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EVENT RISK BOND COVENANTS AND SHAREHOLDER WEALTH: EVIDENCE FROM CONVERTIBLE BONDS

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Abstract

Previous studies examining the impact of event risk bond covenants on shareholder wealth have conflicting results. Bae, Klein and Padmaraj (1994) find a significant positive stock price reaction related to the issuance of event risk protected bonds. While Cook and Easterwood (1994) find an opposite effect. We examine a sample of convertible bonds and determine that event risk covenants have a significant negative impact on shareholder wealth. This finding supports the hypothesis that event risk bond covenants serve the role of an anti-takeover device and can serve as a tool for management entrenchment.

INTRODUCTION

In recent years the use of event risk protection provisions (or "poison puts") in the issuance of corporate bonds has become very common. Event risk covenants frequently take the form of a put option that is included with the bond. The put option typically requires the issuing firm to repurchase the bond issue from investors in the event of a change in corporate control such as a merger or leveraged buyout. The provisions often require the firm to purchase the bonds at par value or, in the case of original issue discount bonds, at the issue price plus accrued original issue discount.

Event risk covenants can serve two purposes. First, the covenants can serve to protect bondholders from losses in value in the event of a change in corporate control and the associated changes in the level of risk of the firm. Second, by making the firm a less attractive takeover target, the covenants can serve as a tool for management entrenchment. This paper examines the effects of issuing convertible bonds with event risk protection on stockholder wealth to determine if the inclusion of such provisions are in the stockholders' best interest.

Section I of this paper provides a discussion of the previous research examining event risk covenants and develops the purpose of this study. Section II describes the data used in this study and Section III outlines the methodology used to determine the effects on stockholder wealth. Results are presented in Section IV, and a summary and conclusion are provided in Section V.

BACKGROUND AND PURPOSE

While they had been around for several years, event risk covenants became more popular after the RJR/Nabisco (RJR) leverage buyout in 1988. The RJR takeover resulted in significant losses to bondholders and caused bondholders to be reluctant to purchase corporate debt without effective event risk protective covenants. Fields, Kidwell and Klein (1992) find that after the RJR takeover, yields on new bond issues increased by 26.4 basis points, however, bonds with event risk protection sold for 31.7 basis points less than similar non-protected bonds. This finding indicates that the inclusion of event risk protection in bond issues may serve to lower the cost of debt and cost of capital for a firm and thereby increase stockholder wealth.

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Bae, Klein and Padmaraj (1994) directly test the relationship between event risk covenants and stockholder wealth. They compare the impact on stockholder wealth of nonconvertible bond issues with event risk protection and nonconvertible bonds without event risk protection. They find a significant negative impact on stockholder wealth at the issuance of non-protected bonds. However, at the issuance of protected bonds, Bae, Klein and Padmaraj find a significant positive impact on stockholder wealth. In addition, other tests by Bae, Klein and Padmaraj indicate that the firms with higher agency costs of debt have higher abnormal returns related to the announcement of an issue of event risk protected bonds.

The results of Bae, Klein and Padmaraj support the hypothesis that event risk protective covenants serve to reduce the agency costs of debt and thereby increase stockholder wealth. That is, event risk covenants appear to be viewed positively by both stockholders and bondholders.

Bae, Klein and Padmaraj's findings are in stark contrast with the findings of Cook and Easterwood (1994). Cook and Easterwood find that the issuance of non-protected bonds does not have a significant impact on shareholder wealth, however, the issuance of protected bonds results in a significant negative impact on stock prices. In addition, they find that while issuing non-protected bonds does not have a significant impact on the wealth of existing bondholders in a firm, issuing protected bonds has a significant positive impact on the wealth of existing bondholders.

Cook and Easterwood's findings support the hypothesis that event risk bond covenants serve the role of an anti-takeover device and can serve as a tool for management entrenchment (thereby deserving the name "poison puts"). In addition, their results indicate that protective covenants serve to benefit bondholders. This benefit, however, does not appear to translate into a reduction in the cost of debt large enough to have a positive impact on stockholder wealth. Cook and Easterwood conclude that event risk protective covenants serve to protect the mutual interest of both managers and bondholders at the expense of stockholders.

There is a conflict of interest between the stockholders of a firm and the managers and bondholders of the firm. Most takeovers increase stockholder wealth because stockholders typically receive a substantial premium over the pre-takeover stock price of the firm. In contrast, top managers of companies frequently lose their jobs in a takeover. Preventing takeovers increases the job security of top managers within corporations. A takeover may negatively impact bondholders' wealth if the target firm's risk increases significantly. It is very common to have an increase in risk due to a takeover because the capital structure of a target firm is typically significantly altered during the takeover (e.g., a leverage buy-out).

This paper provides additional evidence on the impact of event risk covenants on stockholder wealth by utilizing a different data source. That is, we examine a sample of convertible bonds to determine if there is a difference in the shareholder wealth impacts for a group of protected bonds versus a group of non-protected bonds.

Previous research into the stock market's reaction at the announcement of an issue of convertible bonds indicates that, on average, there is a significant negative reaction (see Dann and Mikkelson (1994), Eckbo (1986), and Mikkelson and Partch (1986)). Our findings are consistent with these studies. That is, for both the protected and non-protected sample, there is a significant negative impact on shareholder wealth related to the issuance of convertible bonds. In addition, we find a significantly stronger negative reaction for protected bonds versus non-protected bonds. Our findings support the hypothesis that event risk covenants serve to protect both managers and bondholders at the expense of stockholders.

DATA

Information on convertible bond issues and their SEC filing date is taken from the *Standard and Poor's Bond Guide* for a period from 1985 through 1992 and verified in the *Moody's Industrial Manuals*. Inclusion in the sample requires that the bond issue announcement appear in the *Wall Street Journal Index* and the firm's stock return data must be available in the Center for Research in Security Prices (CRSP) daily returns files for the New York Stock Exchange, American Stock Exchange, or National Association of Securities Dealers Automated Quotation System firms during both the beta estimation period and the analysis period. In addition, firms with other significant announcements around the event dates, as identified in the *Wall Street Journal Index*, are eliminated from the sample. The final sample includes 99 issues of non-protected convertible debt and 41 issues of protected convertible debt.

We employ a standard two-day event window. The announcement date is defined as the earlier of the trading day following the date the issue was registered with the Securities and Exchange Commission (SEC), or the first

date that the issue was reported in the *Wall Street Journal (WSJ)*. The event window for the *WSJ* announcement date includes the day an announcement appears in the *WSJ* and the previous day. The event window for the SEC filing date captures the date the issue is filed with the SEC and the following trading day.

METHODOLOGY

Abnormal returns at the announcement of security offerings are measured using standard event study methodology. Abnormal returns (AR_{jt}) are determined for a period beginning 61 days before to 20 days after the announcement date using the standard market model:

Equation 1

$$AR_{jt} = R_{jt} - (\hat{\alpha}_j + \hat{\beta}_j R_{mt})$$

where R_{jt} is the return for security j for period t, and R_{mt} is the return on an equally weighted index compiled using NYSE, AMEX and NASDAQ stocks for period t. The coefficient estimates $\hat{\alpha}_j$ and $\hat{\beta}_j$ are calculated using a 120 trading day period that ends 62 days prior to the event date examined.

Statistical tests involving the abnormal returns are based on the following Z-statistic,

Equation 2

$$Z = \frac{1}{\sqrt{n}} \sum_{j=1}^{n} \sum_{t=T_1}^{T_2} \frac{AR_{jt}}{S_{jT}}$$

where S_{jT}, the standard deviation for the sum of the AR_{jt} series over the time period from $t = T_1$ to $t = T_2$, is given by Equation (3).[1]

Equation 3

$$S_{jT} = \sqrt{\hat{\sigma}_j^2 \left(T + \frac{T^2}{N} + \frac{T^2 (\overline{R}_{mt} - \overline{R}_m)^2}{\sum_{t=1}^{N} (R_{mt} - \overline{R}_m)^2} \right)}$$

The value $\hat{\sigma}_j^2$ is the mean square error of the market model regression for firm j. The number of sample observations in the period from $t = T_1$ to $t = T_2$ is denoted by T, where T equals $T_2 - T_1 + 1$. The mean market index return during period T is denoted by $\overline{R}_{mt}$ and $\overline{R}_m$ is the mean market index return during the estimation period, N is the number of returns in the estimation period, and R_{mt} is the market index return on day t.

A randomization test is used to determine if there is a significant difference between the event window average abnormal returns (AAR) for the group of bonds with event risk protective covenants and the group of bonds without protective covenants. The randomization test involves first calculating the actual difference between the averages from each sample (the difference between the two AAR). This difference is referred to as the actual value. Next, the event window abnormal returns from both data samples are pooled together. From this pool, 99 abnormal returns are randomly selected and their average is subtracted from the average of the remaining 41 abnormal returns (99 and 41 are used because this is the size of the two samples of securities used in this study). This produces one randomly generated difference between the abnormal returns (referred to as a random value). This process is repeated to generate 999 random values. The actual value is then pooled with the 999 random values, yielding a total of 1,000 observations.

The above observations are then sorted by size. If there is a significant difference between the AAR from the two samples, the actual value should rank very close to either the top or the bottom of the sorted pool (depending on whether the difference is positive or negative). For example, if the actual value is the thirtieth observation from

the sorted pool, the probability of the abnormal returns producing a difference between the means of two samples as large as the actual difference is 30 out of 1,000. This leads to the conclusion that the actual difference between the AAR is significantly different from zero at the three percent level (a p-value of 0.03).

This randomization test has an advantage over parametric t-test for the difference between two means because it requires no assumption as to the distribution of the two samples. In addition, the randomization test is as powerful as the parametric test even if the assumptions for the parametric test are met. Also, this test is more powerful than non-parametric tests.[2]

RESULTS

We estimated abnormal returns around the 140 bond issues in our sample. The coefficients for Equation (1) are estimated using both ordinary least squares regression and the method of Scholes and Williams (1977). In addition, both a value-weighted and equal-weighted index are used in the analysis.

The results from our analysis are presented in Table 1. Consistent with the findings of previous studies, we find a significant negative stock market reaction associated the convertible debt issues. The results are consistent across all estimation methods. More importantly, the reaction related to the protected bond issues is larger than that for the non-protected issues. The p-value from the randomization test for the difference between the average reaction for the protected issues and the non-protected issues indicates that the protected issues have a significantly larger negative reaction than do the non-protected issues. That is, the event risk covenants appear to have a significant negative impact on shareholder wealth.

TABLE 1
Average Abnormal Common Stock Returns Related to Convertible Bond Issues With Event Risk Protection and Convertible Bond Issues Without Event Risk Protection

	Protected Bonds		Non-protected Bonds		
	Average Abnormal Returns	**Percent Positive**	**Average Abnormal Returns**	**Percent Positive**	**p-Value[a]**
OLS Betas Value-Weighted Index	-0.0189* (-3.3455)	29.27	-0.0138* (-3.0981)	37.37	0.046*
OLS Betas Equal-Weighted Index	-0.0205* (-3.5795)	29.27	-0.0124* (-2.6624)	36.36	0.054**
Scholes-Williams Betas Value-Weighted Index	-0.0208* (-3.5906)	26.83	-0.0126* (-2.7625)	36.36	0.049*
Scholes-Williams Betas Equal-Weighted Index	-0.0217* (-3.6661)	24.39	-0.0118* (-2.4700)	39.39	0.056**

a p-Value to test from randomization test for the difference in Average Abnormal Returns.
* Significant at the 0.05 level.
**Significant at the 0.10 level.

Our results are consistent with the findings of Cook and Easterwood. That is, the stock price reaction to the issuance of bonds with event risk covenants is consistent with management entrenchment hypothesis. The covenants appear to serve to protect the interest of managers (and bondholders) at the expense of stockholders.

SUMMARY AND CONCLUSION

Previous studies examining the impact of event risk protective covenants on shareholder wealth have conflicting results. Bae, Klein and Padmaraj find a significantly positive impact on shareholder wealth associated with the issuance of protected bonds. Their results support the hypothesis that event risk covenants serve to reduce the agency costs of debt, thereby lowering a firm's cost of debt and cost of capital and benefiting shareholders. In direct contrast to these findings are the findings of Cook and Easterwood. They indicate that event risk covenants have a significant negative impact on shareholder wealth. Their findings support the hypothesis that event risk covenants serve to protect managers and bondholders at the expense of stockholders.

This paper provides additional evidence on the impact of event risk covenants by examining convertible bonds. Consistent with previous research, we find that, on average, the issuance of convertible bonds is associated with a negative impact on shareholder wealth. In addition, we find a significantly larger negative stock price reaction for the convertible bonds with event risk protection than for convertible bonds without event risk protection. Our findings are consistent with the findings of Cook and Easterwood indicating that event risk covenants have a negative impact on stockholder wealth.

ENDNOTES

1. Equation (2) adjusts for the dependence created by cumulating individual abnormal returns calculated from a single set of parameter estimates (see Mikkelson and Partch (1988)).

2. Additional information on this test is provided in Noreen (1989) and Edgington (1987).

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