 DIS + \alpha_2 WAIVER + \alpha_3 NEWS + \alpha_4 LEV + \alpha_5 SUR + \alpha_6 LTA + \varepsilon \quad (1)$$

Model 2 (*H2*):

$$CAR = \beta_0 + \beta_1 DT_SIZE_SL + \beta_2 WAIVER + \beta_3 NEWS + \beta_4 LEV + \beta_5 SUR + \beta_6 LTA + \nu \quad (2)$$

where *CAR* is the cumulative abnormal return, namely, the raw stock return minus the CRSP equal-weighted market portfolio return, measured over a three-day window (-1, +1), where 0 is the date of the earliest announcement; *DIS* is a binary variable, which is coded 1 if financial covenants are disclosed in the 10-K, 10-Q, or 8-K filings prior to a firm’s announcement of technical default, and 0 otherwise; *DT_SIZE_SL* is the aggregate lending commitment amount under the debt agreement scaled by total liabilities measured at the beginning of the fiscal year of violation. I use this variable as a proxy for the materiality of the debt contract. *WAIVER* is coded 1 if a waiver is granted at the time of the violation announcement, 0 otherwise; *NEWS* is defined as 1 if the violation announcement first appears in the 8-K or on the newswire, 0 if it first appears in the 10-K or 10-Q; *LEV* is leverage defined as total liabilities over book value of total assets measured at the end of the violation year; *SUR* is earnings surprise measured as actual quarterly earnings per share minus the most recent forecast of earnings per share closest to, but still prior to, the quarterly earnings announcement. A random walk model is used to obtain the last period quarterly earnings when a forecast is not available in I/B/E/S; *LTA* is the natural logarithm of total assets measured at the beginning of the fiscal year of covenant violation.

This model does not include the three variables related to the technical default cost in Beneish and Press (1995a). The three variables are: (1) incremental interest costs, (2) the change in the amount of loan credit, and (3) the increased number of constraints following default and renegotiation. Beneish and Press (1995a) document that while (1) and (3) are significant, the change in the amount of loan credit is insignificant in determining the market reaction. Since half of my sample firms have not finished renegotiation with their lenders at the date they announce technical default, it is not possible to determine the three variables. Instead,

I include leverage as a control variable since it is significantly correlated with incremental interest costs after technical default (Beneish and Press, 1993).

Leverage ratio is also frequently used as a proxy for closeness to covenant violation and for the cost of covenant violation (Aboody et al. 2000; Duke and Hunt, 1990; Press and Weintrop, 1990; Zhang, 2008). I control for leverage for three reasons. First, as mentioned above, Beneish and Press (1993) show that leverage measured at the end of the violation year is significantly correlated with incremental interest cost (refinancing cost) caused by technical default. Second, Press and Weintrop (1991) find in their randomly selected sample that tangible net worth, working capital, and leverage are the most frequently used covenants. Dichev and Skinner (2002) also show that leverage ratio is among the most frequently used covenant in their large sample. Thus, leverage is a good proxy for future covenant violation. Third, many credit facility agreements contain cross-default provisions for covenants, so violating one covenant could result in a default under another contract. As a result, a firm with higher leverage is more likely to have cross defaults and a hard time rectifying such problems.

I control for whether the firm is granted a waiver when it announces technical default, because a waiver signals to the market that the liquidity problem is, either permanently or temporarily, relieved as documented in Beneish and Press (1993, 1995a). I include *NEWS* as a control variable because Beneish and Press (1995b) document that news media announcements generate more adverse *CARs*. For example, such disclosures of technical default have -5.54 percent *CAR* versus -2.40 percent *CAR* for SEC filings. In addition, it appears that the majority of newswire announcements coincide with 8-K filings, so I code both 8-K and newswire announcements as 1.

I also control for earnings surprise, *SUR*, and total assets, *LTA*. Earnings surprise, *SUR*, is controlled for because among the 66 firms, 27 firms released the technical default information along with their earnings. *LTA* is used to control for firm size. Lobo and Mahmoud (1989) find that market reactions to earnings announcements decline as firm size increases. However, for the other 39 firms, their announcements do not accompany earnings announcements, so the sign of *LTA* is not clear.

Hypothesis 1 predicts a positive coefficient on *DIS*. A positive coefficient on *DIS* suggests that firms disclosing their accounting-based covenants before the default experience less negative market reaction when they announce the technical default because their investors are able to already account for the probability of technical default. With regard to Hypothesis 2, a positive β_1 indicates that the disclosure effect dominates the materiality effect. In other words, firms with larger debt contracts experience smaller negative market reaction at the time of the technical default announcement. On the contrary, a negative β_1 indicates that the materiality effect dominates the disclosure effect.

It is best to include both *DIS* and *DT_SIZE_SL* in one regression so that any interpretation of *DIS* is immune to the effect of *DT_SIZE_SL*, and vice versa. However, as developed above, the relative size of the contract is potentially correlated with the firm's tendency to disclose financial covenants, leading to collinearity. Collinearity is problematic when the purpose of the regression is to interpret the coefficient. Moreover, collinearity makes it more difficult to achieve significance of the collinear parameters. These two variables are in fact correlated at 0.005 level, with Spearman correlation of .34 (untabulated to conserve space). Therefore, to consider materiality while eliminating the collinearity problem in Model 1, I partition the sample into two groups based on level of materiality. Since there is no unambiguous definition of a "significant" or "material" contract, albeit somewhat arbitrary, I choose the median *DT_SIZE_SL* as a cut-off, and test both hypotheses again on two groups to see whether *DIS* and *DT_SIZE_SL* still affect shareholder wealth within each group while eliminating the omitted correlated variable problem. Other possible ways to partition exist: for example, 10 percent of total assets (Regulation S-K). However, I do not use this for two reasons. First, Regulation S-K only requires companies to file exhibits for long-term debt

but does not explicitly require disclosure about covenants when the total amount exceeds 10 percent of total assets. Second, this cut-off results in 14 firms in one group where regression can hardly be performed.

SAMPLE SELECTION

I construct my sample similarly to Beneish and Press (1993, 1995a). The major difference is in the fact that I include 10-Q files, whereas Beneish and Press (1995a) limit their study to only 10-K files because of the data limitation at that time. Out of 66 firms in my final sample, 18 chose a 10-Q filing and 7 an 8-K filing as the first report to announce their financial covenant violations.

I use the 10-K filings to identify firms that violated financial covenants. I start with non-financial firms listed on either the New York Stock Exchange or the American Stock Exchange, with a reporting date between January 1, 2003 and December 31, 2007. Using three groups of keywords — “technical default,” “violation,” and “not in compliance” — I identify firms that disclosed their technical default in their 10-K filings. For each 10-K filing, I also read their 10-Q and 8-K filings one year prior to that filing date to pinpoint the earliest date the violation information was disclosed. I then search Factiva using keyword “covenant” for a one-year period before the 10-K filing dates. Comparing the date from the SEC filings and the date from the Factiva for each firm, I choose the earlier date as my event date.

Consistent with Beneish and Press (1995a), I impose the following restrictions on my sample:

1. To reduce the impact caused by contamination from other events, I exclude firms that announced violations along with debt service default, filing under chapter 11, or with a qualified auditor opinion, etc. I exclude such firms because it is unclear whether these different types of events would have similar effects on the *CAR*.
2. For firms that violated financial covenants multiple times during my sample period, only the first violation is included in the sample. By doing this, I eliminate the problem that the market may react differently to the second violation than it did to the first violation.
3. Along the same line of reasoning as restriction 2, firms in my final list do not have a violation in the prior year.

Finally, for firms that satisfy all of the above restrictions, I search the SEC filings for detailed information on the contracts related to the violated covenants. *DIS* is coded 1 only if the exact terms of the financial covenants are disclosed. For example, ANGELICA CORP disclosed in its 2001 10-K filings that the most restrictive of its loan agreements requires that the company maintain a minimum of \$160,000,000 in consolidated net worth. In this case, *DIS* is coded 1. One example where *DIS* is coded 0 is COMFORT SYSTEMS USA INC. In its second quarter 10-Q filings in 2000, it only says that the credit facility provides for the maintenance of certain levels of EBITA. Besides *DIS*, I also collect the aggregate lending commitment amount under the agreement to capture the size and the materiality of the contract.

Table 1 presents a summary of how the final sample is obtained. I begin by identifying 206 filings that include violation of financial covenants. Of these 206 filings, 69 had previous violations. This is consistent with the findings in Chava and Roberts (2008), Dichev and Skinner (2002), DeAngelo et al. (1994), and Sweeney (1994) that private lenders set debt covenants tightly and use them as “trip wires” for borrowers. As a result, technical violations occur relatively often. There are four announcements accompanied by bankruptcy filings, five with other legal matters, eight with debt service default, seven with qualified auditor opinions, two with initial public offering, five with restatements, and two with non-accounting based covenants. Thirteen firms did not disclose what covenants they violated and the contracts to which the covenants belong. In addition, because I use the CRSP stock price data to compute the abnormal return, 22

firms that do not have enough price information in CRSP are also dropped. I also delete three observations because the necessary control variables are not found in COMPUSTAT. I end up with 66 observations.

Table 1: Sample Selection

Filings with violation announcement ¹		206
Less:	violations which are either not the first-time violation in my sample period or have a violation in the prior year	69
	violations announced with bankruptcy filing	4
	violations announced with other legal matters	5
	violations announced with debt service default	8
	violations announced with qualified auditor opinion	7
	violations announced with IPO	2
	violations announced with restatement	5
	violations announced with non-accounting based covenant	2
	violations without detailed information	13
		91
less:	firms with no CAR results on EVENTUS	22
		69
less:	firms with missing necessary COMPUSTAT items	3
Final sample		66

Table 1 presents sample selection process.

¹filings include 10-K, 10-Q, and 8-K.

EMPIRICAL RESULTS

Market Reactions to the Announcement of Financial Covenant Violation

To compute abnormal returns, I choose the market model and CRSP equally weighted market portfolio return. I use an estimation period of 300 trading days from day +61 to day +360, where day 0 is the technical default announcement date. By using the post-event estimation period, I avoid the effect of potential risk shifts immediately preceding the technical default announcement (Beneish and Press, 1995a; Holthausen and Leftwich, 1986).

The descriptive statistics of cumulative abnormal returns are reported in Table 2. As Table 2 shows, the mean cumulative abnormal return from days -1 to +1 is -1.67 percent, a shareholder wealth loss, which is significant at the 3 percent level. The mean cumulative abnormal return on the exact date of announcement is -1.25 percent, significant at the 2 percent level. The negative market reaction on the date of the technical default announcement contributes most to the wealth loss during the three-day event window. Hereafter, I use three-day cumulative abnormal returns as the measure of shareholder wealth loss on announcement dates of technical default.

Table 2: Descriptive Statistics of Cumulative Abnormal Return

Variable	N	Mean	Median	Std Dev	First Quartile	Third Quartile	P-value
(-30,-2) CAR	66	-0.0287	-0.0240	0.1812	-0.1038	0.0548	0.2031
(-1,0) CAR	66	-0.0123	-0.0098	0.0484	-0.0378	0.0145	0.0424**
(0,0) CAR	66	-0.0125	-0.0085	0.0412	-0.0205	0.0991	0.0164**
(0,+1) CAR	66	-0.0168	-0.0122	0.0614	-0.0374	0.0049	0.0295**
(-1,+1) CAR	66	-0.0167	-0.0193	0.0607	-0.0433	0.0067	0.0292**
(+1,+30) CAR	66	-0.0286	-0.0450	0.1948	-0.1207	0.0447	0.2370

¹CAR is cumulative abnormal return is the raw stock return minus the CRSP equally-weighted market portfolio return. Market portfolio return is estimated over 300 trading days from day +61 to day +360.

²P-value is for H0: CAR=0 using a two-tailed student-t. * significant at 10%; ** significant at 5%; *** significant at 1%.

To further examine whether shareholders are more likely to experience a wealth loss on the announcement date of a technical default, I implement a binomial test of equal likelihood of positive and negative *CAR* around violation announcement dates. The result is shown in Table 3. The null hypothesis is rejected at the 0.0016 level, indicating that firms are more likely to experience a negative market reaction when they announce technical default.

Table 3: Binomial Test of Equal Likelihood of Positive and Negative *CAR* (-1, +1)

<i>CAR</i> (-1,+1)	Frequency	Percent	Cumulative Frequency	Cumulative Percent
<i>CAR</i> <0	45	68.18	45	68.18
<i>CAR</i> >=0	21	31.82	66	100
Test of H0: Proportion = 0.5				
ASE under H0		0.0615		
Z		2.954		
One-sided Pr > Z		0.0016		
Two-sided Pr > Z		0.0031		
Exact Test				
One-sided Pr >= P		0.0021		
Two-sided = 2 * One-sided		0.0043		

CAR is cumulative abnormal return is the raw stock return minus the CRSP equally-weighted market portfolio return. Market portfolio return is estimated over 300 trading days from day +61 to day +360. P-value is for H0: firms are equally likely to experience a positive and negative market reaction.

Descriptive Statistics of Other Variables

Other descriptive statistics for the sample are presented in Table 4. In Panel A of Table 4, 62 percent of firms disclosed financial covenants in previous SEC filings before they announced technical default. Seventy-seven percent of the firms obtained waivers by the time they announced technical default to the public. Seventy-four percent of the firms chose to announce the covenant violation in 10-K or 10-Q filings; for the remaining 26 percent of firms, the violation announcements first appeared on either the newswire or 8-K filings. Mean (median) *LEV* is 0.60 (0.57), similar to the mean (median) leverage of 0.62 (0.62) in Beneish and Press (1993). Both the mean and median of the earnings surprise, *SUR*, are negative, which indicates that most firms experienced unexpected low earnings in the quarter right before they announced technical default. The size of the debt contract, *DT_SIZE*, differs from one million to one billion. However, the mean contract is 46 percent of the total liabilities of an individual firm. The sizes of my sample firms are larger than that of Beneish and Press (1993). Mean and median of total assets in my sample are approximately 1,501 and 329 million; in Beneish and Press (1993, 1995a), the mean and median are 493 and 104 million, respectively. Overall, my sample firms are relatively larger compared to Beneish and Press (1993, 1995a), but the capital structures of firms in both samples are similar in terms of leverage.

Panel B and C of Table 4 take a closer look at the sample from the contract materiality perspective. First, Panel B shows that 49 firms have debt that exceeds 10 percent of their total assets, which is the Regulation S-K threshold, whereas 14 firms have debt below the threshold. To further decompose the sample, I find that among the contracts that exceed the threshold, 78 percent of the firms chose to disclose their covenants, whereas among the contracts under the 10 percent threshold, only 21 percent disclosed covenants. This result is consistent with the intuition that firms tend to disclose their financial covenants when the debt contract is above the materiality threshold. Using the proxy for materiality in this study, I also partition the sample by the median of debt contract size over total liabilities to see whether there is the same trend as discovered above. As expected, the number of firms that disclose their financial covenants is 18 percent higher in the group where contracts exceed the median of *DT_SIZE_SL* than in the other group. These two panels not only provide the evidence that materiality is positively correlated with the tendency to disclose the covenant but also show that the proxy for materiality threshold chosen, median *DT_SIZE_SL*, is valid.

Table 4: Descriptive Statistics and Number of Observations by Materiality Threshold (1)

Panel A: Descriptive Statistics						
Variable	N	Mean	Median	Std Dev	1st Quartile	3rd Quartile
DIS	66	0.6212	1			
WAIVER	66	0.7727	1			
NEWS	66	0.2576	0			
LEV	66	0.5982	0.5676	0.3617	0.3882	0.7161
SUR	66	- 0.1522	- 0.0850	0.5934	- 0.2700	0
TA	66	1,501.1	329.37	6,267.7	100.55	854.63
LTA	66	5.6891	5.797	1.657	4.611	6.751
DT_SIZE	58	88.646	18.200	177.65	3.900	125
DEBT_USED	58	0.4328	0.1228	2.304	0.0140	0.2130

Panel B: Number of Observations by Materiality Threshold (1)			
	Disclose Covenants	Not Disclose Covenants	Total
contracts that exceed 10% threshold ¹	38 (78%)	11 (22%)	49
contracts that do not exceed 10% threshold	3 (21%)	11 (79%)	14

Panel C: Number of Observations by Materiality Threshold (2)			
	Disclose Covenants	Not Disclose Covenants	Total
contracts above the median of DT_SIZE_SL ²	23 (74%)	8 (26%)	31
contracts below or equal to the median of DT_SIZE_SL	18 (56%)	14 (44%)	32

CAR is cumulative abnormal return that is the raw stock return minus the CRSP equally-weighted market portfolio return during three-day window. Market portfolio return is estimated over 300 trading days from day +61 to day +360.

DIS is 1 if the firm disclosed its financial covenants in either a 10-k, 10-Q, or 8-K filing before it announced the violation, 0 otherwise.

WAIVER is 1 if a waiver is granted at the time of violation announcement, 0 otherwise.

NEWS is 1 if the violation announcement first appears on the 8-K or newswire, 0 if it appears first on the 10-K or 10-Q.

LEV is the ratio of total liabilities to book value of total assets measured at the end of the fiscal year of covenant violation.

SUR is actual quarterly earnings per share minus the most recent forecast earnings per share closest to, but prior to, the quarterly earnings announcement. A random walk model is used to obtain the last period quarterly earnings when a forecast is not available in 1/B/E/S.

TA total assets at the beginning of the fiscal year of covenant violation in millions.

LTA is natural logarithm of total assets measured at the beginning of the fiscal year of covenant violation.

DT_SIZE is the amount of used commitment under the debt agreement.

DEBT_USED is the amount of used commitment under the debt agreement scaled by the total assets at the beginning of the fiscal year

¹Regulation S-K requires a company to file an exhibit to form 10-K if the amount of debt exceeds 10% of its total assets.

²DT SIZE SL is defined in Panel A.

Regression Results

In Table 5, I present the results of a multivariate analysis using the ordinary least squares estimation. The dependent variable is *CAR* during the (-1, +1) event window. I start with two benchmark models. Column (1) presents the result of the first benchmark model with three independent variables, *LEV*, *SUR*, and *LTA*. By adding two covenant-related variables, *WAIVER* and *NEWS*, the model in column (2) is improved by an increase of 3.58 percent in adjusted R-squared. To test Hypothesis 1, I show in column (3) that the variable of interest, *DIS*, increases the model's explanatory power by 1.9 percent. More to the point, as hypothesized, *DIS* is significantly positively correlated with *CAR* with a coefficient of 0.0217. This suggests that firms disclosing financial covenants experience 2.17 percent less negative returns than those firms not disclosing related covenants.

Table 5: Regression Analysis

Variable	Predicted Sign	Benchmark Models		Main Models	
		(1)	(2)	MODEL1 (3)	MODEL2 (4)
Intercept	?	0.0193 (0.4089)	0.0068 (0.8180)	– 0.0076 (0.8013)	– 0.0336 (0.3264)
DIS	+			0.0217 (0.0524)*	
DT_SIZE_SL	?				0.0325 (0.0899)*
WAIVER	+		0.0059 (0.3592)	0.0071 (0.3287)	0.0033 (0.4219)
NEWS	–		– 0.0318 (0.0220)**	– 0.0374 (0.0098)***	– 0.0428 (0.0042)***
LEV	–	– 0.0378 (0.0240)**	– 0.0348 (0.0319)**	– 0.0392 (0.0184)***	– 0.0255 (0.0892)*
SUR	+	0.0486 (<.0001)***	0.0475 (<.0001)***	0.0480 (<.0001)***	0.0489 (<.0001)***
LTA	?	– 0.0011 (0.7961)	0.0014 (0.7270)	0.0022 (0.5964)	0.0062 (0.1624)
Sample Size		66	66	66	63 ¹
Unadjusted R ²		0.3146	0.3697	0.3975	0.4280
Adjusted R ²		0.2814	0.3172	0.3362	0.3667
Regression P-value		<.0001	<.0001	<.0001	<.0001

CAR is cumulative abnormal return that is the raw stock return minus the CRSP equally-weighted market portfolio return during three-day window. Market portfolio return is estimated over 300 trading days from day +61 to day +360.

DIS is 1 if the firm disclosed its financial covenants in either a 10-K, 10-Q, or 8-K filing before it announced the violation, 0 otherwise.

DT_SIZE_SL is the aggregate lending commitment amount under the agreement scaled by total liabilities at the beginning of the fiscal year of covenant violation.

WAIVER is 1 if a waiver is granted at the time of violation announcement, 0 otherwise.

NEWS is 1 if the violation announcement first appears on the 8-K or newswire, 0 if it appears first on the 10-K or 10-Q.

LEV is the ratio of total liabilities to book value of total assets measured at the end of the fiscal year of covenant violation.

SUR is actual quarterly earnings per share minus the most recent forecast earnings per share closest to, but prior to, the quarterly earnings announcement. A random walk model is used to obtain the last period quarterly earnings when a forecast is not available in I/B/E/S.

LTA is natural logarithm of total assets measured at the beginning of the fiscal year of covenant violation.

¹Compared to Model 1, Model 2 has 63 firms because lending commitment amounts for three contracts are unavailable. I also run the benchmark models based on these 63 firms, and the R-squares are 0.2888 and 0.3447, respectively.

P-values are provided below the coefficients (one-tailed when sign is predicted) and are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

The signs for all control variables are as expected. I find that although the sign on *WAIVER* is positive, it is not statistically significant. This insignificance might be due to the fact that waivers are routinely granted. As private lenders try to set tighter covenants in order to obtain more frequently updated financial information (Dichev and Skinner, 2002), firms violate covenants more often but are also granted waivers more often. In addition, Beneish and Press (1993) and Chen and Wei (1993) show that waivers are not costless, since firms that obtain waivers following renegotiation face higher interest rates, have more covenants, and divest more frequently. Hence, even if a firm is able to obtain a waiver, the market does not necessarily consider it a positive signal.

NEWS is negatively related with *CAR*, indicating that the price reaction is 3.74 percent more negative when technical defaults are announced on Newswire or an 8-K than in the 10-Ks or 10-Qs. This price response difference is similar to the 3.14 percent difference found in Beneish and Press (1995b). This is consistent with the argument in Beneish and Press (1995b) that news media selectively report events that affect a relatively larger number of investors or that are relatively more costly covenants.

Consistent with prior research, *LEV* is significantly negatively related to the market reaction, suggesting that the higher the leverage ratio, the higher the cost of technical default, and thus the stronger the negative price reaction. As expected, earnings surprise, *SUR*, has a positive coefficient, indicating that a larger magnitude of positive earnings surprise is more likely to have a positive market reaction, or at least a less negative reaction. *LTA* is positive but insignificant.

To test Hypothesis 2, I run Model 2 by substituting *DT_SIZE_SL* for *DIS* in Model 1. The sign and significance of all the control variables are similar to the results of Model 1. The significant positive coefficient on *DT_SIZE_SL* provides evidence that the disclosure effect dominates the materiality effect. As discussed earlier, the materiality effect predicts that the technical default of material debt contracts would induce a stronger negative market reaction, whereas the disclosure effect predicts a smaller magnitude of negative price response since firms tend to disclose material contract terms, managers are more likely to discuss the default risk of larger contracts, and larger contracts are more closely watched by investors. The result shows that the technical default of material debt contracts leads to a smaller negative market reaction than that of less material contracts: it indicates that the disclosure effect dominates the materiality effect.

To further examine the disclosure effect from the effect of the materiality of the contract, I partition the sample into two groups by the median of relative importance of the contracts, *DT_SIZE_SL*. Group 1 includes firms where *DT_SIZE_SL* is less than or equal to the median, while group 2 consists of firms with *DT_SIZE_SL* greater than the median. Heitzman et al. (2010) report that in general, the firms choose the materiality threshold as a result of negotiation among management, auditors, and regulators. Since the materiality threshold of covenant disclosure is unobservable, I use median *DT_SIZE_SL* to proxy for the materiality threshold for disclosure decisions. This materiality threshold is a cut-off such that for group 2 (above the threshold), the information is material enough to warrant disclosure. While for group 1 (below the threshold), the information is not material enough to require disclosure. Hence, the materiality threshold is assumed likely not to be binding for group 1, but is assumed binding for group 2. Of course, it is possible that some firms in group 1 do disclose. If a firm in group 1 discloses the terms of debt covenants, then I interpret it as a case of “voluntary” disclosure. First, I test whether *DIS* still plays a role in determining *CAR* for each group.

In Table 6, results of Model 1 are presented in columns (1) and (2). First, the coefficient on *DIS* ($\alpha_1=0.0275$ and $p\text{-value}=0.0798$) of group 1 in column (1) suggests that when a contract is less material, disclosing covenants in previous filings alleviates 2.75 percent of the negative market reaction. Heitzman et al. (2010) posit that even when the materiality threshold is not binding, managers may voluntarily disclose the information if they expect the benefits (for example, market reaction in this case) to outweigh the costs. My results provide evidence that supports the argument in Heitzman et al. (2010). For group 2 in column (2), *DIS* ($\alpha_1=0.0164$ and $p\text{-value}=0.2283$) is insignificant, which indicates that *DIS* does not explain much about the *CAR*. This insignificance might be due to the fact that those firms met the materiality threshold and disclosed their financial covenants anyway. Therefore, there is not much variation in *DIS* itself. As a result, group 1, where materiality is not binding, primarily drives the finding that the disclosure decision affects market reaction to technical default.

Second, to further support the hypothesis that the disclosure of financial covenants reduces shareholder wealth loss mainly for less-material contracts, I re-run Model 2 for the two groups. If the first hypothesis still holds, I expect that *DT_SIZE_SL* will not be significant in group 1 because it is *DIS* and not *DT_SIZE_SL* that explains the variance of *CAR*. Regression results are reported in Columns (3) and (4) on Table 7. As expected, *DT_SIZE_SL* is insignificant in group 1, indicating that the relative size of a contract is not correlated with price responses to technical default when materiality is not binding. However, *DT_SIZE_SL* shows significance ($\beta_1=0.073$ and $p\text{-value}=0.0203$) in group 2, and this implies that when

materiality is binding, *CARs* are positively, significantly related to the relative size of a contract, consistent with the finding shown on Table 6.

Table 6: Regression Analysis for Partitioned Sample

Variables	Predicted Sign	Model 1		Model 2	
		Group 1 (1)	Group 2 (2)	Group 1 (3)	Group 2 (4)
Intercept	?	0.0012 (0.9805)	– 0.0154 (0.7202)	– 0.0177 (0.7675)	– 0.0636 (0.1578)
DIS	+	0.0275 (0.0798) *	0.0164 (0.2283)		
DT_SIZE_SL	?			0.0079 (0.9251)	0.0730 (0.0203) **
WAIVER	+	0.0064 (0.3954)	0.0272 (0.1466)	0.0033 (0.4519)	0.0114 (0.3168)
NEWS	–	– 0.0137 (0.3054)	– 0.0552 (0.0071) ***	– 0.0214 (0.2441)	– 0.0516 (0.0052) ***
LEV	–	– 0.0446 (0.0290) **	– 0.0628 (0.1024)	– 0.0361 (0.0624) *	– 0.0145 (0.3760)
SUR	+	0.0547 (0.0002) ***	0.0330 (0.0602) *	0.0566 (0.0003) ***	0.0360 (0.0320) **
LTA	?	0.0006 (0.9179)	0.0033 (0.6014)	0.0060 (0.4221)	0.0024 (0.6796)
Sample Size		34	32	31 ¹	32
Unadjusted R ²		0.5203	0.3142	0.5302	0.4368
Adjusted R ²		0.4137	0.1496	0.4127	0.3016
Regression P-value		0.0017	0.1189	0.0034	0.0172

Group 1 includes firms with $DT_SIZE_SL \leq 0.4545$; group 2 includes firms with $DT_SIZE_SL > 0.4545$ where 0.4545 is the median of DT_SIZE_SL of whole sample.

CAR is cumulative abnormal return that is the raw stock return minus the CRSP equally-weighted market portfolio return during three-day window. Market portfolio return is estimated over 300 trading days from day +61 to day +360.

DIS is 1 if the firm disclosed its financial covenants in either a 10-K, 10-Q, or 8-K filing before it announced the violation, 0 otherwise.

DT_SIZE_SL is the aggregate lending commitment amount under the agreement scaled by total liabilities at the beginning of the fiscal year of covenant violation.

WAIVER is 1 if a waiver is granted at the time of violation announcement, 0 otherwise.

NEWS is 1 if the violation announcement first appears on the 8-K or newswire, 0 if it appears first on the 10-K or 10-Q.

LEV is the ratio of total liabilities to book value of total assets measured at the end of the fiscal year of covenant violation.

SUR is actual quarterly earnings per share minus the most recent forecast earnings per share closest to, but prior to, the quarterly earnings announcement. A random walk model is used to obtain the last period quarterly earnings when a forecast is not available in I/B/E/S.

LTA is natural logarithm of total assets measured at the beginning of the fiscal year of covenant violation.

¹0.4545 is the median of DT_SIZE_SL of whole sample.

**group 1 under model 2 lost three firms because of no information on lending commitment amounts for the three firms.

P-values are provided below the coefficients (one-tailed when sign is predicted) and are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

To summarize the results for group 2, this group has contracts that meet the materiality threshold, so firms in this group are more likely to disclose the contracts and attract more attention from the public through the terms of their debt contracts. Last, but not least, the omitted correlated variable problem between *DIS* and *DT_SIZE_SL* no longer exists on Table 7, since only one of them relates to the dependent variable *CAR* within each group.

Collectively, the results from both Table 5 and Table 6 are generally consistent with Hypothesis 1. Disclosure of financial covenants in SEC filings reduces shareholder wealth loss when the technical default is announced, in particular, for firms where materiality condition is not binding. That is, voluntary disclosure of covenant information allows investors to assess the financial condition of firms in a timely fashion so that the impact of a technical default announcement is better anticipated and the negative market

reaction is attenuated. Regarding Hypothesis 2, this study provides evidence that market responses vary systematically with the relative size of a contract at times when materiality is binding.

CONCLUSIONS AND LIMITATIONS

This study investigates the benefits of disclosing financial covenants in SEC filings to shareholders. Specifically, it provides empirical evidence that disclosing financial covenants in previous SEC filings reduces the negative price responses on the announcement date of a technical default. Additional tests reveal that this specific type of benefit mainly shows up for firms where materiality is not binding. This result suggests that “voluntary” disclosure is especially effective in providing useful information to investors in a timely manner, so that investors are able to better assess the probability of technical default and take appropriate action, if they wish. Thus, shareholders experience a less negative market reaction on the announcement date of technical default. When materiality is binding, firms are more likely to disclose the covenants of these contracts, and thus, the disclosure variable is no longer the distinguishing factor. The result shows that material contracts tend to have smaller negative market reactions. As discussed earlier, one potential reason is that the risk of violating the covenant of such material contracts is more frequently discussed by management. Another reason could be that material contracts tend to receive more attention from investors. As a result, the surprise on the announcement date of the technical default is smaller. These findings have financial reporting implications for financial communities and standard setters. Specifically, since FASB has been trying to improve the disclosure effectiveness by clarifying materiality, it might consider the evidence that debt covenant disclosure is material to investors, especially for debt contracts that fall short of extant disclosure requirements. At the same time, this finding is also useful for companies that are trying to decide whether to disclose the terms of debt covenants.

One limitation of this study is the small sample due to the hand-collected data collection process, which restricts research design. For example, I could not partition sample firms based on the 10 percent criterion because one of the sub-samples would be too small to run a multivariate analysis. In addition, the collinearity problem between *DIS* and *DT_SIZE_SL* is difficult to remedy in a small sample. Future studies could employ larger samples to conquer these limitations and improve our understanding of how the disclosure of debt covenant terms affects shareholder wealth.

APPENDIX

Appendix A: An Example of how Investors Use Covenant Information to Evaluate the Probability of Technical Default

Part 1: Disclosure of Financial Covenants in the Year the Contract Is Signed

The following information is extracted from 10-Q filings on Nov 15, 1999 of HOOPER HOLMES INC (ticker: HH).

AMENDED AND RESTATED REVOLVING CREDIT AND TERM LOAN AGREEMENT

The borrowers shall not:

8.14 Consolidated net loss: suffer a consolidated net loss in any two fiscal quarters occurring in any period of twelve consecutive months.

8.15. Consolidated fixed charge coverage ratio: permit its consolidated fixed charge coverage ratio to be at any time less than 1.50 to 1.00, measured on a quarterly basis for the relevant test period.

Consolidated net loss shall mean for any fiscal period relevant to the determination thereof, the circumstance that would exist if the results reported on an income statement of the borrower prepared in accordance with GAAP, consistently applied, on a consolidated basis, report a net loss for such fiscal period.

Consolidated fixed charge coverage ratio shall mean the ratio of (A) the borrower's net income (excluding non-cash extraordinary items or non-cash post-tax non-operating earnings adjustments) plus amounts (without duplication) deducted from net income in respect of income tax expense, interest expense, depreciation and amortization expense and lease and rental expense to (B) the sum of (y) the current maturities on long term indebtedness (excluding, however, in all cases any current maturities in respect of borrower's obligations under the revolving credit loans) plus (z) the interest expense and lease and rental expense otherwise added back into the borrower's net income pursuant to clause (A) above, in each case determined for the relevant test period on a consolidated basis in accordance with GAAP, consistently applied.

Part 2: Announcement of Technical Default

The following information is extracted from 10-K filings on May 2, 2006 of HOOPER HOLMES INC (ticker: HH).

For the year ended December 31, 2005, the company was not in compliance with two financial covenants: (i) that the company will not incur a consolidated net loss in any two fiscal quarters in any twelve consecutive months; and (ii) that the company will not permit its consolidated fixed charge coverage ratio to be less than 1.50 to 1.0 for the period ended December 31, 2005. The company recognized a consolidated net loss for the quarters ended September 30, 2005 and December 31, 2005. At December 31, 2005, the company's consolidated fixed charge coverage ratio was 1.10 to 1.00. On April 25, 2006, the company obtained a waiver of the above-described issues of non-compliance from the lenders.

Part 3: How Investors Use Covenant Information to Evaluate the Probability of Technical Default as Evidence in Support of Hypothesis 1 (H1)

The company reported a \$2,491,000 net loss for the quarter ended September 30, 2005 on October 30, 2005. In addition, median (mean) analyst forecast made during the third quarter is a \$5,500,000 (\$5,500,000) net loss for the quarter ended December 31, 2005. As a result, (1) investors are able to see that this company is highly likely to violate the covenant related to consolidated net loss; (2) regarding the consolidated fixed charge coverage ratio, here is the simplified version of the formula to compute the ratio:

$$\frac{\text{net income} + \text{non-cash extraordinary} + \text{income tax expense} + \text{interest expense} + \text{depreciation/amortization}}{\text{current-maturity of long-term debt} + \text{interest expense}} \quad (3)$$

Using the data for the third quarter ended on September 30, 2005, one finds that the net loss is 2.5 million, and the numerator is likely to be negative. Thus, the covenant minimum level of 1.5 cannot be easily met.

Part 4: Conclusion

Before the news of technical default first appeared in the news media (PR. Newswire) on April 25, 2006 and was later announced in 10-K filings on May 2, 2006, investors were able to find that this company was about to violate its financial covenants during the fourth quarter of 2005.

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BIOGRAPHY

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