

UNDERWRITER CHOICE AND ANNOUNCEMENT EFFECTS FOR SEASONED EQUITY OFFERINGS

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Abstract

This study examines differences in company and issue characteristics of firms which choose different types of underwriters to market their seasoned equity offerings. Larger, slower growth firms with a lower percentage of inside ownership contract with prestigious investment bankers while smaller, higher growth firms utilize non-prestigious underwriters. After controlling for different firm and issue characteristics, the abnormal returns upon announcement of an equity offering are more negative for issues marketed by prestigious investment bankers. Finally, the announcement of a seasoned equity issue by more rapidly growing firms results in less negative abnormal returns.

INTRODUCTION

Booth and Smith (9) and Gilson and Kraakman (15) introduced the "certification" hypothesis as an explanation for the observed underpricing of Initial Public offerings (IPOs). The final offering price of an issue is a function of the ability of the underwriter to certify the offer price as a fair price; that is, the price that reflects adverse inside information. Part of the fees paid by the issuer purchase the bonding services of the investment banker. The bonding cost incurred by the investment banker is the potential loss of reputational capital if the issue is mispriced. Booth and Smith offer empirical support for the certification hypothesis for IPOs. Virtually all empirical research addressing the certification model and the role of underwriters in that process has examined the underpricing of IPOs. Several researchers have found support for this hypothesis by modeling or testing the relationship between the price reaction to the decision to go public and the specific lead underwriter for the issue.

This study extends earlier research by examining abnormal return differences for seasoned offerings which employ prestigious versus non-prestigious underwriters to market the equity issues. The IPO results indicate that choosing a prestigious investment banker leads to less underpricing due to better certification, *ceteris paribus*.¹ The issue process is similar enough to suspect the certification function exists for seasoned offerings as well. Nevertheless, the certification function may be less important for firms which have a public record of performance and hence potentially less adverse inside information. We focus on differences in abnormal returns for seasoned offers instead of underpricing differences because the former allows an examination of the net benefit (cost) to existing shareholders of the choice of underwriter. However, comparing abnormal returns is more complex because the differences may also provide information about how investment bankers price their services.

Our results indicate that seasoned equity issues underwritten by more prestigious investment bankers result in more negative abnormal returns on average. The more negative abnormal return may occur because of the higher issue costs charged by prestigious investment bankers, *ceteris paribus*. We also show that the valuation impact of an equity issue announcement is less negative for issuing firms which have higher growth in total assets.

The remainder of the paper is organized as follows: Section II contrasts IPOs and seasoned equity offerings and justifies the need for additional research. Section III presents our hypothesis and Section IV identifies the sample

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and defines the firm/issue specific control variables and the test methodology. Section V provides the results and the final section contains a summary and conclusions.

SIGNALLING CHARACTERISTICS OF IPOs VERSUS SEASONED ISSUES

Firms issue equity for a variety of reasons. Although the prospectus testifies what the funds are to be used for, the prospectus makes no claim per se as to the fair pricing of the issue. Thus, there is a possibility that a new issue may benefit the existing shareholders at the expense of new security purchasers. For instance, Booth and Smith claim the firm's management may often believe the stock is overvalued at the time of issue. In this situation the excess payment for the stock by new shareholders will be seen to benefit the existing shareholders when the market price correctly reflects all information. Because of potential losses from stockholder lawsuits and damage to the reputational capital of the underwriter, the investment banker will set an offer price sufficiently below the current market price to reflect management's adverse inside information.

Equity IPOs are also typically offered to the market at a price below the market price obtained just subsequent to the issuance of the IPO. Large positive abnormal returns for IPOs have been documented by McDonald and Fisher (29), Logue (27) and Neuberger and Hammond (33). Seasoned equity offerings, on average, are offered at a price below the pre-announcement market price. Prior research by Mikkelson and Partch (30), Masulis and Korwar (28) and others document an average negative abnormal return of about -3% upon the announcement of the intent to market a seasoned issue of common stock.²

Theoretical models by Baron (3), Rock (39), Beatty and Ritter (4), Booth and Smith (9), Titman and Trueman (43) and more recently Tinic (42) imply that underwriters use their reputation to bond or to certify that the offer price in an IPO reflects all adverse nonpublic information. Since firms usually go public only once, the issuer cannot certify this information with its own reputation. Instead the issuer contracts with an investment banker who is in the new issue market frequently. As a result, with each new issue the investment banker places its reputation as well as its capital at risk. Hayes (19) argues that underwriter reputation is an important attribute of the investment banking firm since reputation allows the banker to grow and attract more clients.

Relative to IPOs, however, the risk of seasoned issues can be more easily measured. Issuers of seasoned securities have a longer history of public disclosure which may imply that less outside certification may be necessary because the public is experienced with the financial statements and the reputation of the issuing firm's management. The outcome of the research contributes toward resolving this issue.

SEASONED ISSUES, CERTIFICATION AND ABNORMAL RETURNS

If investors believe that offer prices of seasoned issues placed via prestigious bankers more fully reflect adverse inside information, the percentage price decline associated with an issue underwritten by a prestigious investment banker will be smaller than the returns associated with issues underwritten by non-prestigious investment bankers, *ceteris paribus*. This expectation arises because the prestigious investment banker has a potentially larger loss of reputational capital and thus will more precisely certify the fair price of the issue. The certification hypothesis relies upon the existence of asymmetric information. Information asymmetry can exist between the issuer and the market [(Jurin (25); Gilson and Kraakman (15)] between potential investors [Rock (39)], or between the issuer and the underwriter [Baron (3)]. A common conclusion in this literature is that issuing firms pay more than the direct underwriting cost. The added cost is attributed to the issuer paying for outside certification that the offer price reflects all inside information about the true security value [Booth and Smith (9) and Grinnblatt and Hwang (17)].

Any test of abnormal return differences based on underwriter choice is actually a joint test of the certification hypothesis and the pricing of investment banker services. Finding no difference in abnormal returns would be consistent with either no certification or a competitive equilibrium for pricing of banker services where prestigious investment bankers charge just enough higher fees to offset the marginal advantage of better certification. If prestigious investment bankers operate in an oligopolistic environment or if there are other managerial incentives to choosing a prestigious underwriter which may not necessarily maximize shareholder wealth, the bankers may be able to charge fees which more than offset any certification advantages. This would lead to more negative abnormal returns for prestigiously underwritten issues. For instance, having a nationally known underwriter

market the issue may influence court decisions limiting manager's liability in subsequent stockholder lawsuits or may allow management to disperse ownership of the stock on a national scale to dilute ownership control. As a result, the differences in abnormal returns for firms employing different types of investment bankers may be negative, positive or zero.

Firm and issue specific characteristics will also affect how investors interpret the news of an equity offering, and will thus affect the size of the abnormal return. Several firm/issue specific factors (not all of which are easily measurable) may influence the quality of the due diligence investigation. For example, an ongoing relationship between the lead underwriter and the issuing firm provides opportunities for greater knowledge of the firm's prospects. Likewise the riskiness of the issuing firm, the size of the offering and the value of the firm's perceived growth opportunities may influence the investment banker's choice to place their reputation and financial capital at risk by affecting the choice to underwrite the issue and the offer price the banker is willing to 'certify'. In general, the reputation models predict that the riskier the issuing firm the lower the offer price the investment banker is willing to certify.

The only direct research to date of which we are aware that addresses this certification question for seasoned equity issues is by Slovin, Sushka and Hudson (40). Their findings support the certification hypothesis since they show that average abnormal returns are less negative when the issue is underwritten by a prestigious underwriter. Hansen and Torregrosa [18] test for a relationship between the monitoring function of investment bankers and investment banker compensation. They find a positive association. Although monitoring is different from certification their results do provide limited support for the role of investment bankers in the process of performing an important oversight function for the capital markets. Hansen and Torregrosa did not control for prestigious versus non-prestigious underwriter differences.

However, there are several concerns about their tests. First, they use the underwriter categories provided on the *Registered Offerings Statistics (ROS) Tape* provided by the SEC to classify investment bankers as national, regional or local firms. Our observations indicate that the ROS tape classifications are highly unreliable. For example, for the issue of common stock by Computervision Corporation on August 14, 1980, the ROS tape classified the lead underwriter, Merrill Lynch as a national underwriter. On a September 23, 1980 issue of common stock for Control Data Corporation, Merrill Lynch was classified on the ROS tape as a local underwriter. A quick look at the data on the tape confirms that this example is not an isolated incident. To overcome this problem we use the Johnson and Miller (24) classification scheme for defining prestigious versus non-prestigious investment bankers. The ROS tape also contains many errors in the registration date and even the type of security offering. We verify the ROS announcement data with the *Wall Street Journal Index*.

The Slovin et al study also does not control for other factors that may influence the abnormal returns associated with a particular investment banker classification. For example, as Beatty and Ritter (4) suggest, the more highly reputable underwriters may underwrite predominantly high-quality, low-risk issues. Our methodology controls for these other variables. We include the firm's growth rate, market value of equity, offer size and percent of inside ownership as well as ex-ante issue uncertainty and underwriter prestige in our test of these hypotheses.

CONSTRUCTION OF SAMPLE AND DEFINITION OF CONTROL VARIABLES

Selection Of Initial Sample And Test Variables

The sample of firms for this study is initially constructed from the ROS tape. The announcements are verified and screened through the *Wall Street Journal Index*. The initial sample consists of all negotiated seasoned offerings of common stock during the years 1977 through 1982. There are a total of 373 common stock registrations for which data were available during this period. The sample is reduced to 334 observations by eliminating issues that have more than one significant event during the announcement period. Return information must also be available on either the *Center for Research on Security Prices Daily Returns (CRSP) Tape* or the *Daily Stock Price Record* for OTC stocks. The following measures are used in our tests as control variables:

Market Value (MKTVAL) - Market value is a control for several firm features. According to Ritter (38), market value serves as a proxy for the degree of total risk. Larger firms may also use the larger, more prestigious bankers due to their ability to handle a large offering. Size is proxied by the prior year-end market value of the

firm's equity obtained from the *COMPUSTAT Annual Industrial* tape, *Standard and Poors Stock Guide*, *Moody's Industrials*, *Moody's OTC* or the *National Monthly Stock Price Summary*.

Growth In Total Assets (GROWTH) - The level of growth may be directly related to issue risk. Higher growth firms tend to be firms that rely on future investment returns to generate profitability, hence the risk of poor aftermarket performance and the investment banker's liability may be higher. Conversely, news of a forthcoming equity issue of a higher growth firm may be better received by investors since external financing by slower growth firms may reflect overinvestment. [See Pilotte (37) and Jensen (22).] This variable is measured as the average growth rate in total assets for five years prior to the equity issue. The total assets measures were obtained from the *COMPUSTAT Annual Industrial Tape*, *Moody's Industrials* or *Moody's OTC*.

Offer Size (OFFER) - The size of the offer serves as a size proxy similar to the firm's market value (MKTVAL). The issue size may affect the issuer's choice of underwriter or the underwriter's decision to market an issue. Evidence is mixed whether offer size affects the abnormal return associated with the announcement of an issue [see Asquith and Mullins (1) and Mikkelsen and Partch (30) for opposing results]. In the certification literature the association between offer size and the price response is based upon the potential gain to the issuer from certification. The larger the issue size the more valuable is the certification. This implies that the larger the issue the greater the risk to the new shareholders of a wealth transfer.

Percent Of Inside Ownership (OWN) - The percent of inside ownership provides an ambiguous signal concerning the risk of the issue. First, this variable is a measure of the degree of asymmetric information and an indication of the higher cost of performing the due diligence investigation. The greater the amount of inside ownership the greater the amount of potentially adverse inside information. Greater asymmetry of information leads to more risk on the part of the investment banker. However, in the agency model of Jensen and Meckling (23) a greater proportion of inside ownership reduces the manager-stockholder agency conflict. With a large proportion of the firm owned by managers, managers are more likely to engage in activities beneficial to stockholders. This variable is obtained from *Value Line* or the firm's Proxy Statement.

Standard Deviation Of Pre-Issue Returns (STDDEV) - The standard deviation is a proxy for the ex-ante risk of the issue. The lower the standard deviation, the lower the issue risk to the investment banker. This measure is calculated from returns on the CRSP tape or the *Daily Stock Price Record* for OTC firms over days -60 to -5 in event time.

Prestigious Versus Non-Prestigious Investment Banker Classification

Johnson and Miller (24), Tinic (42) and Hayes (19, 20) use the positioning of underwriter names within tombstone advertisements to classify investment banking firms into four distinct groups: the bulge bracket, the major bracket, the sub-major bracket and other. A comparison of the makeup of the Johnson and Miller groups from 1988 with Hayes' 1979 sample reveals that except for some merger activity there was virtually no movement between the groups. Since there is little change in ranking over time we use the grouping provided by the Johnson and Miller article (24).

Johnson and Miller use several subdivisions of the above groups to classify investment bankers, while Tinic classifies the first three brackets as prestigious. Similar to Tinic, our results suggest that issues underwritten by the bulge, major, and sub-major brackets are sufficiently similar to be jointly classified as underwritten by prestigious investment bankers while the "other" category comprises the issues underwritten by non-prestigious investment bankers.

Models For Examining Underwriter Choice And Abnormal Returns

We use logit analysis, univariate analysis of means, and a multiple regression framework to examine differences in abnormal returns based on underwriter choice. The first step in our approach is to examine whether the proxy variables are important determinants of the selection of an underwriter. To accomplish this the logit model shown in equation (1) is estimated:

Equation 1

$$P(\text{TYPE}) = + \beta_1(\text{MKTVAL}) + \beta_2(\text{GROWTH}) + \beta_3(\text{OFFER}) + \beta_4(\text{OWN}) + \beta_5(\text{STDDEV})$$

where P(TYPE) is a dichotomous variable equal to one when the security is underwritten by a prestigious underwriter and zero otherwise. The β values indicate the change in probability that the issue is underwritten by a prestigious banker that occurs with a higher level of the associated variable. The objective of the logit model is to confirm that the proxy variables we are using are in fact associated with the type of underwriter an issuer chooses. The results of the logit model are shown in equation (2) below. The sample has 252 observations with complete data.

Equation 2

$$P(\text{TYPE}) = -0.1074 + 0.0129(\text{MKTVAL}) - 0.4484(\text{GROWTH})^* \\ + 0.00012(\text{OFFER})^* + 0.0088(\text{OWN}) + 2.093(\text{STDDEV})$$

The * indicates the coefficient is significant at the 5 percent level. The model's chi-square value is 50.30 and is significant at the 1 percent level. The significance of the model indicates that an important relationship exists between these firm/issue characteristics and the prestige of the underwriter for seasoned equity offerings.³

Next we examine the results of a simple test of the association between the equity announcement abnormal return and underwriter choice. The abnormal returns associated with the announcement of a new common stock issue were calculated using standard event-study methodology similar to Mikkelsen and Partch (28). Event-time portfolios of securities were formed based on underwriter classification. We calculated two-day market-adjusted announcement-period returns where the S&P 500 index with dividends is used to proxy the market. To enhance our association test we also use an Analysis of Covariance multiple regression test which controls for firm and issue specific characteristics. We estimated the regression model shown in equation (3):

Equation 3

$$\text{AR}_i = + \tau_1(\text{GROWTH}_i) + \tau_2(\text{MKTVAL}_i) + \tau_3(\text{OFFER}_i) + \tau_4(\text{OWN}_i) \\ + \tau_5(\text{STDDEV}_i) + \tau_6(\text{PREST4}_i) + e_i$$

where PREST4_i is a binary indicator variable equal to 1 if observation i is an issue underwritten by a non-prestigious investment banker and equal to zero otherwise. A significantly negative τ_6 implies that the average abnormal return for issues underwritten by nonprestigious investment bankers is statistically more negative than the mean abnormal return for issues underwritten by prestigious investment bankers.

SAMPLE DEMOGRAPHICS AND RESULTS

Sample Characteristics

There are 334 total equity issues in the final sample. The distribution of the number of issues by underwriter classification each year is given in Table 1. About 20% of the issues in any given year and in the total sample are underwritten by the bulge-bracket investment bankers. The largest category, the major bracket, underwrote between 30% and 50% of the issues. Finally, the sub-major and "other" categories comprise about 35% of the issues. The percentage of issues underwritten by each type investment banker is relatively stable, with the first three categories underwriting approximately 80% of the seasoned equity offerings in each year.

Table 2 provides the mean values for each sample firm specific variable. The average mean growth rate is 50%, the average market value of equity of the issuing firm is approximately \$162 million, the mean pre-issue standard deviation of returns is 2.8% and the mean percent of inside ownership is approximately 20%. The average offer size is \$22.3 million.

Differences In Firm/Issue Characteristics Based On Underwriter Prestige

In Table 3 the sample is partitioned by investment banker prestige. There are several differences in firm/issue characteristics for offers underwritten by the different type of investment bankers. First, the average firm size as measured by equity market value declines progressively as the prestige of the underwriter declines. This may indicate that smaller firms do not have a greater need to rent the presumably higher quality underwriter reputation of the top bracket underwriters (or that it is too costly for small firms to do so).

The average size of the issuer using the top two underwriter brackets is more than four times greater than the size of the firms using the less prestigious underwriters. The mean offer size follows a similar pattern. Growth and inside ownership also differ between the firms employing different underwriter types. Higher growth firms with more inside ownership employ less prestigious investment bankers. The standard deviation of pre-issue returns is also generally greater for firms which employ lower prestige level investment bankers.

We also examined differences in the mean values for the five proxy variables based upon the classification of prestigious and non-prestigious underwriters employed by Tinic (42).⁴ We combined the bulge, major and sub-major groups to form the prestigious underwriter group. Significant differences between the two groups are found for the MKTVAL, OFFER and OWN variables. Since both MKTVAL and OFFER are proxies for size, we conclude that size is a standard factor that distinguishes the selection of one underwriter group from another. Inside ownership (OWN) can also serve as a size proxy since smaller firms are on average more closely held. Under this condition, the OWN variable is consistent with the MKTVAL and OFFER variables since the inside ownership variable is smaller for the prestigious underwriters.

Abnormal Returns And Underwriter Prestige

The event study results are shown in Table 5. The mean market-adjusted two-day cumulative abnormal returns for day -1 and 0 are shown for the prestigious and non-prestigious underwriters.⁵ The mean abnormal return for firms employing prestigious bankers is significantly less than zero at the one percent level. For the non-prestigious banker issues, the mean abnormal returns are also significantly negative at the five percent level.

The differences between the two-day abnormal returns for the two prestige groups are also shown in Table 5. The abnormal returns are significantly different at the five percent level. The mean abnormal return for the firms employing prestigious underwriters is more negative than the mean abnormal return of firms which employ non-prestigious underwriters. This result is not consistent with the certification hypothesis per se. Analysis of means is not, however, sufficient to indicate whether the difference in abnormal returns are due to underwriter choice since simple mean comparisons do not control for the difference in firm specific factors which may influence the size of a firm's abnormal returns.

Table 6 presents the coefficient estimates for Equation (3). The intercept contains the mean abnormal return for the prestigious underwriters which include the bulge, major and sub-major brackets.⁶ The mean abnormal return for the prestigious group is significantly negative. The significant positive coefficient on the dummy variable, PREST4, indicates that issues underwritten by non-prestigious bankers have a less negative announcement date abnormal return. The significant positive coefficient on GROWTH indicates that equity announcement abnormal returns made by firms with higher growth in total assets result in less negative stock valuation impacts.⁷

Simple correlation tests of our independent variables indicate that the MKTVAL, OFFER and OWN measures are significantly correlated with each other. MKTVAL and OFFER are significantly positively correlated, while MKTVAL and OWN and OFFER and OWN are significantly negatively correlated. Their lack of significance in our regression model may be due to this collinearity. GROWTH and STDDEV are not significantly correlated with any other variable in the model. Moreover, no interaction terms between any of the quantitative variables and the prestige dummy are significant.

Our results indicate that any advantage of better certification by prestigious underwriters is not revealed in simple comparisons of abnormal return differences. A possible reason may be how top-tier investment bankers price their services. Our results are consistent with oligopolistic pricing policies by prestigious bankers where the leading national underwriters require a higher rate of return to put their reputational capital at risk.

SUMMARY AND CONCLUSIONS

This study has examined characteristics of firms which contract with different types of underwriters for seasoned common stock issues. Prestigious underwriters contract with larger, lower growth firms which exhibit lower inside ownership and a slightly lower standard deviation of returns. These observations indicate that prestigious underwriters contract with less risky issuers.

Our analysis of the abnormal returns to new issues of outstanding common stock indicates that after controlling for other firm specific variables the market responds differently to the announcement of offerings underwritten by prestigious and non-prestigious bankers. Managers should be aware that the choice of a prestigious investment banker instead of a non-prestigious banker does not result in a more favorable response to the announcement of a seasoned equity issue by investors. On the other hand, offerings by lower growth firms yield more negative price responses on average than issues announced by higher growth firms.

An interesting area for further research is to test whether and/or how future earnings expectations are altered based upon the prestige of the underwriter. The justification for this research question arises from the findings of Brous [10] that analysts short-run earnings forecasts are altered, on average, downward after the announcement of the firm's intent to undertake a seasoned equity offering. Is this response dependent upon the reputation of the lead underwriter?

TABLE 1
Number Of Issues In Each Year Classified By Underwriter Prestige

YEAR	TOTAL ISSUES	UNDERWRITER PRESTIGE			
		BULGE	MAJOR	SUB-MAJOR	OTHER
1977	22 (6.6%) ^a	3 (4.6%)	8 (5.3%)	3 (4.8%)	8 (14.6%)
1978	45 (13.5%)	11 (16.9%)	21 (13.9%)	6 (9.5%)	7 (12.7%)
1979	39 (11.7%)	9 (13.8%)	21 (13.9%)	5 (7.9%)	4 (7.3%)
1980	94 (28.1%)	16 (24.6%)	48 (31.8%)	17 (27.0%)	13 (23.6%)
1981	74 (22.2%)	14 (21.5%)	29 (19.1%)	16 (25.4%)	15 (27.3%)
1982	60 (17.9%)	12 (18.6%)	24 (16.0%)	16 (25.4%)	8 (14.5%)
TOTAL	334 (100%)	65 (19.5%)	151 (45.2%)	63 (18.9%)	55 (16.4%)

a. The numbers under Total Issues are percentages of the total sample. The numbers under the total row are the percentages of the total sample (334).

TABLE 2
Mean Values Of Firm And Issue Specific Variables

Variables:	GROWTH	MKTVAL^a	STDDEV	OWN	OFFER^b
Mean Values	0.50522 (321) ^c	161.55304 (330)	0.02853 (294)	0.20261 (316)	22.28070 (328)

- MKTVAL is stated in millions of dollars.
- OFFER is stated in millions of dollars.
- The numbers in the parentheses are the number of firms for which we had data. The number of firms is not the same for each variable due to the inability to obtain data observations for all firms.

TABLE 3
Mean Values Of Proxies By Underwriter Group

Underwriter Prestige Group	GROWTH	MKTVAL^a	STDDEV	OWN	OFFER^b
Bulge Bracket:	0.3339 (63) ^c	361.3476 (65)	0.0121 (62)	0.1429 (64)	41.0136 (63)
Major Bracket:	0.3344 (147)	175.8586 (149)	0.0254 (130)	0.2037 (144)	22.3654 (148)
Sub-Major Bracket	0.6520 (59)	41.0616 (61)	0.0514 (58)	0.2230 (57)	16.0731 (63)
Non-Prestigious Bracket:	1.0290 (52)	20.3130 (55)	0.0310 (44)	0.2516 (51)	7.4356 (54)

- MKTVAL is stated in millions of dollars.
- OFFER is stated in millions of dollars.
- The number in parentheses is the number of firms used to calculate the average for the specific variable in that group.

TABLE 4
Differences In Firm/Issue Characteristics By Prestige

Variables	Mean Values
GROWTH:	
Prestigious	0.4040
Non-Prestigious	1.0290
	(269:52) ^a
MKTVAL: ^b	
Prestigious	189.8010**
Non-Prestigious	20.3130
	(275:55)
STDDEV:	
Prestigious	0.0281
Non-Prestigious	0.0310
	(250:44)
OWN:	
Prestigious	0.1932*
Non-Prestigious	0.2516
	(293:58)
OFFER: ^c	
Prestigious	25.2064**
Non-Prestigious	7.4356
	(274:54)

a. The two numbers in parentheses represent the number of firms in the prestigious and non-prestigious categories respectively.

b. MKTVAL is stated in millions of dollars.

c. OFFER is stated in millions of dollars.

* Mean values for prestigious versus non-prestigious are significantly different at the 5 percent level.

** Mean values for prestigious versus non-prestigious are significantly different at the 1 percent level.

TABLE 5
Abnormal Returns For Different Prestige Groups

	Prestigious	Non-Prestigious	Difference
Announcement Day	-0.0230**	-0.0119*	-0.0110
Mean Abnormal Return	(279) ^a	(55)	(-2.5200) ^b

a. The numbers in parentheses for the prestigious and non-prestigious categories are the number of observations used to calculate the average. The number of observations differs from those used in the regression and logit analysis because of the inability to obtain observations for all variables. This does not affect our conclusions.

b. The two-tailed t-statistic for the difference in mean abnormal returns, significant at the five percent level.

* The individual mean is significantly different from zero at the five percent level.

** The individual mean is significantly different from zero at the one percent level.

TABLE 6
Regression Of Abnormal Returns On Prestige And Firm Specific Variables

VARIABLE:	COEFFICIENT:
INTERCEPT	-0.0284**
GROWTH (τ_1)	0.0043**
MKTVAL ^a (τ_2)	-0.0018
STDDEV (τ_3)	-0.0240
OWN (τ_4)	0.0140
OFFER (τ_5)	0.0001
PREST4 (τ_6)	0.0129*
DEGREES OF FREEDOM ^b	252**

- a. In the regression tests MKTVAL and OFFER are expressed in hundred million dollars and OWN is in decimal form. Using these scales does not change the results and yields reasonable size coefficients. Using the natural log of the former two variables also does not change the results materially.
- b. The * on the degrees of freedom indicates the significance of the model F-statistic.
- * The coefficient estimate is significantly different from zero at the five percent level.
- ** The coefficient estimate or the F-statistic is significantly different from zero at the one percent level.

ENDNOTES

1. Evidence on the existence of rationing is largely anecdotal as Tinic (42) indicates. However, rationing is an accepted fact among market participants.
2. Several studies document that, on average, seasoned issues of common stock generate a negative abnormal return when news of the offering becomes public. Smith (41) provides an excellent summary of research in this area as well as offering potential explanations for the observed pattern of returns. Asymmetric information and agency costs are popular explanations of the negative returns [see, for example Miller and Rock (31) and Myers and Majluf (33)].
3. We obtain a higher chi square by including the variables MKTVAL, OWN and STDDEV even though they are insignificant. Because of potential collinearity we use all of these variables, significant or not, in our subsequent regression tests. Omitting these variables does not change our conclusions.
4. Comparing the combination of the bulge and major groups to the combination of the sub-major and "other" categories results in similar findings.
5. The equity announcement date abnormal returns are somewhat smaller than those found in other studies [see Smith (41) for example]. This result is not surprising since our sample contains a greater number of smaller firms (many of which are traded over-the-counter) in all prestige categories than most of the equity announcement abnormal return studies which rely solely on data available on computer tapes. We find that the announcement date abnormal returns for smaller, high growth firms is closer to zero. Pilotte (37) finds a similar result.

6. We also calculated Equation (3) including only issues underwritten by bulge bracket investment bankers in the prestigious category. The results are qualitatively identical, hence they are not presented. In order to ensure that our results are not sensitive to the form of the variables, we also considered several other forms of the proxy variables MKTVAL and OFFER. We calculated the relative offer size (OFFER/MKTVAL) in place of OFFER and in separate tests we used the natural log of MKTVAL and OFFER in place of the raw data. In each case we obtained similar results and no change in our conclusions followed.
7. We obtain similar results when we estimate growth with the change in total market value of the firm's equity.

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