

**Desirable Slack or Liquidity Enhancement:  
Evidence from Private Placements of Equity**

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## **Desirable Slack or Liquidity Enhancement: Evidence from Private Placements of Equity**

### **Abstract**

The need for liquidity contributes positively to common stock price response at private equity placement announcements. Supporting additions of needed liquidity for liquidity poor companies or the addition of needed financial slack for slack poor companies, our results are contrary to prior evidence with public equity issuances where a free cash flow problem appears to hold. Announcements are more favorable for companies with better prior performance and greater prior liquidity, potentially representing a greater company likelihood of surviving.

The objective of this paper is to add additional understanding on the valuation of liquidity infusions for liquidity constrained, or slack poor, companies. Studies by Miller and Orr (1966,1968), Myers and Majluf (1984), Jensen (1986) and Stulz (1990) establish that firm value is first enhanced and later reduced as the firm acquires liquid resources. Hertzal and Smith (1993) reveal that firms in financial distress – a likely strong proxy for either slack or liquidity poverty – are favorably treated when they announce private placements of equity.<sup>1</sup> A positive market reaction to the infusion of liquidity from equity private placements could come from either the generation of required financial slack with the pecking order model or a return toward optimal liquidity, when liquidity poor, with the static tradeoff model.<sup>2</sup> Alternatively, a negative market reaction exists if Jensen's (1986) excess free cash flow problem dominates and the added liquidity represents expected negative NPV investments. Not examined by Hertzal and Smith (1993), the primary purpose of this study is to determine whether positive announcement period returns are related to desirable liquidity or slack enhancement while not representing acquisition of excess free cash flows.

Myers and Majluf (1984) provide insight on how information asymmetry, agency conflicts and desirable company investment opportunities add greater value, provided that adequate financial slack or liquidity is achieved. They suggest that greater investment opportunities and higher degrees of information asymmetry lead to a higher optimal liquidity level. The resolution of the information asymmetry problem achieved by using informed investors in a private offering would, therefore, increase the optimal level of slack. This would then increase the likelihood of the use of equity private placements for severely slack constrained companies. Additionally, the ability to attract informed private-placement-investors' capital serves as a possible certification that the funds will be invested in positive NPV projects, ameliorating a possible Jensen (1986) excess free cash flow problem.

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<sup>1</sup>A private placement is a debt or equity issue that involves no public offering; as such, the issue is commonly exempt from registration with the Securities and Exchange Commission (SEC).

<sup>2</sup>Examining the impact of corporate holdings of liquidity on firm value, a paper by Opler, Pinkowitz, Stulz, and Williamson (1999) contains evidence supporting the static tradeoff model of cash holdings. Alternatively, Shyam-Sunder and Myers' (1999) provide evidence generally supporting the pecking order model over the capital structure static tradeoff model. Opler, Pinkowitz, Stulz, and Williamson discuss the difficulty in distinguishing between liquidity and capital structure effects and the ability to measure optimal liquidity when viewing cash holdings as negative debt. It is an objective of this paper to argue that at least one of the two models hold for equity private placements where liquidity or slack is needed. No attempt is made to assert which model dominates.

Prior studies confirm, and we reconfirm, that the majority of equity private placement companies have poor earnings performance prior to the announcement. Thus, the announcement likely reflects inadequate pre-issue liquidity or slack levels. It is an empirical issue as to whether the optimal level of liquidity or slack is surpassed with additions of excess liquidity, initiating an excess free cash flow problem.

An equity private placement is one of the most expensive sources of liquidity or financial slack, and would rationally be used when the benefits from the added liquidity or slack are justified by sufficient marginal wealth enhancements.<sup>3</sup> Due to high costs of issuance from discounts given to equity private placement investors, various debt and preferred stock alternatives and public equity offerings should precede equity private placements in the “pecking order.” Equity private placements should then precede more expensive voluntary forms of reorganization, followed by involuntary forms of reorganization. The ultimate resolution of a Jensen (1986) free cash flow problem then comes from business cessation when the going-concern value is less than the company's liquidation value. These conditions lead to the expectation that the known positive response to equity private placements, at least partially, come from needed liquidity or slack. A secondary possible result would be to find that the most distressed companies represent undesirable liquidity additions and an excess free cash flow problem.

Public equity offerings have share price run-ups prior to the offering announcement, share price decreases at announcement and have post-issuance-period relative under performance.<sup>4</sup> Both results are consistent with a lemons phenomenon and an excess free cash flow problem. Supporting this contention, Pilotte (1992) finds that slack provides no significant explanatory power to cross-sectional tests of market responses to new public equity offerings. Our study continues Pilotte’s examination by focusing on private equity placements where positive announcement effects are potentially related to desirable expansions in liquidity or slack.

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<sup>3</sup>In our sample, the average discount to equity private placement investors was 20.9 percent (median of 20.7 percent) with a range from a premium of 16.6 percent to a discount of 77.7 percent. The average is similar to Hertz and Smith (1993) with 20.1 percent, but dissimilar to Wruck (1989) with 4.8 percent. Additionally, equity private placements occur after relative price under performance where the private investors are signaling security under-valuation. Thus, the discount alone potentially underestimates the total equity issuance costs.

<sup>4</sup>See Smith (1986), Asquith and Mullins (1986) and Mikkelson and Partch (1986).

Other studies provide mixed evidence on the enhancement of firm value through the acquisition of liquidity or slack. Research by Lehn and Poulsen (1989), Mann and Sicherman (1991) Perfect, Peterson and Peterson (1995) and Harford (1999) provide substantial evidence of the costliness to stockholders from the over-accumulation of liquidity, and no evidence on the value of added liquidity. Smith and Kim (1994) report that mergers of slack poor with slack rich firms provide value. This result jointly considers the mitigation of the under-investment issue of Myers and Majluf (1984) and the excess free cash flow problem of Jensen (1986). Consistent with the static tradeoff model, Opler, Pinkowitz, Stulz, and Williamson (1999) find that riskier cash flows and greater growth opportunities are related to greater liquidity levels.

To study the value of slack or liquidity, we use a sample of liquidity changes where the link between corporate value and liquidity is as identifiable as possible. Private placements of equity, as noted by Wruck (1989), provide an opportunity to examine market responses to corporate events without the "clutter" of the resolution of information asymmetries impacting firm value. News of most liquidity enhancing events is compromised by the resolution of information asymmetries. By its decision to publicly procure funds through the sale of securities or corporate assets, management reveals some degree of inside information. Separating this information effect from other sources of market responses is difficult. Private equity placements provide an opportunity, using an adjusted abnormal returns measure introduced by Wruck, to observe market responses to corporate events while mitigating the influence of the resolution of information asymmetries.

The announcement of a firm's decision to issue equity privately is commonly received favorably. Large and sophisticated individual or institutional investors provide a positive opinion about the company's prospects and monitor management following their private placement purchase. Myers and Majluf (1984) indicate that value enhancement occurs by increasing slack when information asymmetries are high. The knowledgeable equity private placement investor helps facilitate this objective. Private investors are also bonding their positive opinion to the extent that they are restricted from reselling their shares. Prior studies (see, for example, Wruck, 1989, Fields and Mais, 1991 and Hertzels and Smith, 1993) attribute the atypical positive performance of equity private placements to desirable information

releases and improvements in ownership structures of issuing companies. Hertz and Rees (1998) find that earnings increases subsequent to private placements are positively related to the placements' announcement period abnormal returns; in contrast with the typically adverse signal of public equity issues, Hertz and Rees hold that the private equity placement announcement portends more favorable future earnings. Goh, Gombala, Lee and Liu (1999) also discover that analysts' upward revisions of earnings forecasts are positively related to these announcement period abnormal returns. The earnings enhancements noted in these two studies may be representing the value enhancing impact of adding needed liquidity or financial slack.

Similar to prior studies by Wruck (1989) and Hertz and Smith (1993), we find significant adjusted and unadjusted positive abnormal returns at announcement for a sample of 67 equity private placements that occurred during 1988-95. Findings are contrary to expectations of adverse market responses to equity issues in general.

The changes in the relative level of needed and supplied liquidity contribute positively to the cross-section of common stock price responses at private equity placement announcements. This result is consistent with investors in companies having an internal fund deficit responding favorably to the addition of financial slack or liquidity. The result is inconsistent with an excess free cash flow problem.

The methodology section is provided next. Section II provides the tests, results, and the interpretation of the results. Section III concludes the paper.

## **I. Methodology**

This subsection provides the definitions of the relevant variables, the sample selection procedure and a description of other control variables.

### **A. Valuation Effects**

Dependent variables are constructed with abnormal returns measured in two ways. The first measure is the traditional abnormal return for the issuing firm over the period from 3 days before the announcement to the day of the announcement, if there is time to trade an announcing firm's stock on the announcement date. For firms announcing after the close of trading, the first trading day after the announcement is treated as day 0. This announcement window is used by Wruck (1989) and Hertz and

Smith (1993) and is employed here to allow comparability with their results. This traditional measure is calculated as:

$$AR_{i,t} = R_{i,t} - [\hat{\alpha}_i + \hat{\beta}_i (R_{m,t})], \quad (1)$$

where  $AR_{i,t}$  is the abnormal return for firm  $i$  in period  $t$ ,  $R_{i,t}$  is the total return for firm  $i$  in period  $t$ , and  $[\hat{\alpha}_i + \hat{\beta}_i (R_{m,t})]$  is the market-model predicted return for firm  $i$  in period  $t$ .  $\hat{\alpha}_i$  is the intercept for security  $i$  predicted from the pre-event estimation period from day -200 to day -60;  $\hat{\beta}_i$  is the slope coefficient of security  $i$  over this same pre-event estimation period and  $R_{m,t}$  is the value-weighted return of the market during period  $t$ .<sup>5</sup>

The next measure comes from Wruck (1989) and is the adjusted abnormal return employed as the second dependent variable in this study. This measure allows for the examination of the portion of abnormal return that is due to factors other than information asymmetry resolution. The presumption is that the private placement investor knows the underlying firm value. The encumbrance from included information asymmetry effects, tempering the results of public equity issue announcements, is avoided.

The adjusted abnormal return model is:

$$AR_{i,tADJ} = [1/(1 - \lambda)]AR_{i,t} + [\lambda/(1 - \lambda)][(P_b - P_0)/P_b] \quad (2)$$

where  $AR_{i,tADJ}$  is the adjusted abnormal stock return for firm  $i$  in period  $t$ ,  $\lambda$  is the ratio of shares placed to shares outstanding after the placement for firm  $i$ , and  $AR_{i,t}$  is the traditional measure of the abnormal return for firm  $i$  in period  $t$  described above.  $P_b$  is the market price two days prior to the event window (taken from the CRSP files), and  $P_0$  is the placement price. The element  $[(P_b - P_0)/P_b]$  is the discount received by the private placement purchaser, where a negative discount rate represents a premium. The

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<sup>5</sup>A test is also conducted to account for potential pre- and post- parameter estimation bias that may come from a change in the variability of a stock's returns after the placement announcement. To account for this, a second set of parameter estimates is prepared over the period from day 11 to day 151 (results available from the authors by request). The results using these two parameter estimation paradigms are qualitatively the same, thus the results are robust to this possible estimation bias.

placement price is taken from the private placement announcement. Event windows between days -59 and 30 are examined.

## **B. Independent Variables and Related Hypotheses**

Authors of varied theories predict a stock price announcement effect based upon a set of potentially influential independent variables. These variables, and their related hypotheses, are employed in the tests and are summarized in Table I.

### **1. Existing Liquidity and Liquidity Supplied**

The two liquidity measures defined in Table I are the variables used to achieve the primary objective of the study, to see if and how investors value liquidity enhancement provided by equity private placements.<sup>6</sup> To a more limited extent, the two variables, together with other independent variables that follow, may provide evidence consistent or inconsistent with the static tradeoff model, the pecking order model and the excess free cash flow problem.

### **2. Proxies for Growth Options**

Companies with more growth options relative to assets-in-place are more likely to have positive NPV projects and, all else equal, need greater liquidity or slack and be less subject to an excess free cash flow problem. The following variables are used to proxy for growth options.

The earnings-price (E/P) ratio is inversely related to growth opportunities. High growth companies are expected to have low E/P ratios due to the preponderance of growth options to assets-in-place. The measure allows firms with small positive or negative earnings to be classified similarly.<sup>7</sup> Smith and Kim (1994) suggest that this growth opportunities measure captures the relative importance of current to expected future cash flows. A negative sign is predicted for this variable by the pecking order,

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<sup>6</sup>In ancillary tests, liquidity was normalized using SIC codes. Liquidity holdings in the sample industries was typically tri-modal; some firms in each industry were liquidity-constrained, others occupied a middle ground of available liquidity and a third group generally held ample liquid resources. Results using industry-normalized liquidity measures did not differ significantly from results using the non-normalized liquidity measures employed in this study.

<sup>7</sup>Pilotte (1992) describes tempered negative seasoned equity issue announcement period returns in the framework of several growth proxies. He proposes that firms with growth options will encounter a more willing stock market as they issue stock than will firms without these prospects.

static trade-off and excess free cash flow hypotheses. Low E/P ratio companies could also be in financial distress if they have negative, or seriously deteriorated, earnings.<sup>8</sup>

New product announcements with a private placement announcement represent exercise of a growth option. The expected investor reaction to the announcement should be positive. Cooney and Kalay (1993) consider the potential for equity issue announcements being positively received by the markets if the announcements are coupled with proposals to increase capital expenditures. They note that a firm's capital spending plans enhance stock value, but this gain is generally overwhelmed by other factors in a public equity issue. The response to a firm both placing equity privately and announcing favorable capital expenditure programs is not specifically addressed in earlier studies.

Working capital is required to support company operations and fund growth options. Given a signaling by the firm of its inadequate liquidity or slack through the announcement of a funding of working capital with placement proceeds, a positive market response is predicted.<sup>9</sup>

### **3. Corporate Control Issues and Ownership Structure**

Abnormal returns observed at the announcement of the placements reflect expectations of improved or diminished monitoring and increased or decreased discretion by management. Measures of managerial discretion are implemented in this study using a set of ownership structure proxies. Echoing Morck, Schleifer and Vishny (1988), a reduced role is expected to be played by an ownership structure hypothesis in explaining market responses to announcements by the smaller firms in this study's final sample than was found with the larger companies in Wruck (1989) and Hertz and Smith (1993).

Ownership concentration levels 1 through 3 represent earlier findings of non-monotonic valuation impacts for the firm with increases in management ownership concentration. Dummies for ownership concentration levels between 0 and 5%, between 5% and 25%, and over 25%, are specified. We examine

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<sup>8</sup>A financial distress variable adopted below controls for a money-losing firm in a mature industry that also has a low earnings/price measure. For example, if a U.S. steel maker is losing money, its deceptively low earnings/price measure implies possession of growth options. The financial distress variable helps controls for this empirical problem.

<sup>9</sup>Alternatively, the cash-flow-signaling hypothesis supported by Miller and Rock (1985) implies an unfavorable reception by the market to news that firm activities are generating lower cash flows than previously revealed. However, this "news" and its impact on stock price are captured by the size and discount of the placement, as the purchaser discloses this asymmetry in his or her purchase terms.

changes in these ownership proxies in our cross-sectional tests. Levels of inside ownership between 5% and 25%, and over 25% are taken from *Compaq Disclosure* for the reporting periods most recently available before the placement. Levels of ownership beneficially controlled by management and less than 5% of outstanding shares are not in *Compaq Disclosure*. A positive stock price reaction is anticipated to ownership concentration level 1. An increase in ownership concentration can better align management with shareholder interests, encourage more effective monitoring of managerial performance, or increase the probability of takeovers.<sup>10</sup> Further increasing ownership concentration reduces firm value by precluding a takeover or encouraging the mismanagement of corporate resources (see Fama and Jensen, 1983), leading to an expected negative response to changes in ownership concentration level 2. A favorable or insignificant valuation impact is expected given increases in the highest ownership concentration level 3.

#### **4. Control Variables**

A set of control variables used in prior studies control for elements of market responses not addressed by the liquidity, growth and ownership variables already adopted.

Financial distress denotes the presumably greater need for funds by the distressed firm, proxying for either the distance of the firm from its liquidity optimum with the static tradeoff model or the level of the internal financial deficit with the pecking order model. It is a control variable suggested by Hertz and Smith (1993) in their study of private placements. It is proxied by a firm's two consecutive prior years of negative earnings. An increase in firm value is expected to accompany the distressed firm's accumulation of required liquidity or financial slack. The adopted assumption for this result is that the financially most distressed firm can implicitly make better use of slack than its less distressed counterpart; this is not necessarily the case. For example, a firm that is poorly managed and/or in a declining industry often should be encouraged - sometimes against management's wishes - to cease operations and return any remaining value to shareholders. A period of financial distress is often observed prior to this firm's exit. If a private placement is part of a resistance strategy, the market is expected to discount firm value

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<sup>10</sup>Jensen and Meckling (1976) consider the benefits of increased management ownership and Shleifer and Vishny (1986), the benefits of large shareholders.

since management is merely denying the inevitable and is being afforded additional opportunity by the private placement to further waste corporate resources in negative NPV investments. Private placement investors may still be motivated to buy the issue if the purchase is at a sufficient discount below an anticipated, possibly short-term for registered issues, resale price. This represents false signaling of value creation and gives rise to the possibility of both an adverse selection problem and an excess free cash flow problem.

Restricted shares (unregistered shares) reflect an expected more favorable information effect. A positive sign is predicted for the coefficient of restricted shares given the preclusion of opportunistic resale by private placement investors of their shares. All else constant, restricted shares provide a more credible signal than unrestricted shares. There is also a greater expected ownership effect with restricted shares. The restricted shareholder is more motivated to aid the monitoring and management of the firm to insure the continuing value of his or her illiquid investment.<sup>11</sup>

Prior under performance signals greater positive information due to likely greater under-valuation prior to the placement. Myers and Majluf (1984) use this variable. A firm is considered an “under performer” if it exhibits common stock returns over the event period (-29, -10) that are below the average for the value-weighted index.<sup>12</sup>

Firm size is expected to be inversely related to the information effect of the announcement. A greater positive average information effect is expected for the smaller firm. Firm size is, *ceteris paribus*, typically related to larger and longer-term relationships with outsiders (such as banks) and with the capacity to more easily secure additional financial slack.

### **C. Sample Selection Procedure**

Initially, 543 private placement announcements are collected from the *Business News Wire* using combinations of key words “private” plus one of the following: “placement,” “offering,” “stock

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<sup>11</sup>The power of restricted shares variables and, thereby, the expected level of monitoring may be reduced since the prior studies by Wruck (1989) and Hertz and Smith (1993). Barron (1995) outlines options available to restricted shareholders to more easily sell their securities under new SEC guidelines if the sales are to “informed investors.”

<sup>12</sup>As with industry-normalized measures of liquidity, SIC codes were used to measure performance relative to a firm’s industry, but small industry sample sizes precluded further evaluation.

purchase,” “purchase,” “sale,” and “stake.”<sup>13</sup> Announcements between January 1, 1988 and December 31, 1995 are used. The date of the first announcement on the wire service is treated as day 0 in subsequent examinations unless the announcement occurs after the close of trading; the first available trading day after the announcement is selected as day 0 for these announcements. Only publicly traded domestic firms with no other simultaneous announcements are retained in the sample.<sup>14</sup> The final sample is restricted to common stock since it represents a more costly external capital infusion and is more likely to have greater information content and changes in ownership than with debt or preferred stock private placements.

Table II indicates the factors reducing the sample. Multiple issues by single firms are included provided that the announcements of each issue clearly describe the private placements as independent events and event periods do not overlap. Of the 215 observations that initially meet the selection criteria, 146 are lost due to insufficient information available on *CRSP* (77), *Compustat* (20), *Compaq Disclosure* (16), simultaneous announcements of other security issues (18), or other factors (15, listed in Table II) that compromise the ability to interpret announcement period returns.<sup>15</sup> Two of the remaining 69 announcements are eliminated, one observation has an extraordinary discount and issue size while another one has an extraordinary premium. The final sample used in all the tests contains 67 equity private placement announcements by 62 companies.

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<sup>13</sup>The sample selection and screening process closely follow the procedures followed by Wruck (1989). The announcements vary in size from 60 words to several hundred. Data on more detailed announcements include the relative and absolute size of the placements, private investor characteristics, proposed use of the private placements proceeds, perceived needs by the firms for the arriving liquidity, information on the ownership structure changes resulting from the private placement and whether the issues are registered or unregistered (i.e. restricted). The *Business News Wire* is published on the west coast and each announcement is posted in Pacific time. Observations reported after 1:00 PM Pacific (4:00 PM Eastern) are treated as occurring on the following trading day. Since the *Business News Wire* operates on days when the market is closed, any announcement occurring on closed days is treated as occurring on the next available trading day. The potential for the compromise of foreign private placement issuing firm returns by unknown or undiscovered foreign announcements precludes their inclusion. Two highly influential observations were eliminated from the sample based on high R-Student values and significant DFFITS and DFBETAs.

<sup>14</sup>Ambarish, John and Williams (1987) and Loderer and Mauer (1992) consider the information effects of simultaneous signals of investment, dividends and equity issues; they imply equity issues and the private placement story are clouded where issuing firms make simultaneous announcements of these other activities.

<sup>15</sup>Reduction in the sample due to missing data potentially induces a selection bias toward more followed and larger companies. Since our final sample is of materially smaller companies than in either the Wruck (1989) or Hertz and Smith (1993) studies (see the Table IV Firm Characteristics subsection), this possible bias appears to be mitigated.

## II. Results

### A. Descriptive Statistics

The issue and company characteristics in the primary test sample are contained in Table III. The table also holds the characteristics of an ancillary sample, used in tests described later in this section. The primary test sample is contrasted to samples used in earlier private placement studies in Table IV. The mean size of the 67 placements is \$5.01 million with a median of \$2.40 million. Larger offer sizes in prior studies range from \$31.5 million with Wruck (1989) and \$11.4 million by Hertz and Smith (1993).<sup>16</sup> Market values of equity range from \$3.3 million to just less than \$1/2 billion. The average equity market value of \$68.1 million is also materially smaller than the values of \$233.7 million in Wruck's study and the \$94.7 million in Hertz and Smith's paper. The fraction of shares placed in the current study varies from less than 1.0 percent to 34.9 percent with an average of 11.8 percent and a slightly lower median of 10.8 percent. Referencing Table IV, higher percentages placed are found in Wruck (19.6 percent) and Hertz and Smith (16.0 percent). Discounts to private placement purchasers, relative to the firm's stock price 5 days before the announcement is 20.9 percent, which is similar to Hertz and Smith's 20.1 percent and quite variant from Wruck's much lower 4.8 percent.

Materially smaller size of offers and size of company equity value are likely representative of differences in equity private placements in the 1988-95 period of our study versus Wruck's 1980-85 and Hertz and Smith's 1980-87 sample periods. Since we use a sample collection and screening process similar to Wruck, differences should not be attributable to the sampling procedure. Thus, the average annual number of placements has decreased from an average of over 16 per year in Wruck's study to about 13 in Hertz and Smith's and just over 8 in this study. Using a non-overlapping time period with the prior two studies, the robustness of their results over time, and different sample characteristics, can be examined while also adding additional discovery on the role of liquidity enhancement to equity private placement valuation effects.

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<sup>16</sup>Tests for significant differences on descriptive variables between the current and prior two studies was not possible due to unavailable information on the distributions of the variables from the other studies.

The smaller companies in this study may represent less scrutinized firms followed by fewer analysts and, thereby, have a more extreme market response to information release than for the larger firms in the prior two studies. Conversely, the smaller relative size of the placement and the expected reduced role of ownership and control differences in smaller companies both lead to a countervailing expectation of a smaller market response. The larger fractions placed and smaller discounts given to the purchasers in the Wruck study implies that the current study's companies are probably under greater financial distress. Evidence of a positive benefit from liquidity or slack enhancement is more likely in this sample unless a greater adverse selection problem has resulted due to more lax private placement investor trading restrictions.

Inside ownership before the private issues vary from less than 2 percent to over 82 percent with a mean of 26 percent and a slightly lower median. The mean is similar to Wruck's 30.7 percent and Hertz and Smith's 30.3 percent. Book-to-market equity ratios range from around zero for one firm with marginally negative reported stockholders equity to a maximum of 1.65. This measure is developed using market prices five days before the issue and the annually reported stockholders equity in *Compustat* prior to and closest to the announcement event. A mean book-to-market equity ratio of 0.294 is observed, with a median of 0.177. Forty-three of the announcements are preceded by two prior years of negative earnings and are presumed to be for firms experiencing financial distress.

The purchaser information is taken from the text of the private placement announcements in the *Business News Wire*. No single group dominates the purchaser descriptions. Sixteen of the purchasers are single and/or foreign. Twenty-three are institutional or corporate with all of the corporate buyers in related businesses. Nine of the purchasers are managers or directors at the time of the purchase with 11 outside buyers becoming managers or directors with the purchase. Eight purchasers are individuals. No information on the buyers is given in 26 of the announcements. Characteristics sum to over 67 as many buyers share multiple features.

The purchaser characteristics of this study do not seem to differ greatly from earlier studies by Wruck (1989) and Hertz and Smith (1993) in Table IV. Although the purchaser "mix" is different, no striking dissimilarities based on the manager/director, institutional or individual status of the buyer is

noted; the Hertz and Smith study, however, seems to be more dominated by individual and institutional buyers. Depending on the ownership structures prior to the placement, a more favorable corporate control response is expected for the Hertz and Smith sample, since a significant portion of the ownership being assumed is by new outside block holders.

The purposes of the private placement proceeds vary. Purposes are drawn from the text of the announcements. Thirty-four of the issues are for new products and eight are for debt retirement. Twenty-three of the placements generate funds for working capital. Three provide funds to be used, at least partially, in acquisitions. Fourteen of the announcements do not reveal the purpose of the private placement proceeds. The announced funds uses sum to over 67 as many firms report multiple intended uses for their private placement proceeds.

## **B. Unadjusted and Adjusted Announcement Period Returns**

Announcement period abnormal returns are given in Table V. Panel A includes the traditional mean cumulative abnormal returns (CARs) unadjusted for the private placement investors' discount over various event windows used by Hertz and Smith (1993). Panel B provides the mean CARs for the same event windows using the discount adjusted returns method introduced by Wruck (1989). With the exception of the two event windows (-9, 0) and (1, 10) for unadjusted CARs, all event windows in Table V exhibit significant abnormal returns. The primary event window, (-3, 0) provides average unadjusted abnormal returns of 0.49 percent while the equivalent adjusted return equals 2.5 percent with p-values of 0.04 and 0.0001, respectively.

In panel B, p-values approach 0 for all of the adjusted CARs over every selected event window.<sup>17</sup> The impact of the adjustment is greatest for the longest event windows. The adjustment has intuitive appeal. If the firm privately issues equity with an average discount of 20.9 percent on over a tenth of the firm's stock and the market does not penalize stock price, then an effective favorable response is implied even if the actual stock price change is neutral or moderately negative. Possible sources of the adjusted abnormal returns in the primary event window (-3, 0) are examined next.

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<sup>17</sup>The non-event announcement period adjusted returns for (-29, -10) and (1, 10) are reported in Panel B of Table V with the inclusion of the discount adjustment from Equation 2. Since the information on the discount value impact represents an announcement period return, the CARs for these two windows are better represented by the unadjusted returns of Panel A in Table V. The discount effects on adjusted returns are left in these two windows to more closely reflect Hertz and Smith's (1993) reporting procedure.

## C. Empirical Predictions and Tests

The variables defined in Section II are summarized in Table I and are included in the primary test column of Table VI. The dependent variable in the regression test,  $AR_{i,tADJ}$ , is the adjusted abnormal returns measure from Equation 2. Results are presented with the description of the independent variables and their rationale in this section; results come from Table VI.<sup>18</sup>

### 1. Proxies for Liquidity

Two direct measures, existing liquidity and the liquidity supplied, and two interactive liquidity measures (not shown in Table results) are employed. With the inclusion of a liquidity supply variable, the significance of the firm's existing liquidity standing alone is displaced. The liquidity supply is among the most significant two or three factors in the reported and all unreported estimating environments. The change in the liquidity supply factor's significance is anticipated by Myers and Majluf (1984) with the pecking order model, consistent with desirable liquidity enhancement with the static tradeoff model, and counter to existence of an excess free cash flow problem, even though it is consistent with Jensen's free cash flow hypothesis.

The next set of unreported tests examine for possible decreasing marginal benefits from liquidity infusions. In the first test an interactive variable, the product of liquidity and liquidity supply, is used as the only liquidity variable in an otherwise replication of the variables reported in the primary test of Table VI. The expected sign is negative. Yet, the interactive variable is positive and significant at the 5 percent level. We suspect that the market is using existing liquidity as a proxy for the firms' expected survival likelihood or the interactive variable may be serving as a poor proxy for the relative change in liquidity variable. The result is not robust since the interaction variable is not significant in other tests that include either liquidity or liquidity supply variables. Counter to existence of a free cash flow problem and the

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<sup>18</sup>Variance inflation factors are derived for the independent variables in the reported and unreported supplementary regressions. All are within acceptable ranges with most between 1.008 and 2.000, with one as high as 3.304. White standard errors are used in all regression tests to generate efficient estimators that are robust to heteroskedasticity. No significant reductions in the powers of the test statistics occur with White corrections; several of the t-values (p-values) improve. Uncorrected p-values are reported where White's correction "improves" statistical results. Interactive variables are included in unreported supplemental tests and are not included in Table I or Table VI results. The supplemental tests, tables with corrected and uncorrected t-values, a table with the variance inflation factor ranges for each variable and the correlation matrix among the independent variables are available from the authors by request.

static trade off hypotheses, squared liquidity and squared changes in liquidity variables are not significant when their linear counterparts are present in the regressions. A negative significant sign is expected if decreasing marginal benefits or increasing marginal costs occur when sufficient liquidity enhancements are present.

## **2. Proxies for Growth Options**

The empirical implications and proxies for growth options, described in Table I, include an earnings/price ratio and dummies for new product and working capital investment. In Table VI the new product dummy variable is significant with a p-value of .026 while the earnings/price ratio has a p-value of .111. The new product dummy variable only has a variance inflation factor of about 1.4, but is still significantly correlated with the working capital, change in liquidity and under performance variables. Since the three variables also are related to liquidity, or factors effecting liquidity needs, a supplemental unreported test is performed where the earnings/price variable is negative and significant at the .001 level when the new product dummy variable is excluded. The earnings/price variable is negative and significant in all specifications that exclude the new product dummy variable. This is consistent with a more favorable market response to funds infusions for higher growth or financially distressed firms with negative or very low earnings. This result does not assist in recognizing the dominance of a given hypothesis. The result is consistent with the marginally higher value of financial slack with the pecking order model and/or the higher opportunity or stock-out cost for marginally needed liquidity with the static tradeoff model. The phenomenon could also represent an amelioration of the free cash flow problem for higher growth companies or greater free cash flow problem for the companies with less beneficial investment opportunities.

## **3. Proxies for Ownership Structure**

Earlier studies of equity issues provide evidence consistent with a reduced role for ownership structure and an increased role of information releases in describing the cross-section of returns for smaller firms making an equity issue.<sup>19</sup> In Table VI, weak evidence is provided supporting Wruck (1989) and Morck, Schleifer and Vishny (1988). A negative-signed and weakly significant factor is found for the

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<sup>19</sup>See Morck, Schleifer and Vishny (1988), Melnik and Platt (1995) and Hertzal and Smith (1993).

entrenched level of inside ownership from 5 to 25 percent in the primary test. Insignificant positive-signed factors for the change in ownership concentration from 0 to 5 percent and above 25 percent are also revealed. Evidence supports the premise that ownership structure is less important for the smaller firms in this study relative to the larger firms in similar prior studies in describing market responses to news of liquidity enhancing events.

#### **4. Control Variables**

The empirical implications of a set of control variables in tests of liquidity effects are outlined in Panel D of Table VI. Firm size is negative and significant in describing market responses to the announcements. The result is consistent with larger firms having a lower relative need for liquidity. A presumption exists that the larger firms have greater relative access to borrowing and, on average, longer-term relationships with lenders. This access describes an unmeasured portion of a firm's liquidity in our methodology that is possibly directly related to company size. Thus, the firm size effect could also represent occurrence of the pecking order, static tradeoff and/or excess free cash flow hypotheses. Alternatively, there may be less asymmetric information for larger companies that generally are more followed by analysts and in news coverage.

Prior to announcement, stock price under performance in Table VI indicates that the market provides less of a reward, or more of a penalty, to the provision of liquidity to the more under performing firms. The result is consistent with prior stock performance reflecting the survival likelihood, and/or desirability of survival, of a company. Private equity funds going to the weaker companies could then represent an excess free cash flow problem.

The dummy for the unregistered stock issue, significant in prior studies, is not significant in Table VI and other non-reported tests where it is included. We suspect that the private placement investors' role in certification and bonding company valuation is not as great as in the past. This assertion is consistent with recently more relaxed SEC guidelines for private investor sale of restricted stock; they are now enabled more easily to sell unregistered stock.

## 5. Further Examination of Liquidity

Supplemental regressions enable us to observe the relative impact of the demand for liquidity versus the supply of liquidity. We use two proxies to reflect the possible demand for liquidity. The first demand measure comes from the prior to announcement relative level of liquid assets to the yearly demand for liquid assets derived over two years prior to the announcement.<sup>20</sup> The second demand for liquidity measure comes from the company's average prior to announcement two-year average financial deficit to assets, where the prior-to-announcement two-year deficit (surplus) is proxied by net income. The first demand "levels" measure is expected to be more closely associated to liquidity needed arising from the static tradeoff model for liquidity while the "financial deficit" measure more closely proxies the need for financial slack arising from financial distress with the pecking order model. The primary regression, already covered, could not separate these two possible effects and being derived over only one year may not be appropriately capturing the enormity and persistence of the prior to announcement slack or liquidity short-fall. The new measures provide longer-term measures of shortfall in both needed liquidity or desired slack.

Liquidity supplied was defined as the private placement proceeds divided by the firms liquidity needs in the primary test. To provide consistency with the newly defined liquidity demand variables, liquidity supply is defined in the supplementary tests by dividing private placement proceeds by total assets.

The financial distress dummy variable used in the primary test replicates the measure used by Hertz and Smith (1993). In the supplemental tests, we drop the dummy variable and use the new continuous relative demand measure, the two-year average financial deficit to assets, to represent the need for financial slack. We were concerned about the within-sample variation in financial distress in the primary test since the typical company in the sample has a material financial deficit. Forty-three of the 67 announcing companies in the primary test sample have two prior years of negative earnings and are

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<sup>20</sup> For each of the two years prior to announcement, we subtract preferred dividends, interest expense, debt due within a year, cost of goods sold and selling general and administrative expenses from liquid assets. Each net yearly measure is then divided by total prior year's assets to obtain a relative measure of liquidity demanded either from operations or externally. These two measures are then averaged to get the liquidity demand for the supplemental

classified as under financial distress. Additionally, the use of zero earnings as the dichotomous separation criterion is arbitrary and may not represent well the separation of firms based on their level of financial deficits and need for liquidity.<sup>21</sup> Since we will also be using a growth options proxy variable that no longer uses earnings in the supplemental tests, possible multicollinearity and interpretation concerns from using earnings in multiple independent variables also will be averted.

Different possible variables are available that could be used as a proxy for a company's relative proportion of growth options to assets-in-place. Pilotte (1992) finds that five years of sales, operating income or asset growth better proxy a company's growth prospects than the P/E ratio or Tobin's Q. A concern for our use of the reciprocal of P/E in the prior regression test comes from the E also being a measure inversely related to the company's financial deficit. Due to E's impact on the deficit, prior E would also be inversely related to needed infusions of liquidity or slack. Use of any one of the three preferable measures to P/E found by Pilotte will ameliorate this problem. We have more prior sales data across our sample than operating income or asset data. Thus, in the supplemental test we use prior sales growth as a proxy for growth options. We use the geometric average of up to six contiguous years of annual sales occurring just prior to the announcement year to proxy for a company's level of growth options. Many companies in the sample are young and have less than six prior years of reported sales; thus, a minimum of two years of contiguous sales growth is required to derive the geometric average.

Data requirements result in a substantial sample size loss from 67 observations in the primary test to 38 observations in the supplemental tests. The enhanced definitions decrease the power of the test, induce an unknown additional selection bias and potentially decrease the robustness of the results. Nonetheless, if the supplemental measures provide a better specified model we may be able to reinforce some of the prior findings while at least questioning and/or adding insight on the factors underlying shareholders' reactions to announcements of equity private placements.

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tests in Table VI.

<sup>21</sup> For example, with historical based accounting used to determine assets and earnings, a going concern with constant scale and depreciating assets would generally need a return on investment substantially greater than the inflation rate to have a real income of zero.

The right-most column in Table III holds characteristics of the ancillary sample. Many of the characteristics of this sub-set of the total sample are comparable and not materially different. We anticipated a size increase bias with the ancillary sample due to the requirements of more historical information. Surprisingly, the average ancillary sample company is smaller than the average company in the primary sample. Given the similarity of the firms in the two samples, the primary and supplemental test results can be compared and contrasted. The supplemental tests include a majority of the firms in the primary test; we recognize that caution is required interpreting results among the tests since they are not independent.

The right most six columns of Table VI contain the results from the supplemental regression tests.<sup>22</sup> The first supplemental test includes the sales growth and the two new liquidity demand variables. The "levels" liquidity need (demand) measure strongly supports the contention at the one-percent significance level that prior liquidity levels positively impact investors' assessment of company value. The prior to announcement "financial distress" measure of slack demand is not significant.

The equity private placement announcement releases positive asymmetric information on the firm's need for liquidity. Investors view companies with higher prior levels of liquidity more favorably than companies with low levels of prior liquidity. This most likely represents investors' incorporation of a company's expected survival rate and likelihood and size of future expected operating cash flow increases as determinants of value enhancement. Over the continuum of all equity private placements we fail to find support for either the static trade off model and the pecking order model. The result runs counter to a Jensen's free cash flow problem since the more liquid firms are provided the more positive market response.

These results are consistent with investors sensing two different types of liquidity poor companies announcing equity private placements. Based on the results of the primary sample and the ancillary sample, it appears that we have one sub-sample of companies under severe financial distress. They need liquidity to continue in business, but continuance requires equity funds that have a greater likelihood than

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<sup>22</sup> The same statistical tests and procedures used on the primary test were used and no problems were found; the regression models in the three supplemental tests are well specified.

with stronger companies of having negative NPV investments. For the most distressed companies this potentially represents an excess free cash flow problem. Many of these companies will not return sufficient future cash flows to justify the funds infusion. The second sub-sample is not as financially distressed and needs the additional liquidity for higher expected levels of positive NPV investments. This second sub-sample needs additional liquidity or financial slack.

The new sales growth variable, which proxies for growth options, is insignificant, as was the E/P ratio used in the primary test. Growth option differences among companies, as proxied in our sample, do not appear to have a role in the determination of abnormal announcement returns. The firm size and prior stock under performance variables remain significant at similar levels as in the primary test. The new product variable is now not significant while the working capital variable becomes weakly significant. The intercept remains positive, but is only weakly significant. None of the ownership structure variables are significant in any of the supplemental tests.

Relative to the first supplemental test, the second supplemental test adds the liquidity supply variable and removes the two liquidity demand factors. The liquidity supply variable is moderately significant at the five-percent level. The result of the second supplementary test supports the positive value of slack or liquidity enhancements. The liquidity supply variable measures the proportional increase in the company's asset size coming from the private offering. Greater liquidity supply has the expected positive contribution to the announcement effects of equity private placements and is significant at the five percent level. Results on this test are otherwise qualitatively similar to the prior supplemental test except for the working capital and prior stock under-performance variables no longer being significant. The significance level of the intercept term also increases. The liquidity-supplied variable also likely represents the release of other asymmetric information not captured by the remaining variables in the regression, thereby, potentially representing omitted variables that are not related to the value of liquidity enhancements. The small sample size may also exacerbate this problem.

The third supplemental test includes both the liquidity supply and demand proxy variables to see if one dominates the other, further narrowing the set of possible explanations for the phenomenon we are

examining. The "levels" liquidity demand proxy is significant at the five-percent level while the liquidity supply and "financial distress" demand proxies are not significant at conventional test levels. Company size remains significant while the intercept and prior stock under-performance variables are not significant at the ten percent level. The liquidity demand levels variable comes from information available prior to the announcement and subsumes the liquidity supply variable that is released at the announcement. The relative size of the placement – captured by the liquidity supply variable - does not marginally contribute to the announcement effect. A concern for possible omitted information effects is ameliorated given the results of this test. Customary tests for model specifications and tests for violations of the standard statistical assumptions do not temper any of our supplemental results. Similar explanatory power among the supplementary and primary tests decreases the likelihood that the smaller sample size and possible selection bias of the ancillary tests compromise their results.

The new proxy variables for liquidity needed reasonably capture the value of slack and liquidity enhancements for the financially sounder equity private placement issuing companies. A free cash flow problem is not evident for the more financially sound companies, even though it may hold for the more distressed firms. Thereby, a positive value for slack and/or liquidity demand does not hold over the set of all equity private placement company observations. Based on the two liquidity demand measures, neither the pecking order model, the static trade-off model nor Jensen's excess free cash flow problem are holding over the entire continuum of companies announcing equity private placements. Alternatively, liquidity supplied enhances company value for the entire sample when the demand variables are not considered.

### **III. Conclusions**

Equity private placements provide a rich environment to enable deductions and inferences on the possible positive role of liquidity or slack enhancement. This role is not easily portrayed for the average company that appears, based on prior research, to have ample liquidity or be cash rich. Thus, the majority of prior research has repeatedly found evidence of excess free cash flow problems. Evidence of an excess free cash flow problem is not found with equity private placements except, quite likely, for the poorest

performing companies. Overall, support is found for the static trade-off model or the pecking order model for the more financially sound equity private placement companies. Myers and Majluf's (1984) contention that markets should respond positively to companies obtaining needed financial slack is indirectly supported. Failure to find a significant positive relationship between announcement returns and prior financial distress possibly favors the static tradeoff model over the pecking order model. This possible assertion should be viewed with caution since our objectives and methodology were not intended to try to differentiate between the two models.

The equity-issue puzzle, including the pecking order model, static tradeoff model, excess free cash flow hypothesis, information theoretic models and ownership structure theory, is supplemented by the findings in the preceding pages. Test evidence confirms that the prior to announcement liquidity level helps to describe the cross-section of market responses at private equity placement announcements. A link exists between liquidity and the enhancement of company value for many of the firms announcing these issues. Results are also consistent with the view that the most financially distressed equity private placement companies quite possibly represent an excess free cash flow problem. Even though our sample contains much smaller companies than in prior tests of equity private placements, and contrary to prior research, we also find weak evidence of at least a weak possible role for corporate control benefits for small companies arising from monitoring by private placement investors.

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**Table I**

**Independent and Control Variables**

Variable	Predicted Sign	Definition	
Existing Liquidity and Liquidity Supplied	- +	Existing liquidity equals prior liquid assets divided by the sum of prior funds required for preferred dividends, operations and debt servicing needs. Liquidity supplied is equal to the proceeds from the placement divided by the sum of prior funds required for preferred dividends, operations and debt servicing needs. "Prior" is defined as the most recently reported year prior to the announcement of the private placement. Liquid assets are the sum of cash plus accounts receivable plus short term marketable securities.	- / + w pecking - / + wi below tl - / - wit above tl - / - w flow hy
Earnings/Price	-	Proxied by the ratio of earnings per share to market price five days before the first announcement of the private placement.	More : growth
New Product	+	1 if the financial press indicates the private placement will be used to fund a speculative new product and 0 otherwise.	Capturi compor options
Working Capital	+	1 if the private placement proceeds are reported in the financial press as intended by the firm to be used as working capital and 0 otherwise. A firm is treated as funding working capital if it discloses an intention to fund working capital, continuing operations, or cash shortages or if it uses any language that implies the funding of day-to-day activities with the placement proceeds.	With below c model reductio
Ownership Concentration Level 1	+	Management ownership includes beneficial control by management of voting shares and common stock ownership by shareholders noted as loyal to management in either the private placement announcement or SEC reports as provided by <i>Compaq Disclosure</i> . Ownership concentration is the total shares controlled by management after the placement divided by shares outstanding after the placement. This variable takes on a value equal to the ownership concentration if that ownership after the placement is less than 5%. If ownership concentration after the placement is more than 5%, this variable takes on a value of .05	Increase ment w

**Table I (Continued)**

Variable	Predicted Sign	Definition	
Ownership Concentration Level 2	-	Management ownership is measured in this level in a manner analogous to that used for Changes in Level 1. If ownership concentration after the placement is greater than or equal to 5% and less than 25%, this variable takes on a value equal to the ownership concentration minus 5%. (i.e., if the total ownership concentration after the placement is 24%, this variable takes on a value of 24% minus 5% or 19%.) If ownership concentration after the placement is less than 5%, this variable takes on a value of zero.	Increase alignme
Ownership Concentration Level 3	+	Management ownership is measured in this level in a manner analogous to that used for Changes in Level 1. If ownership concentration after the placement is greater than or equal to 25%, this variable takes on a value equal to the ownership concentration minus 25%. (i.e., if the total ownership concentration after the placement is 45%, this variable takes on a value of 45% minus 25% or 20%). If ownership concentration after the placement is less than 25%, this variable takes on a value of zero.	Increase ment w
Financial Distress	?	1 if the firm has had 2 consecutive years of negative earnings and 0 otherwise.	+ with distress - The NPV pr
Restricted Shares	+	1 if the shares to be placed are identified as restricted or unregistered and 0 otherwise. A search is made of the private placement announcement for the words "restricted" or "unregistered"; if the SEC registration status of the placement is not noted or is unclear, this variable will take on a 0 value.	Inabilit investor a perf firm su
Prior Under performance	?	1 if the firm's raw returns over the event period (-59, -10) are below the average for the value-weighted index. This variable takes on a 0 value for all other firms. Returns are calculated using the CRSP daily returns file. A holding period return is calculated for each firm over the period (-59, -10).	+ if the Investo - if the NPV pr
Firm Size	-	The log of total assets for the most recent reporting period prior to the private placement.	Fewer financi

**Table II****Private Placement Announcement Sample Reduction Conditions from 1988-1995**

The initial sample of 543 observations come from *Business News Wire* using keyword searches on terms including "private" jointly found with one of the following words: placement(s), offering(s), stock purchase(s), purchase(s), sale(s), and stake between January 1, 1988 and December 31, 1995.

Description	Number	Remaining
Initial <i>Business Wire</i> keyword announcements	543	543
Only cursory mention of private placement	240	303
"Recaps" not identifiable as private placements	34	269
Foreign companies	54	215
Insufficient or unavailable <i>CRSP</i> data	77	138
Unavailable required <i>Compustat</i> data	20	118
Other simultaneous issue announcements	18	100
Insufficient insider ownership data on <i>Compaq Disclosure</i>	16	84
Banks and financial institutions	7	77
Both shares issued and size of placement not announced	3	74
Secondary offering or simultaneous sale by management	3	71
Simultaneous change in dividends	1	70
Second announcement of earlier issue	1	69
Highly influential outliers	2	67
Final sample used in initial tests		67

**Table III****Selected Characteristics of Private Placement Announcements  
January 1988 - December 1995**

Each of the announcements meets requirements for available CRSP, *Compustat* and *Compaq Disclosure* data.

	Primary Test Sample	Ancillary Sample
<u>Sample Size</u>	67	38
<u>Purchaser Characteristics</u>		
Managers/Directors	13.4%	10.5%
Institutions/Corporations	34.3%	31.6%
Single/Individual	9.0%	7.9%
<u>Placement Characteristics</u>		
Average Proceeds (millions)	\$5.01	\$4.73
Median Proceeds (millions)	\$2.40	\$2.23
Average Discount	20.9%	19.4%
Median Discount	20.7%	19.6%
Average Fraction Placed	11.8%	10.9%
Median Fraction Placed	10.8%	10.4%
Maximum Fraction Placed	34.9%	31.4%
Minimum Fraction Placed	.2%	2%
Maximum Discount	77.7%	69.2%
Minimum Discount (premium)	(16.6%)	(16.6%)
<u>Firm Characteristics</u>		
Average Market Value of Equity (millions)	\$68.12	\$59.46
Median Market Value of Equity (millions)	\$39.47	\$47.44
Average Ownership Concentration Pre-placement	26.0%	22.1%
Median Ownership Concentration Pre-placement	23.1%	21.5%

**Table IV****Selected Contrasts to Earlier Studies of Equity Private Placements**

The observations are contrasted to the data examined in earlier studies of private placements of equity. Contrasting data are drawn from Wruck (1989) and Hertz and Smith (1993).

	Primary Test Sample	Wruck (1989)	Hertz & Smith (1993)
<u>Sample Period</u>	1988-95	1980-85	1980-87
<u>Sample Size</u>	67	99	106
<u>Purchaser Characteristics</u>			
Managers/Directors	13%	13%	6%
Institutions	34%	27%	50%
Single/Individual	9%	11%	28%
<u>Placement Characteristics</u>			
Average Proceeds (millions)	\$5.01	\$31.46	\$11.38
Average Discount	20.9%	4.8%	20.1%
Average Fraction Placed	11.8%	19.6%	16.0%
<u>Firm Characteristics</u>			
Average Market Value of Equity (millions)	\$68.1	\$233.7	\$94.7
Average Ownership Concentration Pre-placement	26%	30.7%	30.3%

**Table V****Cumulative Announcement Period Abnormal Returns**

The percent cumulative abnormal returns (CAR) are calculated using the market model and the value-weighted index. Unadjusted returns are measured using Equation 1. Parameter estimates are calculated over the period (-200, -60). Adjusted returns are measured using Wruck 's (1989) procedure, Equation 2.

	Event Window				
	-59, 30	-29, -10	-9, 0	-3, 0	1, 10
A. Unadjusted Returns					
Mean CAR	-16.81	-18.43	.6123	.4871	-.001
T-statistic	-14.72	-34.23	1.61	2.02	-.002
P-values	.0001	.0001	.11	.04	.99
B. Adjusted Returns					
Mean CAR	28.64	-8.606	5.695	2.518	5.028
T-statistic	25.07	-15.99	14.96	10.46	13.21
P-values	.0001	.0001	.0001	.0001	.0001

**Table VI**

**Cross-Sectional Regression of Private Placement Announcement Period  
Abnormal Returns with an Allowance for Changes in Ownership Concentration**

The dependent variable is the adjusted private placement cumulative abnormal return over the primary event window from 3 days before until the day of the announcement. A traditional market modeling with the estimation period (-200, -60) is employed. Coefficient estimates and p-values are calculated for the 67 announcements between January, 1988 and December, 1995 in the primary test, and for 38 announcements over the same period in the supplemental tests. Changes in levels of inside ownership concentration for levels from 0-5, 5-25 and over 25 percent are calculated for each firm as a result of the private placements.\*

Independent Variable	Likely Sign	Primary Test		Supplemental Test 1 Liquidity Demand		Supplemental Test 2 Liquidity Supply		Supplemental Test 3 Demand & Supply	
		Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
<b>A. Liquidity</b>									
Liquidity Demand (Level)	-	-.062	.3430	.219	.0047			.190	.0366
Liquidity Demand (Distress)	-			-.066	.4352			-.041	.6641
Liquidity Supplied	+	.193	.0020			.215	.0427	.075	.5414
<b>B. Growth Options</b>									
Earnings/price	-	-.294	.1110						
New product	+	-.144	.0260	-.026	.7565	-.057	.5138	-.042	.6354
Working capital	+	-.082	.2410	-.153	.1117	-.149	.1445	-.153	.1165
Sales growth	+			.007	.7875	-.058	.1202	-.011	.7705
<b>C. Ownership Structure</b>									
Change in Level 1	+	15.659	.1680	9.313	.4392	16.006	.2042	9.553	.4339
Change in Level 2	-	-1.948	.0930	-1.314	.4152	-2.569	.1389	-1.567	.3537
Change in Level 3	+	.663	.1190	.044	.9749	1.101	.4493	-.090	.9502
<b>D. Control Variables</b>									
Financial distress	+/-	-.006	.9340						
Restricted shares	+	.067	.3910	.123	.2015	.063	.5434	.106	.2914
Prior under performance	+/-	-.153	.0200	-.171	.0532	-.100	.2856	-.153	.1033
Firm size	-	-.090	.0020	-.099	.0123	-.134	.0210	-.100	.0214
Intercept	n/a	.378	.0080	.317	.0978	.587	.0023	.333	.1153
White's Spec. Chi-Sq.	n/a	60.56	.4925	36.83	.4768	32.61	.4862	33.89	.7018
Adjusted R-squared	n/a	.474	n/a	.367	n/a	.389	n/a	.452	n/a

\* Uncorrected p-values are reported where White's correction improves statistical results. Supplemental data and a full description of ancillary tests for model specification and variable robustness are available from the authors.