



American Finance Association

Shelf Registrations and Shareholder Wealth: A Comparison of Shelf and Traditional Equity Offerings

Author(s): Norman H. Moore, David R. Peterson, Pamela P. Peterson

Source: *The Journal of Finance*, Vol. 41, No. 2 (Jun., 1986), pp. 451-463

Published by: Blackwell Publishing for the American Finance Association

Stable URL: <http://www.jstor.org/stable/2328447>

Accessed: 26/11/2009 08:28

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/action/showPublisher?publisherCode=black>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Blackwell Publishing and American Finance Association are collaborating with JSTOR to digitize, preserve and extend access to *The Journal of Finance*.

<http://www.jstor.org>

Shelf Registrations and Shareholder Wealth: A Comparison of Shelf and Traditional Equity Offerings

NORMAN H. MOORE, DAVID R. PETERSON, and PAMELA P. PETERSON*

ABSTRACT

This study examines the effect of issuing common stock on shareholder wealth under two alternative methods of registration, shelf registration under the Securities and Exchange Commission's Rule 415 and the traditional method of registering shares for immediate sale. The stock price reactions accompanying security registrations and offerings over the period from March 1982 through November 1983 are examined for over two hundred issues. A negative price reaction is observed for traditional and shelf registrations for both utility and non-utility issuers. No statistically significant difference is observed between shelf and traditional registrations. Further negative price reactions precede the offerings of these securities.

SINCE MARCH 1982, CORPORATIONS have been able to use two methods of registering securities for sale to the public. The first method is the traditional method of registration, the offering of shares for immediate issuance. The public offering of shares under the Securities and Exchange Commission's (SEC) Rule 415 is an alternative to the traditional method. This rule, introduced during 1982 and referred to as shelf registration, permits a corporation to file one registration statement for a series of issuances of a security that are made at the discretion of the corporation within two years of the filing of the registration.

Studies by Leland and Pyle [8], Miller and Rock [11], and Myers and Majluf [12] suggest that new equity offerings may convey negative information to the market, thereby depressing the value of equity. Another view related to the effect that the distribution of new equity shares has on the value of equity is that price pressure may accompany new equity due to a less than perfectly elastic demand for shares (Mikkelson and Partch [10]; Hess and Frost [5]).

The effect of the traditional process of registering and offering equity securities on shareholder wealth has been examined empirically by many authors; a summary of several of these studies is provided in Table I. In general, the issuance of equity securities (or equity equivalents) is observed to be accompanied by an immediate negative abnormal return for the common stock of the firm. However, the evidence to date with regard to the impact of shelf registration on the returns to common shares is limited.¹

* Doctoral student, Florida State University, and Assistant Professors, Florida State University, respectively. The authors would like to thank the referee and associate editor for helpful comments and suggestions. The authors would also like to thank the Center for Banking and Financial Institutions at Florida State University for providing assistance in data collection.

¹ Gray [4] finds that security offerings employing shelf registrations have a more depressing effect

Table I
Summary of Selected Studies of Effects of the Issuance of Common Stock or Common Stock Equivalents

Study	Type of Security Offering	No. of Events	Definition of Event Day	Event Day(s) Reaction	Relationship Between Size and Event Day(s) Abnormal Return
Asquith and Mullins [1]	Primary, Secondary, and Combination	531	Announcement of offering	Negative ^a	Inverse relationship
Dann and Mikkelsen [3]	Convertible Debt	132	Announcement of registration	Negative	NA
			Announcement of offering	Negative	NA
Hess and Frost [5]	Primary Offering of Seasoned Common (Utilities only)	152	Date of issuance	Not economically significant ^b	No statistically significant relationship
Marsh [9]	Rights Offering	997	Announcement of offering	Negative	No statistically significant relationship
Mikkelsen and Partch [10]	Secondary Offering	467	Announcement of offering	Negative	No statistically significant relationship ^c

Note: NA means not applicable—the authors did not address this relationship.

^a A smaller, though statistically significant reaction is observed for utility issues. Size and abnormal return are not observed to be related for utility issues.

^b A positive reaction is observed for the days of the event day through the event day +3 days and a negative reaction is observed for the period extending three days beyond that period; the excess returns are not observed to significantly cover transactions costs.

^c For select sub-samples and for variations of the set of explanatory factors, size is found to be negatively related to abnormal stock returns.

The purpose of this study is to examine empirically the effect on shareholder wealth of issuing common shares under the two alternative methods of registration. This effect is examined through the application of standard event-study methodology and the analysis of any abnormal return performance during the days surrounding the filing of the registrations with the SEC and the days surrounding issuance. Background information on shelf and traditional share offerings is provided in Section I. The data and methodology used to examine return performance are described in Section II. The estimation results are provided in Section III, with concluding remarks offered in Section IV.

I. Background—Rule 415

The traditional manner of issuing securities involves the following stages: (a) the registration of the securities by the firm with the SEC, (b) the organization of an underwriting syndicate with one or more managing underwriters, and (c) the issuance of the securities through the syndicate at least 48 hours after the registration of the securities. Rule 415, initially proposed in early 1981 and instituted in March 1982, provides a means whereby the firm can make one filing for securities to be offered during the following two years and can issue any portion of the securities included in the registration at any time during that two-year period.

There are several advantages associated with Rule 415. First, it allows corporations to become more self-sufficient in satisfying their financing needs. Issuers have the option to bypass the underwriters and place the securities directly with the investors in any size blocks. Second, companies may avoid the delay in issuing securities. Under the traditional method, there is at least a 48-hour waiting period between each registration and issuance, whereas for a shelf registration this minimum 48-hour waiting period occurs only immediately following the registration, but not for subsequent issuance under this registration. Third, since corporations do not have to settle on a managing underwriter under Rule 415, there is the potential for increased price competition among underwriters, resulting in the narrowing of underwriting spreads. Fourth, Rule 415 simplifies the process of registration by providing a “short form” approach to the filing of new shares.

Rule 415 is, in effect, deregulation of the issuance process for new securities, representing a radical departure from the traditional manner in which securities are offered. Under the traditional system, the managing underwriters of an issue coordinate the distribution of the securities through many dealers and brokers, often involving regional brokerage firms, and profits are shared among these many parties. The shelf method permits the issuing firm to sell the securities directly to investors or to one investment banker, who then resells these shares and keeps any profits earned on the resale.²

on returns to shareholders than non-shelf registrations. Kidwell, Marr, and Thompson [7], Rogowski and Sorensen [13], and U.S. Securities and Exchange Commission [15] find, in general, that shelf registrations result in lower issuance costs than traditional offerings.

² Another difference between the two methods of registration is that in traditional registrations the issuer is able to shift some of the risk of adverse price movements to the underwriters, whereas

II. Data and Methodology

This study analyzes common stock offerings made by utility and non-utility issuers. Stock offerings employing shelf registrations are included in the sample if the following requirements are satisfied:

1. The registration (filing) date of the offering is listed in the *SEC News Digest* or on the SEC's *Registrations and Offering Statistics (ROS)* data file between March 1982 and November 1983.
2. The offering is listed as a shelf offering under Rule 415, is for common stock only, is not an initial offering, and is a primary offering to the public.
3. The number of shares included in the offering is provided in the *SEC News Digest* or on the *ROS* file.
4. Offering information (date, number of shares, and price) is available in the *Institutional Investor*.
5. The returns of the common stock of the issuing firm are included on the *Center for Research in Security Prices (CRSP)* daily returns data base for the period beginning 180 trading days prior the filing date and ending 20 days after the offering (issuance) date.
6. The number of shares of common stock outstanding and the price per share of common stock for the issuer firm are available from the *CRSP* daily master data file for both the date of registration and the offering date.

The sample consists of 84 shelf offerings: 31 utility shelf registrations and 53 non-utility shelf registrations. Offerings employing the traditional method of registration are chosen by applying the above criteria, with the exception of criterion (2). There are 145 non-shelf issues included in the sample: 81 non-utility issues and 64 utility issues. The 229 issues included in the sample represent 189 different firms. The *Wall Street Journal (WSJ)* is examined for each firm in the sample for any announcement regarding the filing of the registration statement and any offering of the registered securities.

The reaction of common stock to new equity offerings is examined through a series of tests that investigate abnormal daily stock returns around a chosen event day. Two analyses are performed. The first analysis focuses on the stock price reaction accompanying the registration of the securities. The filing date (as reported either in the *SEC News Digest* or on the *ROS* file) or the day preceding an announcement of the filing in the *WSJ*, whichever is sooner, is chosen as the event day. For the securities in the sample, the filing date precedes any announcement of the offering in the *WSJ* or the *SEC News Digest* in almost every case.³

in shelf registrations, if an underwriter is not employed, the issuer bears all of the risk. Thus, while the issuance costs of new equity may be reduced if the underwriting system is bypassed, there may also be increased risk exposure for the issuer. It is the case, however, that most issuances under shelf registrations employ underwriters.

³ Underwriting syndicates, if employed for the distribution of the securities, generally are formed on or after the registration of the issue and, hence, information regarding the issue is not generally available until the prospectus is published, a press release is provided by the issuer, or a "red herring" prospectus is distributed after the registration. Further, it is usual that if a syndicate is formed prior

The event date for the second analysis, dealing with the offering of the security, is specified as the day preceding the announcement of the offering in the *WSJ*, or the actual offering day as reported in the *Institutional Investor*, whichever is sooner. This event date is selected since it represents the earliest release of public information regarding the terms of the offering.

The effect of issuance under the two methods of registration (traditional vs. shelf) is assessed by calculating abnormal returns as the difference between observed daily returns and predicted daily returns on common shares. Predicted daily returns are determined using the market model and an estimation procedure suggested by Scholes and Williams [14].⁴

Let $\hat{a}_j$ and $\hat{b}_j$ be the estimated intercept and beta for security j , respectively, that describe the relation between the returns of the security and the returns on a market index of securities for a period of T trading days. Further, let R_{mt} represent the return on the market index for day t . The abnormal return for security j on day t , A_{jt} , is the prediction error calculated as:

$$A_{jt} = R_{jt} - [\hat{a}_j + \hat{b}_j R_{mt}] \quad (1)$$

where R_{jt} is the return on security j on day t . For a sample of N securities, the abnormal return for day t is defined as:

$$A_{Nt} = (1/N) \sum_{j=1}^N A_{jt}. \quad (2)$$

For a series of n days, from T^* through T^{**} , the cumulative abnormal return for a sample of N securities is given by:

$$CA_{Nn} = (1/n) \sum_{t=T^*}^{T^{**}} A_{Nt}. \quad (3)$$

The test of significance of an abnormal return for security j on day t is performed by taking the ratio of the abnormal return to the standard error of the forecast for day t , s_{jt} . The standard error of the forecast is given by:

$$s_{jt} = s_{ej} \{1 + [1/(T - 2)] + [(R_{mt} - \bar{R}_m)^2 / \sum_{r=2}^{T-1} (R_{mr} - \bar{R}_m)^2]\}^{1/2} \quad (4)$$

where $\bar{R}_m$ is the mean return on the market index for the period in which $\hat{a}_j$ and $\hat{b}_j$ are estimated, r designates the day of the return within the estimation period and s_{ej} is the standard error of the estimate from the estimation of $\hat{a}_j$ and $\hat{b}_j$. The test statistic used to examine the significance of the abnormal return for security

to registration, information of the issue is not disseminated to the investing public. Therefore, the earliest release of information regarding an offering is the registration date unless news of the offering is announced in the financial press in anticipation of the filing.

⁴ This procedure involves an adjustment of the estimated beta coefficients of the security to compensate for possible nonsynchronous trading. Scholes and Williams [14] suggest the estimation of three equations relating the returns of a security to the returns of a market index: (a) the returns of the security and the concurrent returns on the market index, (b) the returns on the security and the one-day lagged values of the market index returns, and (c) the returns on the security and the one-day lead values of the market index returns. The estimated beta, $\hat{b}_j$, is calculated by summing the slopes from each of these regressions and dividing by the term $(1 + 2p)$, where p is the first-order serial correlation coefficient of the market returns over the period. The intercept, $\hat{a}_j$, is calculated as the difference between the mean return on the security and the product of the beta and the mean return on the market index. Examples of the use of this estimation method can be found in the studies by Brown and Warner [2] and Hite and Owers [6].

j on day t , A_{jt}^* , is:

$$A_{jt}^* = A_{jt}/s_{jt}. \quad (5)$$

This test statistic, also referred to as the standardized prediction error, is distributed approximately normal.

A test of significance across N securities for a given day t is performed by summing the calculated test statistics for individual securities (the A_{jt}^*) and dividing this sum by the square root of N :

$$A_{Nt}^* = \sum_{j=1}^N A_{jt}^*/(N)^{1/2} \quad (6)$$

which is distributed approximately normal for large N . The cumulative standardized prediction error for security j for a series of n days (from T^* through T^{**}) is calculated as:

$$CA_{jn}^* = \sum_{t=T^*}^{T^{**}} A_{jt}^*/(n)^{1/2}. \quad (7)$$

The cumulative standardized prediction error for a sample of N securities is equal to:

$$CA_{Nn}^* = \sum_{j=1}^N CA_{jn}^*/(N)^{1/2}. \quad (8)$$

The estimation interval used for the calculation of the $\hat{a}_j$ and $\hat{b}_j$ begins 180 trading days before the event day associated with the security registration and

Table II
Descriptive Statistics for Sub-samples

Characteristic	Sub-sample			
	Non-utility Issuers		Utility Issuers	
	Shelf	Traditional	Shelf	Traditional
No. of Firms	53	81	31	64
No. of Shares Registered (in millions)				
Mean	2.244	1.773	3.189	3.905
S.D.	(1.801)	(1.446)	(2.622)	(3.261)
Proportional No. of Shares Registered				
Mean	0.110	0.150	0.062	0.093
S.D.	(0.065)	(0.097)	(0.038)	(0.065)
T-statistic for differences in means	-2.88*		-2.96*	
No. of Trading Days between Registering Event Day and Offering Event Day				
Mean	11.642	7.222	19.936	12.141
S.D.	(28.752)	(5.422)	(31.120)	(8.126)
T-statistic for differences in means	1.19		0.89	

* Indicates a difference in means significant at the 5% level.

Table IIIa
Abnormal Returns for Non-utility Issuers around Registration Event Day

Day Relative to Event Day	Shelf Registrations		Traditional Registrations	
	Abnormal Return (A_{Nt})	Standardized Prediction Error (A^*_{Nt})	Abnormal Return (A_{Nt})	Standardized Prediction Error (A^*_{Nt})
-10	-0.0005	0.2134	-0.0006	-0.1713
-9	0.0010	-0.0597	-0.0049*	-2.1375
-8	-0.0025	-0.3307	0.0060*	2.4215
-7	0.0018	0.5563	0.0060	1.8682
-6	-0.0016	-0.1080	0.0005	0.7189
-5	-0.0039	-1.4615	0.0007	-0.0007
-4	0.0014	0.8146	-0.0013	-0.2259
-3	-0.0004	-0.0906	-0.0010	-0.3654
-2	0.0024	1.2803	-0.0013	-0.3797
-1	-0.0089*	-2.8365	-0.0012	-0.6922
0	-0.0098*	-3.4726	-0.0207*	-8.5884
+1	-0.0056*	-2.0965	-0.0029	-1.3858
+2	-0.0047	-1.8539	-0.0011	-1.0276
+3	-0.0045	-1.5433	-0.0013	-0.6301
+4	0.0078*	2.1878	0.0025	0.8334
+5	-0.0018	0.7757	0.0001	-0.1354
+6	0.0005	-0.2421	-0.0018	-0.5125
+7	0.0003	0.6019	0.0020	0.8469
+8	0.0007	0.7514	-0.0009	-0.3411
+9	-0.0018	-0.7900	-0.0008	-0.0541
+10	0.0009	-0.2541	-0.0048	-1.4268

* Indicates that the abnormal return is different from zero at the 5% level of significance.

ends 31 days prior to that date ($T = 150$). The returns on the CRSP equally weighted index represent the returns on the market. The cumulative standardized prediction error, CA^*_{Nt} , is calculated for the interval of days from the registration event day through the day following the offering event day to capture the effects of both events. Utility and non-utility issuers are analyzed separately since they may react differently due to varying flows of information on financing.⁵

III. Estimation Results

Descriptive statistics for the securities in the sample are provided in Table II, classified by the type of filing and type of issuer. The results indicate that shelf registrations are larger than non-shelf registrations in terms of the number of shares registered for non-utilities but not for utilities, yet traditional filings are larger relative to the number of shares outstanding for both classes of issuers.

⁵ Asquith and Mullins [1] find that, although the security price reactions are negative for both utilities and non-utilities, the response of utilities to new equity financing is less pronounced. Kidwell, Marr, and Thompson [7], like Asquith and Mullins, argue for treating utilities and non-utilities separately.

Table IIIb
Abnormal Returns for Utility Issuers around Registration Event Day

Day Relative to Event Day	Shelf Registrations		Traditional Registrations	
	Abnormal Return (A_{Nt})	Standardized Prediction Error (A^*_{Nt})	Abnormal Return (A_{Nt})	Standardized Prediction Error (A^*_{Nt})
-10	0.0008	0.4487	-0.0035*	-2.1683
-9	0.0017	0.7876	0.0022	1.4036
-8	0.0002	0.1259	0.0002	0.0347
-7	0.0016	0.8612	0.0011	0.5819
-6	-0.0003	-0.1500	-0.0014	-1.1680
-5	-0.0003	-0.2084	0.0015	0.4851
-4	0.0041*	2.1350	-0.0006	-0.2191
-3	0.0018	0.7500	0.0002	0.0776
-2	0.0024	1.3803	0.0009	1.0015
-1	0.0015	0.6252	-0.0023	-1.5786
0	-0.0046*	-2.7064	-0.0059*	-3.9536
+1	-0.0049*	-2.1511	-0.0016	-0.9444
+2	-0.0047*	-2.4132	-0.0007	-0.5810
+3	0.0034	1.6594	-0.0041*	-2.7930
+4	-0.0002	0.0762	-0.0015	-1.0746
+5	0.0009	0.4197	-0.0004	-0.2292
+6	0.0009	0.5099	0.0014	1.1711
+7	-0.0004	0.0235	-0.0010	-0.5887
+8	0.0003	0.3574	0.0005	0.4028
+9	-0.0042*	-2.1185	-0.0017	-0.7046
+10	0.0009	0.5689	-0.0016	-1.1794

* Indicates that the abnormal return is different from zero at the 5% level of significance.

This relation is statistically significant at the 5% level. Also, as indicated by the differences in the number of trading days between the two event days, the mean lag time between the release of information regarding registration and offering is greater for the shelf filers, though this difference is not statistically significant.

The daily abnormal returns calculated and averaged across each of the four sub-samples (A_{Nt}), along with the standardized prediction errors (A^*_{Nt}), are provided for the non-utility and utility sub-samples in Tables IIIa and IIIb, respectively, for 10 days prior to the registration event day through 10 days after this study. Figures 1a (for non-utility issuers) and 1b (for utility issuers) shows abnormal returns by plotting cumulative abnormal returns (CA_{Nn}) from 30 days prior to the registration event day through 20 days following this event day.

For each sub-sample there are statistically significant negative abnormal returns around the registration event day, yet the timing of the response differs among the sub-samples. For the two traditional sub-samples, the reaction accompanying registration is found on the event day only, whereas for the shelf sub-samples the reaction is observed to occur from one day preceding this event day through two days after. The reactions of shelf and traditional registrations are compared by calculating t -statistics for the test for differences in the CA^*_{jn} for

Table IVa
Abnormal Returns for Non-utility Issuers around Offering Event Day

Day Relative to Event Day	Shelf Registrations		Traditional Registrations	
	Abnormal Return (A_{Nt})	Standardized Prediction Error (A^*_{Nt})	Abnormal Return (A_{Nt})	Standardized Prediction Error (A^*_{Nt})
-10	0.0002	-0.4404	0.0040	1.4266
-9	-0.0017	-1.2718	-0.0017	-1.1089
-8	0.0027	1.1076	-0.0001	0.1104
-7	-0.0040	-1.3091	-0.0013	-0.9703
-6	0.0005	0.8105	-0.0032	-1.2081
-5	-0.0032	-0.7498	-0.0006	-0.6642
-4	-0.0039	-1.3220	-0.0016	-0.8198
-3	-0.0019	-0.5350	-0.0026	-1.2185
-2	-0.0056*	-2.0163	-0.0054*	-2.3897
-1	-0.0022	-1.2648	0.0034	1.3799
0	-0.0024	-1.2067	-0.0007	-0.2295
+1	-0.0013	-0.3631	-0.0004	0.2534
+2	-0.0025	-0.3472	-0.0043	-1.7848
+3	-0.0057	-1.6952	-0.0008	-0.1088
+4	0.0026	0.5591	0.0060*	2.1574
+5	0.0065	1.6598	-0.0012	-0.4828
+6	-0.0085*	-2.1413	0.0011	-0.1962
+7	-0.0014	-0.3496	0.0030	1.4882
+8	0.0029	0.7070	0.0059*	2.0281
+9	-0.0002	-0.5986	-0.0044	-1.9025
+10	-0.0014	-0.0574	0.0008	0.2490

* Indicates that the abnormal return is different from zero at the 5% level of significance.

days $T^* = 0$ and $T^{**} = 1$. The t -statistics are 1.00 and -0.90 for the non-utility and utility samples, respectively.^{6,7}

The abnormal stock returns and standardized prediction errors for selected days around the offering of the equity shares are provided in Tables IVa and IVb, for non-utility and utility issuers, respectively. The cumulative abnormal

⁶ The cumulative abnormal returns were examined for outliers for each sub-sample for the period beginning one day prior to the filing and ending two days after the filing. No outliers were detected in any of the sub-samples. An inspection of these cumulative abnormal returns revealed predominantly negative security returns. For the non-utility samples, it was found that 66% and 79% of the shelf and non-shelf issuers, respectively, experienced negative abnormal returns; for utility issuers, the corresponding proportions were 68% and 72%.

⁷ For both utilities and non-utilities, regressions were estimated to explain the cumulative standardized prediction errors over days 0 and 1 using both a dummy variable indicating a shelf registration and a variable representing the size of the issue (the ratio of the number of shares registered to the number of shares outstanding). However, both variables were statistically insignificant. In addition, regressions were estimated which included an interaction term, created as the product of the two explanatory variables. This interaction term was not found to contribute to the explanation of abnormal security returns. Thus, there is no evidence provided to support the contention that the demand for shares of the issuers is less than perfectly elastic.

Table IVb
Abnormal Stock Returns for Utility Issuers around Offering Event Day

Day Relative to Event Day	Shelf Registrations		Traditional Registrations	
	Abnormal Stock Return (A_{Nt})	Standardized Prediction Error (A^*_{Nt})	Abnormal Stock Return (A_{Nt})	Standardized Prediction Error (A^*_{Nt})
-10	0.0039	1.9388	-0.0013	-1.1832
-9	-0.0020	-1.1938	-0.0009	-0.4355
-8	0.0022	0.9580	0.0008	0.4090
-7	0.0025	1.2012	0.0002	0.1843
-6	-0.0013	-0.3467	-0.0001	0.2306
-5	0.0016	0.7512	-0.0001	-0.4329
-4	0.0008	0.4714	-0.0064*	-4.1377
-3	-0.0039*	-2.0508	0.0006	-0.7919
-2	-0.0010	-0.9190	-0.0007	-0.6391
-1	0.0010	-0.4518	0.0036*	2.6185
0	0.0015	0.7922	0.0016	1.2337
+1	0.0028	1.4208	-0.0013	-0.5543
+2	0.0015	0.6757	-0.0025	-1.7957
+3	-0.0017	-1.2141	-0.0002	-0.3498
+4	-0.0010	-0.3873	-0.0035*	-2.1659
+5	-0.0018	-1.0089	-0.0009	-0.6764
+6	-0.0024	-1.2503	-0.0022	-1.4207
+7	-0.0012	-0.7352	-0.0002	-0.2580
+8	-0.0016	-0.8559	0.0012	0.8739
+9	0.0030	1.5011	0.0014	1.0807
+10	-0.0002	-0.0753	-0.0000	-0.0829

* Indicates that the abnormal stock return is different from zero at the 5% level of significance.

returns are shown graphically in Figures 2a (non-utility issuers) and 2b (utility issuers). There is no statistically significant abnormal return performance for any of the sub-samples on the offering event date, yet there are negative, statistically significant prediction errors preceding the offering date (two days in the case of non-utility issuers, three and four days in the case of utility shelf and non-shelf filers, respectively). These significant negative returns are consistent with those found by Dann and Mikkelsen [3] and appear to represent an example of market inefficiency since the market should not consistently underestimate the effect of additional issuance information.

Comparison of cumulative standardized prediction errors over the two days, 0 and +1, indicates no difference in offering event reactions between the traditional and shelf offerings for either class of issuer (t -statistics for differences in means of -0.89 and 0.97 for non-utility and utility classes, respectively).

The abnormal returns that encompass the period between the two event days confirm the results presented in Tables IIIa, IIIb, IVa, and IVb. The calculated cumulative standardized prediction errors (CA^*_{Nn}) for the interval beginning on the registration event day and extending through one day after the offering event day are -3.216 and -3.515 for the non-utility shelf and traditional sub-samples,

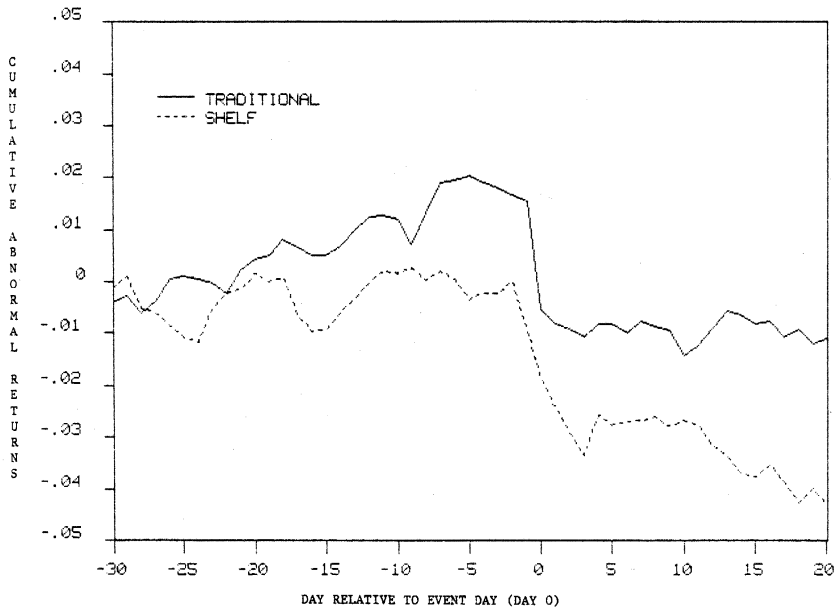
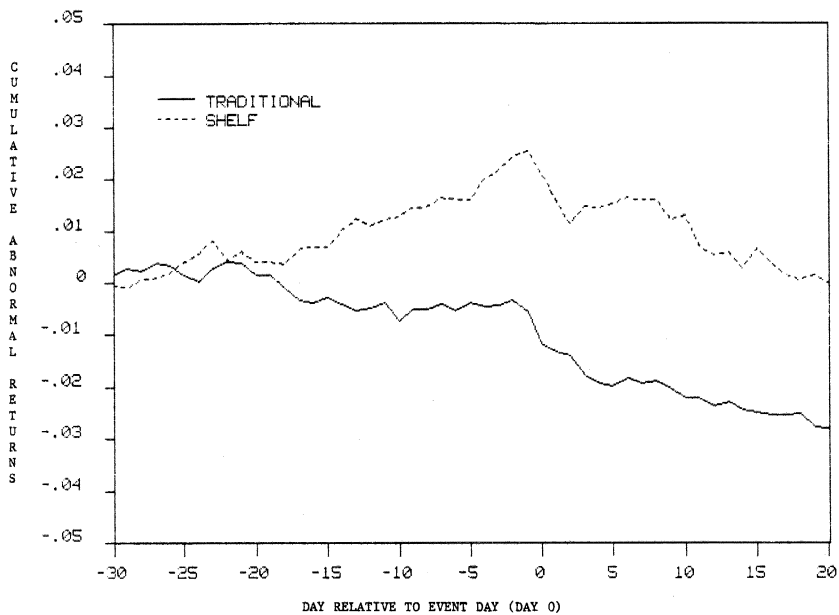
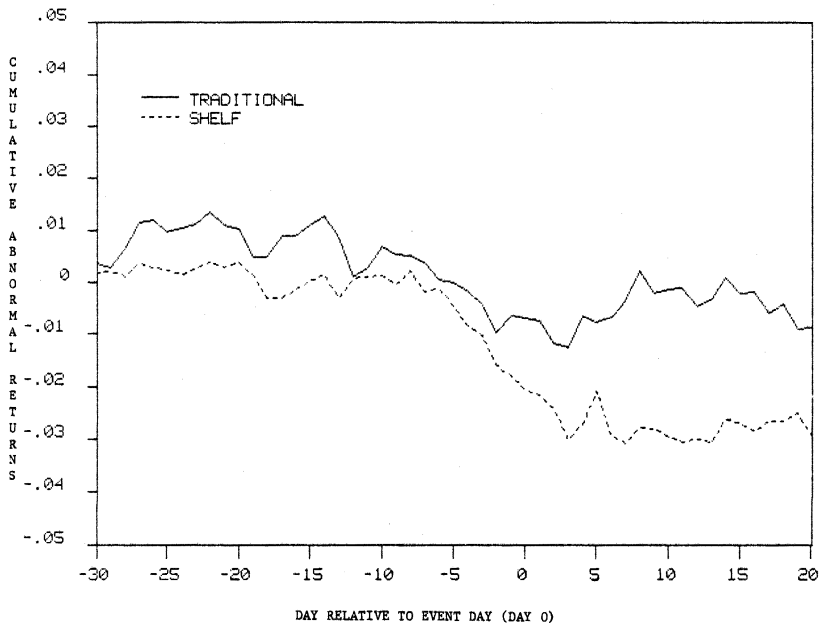
a**b**

Figure 1. (a) Plot of cumulative abnormal returns for non-utility issuers around registration event day. (b) Plot of cumulative abnormal returns for utility issuers around registration event day.

a



b

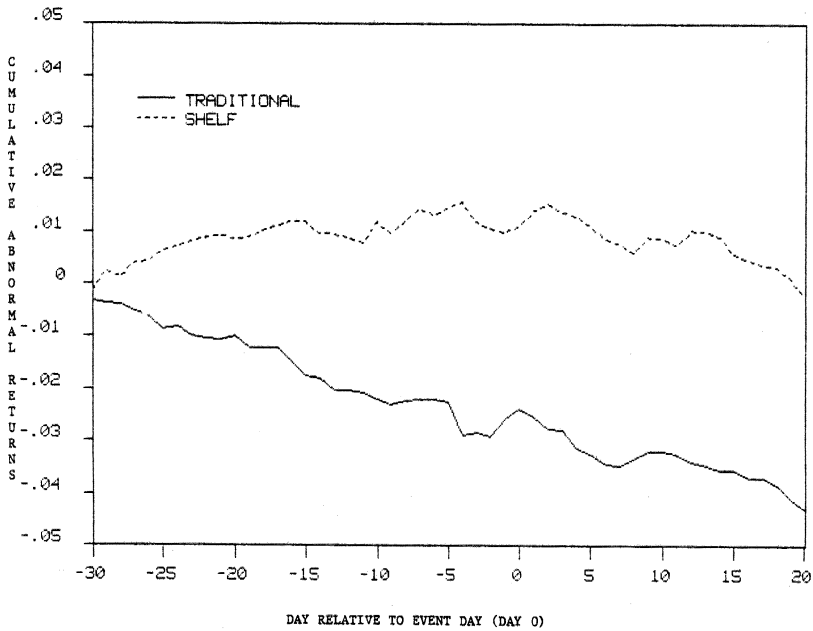


Figure 2. (a) Plot of cumulative abnormal returns for non-utility issuers around offering event day. (b) Plot of cumulative abnormal returns for utility issuers around offering event day.

respectively. For the non-utilities, there is no statistical difference between the standardized prediction errors for the shelf and non-shelf issues (t -statistic = 0.32). For utility issuers, a similar result is found; the calculated values of CA_{Nn}^* are -1.188 and -2.549 for the shelf and traditional issues, respectively, which are not statistically different (t -statistic = 0.49). Therefore, no difference in stock price reaction is observed under shelf and traditional registrations.

IV. Conclusions

Consistent with previous investigations, this study documents negative stock price reactions accompanying both the announcement of the registration and the offering of new issues. The findings with respect to the effect of the shelf registration rule indicate that there is no difference between the reactions that accompany shelf and traditional registrations for either non-utility or utility filers. When both the registration and offering events are considered together, there continues to be no difference in stock price reactions.

REFERENCES

1. P. Asquith and D. W. Mullins, Jr. "Equity Issues and Offering Dilution." *Journal of Financial Economics* 15 (1986), Forthcoming.
2. S. J. Brown and J. B. Warner. "Using Daily Stock Returns: The Case of Event Studies." *Journal of Financial Economics* 14 (March 1985), 3-31.
3. L. Y. Dann and W. H. Mikkelsen. "Convertible Debt Issuance, Capital Structure Change and Financing-Related Information," *Journal of Financial Economics* 13 (June 1984), 157-86.
4. G. Gray. The Investment Banking Process for Primary Equity Securities and the Effects of SEC Rule 415. Unpublished doctoral dissertation. The Pennsylvania State University, Pennsylvania, 1984.
5. A. C. Hess and P. Frost. "Tests for Price Effects of New Issues of Seasoned Securities." *Journal of Finance* 36 (March 1982), 11-25.
6. G. L. Hite and J. E. Owers. "Security Price Reactions Around Corporate Spin-off Announcements." *Journal of Financial Economics* 12 (December 1983), 409-36.
7. D. S. Kidwell, M. W. Marr, and G. R. Thompson. "SEC Rule 415: The Ultimate Competitive Bid." *Journal of Financial and Quantitative Analysis* 19 (June 1984), 183-95.
8. H. E. Leland and D. H. Pyle. "Information Asymmetries, Financial Structure, and Financial Intermediation." *Journal of Finance* 32 (May 1977), 371-87.
9. P. Marsh. "Equity Rights Issues and the Efficiency of the UK Stock Market." *Journal of Finance* 34 (September 1979), 839-62.
10. W. K. Mikkelsen and M. M. Partch. "Stock Price Effects and Costs of Secondary Distributions." *Journal of Financial Economics* 14 (June 1985), 165-94.
11. M. H. Miller and K. Rock. "Dividend Policy Under Asymmetric Information." *Journal of Finance* 40 (September 1985), 1031-52.
12. S. C. Myers and N. S. Majluf. "Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have." *Journal of Financial Economics* 13 (June 1984), 187-221.
13. R. J. Rogowski and E. H. Sorensen. "Deregulation in Investment Banking: Shelf Registration, Structure, and Performance." *Financial Management* 14 (Spring 1985), 5-15.
14. M. S. Scholes and J. Williams. "Estimating Betas from Nonsynchronous Data." *Journal of Financial Economics* 5 (June 1977), 309-28.
15. U.S. Securities and Exchange Commission. "The Rule 415 Experiment: Equity Markets." Unpublished information memorandum, September 1983.