



American Finance Association

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Source: *The Journal of Finance*, Vol. 46, No. 5 (Dec., 1991), pp. 1925-1932

Published by: Blackwell Publishing for the American Finance Association

Stable URL: <http://www.jstor.org/stable/2328579>

Accessed: 25/11/2009 12:14

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The Valuation Effects of Private Placements of Convertible Debt

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ABSTRACT

Share price reactions to announcements of 61 private placements of convertible debt securities are investigated and a significant positive average abnormal return of 1.80% is documented. This unique result contrasts with the negative average abnormal return associated with public sales of convertible debt securities. The positive effect on common shareholders' wealth appears to be related to the relative size of the private issue and unrelated to the degree to which the convertible bond is "out-of-the-money" at issuance.

CONSIDERABLE EMPIRICAL EVIDENCE INDICATES that public offers of equity-related securities are associated with significant negative common stock price reactions (Smith (1986)). Recent research has focused on private placements of securities made to a limited number of investors.¹ James (1987) investigates private placements of straight debt and documents an insignificant negative average announcement period abnormal return.² Wruck (1989) examines private sales of equity and reports a significant positive average abnormal return upon announcement.³

We examine the valuation effects of announcements of private placements of convertible debt. Our results indicate that these announcements are associated with a statistically significant positive average share price response, similar to private placements of equity. Thus, private sales of equity-

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¹ Privately placed securities are exempt from SEC registration under certain circumstances (Ratner (1982)). SEC regulations allow up to 35 "sophisticated" purchasers to participate in a given private placement. The assumption is that these investors are capable of evaluating the merits of the issue without SEC monitoring.

² Private placements of straight debt appear to have announcement period wealth effects similar to public issues of straight debt; neither results in a significant average abnormal return. Mikkelsen and Partch (1986) document an announcement period abnormal return of -0.57% ($Z = -1.44$) for a sample of 80 private placements of straight debt. Public issues of straight debt are associated with -0.06% ($Z = -0.44$) and -0.23% ($Z = -1.40$) announcement period abnormal returns as reported by Eckbo (1986) and Mikkelsen and Partch (1986), respectively.

³ Specifically, a two-day announcement period abnormal return of 1.89% ($Z = 1.91$) and a four-day announcement period abnormal return of 4.41% are documented for a sample of 99 private sales of common stock, convertible preferred stock, and straight preferred stock.

related securities to small numbers of sophisticated investors reveal positive information about issuing firms, while public offers to large numbers of investors reveal adverse information about issuing firms.

In Section I testable hypotheses are identified. The sample and empirical method are described in Section II. Empirical results are reported in Section III, and the findings are summarized in Section IV.

I. Announcement Effect Hypotheses

The share price reaction to private placements of convertible debt may be examined in the context of ownership structure effects, tax effects, and information effects.

A. Ownership Structure Effects

A private placement of convertible debt can increase firm value by placing a large block of potential voting rights with outside blockholders who (upon conversion) use their influence to monitor management (Shleifer and Vishny (1986)).⁴ Further, private placements are negotiated directly with management, creating a relationship which may allow additional monitoring of managerial actions not present when blockholders acquire their securities in the open market.

B. Tax Effects

Modigliani and Miller (1963) show that increases in financial leverage enhance equity value because of the tax advantage of debt. If a convertible debt issue is seen as primarily straight debt, then a positive stock return is expected. If the issue is regarded as predominantly equity, a negative stock price effect is expected.

C. Information Effects

Fama (1985) and others have argued that bank debt can be seen as a form of inside debt (financial slack) because banks are more informed about their borrowers than are public security holders. James (1987) argues that private placements are similar to bank loans because private placement buyers are better informed about the issuing firm than are public security holders. Firms using private placements may therefore avoid the asymmetric information problems modeled by Myers and Majluf (1984). These arguments suggest that announcements of private placements of convertible debt should result in a non-negative stock price response.

⁴ Private placements of equity tend to result in the creation of outside blockholders. Wruck (1989) observes that for her sample of private equity sales the majority of issues (58%) are purchased by a single buyer, while very few issues (<5%) are purchased by six or more buyers. In our study, 21 of the 61 observations included information on the number of buyers. For ten issues one buyer was reported, five issues had two buyers, five issues had three buyers, and one issue had four buyers.

According to Miller and Rock (1985), unexpected external financing reveals adverse information about firms' future cash flows. If this is the case, announcements of convertible debt private placements (or any external financing) convey negative information and should induce a negative share price response.⁵

II. Data and Methodology

A. Data

To be included in the final sample the following criteria must be met: 1) the firm must be identified in the *Investment Dealer's Digest* (1970 to 1987) as having made a private placement and must have a public announcement of the private placement in the *Wall Street Journal* (WSJ), or on the *Dow Jones News Service* (DJNS) wire; 2) the issuing firms' common stock returns are available on the Center for Research in Security Prices (CRSP) NYSE/AMEX or NASDAQ Daily Returns Files; and 3) there are no other material announcements made within two trading days of the announcement of the private sale.⁶

The final sample consists of 61 announcements of private placements of convertible debt (representing 60 firms). Nine announcements occurred from 1970 through 1979, and fifty-two announcements occurred from 1980 through 1987. The announcement day (day 0) is the WSJ publication data unless the private sale first appeared as a press release on the DJNS wire, in which case the following trading day is designated as the announcement day.

In Table I, mean and median values for our sample of private placements are compared to mean values for the sample of public issues of convertible debt examined by Dann and Mikkelsen (1984). The mean size of private offerings (\$13.52 million) is considerably smaller than the mean size of public convertible debt offers (\$55 million). This difference in issue size is consistent with the smaller size of firms making private sales. The mean market value of equity is \$121.65 million for firms making private sales of convertible debt compared to a mean market value of \$250.4 million for firms making public offers.⁷

The relative issue size of 0.24 and the relative increase in potential voting rights of 0.22 for this study are similar to the measures documented by Dann and Mikkelsen (1984). This is consistent with the conclusion that private

⁵ Leland and Pyle (1977) show that changes in shareholdings of insiders reveal management's perception of profitability. If private placement purchasers are more like insiders than open market buyers, then the announcement of a private offer of equity or equity-related securities may result in a positive valuation effect.

⁶ "Material" refers to disclosures such as earnings, dividends, or financing decisions.

⁷ These dollar figures may understate the extent to which firm size and issue size for the private placements sample are smaller than the public convertible debt issues examined by Dann and Mikkelsen (1984). The majority of the observations in this study (52 of 61) date from 1980–1987, while a large portion of the observations in Dann and Mikkelsen's study are from 1970 and 1971.

Table I
Mean and Median Values of Selected Descriptive Measures for
61 Private Placements of Convertible Debt Announced from
1970 to 1987

This table reports mean and median values for our sample of private placements of convertible debt and mean values for the sample of public issues of convertible debt examined by Dann and Mikkelsen (1984). Our data are obtained from many sources, and N denotes the number of firms with sufficient data available to calculate the corresponding descriptive measure. Item 1 is obtained from the *Wall Street Journal*, the *Investment Dealer's Digest*, or the *Dow Jones News Service*. Item 2 is the product of the pre-issue number of shares outstanding (obtained from Standard & Poor's *Stock Guide* for the month prior to announcement) and the common stock price on the Friday prior to the announcement date. Item 3 is the conversion price (obtained from the *Wall Street Journal*) divided by the pre-issue common stock price. Item 4 is Item 1 divided by Item 2. Item 5 is the number of shares upon conversion (obtained from the *Wall Street Journal*) divided by the pre-issue number of shares outstanding. Item 6 is Item 1 divided by conversion price.

Descriptive Measure	Mean	Median	N	Dann and Mikkelsen (1984), Mean
1. Issue size (\$ millions)	13.52	7.50	61	55.0
2. Pre-issue value of equity (\$ millions)	121.65	38.30	58	250.4
3. Conversion price/stock price	1.266	1.193	57	1.13
4. Relative issue size	0.236	0.169	58	0.22
5. Number of shares issued upon conversion/shares outstanding	0.222	0.161	55	0.20
6. Potential number of common shares created (millions)	1.438	0.593	57	N.A.

convertible debt issues result in substantial increases in the potential voting rights of outside blockholders.

The average ratio of conversion price to market price of common indicates how far "out-of-the-money" the bond is at announcement. This ratio is 1.266 for private placements which is somewhat greater than the ratio of 1.13 for public issues identified by Dann and Mikkelsen (1984).

B. Methodology

Average daily common stock abnormal returns are measured around the initial private placement announcement dates. Abnormal returns (AR_{jt}) are calculated for the period beginning 61 days before to 20 days after the announcement date using the market model:

$$AR_{jt} = R_{jt} - (\hat{\alpha}_j + \hat{\beta}_j R_{mt}), \quad (1)$$

where R_{jt} is the return of security j for period t , and R_{mt} is the return on the Center for Research in Security Prices NYSE/AMEX or NASDAQ market index for period t . The estimated coefficients $\hat{\alpha}_j$ and $\hat{\beta}_j$ are calculated

using the 160 trading days that end 62 days prior to the announcement date.⁸

Tests of statistical significance are based on standardized abnormal returns where the standard deviation of the sum of the AR_{jt} series over the time period from $t = T_1$ to $t = T_2$ is given by Equation (2):⁹

$$S_{jT} = \left\{ \hat{\sigma}_j^2 \left[T + \frac{T^2}{N} + \frac{T^2 (\bar{R}_{mT} - \bar{R}_m)^2}{\sum_{t=1}^N (R_{mt} - \bar{R}_m)^2} \right] \right\}^{1/2} \quad (2)$$

The value $\hat{\sigma}_j^2$ is the mean square error of the market model regression for firm j , $\bar{R}_m$ is the mean market index return over the estimation period, N is the number of returns in the estimation period, and $\bar{R}_{mT}$ is the mean market index return during period T . The number of sample observations in the period from $t = T_1$ to $t = T_2$ is defined as T , where T is $T_2 - T_1 + 1$.

Assuming that the abnormal returns are multivariate normal and cross-sectionally independent, the null hypothesis that the mean abnormal return is zero is tested with the following statistic (Z):

$$Z = \frac{1}{\sqrt{n}} \sum_{j=1}^n \sum_{t=T_1}^{T_2} \frac{AR_{jt}}{S_{jT}} \quad (3)$$

The statistic in Equation (3) has an asymptotically unit normal distribution and n denotes the sample size.

III. Empirical Results

The two-day average abnormal return and daily average abnormal returns around the announcement period ($t = -11$ to $t = -2$ and $t = +1$ to $t = +10$) are presented in Table II. The two-day average abnormal return (days -1 and 0) for private placements of convertible debt is 1.80% ($Z = 2.026$), significant at the 0.05 level.¹⁰ None of the individual daily abnormal returns is significant at conventional levels.¹¹

As is the case for private sales of equity (Wruck (1989)), many firms first report the private sale of convertible debt at or near completion of the issue.

⁸ The parameters are estimated using both the method of Scholes and Williams (1977) and ordinary least squares. There are no significant differences in results.

⁹ Equation (2) measures the variance of the sum of the individual abnormal returns as used by Mikkelsen and Partch (1988). This formula adjusts for the dependence that may be created by cumulating individual abnormal returns calculated from a single set of parameter estimates.

¹⁰ Alternative estimation methods produce similar results. For instance, the use of an equally weighted market index results in a two-day average abnormal return of 1.80%, significant at the 0.06 level ($Z = 1.940$). The mean-adjusted returns model produces an average two-day abnormal return of 2.11%, significant at the 0.005 level ($Z = 3.065$).

¹¹ The average abnormal return on day $+1$ of -0.86% (significant at approximately the 0.12 level) is driven primarily by one individual return of -17% and two of -7% .

Table II
Daily Average Abnormal Returns and Announcement Period
Average Abnormal Return for 20 Days Around Public
Announcements of Private Placements of Convertible Debt

This table reports daily average abnormal returns (days -11 to -2 and days +1 to +10) and the announcement period abnormal return (days -1 and 0), stated in percentage terms, for a sample of 61 private placements of convertible debt announced between 1970 and 1987. The announcement date (day 0) is the *Wall Street Journal* publication date unless the sale announcement first appears as a press release on the *Dow Jones News Service* wire, in which case the following trading day is designated as the announcement date. The abnormal returns are calculated from parameters estimated over the pre-event period (days -222 to -63) using a value-weighted market model. The null hypothesis that the daily average abnormal return or the announcement period average abnormal return is zero is tested using the Z-value calculated from standardized abnormal returns. The percent positive is the number of firms with positive abnormal returns divided by the number of firms in the sample.

Event Days	Average Abnormal Return	Z-value	Percent Positive
-11	0.2017	1.3659	55.74
-10	0.2677	0.5047	50.82
-9	0.6610	1.4601	50.82
-8	-0.0212	-0.0138	37.70
-7	0.4249	0.2787	45.90
-6	0.6390	0.7635	54.09
-5	0.4278	0.7253	45.90
-4	-0.6289	-1.4151	34.42
-3	-1.1722	-1.7274	39.34
-2	0.8709	1.3635	49.18
-1, 0	1.8011	2.0260*	54.09
+1	-0.8620	-1.6554	32.79
+2	-0.4310	-0.4452	45.90
+3	0.4287	0.7152	52.46
+4	-0.5516	-0.8683	40.98
+5	-0.2349	-0.1424	44.26
+6	-0.5550	-1.5908	32.79
+7	0.2018	0.8052	45.90
+8	0.3445	0.3897	45.90
+9	-0.3443	-0.1463	47.54
+10	-0.3335	-1.3720	31.67

*Significant at the 0.05 level.

Thus, some leakage of information prior to announcement is possible.¹² If leakage is present then the stock price effect may be manifested over a longer period. The three-day (days -2 to 0) average abnormal return is 2.63% ($Z = 2.438$), significant at the 0.02 level.¹³

¹² The first public announcement is the completion of the issue for 51 (84%) of the firms.

¹³ Using the equally weighted market index results in a three-day abnormal return of 2.78% also significant at the 0.02 level ($Z = 2.465$). The mean-adjusted returns model gives a three-day abnormal return of 2.94% significant at the 0.001 level ($Z = 3.493$).

To explain the variation in the two-day cumulative abnormal returns, the following ordinary least squares regression model is estimated:

$$\text{CAR}_j = -0.0079 + 0.1099 \text{ RELSIZE}_j + 0.0012 \text{ CONVRAT}_j. \quad (4)$$

(−0.516) (3.216) (0.142)

CAR is the two-day cumulative abnormal return. RELSIZE (dollar value of the issue divided by pre-issue value of equity) is used as a measure of the relative size of the issue. CONVRAT (conversion price divided by market price of equity) is used to measure the degree to which the bond is “out-of-the-money” at announcement. Test statistics for the coefficient estimates are given in parentheses. The adjusted R^2 for the model is 0.1384 with an F -statistic of 5.335 (p value = 0.0078).

There is a statistically significant positive relation between the two-day abnormal returns and the measure of the relative issue size (RELSIZE). The coefficient estimate for CONVRAT is not statistically significant.

The statistically significant announcement period abnormal return suggests that private sales of convertible debt securities to a small group of better-informed investors may avoid the asymmetric information problems described by Myers and Majluf. Additionally, the positive relation between two-day cumulative abnormal returns and relative issue size indicates that management’s ability to place larger issues may convey more favorable inside information to the market.¹⁴ Our results are inconsistent with the model of Miller and Rock (1985) which predicts that larger issues result in more adverse equity valuation effects.

IV. Summary and Conclusions

Announcements of private placements of convertible debt securities result in a significant positive average equity valuation effect. This finding suggests that privately placed convertible debt issues convey favorable information about the firm. This is in contrast to the adverse information conveyed by public issues of convertible debt (Dann and Mikkelsen (1984)). Moreover, the positive relation between relative issue size and announcement period abnormal returns indicates that larger issues may convey more positive information to shareholders.

¹⁴ VOTERIGHT (number of shares issued upon conversion divided by the number of shares outstanding before conversion) is a measure of the potential increase in voting rights associated with the issue. VOTERIGHT is considered as an explanatory variable instead of the relative size of the issue (RELSIZE). A statistically significant positive relation is found between the two-day cumulative abnormal returns and VOTERIGHT. This relation may be consistent with the external monitoring hypothesis of Shleifer and Vishny (1986). That is, the potential creation of a large outside blockholder may enhance firm value because of more effective monitoring of management’s actions in the future (upon conversion). The results are similar using either VOTERIGHT or RELSIZE. When both are introduced into the model simultaneously neither measure clearly dominates the other. However, the coefficient estimate for RELSIZE is more significant than the coefficient estimate for VOTERIGHT.

REFERENCES

- Dann, L. and W. Mikkelson, 1984, Convertible debt issuance, capital structure change and financing-related information: Some new evidence, *Journal of Financial Economics* 13, 157-186.
- Eckbo, E., 1986, Valuation effects of corporate debt offerings, *Journal of Financial Economics* 15, 119-152.
- Fama, E., 1985, What's different about banks?, *Journal of Monetary Economics* 15, 29-36.
- James, C., 1987, Some evidence on the uniqueness of bank loans, *Journal of Financial Economics* 19, 217-236.
- Leland, H. and D. Pyle, 1977, Informational asymmetries, financial structure, and financial intermediation, *Journal of Finance* 32, 371-387.
- Mikkelson, W. and M. Partch, 1986, Valuation effects of security offerings and the issuance process, *Journal of Financial Economics* 15, 31-60.
- and M. Partch, 1988, Withdrawn security offerings, *Journal of Financial and Quantitative Analysis* 23, 119-133.
- Miller, M., and K. Rock, 1985, Dividend policy under asymmetric information, *Journal of Finance* 40, 1031-1051.
- Modigliani, F. and M. Miller, 1963, Corporate income taxes and the cost of capital: A correction, *American Economic Review* 53, 433-443.
- Myers, S. and N. Majluf, 1984, Corporate financing and investment decisions when firms have information that investors do not have, *Journal of Financial Economics* 13, 187-221.
- Ratner, D., 1982, *Securities Regulation in a Nutshell* (West Publishing, St. Paul, MN).
- Scholes, M. and J. Williams, 1977, Estimating betas from nonsynchronous data, *Journal of Financial Economics* 5, 309-327.
- Shleifer, A. and R. Vishny, 1986, Large shareholders and corporate control, *Journal of Political Economy* 94, 461-488.
- Smith, C., 1986, Investment banking and the capital acquisition process, *Journal of Financial Economics* 15, 3-29.
- Wruck, K., 1989, Equity ownership concentration and private value: Evidence from private equity financings, *Journal of Financial Economics* 23, 3-28.