

Long-Run Stock Returns and Abnormal Accruals of Private Issuers: Are They Different from Public Issuers?

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This study examines long-run stock returns and abnormal accruals of private placements of common stock, convertible debt and straight debt. We investigate patterns surrounding private placements and compare results to predictions of competing hypotheses. The long-term abnormal return for common stock is significantly positive in the year before the private placement but significantly negative in post periods. The abnormal return is significantly negative for convertible debt in the year following the private placement. Our results are more consistent with the last-resort financing hypothesis rather than the overvaluation hypothesis, which is often used to explain the performance of public issuers.

INTRODUCTION

In this study, we simultaneously examine and link long-run stock returns and abnormal accruals of firms around private placements of common stock, convertible debt, and straight debt. We investigate the patterns of stock returns and abnormal accruals of private placement issuers in the pre- and post-placement periods associated with these three different types of securities. We also compare our evidence with the evidence associated with public issuers.

Our study is motivated by prior studies, which show that firms perform positively in the period prior to security offerings, such as public issuances of seasoned equity offerings, but negatively in the period following the offerings. It is suggested that investors are optimistic and overestimate the future earnings of these firms. Following Williams and Tang (2009), and the limited studies that investigate the long-term performance surrounding private placements, we link the patterns surrounding the private placement of common stock, convertible debt and straight debt to several well established hypotheses in the finance literature.

The long-run performance of public issuers has been well documented. Several empirical studies find post-issue underperformance for stock-issuing firms (e.g., Hansen and Crutchley (1990), Loughran and Ritter (1995 and 1997), and McLaughlin *et al.*, (1998a)). Although most empirical studies investigate long-run performance of stock issuers, there are studies that examine long-run performance of other issuers. For example, McLaughlin *et al.* (1998a) find that both stock issuers and straight debt issuers have post-issue decreases in operating performance. In another study, McLaughlin *et al.* (1998b) find that convertible debt issuers experience significant declines in operating performance from pre- to post-issue

periods. Spiess and Affleck-Graves (1999) document long-run post-issue underperformance by straight and convertible debt issuers.

Hansen and Crutchley (1990) and Bae *et al.* (2002) have gone one step further and examined simultaneously the long-run performance of public issues of all three types of securities: common stock, convertible debt and straight debt. Hansen and Crutchley (1990) find that all issuing firms experience post-issue earnings decreases, and that earnings decreases are larger for common stock issuers. Bae *et al.* (2002) find that pre-issue abnormal returns are positive and significant for stock issuers, but not for convertible and straight debt issuers. Their post-issue mean returns show that common stock and convertible debt issuers experience underperformance during the post-issue periods, but straight debt issuers do not. In addition, common stock issuers experience the best pre-issue operating performance among all three types of issuers.

In a nutshell, the evidence suggests that the long-run performance of public issuers follow a ranking order. The equity issuers have the best performance in the pre-issue periods, but worst performance in the post-issue periods. The straight debt issuers' average performances are insignificant in both the pre- and post-issue periods. The convertible debt issuers' pre- and post-issue performances are in between the performances of equity and straight debt issuers.

Earnings management has been connected to public issues of common stock since Teoh *et al.* (1998a) found that seasoned equity issuers adjust discretionary accruals to report higher net income prior to the stock issues in 1998. Earnings management has been shown around IPOs by Teoh *et al.* (1998b) and DuCharme *et al.* (2004), and around SEOs by Teoh *et al.* (1998a), Rangan (1998) and DuCharme *et al.* (2004). These studies have also found positive abnormal accounting accruals prior to equity offerings. The reversal of the accruals in the post-issue periods has been identified by Rangan (1998) and Teoh *et al.* (1998). In a more recent publication, Chou *et al.* (2009) find that long-run underperformance of convertible bond issuers can be explained by earnings management, as reflected in discretionary current accruals around the time of the offer.

The opportunism hypothesis has been used to explain the documented relation between abnormal accruals and stock issues. According to this hypothesis, some stock offering firms opportunistically manage earnings upward before stock issues. Investors are deceived and led to form overly optimistic expectations regarding future, post-issue earnings. Thus, offering firms would be able to obtain a higher price than they otherwise would for their stock issue, but subsequent performance would tend to be disappointing. In a sense, investors' optimistic bias plays into the hands of stock issuing firms. They manage their earnings in the pre-issue periods in order to take advantage of investors' over-optimism and make the stock issues at the opportune time.

In the area of private issuers, the evidence on long-run performance is not as well documented as public issuers. Most studies examining the long-run performance of issuers concentrate on equity private placements (Hertzel and Smith, 1993; Hertzel *et al.*, 2002; Krishnamurthy *et al.*, 2005; Barclay *et al.*, 2007).¹ There are a very limited number of studies that have examined the long-run performance of convertible bonds and straight debt (e.g., Marciukaityte and Varma, 2007) or the potential earnings management behavior in the arena of private placements (e.g., Williams and Tang, 2009).

Several beneficial aspects of equity private placements have been promoted in the literature. First, private placements are purchased by active investors who monitor management, ensure that corporate resources are used more efficiently, and increase the probability of value-increasing takeovers (Wruck, 1989). Second, private placements are purchased by informed investors who put their stamp of approval on the market's valuation of the firm by agreeing to purchase a large block of stock (Hertzel and Smith, 1993). Third, liquid assets are provided to slack-poor companies through equity private placements (Brooks and Graham, 2005).

On the other hand, the last-resort financing hypothesis argues that equity private placements are detrimental to current shareholders. Chaplinsky and Haushalter (2005) investigate the motivations and the returns of firms and investors using private equity placements. They argue that private equity placements enable companies barred from traditional capital markets to obtain much needed financing. Equity private placements are often the last-resort financing alternative for some firms. The private equity investors can

negotiate and receive large price discounts from private equity issuers. The last-resort financing hypothesis suggests that private placements allow institutional investors to expropriate wealth from current shareholders by purchasing shares at low prices.

Our study makes several contributions to the literature. First, we concurrently examine the long-run post-issue performance of equity, convertible debt and straight debt private placements. Firms have the option of issuing equity, convertible debt or straight debt. The type of security issued can be impacted by the conditions of the financial market. Firms are more likely to privately place debt when rates are low, and more likely to issue equity when the conditions of equity markets are favorable. The concurrent examination of all three types of private placements allows us to distinguish between the security issuance of choice and the surrounding performances. It also allows us to differentiate between the beneficial and detrimental aspects of private placements. If the beneficial effect wins over the detrimental aspects, we should observe descending order of performance among equity, convertible debt and straight debt private placements in the post-issue periods. Otherwise, we should observe ascending order of performance among equity, convertible debt and straight debt private placements in the post-issue periods.

Secondly, we also examine the pre-issue long-run performance of private issuers of common stock, convertible debt, and straight debt to differentiate between the last-resort financing hypothesis and the overvaluation hypothesis advanced by Myers and Majluf (1984). The overvaluation hypothesis suggests these firms will have higher pre-issue performance and lower post-issue performance. In contrast, the last-resort financing hypothesis suggests that firms using private placements already have poor performance in the pre-issue periods. The differentiation between the overvaluation and the last-resort financing hypotheses can only be achieved by examining the pre-issue performance.

Thirdly, we investigate the possibility of managers' earnings management behavior associated with private placements. If overvaluation is the overriding motivation in driving private placements, we might observe positive abnormal accruals in equity-like private placements in the pre-issue periods and the reversal of abnormal accruals in the post-issue periods, similar to public issues. The last-resort financing hypothesis does not make any predictions about abnormal accruals.

Finally, the results from our study will enable us to ascertain if the private issues are different from public issues. One puzzle about private placements is the positive stock price reaction to the announcements of private equity placements versus the significant negative stock price reaction associated with public issues of equity.² In this study, we examine the pre- and post-issue performance and abnormal accruals (a proxy for earnings management). The totality of the evidence presented in this study will enable us to answer, with some certainty, the following question: Are private issues really different from public issues?

We organize the remainder of the paper as follows. Section 2 provides a literature review and hypotheses. In Section 3, we discuss our sample and in Section 4 we introduce our methodology. Empirical results are presented in Section 5 and we offer our conclusion in Section 6.

LITERATURE REVIEW AND HYPOTHESES

The Monitoring Hypothesis

Prior research suggests that private placements improve monitoring of managers (Shleifer and Vishny, 1986; Wruck, 1989; Kahn and Winton, 1998).³ Private placements typically result in a large percentage of stock being sold to a small number of investors. This concentrated ownership can result in closer monitoring due to related incentives. The private equity investors have direct ownership in the issuers; their holdings will be impacted the most by the performance of the private issuers. They are expected to engage in close monitoring of the management of the issuers. Convertible debt is a hybrid security and its value will be affected by the performance of the issuers, but not as much as equity. The private convertible debt investors will also engage in some degree of monitoring. The private straight debt investors are not owners of a firm; they can only perform very limited monitoring. Accordingly, based on the monitoring hypothesis we posit the following:

H1: There will be a descending order of performance among equity, convertible debt and straight debt private issuers in the post-issue periods (i.e., equity private issuers will have the most positive performance, followed by convertible debt private issuers, and then straight debt private issuers).

The Overvaluation Hypothesis

Information asymmetry between managers and outside investors can result in valuation differences. Myers and Majluf (1984) report that these differences are likely to be greater for equity-like securities (i.e., common stock and convertible debt), which are more sensitive to changes in firm value. Accordingly, their model suggests that common stock or equity-hybrid securities are more likely to be issued when firms are overvalued. The model further predicts these firms will have lower performance in the post-issue period. Similar predictions are reported by Loughran and Ritter (1995), based on the windows of opportunity hypothesis; firms will issue stock when they are overvalued, and will experience lower performance in the post-issue period. Therefore, based on the overvaluation and windows-of-opportunity hypotheses, we predict the following:

H2: There will be a descending (an ascending) order of performance among equity, convertible debt and straight debt private issuers in the pre-issue (post-issue) periods.

The Last-Resort Financing Hypothesis

The term “last-resort financing” associated with private placements is first suggested by Hillion and Vermaelen (2004). They show that companies issuing floating-rate convertibles tend to perform particularly poorly in the long term. They suggest that such floating-priced convertibles encourage short selling by convertible holders and the resulting dilution triggers a permanent decline in the share price. They also find evidence that these structured securities are a source of last-resort financing.

Brophy *et al.* (2009) consider the last-resort hypothesis as a motive for the discounts offered to buyers in equity private placements. They suggest that equity private placements are an attractive mechanism for hedge funds to earn short-turn profits in distressed firms. Brophy *et al.* (2009) attribute their finding of underperformance following private placements of equity to the need for “last-resort” financing by financially troubled firms. The last-resort financing hypothesis suggests that firms that use equity-like private placements will have post-issue underperformance. Since the last-resort financing only applies to equity-like private placements, the straight debt private issuers will have neutral performance according to this hypothesis.⁴

H3: There will be an ascending order of performance among equity, convertible debt and straight debt private issuers in both the pre-issue and post-issue periods (i.e., equity private issuers have the worst performance followed by convertible debt private issuers and finally straight debt private issuers).

In Table 1, we provide a summary of the predictions offered by each of the hypotheses. We recognize that the predictions offered by the hypotheses are not mutually exclusive. It is possible that our findings might be consistent with more than one hypothesis. To distinguish between the overvaluation (or windows-of-opportunity) and last-resort financing hypotheses, we also examine the abnormal accruals of private issuers.

The overvaluation (or windows-of-opportunity) hypothesis has been related to earnings management. Essentially, public issuers of equity-like securities have used abnormal accruals to manage the earnings upward in the pre-issue periods. Investors are led into the delusion about the performance of the issuing firm. In the post-issue periods, the abnormal accruals are reversed. If the overvaluation hypothesis also applies to private placements, we should observe similar patterns of abnormal accruals (i.e., abnormal accruals are more positive for issuers of more equity-like securities in the pre-issue periods and more negative for issuers of more equity-like securities in the post-issue periods. The last-resort financing

hypothesis does not make any predictions about abnormal accruals. In addition, we use cross-sectional regression analysis to further differentiate between the predictions of overvaluation hypothesis and last-resort financing hypothesis.

TABLE 1
THEORETICAL PREDICTIONS OF STOCK RETURNS AND ABNORMAL ACCRUALS OF PRIVATE PLACEMENTS OF SECURITIES

	Pre-issue stock returns (Abnormal accruals)			Post-issue stock returns (Abnormal accruals)		
	Common Stock	Conv. Debt	Straight Debt	Common Stock	Conv. Debt	Straight Debt
Monitoring hypothesis (H1)				+++ (0)	++ (0)	+ (0)
Overvaluation (or windows-of-opportunity) hypothesis (H2)	+++ (+++)	++ (++)	+ (+)	--- (---)	-- (--)	- (-)
Last-resort financing hypothesis (H3)	--- (0)	-- (0)	- (0)	--- (0)	-- (0)	- (0)

SAMPLE SELECTION AND DESCRIPTION

Sample

Our sample consists of private placements of common stock, convertible debt and straight debt of U.S. firms between 1998 and 2004.⁵ We obtain press releases for these three types of private placements from the Lexis/Nexis Academic Database. The dollar amount and type of private placement are obtained from the press releases. Accounting financial data are obtained from Compustat, and stock market returns are obtained from the Center for Research on Security Prices (CRSP) database.

Our initial sample consists of 2,565 private placements of common stock, convertible debt and straight debt. To better determine firm performance, we delete PIPE securities⁶ and firms that issue multiple types of private placements during the sample period (Bae et al., 2002). Consistent with prior studies, if a firm issues multiple private placements of the same type of security, we only include the firm's first private placement in the sample (Hertzel et al., 2002; Bae et al., 2002; Williams and Tang, 2009). We also eliminate firms with insufficient data on Compustat to calculate performance measures. Our final sample includes 566 private placements of common stock, 75 private placements of convertible debt and 54 private placements of straight debt.

Sample Description

Descriptive statistics for the private placements are reported in Table 2. In order to differentiate between the types of securities, we report each one separately. The statistics give us some insight about the characteristics of the equity, convertible debt and straight debt private issuers. The average size of firms in our sample, based on total assets, is \$638 million for firms that privately place common stock, \$2,769 million for firms that privately place convertible debt and \$31,110 million for firms that privately place straight debt. The equity private issuers are, on average, the smallest firms while the straight debt private issuers tend to be the largest firms. Similar results are reported for sales and market value. Firm size, according to all three measures, is significantly different at the 0.01 level.

TABLE 2
DESCRIPTIVE STATISTICS OF PRIVATE PLACEMENTS

	Common Stock			Convertible Debt			Straight Debt			Pairwise t-test
	Mean	Median	Std Dev	Mean	Median	Std Dev	Mean	Median	Std Dev	
Total assets (in \$mil)*	638.30	35.75	3804.25	2,769.47	784.01	4,908.84	31,109.81	3,631.12	127,340.71	18.22***
Sales (in \$mil)*	417.97	17.86	2712.30	1,901.67	619.10	3,594.01	7,843.61	2,032.01	15,473.29	53.74***
Market value (in \$mil)*	703.90	74.51	6654.92	2,517.06	690.76	4,509.70	9,128.61	3,102.20	17,602.94	26.14***
Debt-to-equity ratio*	0.34	0.01	1.69	0.64	0.22	1.55	0.76	0.32	1.54	2.24
Debt-to-asset ratio*	0.14	0.03	0.27	0.27	0.26	0.20	0.28	0.24	0.21	12.78***
Book-to-Market ratio*	0.37	0.27	1.50	0.43	0.34	0.46	0.48	0.41	0.48	0.12
Private placement (in mil)	20.47	10.07	34.94	232.68	150.00	253.79	262.59	200.00	252.30	199.58***
Private placement-to- total assets ratio	0.93	0.25	3.16	0.29	0.16	0.44	0.13	0.06	0.17	3.07**
Private placement-to- market value ratio	0.30	0.15	0.58	0.18	0.14	0.16	0.25	0.08	0.60	1.41

*Based on data in the year prior to the private placement.

Sample includes private placements from 1998 to 2004. *Market value* is the stock price multiplied by common shares outstanding. *Debt-to equity ratio* is long-term debt divided by market value. *Debt-to-asset ratio* is long-term debt divided by total assets. *Book-to-market ratio* is book value per share divided by stock price. *Private placement* is the total dollar amount of the private placement. *Private placement-to-total assets ratio* is the total dollar amount of the private placement divided by total assets. *Private placement-to-market value ratio* is the total dollar amount of the private placement divided by market value. ***, ** and * represent significance at 1%, 5%, and 10% levels, respectively.

We measure the leverage of private issuers using the debt-to-equity and debt-to-asset ratios. While the debt-to-equity ratios are not significantly different, the debt-to-asset ratios are significantly different among the private issuers. According to the debt-to-equity standard deviations of common stock, convertible debt and straight debt (1.69, 1.55 and 1.54 respectively), a wide range of differences exists in leverage within each private placement type.

The average debt-to-asset ratio is smaller for common stock private issuers. This statistic suggests that firms with lower debt-to-asset ratios privately place equity securities while firms with higher debt-to-asset ratios privately place debt securities. The low debt-to-asset firms represent high growth companies, which more easily attract private equity capital. Another possible explanation is that equity issuers may be shut off from their access to the private debt markets. They simply cannot issue private debt, therefore, they have low debt-to-asset ratio. This conjecture can be supported by the examination of the book-to-market (B/M) ratios. The equity issuers have, on average, the lowest B/M ratio among the three types of issuers in comparison of both the means and medians. Convertible debt issuers have the second lowest B/M ratios and straight debt issuers have the highest B/M ratios. These statistics are consistent with the over-valuation hypothesis, which suggests that firms are more likely to issue equity (debt) when their stock is overvalued (undervalued).

When we perform further examination of the B/M ratios for individual issuing firms, we find that 54 equity issuing firms have negative book value relative to 8 convertible debt and 1 straight debt issuers. Brown, Lajbcygier and Li (2008) find that firms with negative book values are likely in financial distress. The low average B/M ratio, and high number of negative B/M ratios, for equity issuers could also suggest that they are probably already in deep financial difficulties when they issue private equities. Firms self select the types of securities they can issue (i.e., there is a pecking-order among private issuers). Those firms, who cannot issue private straight debt or private convertible debt, will issue private equity. Firms will issue private convertible debt if they cannot issue private straight debt.

The private placement dollar amount is significantly different among the three types of issuers. The average private placement amount is \$20 million for common stock issuers, \$233 million for convertible debt issuers and \$263 million for straight debt issuers. Consistent with firm size, larger firms place larger private placement amounts than smaller firms. To further analyze the private placement amount, we deflate the amount by total assets and market value. The results show that private placement-to-total assets and private placement-to-market value ratios are higher for equity private issuers. While the equity issuers are smaller in size, they tend to have a larger relative issuing size. The private placement-to-total assets ratio is significantly different among the issuers but the private placement-to-market value is not significantly different.

METHODOLOGY

Short-Term Abnormal Stock Returns

We measure short-term abnormal stock returns using the Brown and Warner (1985) market model. This model has been widely tested in research and yields test statistics that are well specified in a variety of conditions. The use of this model further enhances the comparability of our results with other studies that have examined the market reaction of public and private offerings of convertible securities (Dann and Mikkelson, 1984; Mikkelson and Partch, 1986; Lewis *et al.*, 2003; Williams and Tang, 2009). We measure abnormal returns over a 3-day window, beginning one day prior to the event and ending one day after the event. Our study focuses on the long-run horizon surrounding private placements. However, we report short-term abnormal returns to facilitate a comparison of our sample with those of previous studies.

Long-Term Abnormal Stock Returns

We measure long-term abnormal stock returns using the Fama-French (1993) Three-Factor Model. This model has been used extensively in research to estimate more specified results by including size and value factors in the capital asset pricing model. To study the long run horizon abnormal stock returns surrounding the private placement of the securities, we measure abnormal stock returns extending three

years before the event to three years after the event. This horizon will reveal how firms perform before and after raising additional capital.

Similar studies examining public offerings of equity and equity-like securities⁷, show that firms perform positively in the period prior to the offering and negatively in the period following the offering. These studies suggest that investors overestimate the future earnings prospects of these firms. If the long-term returns of our study follow these findings, they will be consistent with the overvaluation (or windows-of-opportunity) hypothesis. If the abnormal returns are negative in both the pre and post periods, they will be consistent with the last resort hypothesis. On the other hand, if the returns are positive in the post issue period, our findings will be consistent with the monitoring hypothesis.

Long-Term Abnormal Accruals

We estimate long-term accruals using the modified-Jones model. This model has been widely used in the accounting literature to detect earnings management (Dechow *et al.*, 1995). Furthermore, we use this model to facilitate comparability of our results to Williams and Tang (2009).⁸ We estimate expected accruals based on the following:

$$(ACC_t/A_{t-1}) = \beta_1 (1/A_{t-1}) + \beta_2 (\Delta REV_t - \Delta REC_t) + \beta_3 (PPE_t),$$

where ACC_t is total accruals in year t , A_{t-1} is total assets at year $t-1$, ΔREV_t is revenues in year t minus revenues in year $t-1$ scaled by total assets at year $t-1$, ΔREC_t is receivables in year t minus receivables in year $t-1$ scaled by total assets at year $t-1$, and PPE_t is property, plant and equipment in year t scaled by total assets at year $t-1$.

Industry differences can impact the level of accruals in a firm. As such, we control for these differences by estimating the parameters of this model using all non-sample firms in the same 2-digit Standard Industrial Classification (SIC). We exclude 2-digit SIC codes with less than 10 observations from the estimation sample to ensure sufficient data for parameter estimation. Abnormal accruals are equal to actual total accruals for the sample firm less the expected accruals predicted using the parameters from the equation above.

RESULTS

Short-Term Abnormal Stock Returns

While the focus of this study is long-run performance, we also examine announcement period surrounding the private placements of common stock, convertible debt and straight debt. Table 3 presents the announcement period abnormal returns. We report the mean and precision weighted abnormal returns for a 3-day window surrounding the private placement of each type of placing firm. We also report the parametric (Patell Z) and nonparametric (Rank Z) test statistics to provide robustness for the significance of our test results.

The announcement period returns for common stock are significantly positive at the 0.01 level for the periods (-1, 0), (0, +1) and (-1, +1) according to the Patell Z statistic and at the 0.05 level for the periods (0, +1) and (-1, +1) according to the Rank Z statistic. The mean abnormal return is 2.18% for the 2-day period (-1, 0), 2.06% for the 2-day period (0, +1), and 2.44% for the 3-day period (-1, +1) surrounding the event. This results in a positive mean abnormal return of 1.80% on the announcement day. Our results are consistent with other studies that have reported significantly positive abnormal announcement period returns of equity private placements (Wruck, 1989; Hertz and Smith, 1993; Barclay *et al.*, 2007).

The mean announcement period returns for convertible debt, on the other hand, are significantly negative at the 0.01 level for the three periods, according to the Patell Z and Rank Z statistics. This finding is consistent with Williams and Tang (2009) who also report significantly negative announcement period abnormal returns associated with the private placement of convertible bonds. Furthermore, the results are similar to the negative abnormal returns associated with public sales of convertible debt securities (e.g., Dann and Mikkelsen, 1984; Mikkelsen and Partch, 1986; Lewis *et al.*, 2003). The abnormal announcement period returns for straight debt are also negative but insignificant surrounding

the private placement. It appears that investors react positively to the announcements of private placements of common stock but negatively to private placements of convertible debt. Consistent with these findings, the issuance of common stock appears to signal favorable information about the firm while the issuance of convertible debt appears to signal unfavorable information about the firm.

TABLE 3
ANNOUNCEMENT PERIOD ABNORMAL RETURNS

Common Stock				
Days	Mean (%)	Precision Weighted	Patell Z	Rank Z
(-1, 0)	2.18	1.42	4.38***	1.60
(0, +1)	2.06	1.65	5.08***	2.43**
(-1, +1)	2.44	1.93	4.86***	2.25**
Convertible Debt				
Days	Mean (%)	Precision Weighted	Patell Z	Rank Z
(-1, 0)	-3.87	-3.42	-6.52***	-5.79***
(0, +1)	-3.02	-2.79	-5.32***	-4.58***
(-1, +1)	-4.35	-3.90	-6.08***	-4.84***
Straight Debt				
Days	Mean (%)	Precision Weighted	Patell Z	Rank Z
(-1, 0)	-0.52	-0.29	-0.63	-0.89
(0, +1)	-0.98	-1.50	-1.10	-1.28
(-1, +1)	-1.15	-0.60	-1.07	-1.31

Day 0 is the day the private placement announcement occurs. *Precision Weighted* is the precision-weighted cumulative average abnormal return. *Patell Z* is the standard Patell (1976) parametric test statistic and *Rank Test Z* is the non-parametric rank test statistic. ***, **, and * represent significance at 1%, 5%, and 10% levels, respectively.

Long-Term Abnormal Stock Returns

Next, we examine the long-run returns surrounding the private placement of common stock, convertible debt and straight debt. In Table 4, we report long-term abnormal returns three years prior to the private placement to three years subsequent to the private placement. The long-run return results suggest that the mean abnormal return is significantly positive for common stock in the period immediately before the private placement and significantly negative in the three periods subsequent to the private placement. For example, the mean abnormal return is 14.53% in the months (-11, 0), -26.07% in the months (+1, +12), -23.89% in the months (+13, +24) and -41.55% in the months (+25, +36). The mean abnormal return is highest in the months (-11, 0) at 14.53%, and steadily declines to its lowest return of -41.55% in the months (+25, +36).

TABLE 4
LONG-TERM ABNORMAL RETURNS OF PRIVATE PLACEMENTS

Common Stock			
Months	Mean (%)	Times Series t	Rank Z
(-35, -24)	-6.91	-1.53	-1.01
(-23, -12)	0.13	0.03	2.15**
(-11, 0)	14.53	3.22***	2.41**
(+1, +12)	-26.07	-5.78***	-1.65
(+13, +24)	-23.89	-5.30***	-1.26
(+25, +36)	-41.55	-9.22***	-2.71***
Convertible Debt			
Months	Mean (%)	Times Series t	Rank Z
(-35, -24)	1.72	0.25	0.70
(-23, -12)	-0.41	-0.06	-0.49
(-11, 0)	-8.36	-1.21	0.37
(+1, +12)	-29.40	-4.27***	-2.22**
(+13, +24)	2.12	0.31	1.32
(+25, +36)	3.77	0.55	0.23
Straight Debt			
Months	Mean (%)	Times Series t	Rank Z
(-35, -24)	-13.37	-3.19***	-1.37
(-23, -12)	-5.65	-1.35	0.27
(-11, 0)	9.92	2.36**	1.47
(+1, +12)	1.81	0.43	-0.11
(+13, +24)	3.61	0.86	-0.62
(+25, +36)	-3.09	-0.74	-0.20

Month 0 is the month in which the event occurs. *Time Series t* is the parametric test statistic and *Rank Z* is the non-parametric test statistics. ***, ** and * represent significance at 1%, 5%, and 10% levels, respectively.

The abnormal return is also significantly negative for convertible debt in the period immediately following the private placement. In the months (+1, +12), the mean abnormal return is -29.40%. Similar to common stock, straight debt is significantly positive in the period immediately before the private placement. The mean abnormal return is 9.92% in the months (-11, 0).

Overall, the market reacts positively to the private placement announcement of common stock and negatively to the private placement announcement of convertible debt. The post-issue long-term abnormal returns for common stock display an opposite pattern. While the long-term abnormal return for common stock is positive in the year immediately before the private placement, it is negative for the three years

following the private placement. The long-term abnormal return for convertible debt is also negative in the year immediately following the private placement.

The long-run post-issue stock return results provide support for the overvaluation hypothesis and the last-resort hypothesis but not for the monitoring hypothesis. As predicted by the overvaluation and last-resort hypotheses, the equity private issuers have the most negative performance in the post-issue periods, followed by convertible debt private issuers, and then straight debt issuers. The equity issuers have significantly negative abnormal returns in all three years subsequent to the private placement while the convertible debt issuers' abnormal returns are only significantly negative in the first year following the private placement.

The long-run pre-issue stock return results, however, are mixed. The equity issuers have the most positive mean return in the period immediately before the private placement. However, the pre-issue stock returns are insignificant for convertible debt issuers, and significantly negative in the 3 year period prior to the private placement and significantly positive in the year immediately before the private placement for straight debt. Our results suggest that like the long-run post-issue performance of public issuers, the performance of private placement issuers follow a ranking order: common stock private issuers have the most negative performance, followed by convertible debt private issuers and then straight debt private issuers.

Regression Analysis

Next, we perform a regression analysis for each type of private issuer to explore the association between annual long-run abnormal returns and issuing firms' characteristics. The regression model includes three independent variables, book-to-market ratio, debt-to-equity ratio and private placement amount-to-market value ratio. The purpose is to differentiate between the predictions of overvaluation and last-resort financing hypotheses.

The overvaluation hypothesis implies that firms with larger overvaluation will issue relatively more securities. These firms will have greater underperformance in the post-issue periods. We will expect an inverse relation between stock returns and issue size variables in the post-issue periods. The last-resort financing argument implies that private placement investors will be more willing to commit larger amounts of cash through private placements when they are more confident about the future of the private issuers. We expect that the firms receiving relatively larger amounts of cash infusion through private placements will have better performance in the post-issue periods.

We measure relative size of private placements by private placement amount-to-market value ratio. We expect that there will be a direct relation between post-issue cumulative abnormal returns and this variable. In addition, we also measure the relative size of equity (convertible and straight debt) private placements by book-to-market (debt-to-equity) ratio. We expect that there will be a direct relation between book-to-market (debt-to-equity) ratio for equity (convertible and straight debt) private placements.

The results are reported separately for common stock, convertible debt and straight debt private issuers in Table 5. In the post-issue periods, the book-to-market ratio and private placement amount-to-market value ratio coefficients are consistently positive for private equity issuers. The coefficient of debt-to-equity ratio is consistently positive for convertible debt private issuers. The regression results are not consistent with the implications of overvaluation hypothesis. They are more consistent with the implications of last-resort financing hypothesis.

TABLE 5
REGRESSION ANALYSIS BY PERIODS

$$CAR = \alpha_0 + \beta_1 Bk\text{-to-Mkt} + \beta_2 Debt\text{-to-Equity} + \beta_3 PPbyMktValue$$

Common Stock						
Months	(-35, -24)	(-23, -12)	(-11, 0)	(1, 12)	(13, 24)	(25, 36)
Intercept	-0.22**	-0.02	-0.22**	-0.45***	-0.50***	-0.59***
Bk-to-Mkt	0.01	0.01	0.36***	0.26***	0.24***	0.17*
Debt-to-Equity	0.09	0.04	-0.13*	-0.03	0.11*	0.10*
PPbyMktValue	0.29	0.08	1.65***	0.52***	0.45***	0.46***

Convertible Debt						
Months	(-35, -24)	(-23, -12)	(-11, 0)	(1, 12)	(13, 24)	(25, 36)
Intercept	0.18	-0.01***	-0.39	-0.29	-0.31	-0.20
Bk-to-Mkt	-0.28	0.00	0.60	0.17	0.18	-0.10
Debt-to-Equity	0.13	-0.00	0.23	0.09	0.15*	0.16**
PPbyMktValue	0.02	0.05*	-0.42	0.10	0.61	1.10

Straight Debt						
Months	(-35, -24)	(-23, -12)	(-11, 0)	(1, 12)	(13, 24)	(25, 36)
Intercept	0.05	-0.12	-0.16	-0.26	-0.54***	-0.39
Bk-to-Mkt	-0.27	0.15	0.55	0.38	1.39***	0.23
Debt-to-Equity	0.32	0.03	-0.32	0.38	-0.33*	0.08
PPbyMktValue	-0.77*	-0.04	0.86*	-0.26	0.42	0.29

CAR is the long-term abnormal return estimated using the market model and the monthly CRSP equally-weighted index. We use a twelve month estimation period beginning twelve months before the event. . Month 0 is the month in which the event occurs. ***, ** and * represent significance at 1%, 5% and 10% levels, respectively.

Long-Term Abnormal Accruals

Table 6 reports the mean and median abnormal accruals of firms that privately place common stock, convertible debt and straight debt. The abnormal accruals are presented from three years before the private placement to three years following the private placement. Year 0 is the year that the private placement takes place. The mean and median abnormal accruals of firms that privately place common stock are negative for the years -1 to +1. The mean abnormal accruals are significantly negative for years -1 and 0 according to the t-statistic while median abnormal accruals are significantly negative for years -1 to +1 according to the signed rank statistic. For convertible debt, the mean and median abnormal accruals are significantly negative in the years -3, 0 and +2. Neither the mean nor median abnormal accruals are significant for straight debt.

The abnormal accruals are significantly negative in the year of the private placement for the firms privately placing common stock and convertible debt. This result is consistent with studies that have found that managers make income decreasing accruals and are less likely to increase earnings management during periods of investigation (Jones, 1991; Cahan, 1992; Becker *et al.*, 1998; Brown and Pinello, 2007). Otherwise, there are no significant abnormal accruals in pre-issue and post-issue periods.

Our long-run abnormal accrual results are not consistent with the overvaluation hypotheses. Instead, our results on abnormal accruals are more consistent with the monitoring and the last-resort financing hypothesis since we do not detect an ascending or descending pattern in the pre or post-issue periods.

TABLE 6
LONG-TERM ABNORMAL ACCRUALS OF PRIVATE PLACEMENTS

Common Stock				
Year	Mean (%)	Median (%)	T-Stat	Signed Rank
-3	0.13	0.01	3.48***	5456.00**
-2	0.05	-0.01	1.56	-675.50
-1	-0.07	-0.02	-1.73*	-9691.50***
0	-0.12	-0.04	-2.64***	-11289.50***
+1	-0.06	-0.02	-1.35	-6752.50**
+2	0.00	-0.01	0.08	-1824.00
+3	0.09	0.01	1.73*	3114.00

Convertible Debt				
Year	Mean (%)	Median (%)	T-Stat	Signed Rank
-3	-0.02	-0.04	-0.34	-383.00**
-2	0.10	-0.00	1.09	85.00
-1	0.04	0.01	0.39	59.00
0	-0.28	-0.04	-2.62**	-495.50***
+1	0.05	-0.01	0.45	-16.50
+2	-0.42	-0.03	-3.28***	-368.50**
+3	-0.01	0.02	-0.10	59.50

Straight Debt				
Year	Mean (%)	Median (%)	T-Stat	Signed Rank
-3	0.01	0.01	0.68	73.00
-2	0.03	0.01	1.59	78.50
-1	0.02	-0.01	0.30	-55.50
0	0.08	0.00	1.21	52.50
+1	0.07	-0.00	1.22	-16.00
+2	0.15	0.01	1.61	142.50
+3	0.03	0.01	0.22	32.00

T-Stat is the parametric test statistic and *Signed Rank* is the non-parametric test statistic. ***, ** and * represent significance at 1%, 5%, and 10% levels, respectively.

CONCLUSION

In this study, we concurrently examine the long-run pre-issue and post-issue performance of equity, convertible debt and straight debt private placements. Notwithstanding, we also examine the announcement period returns surrounding the private placements. Similar to the findings presented in existing studies, we find that the announcement period abnormal returns for equity private issuers are significantly positive. The mean long-term abnormal return is significantly positive for common stock in the period immediately before the private placement, but significantly negative in the three periods

subsequent to the private placement. The long-run evidence on equity private issuers is similar to that of seasoned equity offerings. Investors appear to make errors regarding the future earnings of the firm. Following the issuance, the market becomes aware of the overestimation and the stock price declines.

Both the announcement period abnormal returns and one-year post-issue abnormal return for private issuers of convertible debt are significantly negative. Among all three types of private placements, the private issuers of straight debt have the best performance. Both the announcement period abnormal returns and the post-issue abnormal returns of straight debt issuers are insignificant.

Using the regression analysis, we find that the coefficients of book-to-market ratio and private placement amount-to-market value ratio are consistently positive in the post-issue periods for private equity issuers. The coefficient of debt-to-equity ratio is consistently positive for convertible debt private issuers. Our results are consistent with the implications of last-resort financing hypothesis of private placements, which suggests that the private placements (especially equity private placements) tend to be a last-resort financing option for some firms. When firms receive relatively larger amounts of cash infusion through private placements, they are more likely to have better performance.

There is no apparent earnings management associated with private placements, even for equity private placements. Our overall evidence on the post-issue stock returns of private issuers is similar to that of public issuers. Equity private issuers have the worst stock returns, followed by convertible debt private issuers. Straight debt private issuers have the best stock returns among the three types of private issuers. The similarity, however, stops here. The performance of private issuers is better explained by the last-resort financing hypothesis rather than the overvaluation hypothesis, which is often cited to explain the performance of public issuers.

A limitation in this study relates to firms' choice of issuing equity or debt. Firms self select the types of securities they can issue (i.e., there is a pecking-order among private issuers). Those firms that cannot issue private straight debt or private convertible debt will issue private equity. Firms will issue private convertible debt if they cannot issue private straight debt. In this study, we assume that firms that issued equity do not have the option of issuing debt.

ENDNOTES

1. Marciukaityte and Varma (2007) is the only published study that has investigated the long-run performance of firms privately placing convertible debt. Similar to public issues, they also find significant underperformance of private issuers of equity and convertible debt.
2. See the evidence presented by Wruck (1989) and Hertz and Smith (1993) on equity private placements.
3. Monitoring, however, may not necessarily become more effective after private placements if ownership is concentrated in the hands of passive investors. As there are fewer investors in private placements, management is able to select investors based on their own objectives. If investors who purchase securities through private placements are selected by management, it is hard to imagine these CEO-friendly investors will 'rock the boat' and subject management to close scrutiny.
4. The predictions offered by the last-resort financing hypothesis are similar to those implied by the managerial entrenchment hypothesis. Studies have shown that the equity private placement result in a price discount of more than 10 percent (Wruck, 1989; Hertz and Smith, 1993; Barclay et al., 2007). The managerial entrenchment hypothesis states that private placements allow managers to expropriate shareholders by entrenching themselves or by purchasing shares at low prices. Managers entrench themselves thru large price discounts to manager-friendly or passive investors. The severity of the entrenchment hinges on the equity nature of the securities issued thru private placements.
5. In order to compare our findings with the performance of public issuers, we include the same securities in our sample used by Hansen and Crutchley (1990) and Bae et al. (2002). Due to the limited studies that have examined abnormal accruals surrounding private placements and the ability of firms to time the market in the private placements of securities, we use a sample period consistent with Williams and Tang (2009) for comparative purposes.
6. PIPE, short for "Private Investment/Public Equity," is a more recent type of privately placed convertible security, which has a mandatory conversion (usually within three years). In a PIPE transaction, a public company sells equity or equity-linked securities to a limited group of investors in a private transaction, and

then immediately registers the shares for resale into the public markets by those investors. If a convertible security is sold, the underlying common stock is registered for resale.

7. See Loughran and Ritter, 1997; Teoh, Welch and Wong, 1998; Denis and Sarin, 2001; and others.
8. We also estimated abnormal accruals using the modified-Jones model with a lag ROA performance variable as applied by Kothari et al. (2005). Use of this method led to qualitatively similar results.

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