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Corporate Takeover Bids, Methods of Payment, and Bidding Firms' Stock Returns

NICKOLAOS G. TRAVLOS*

ABSTRACT

This study explores the role of the method of payment in explaining common stock returns of bidding firms at the announcement of takeover bids. The results reveal significant differences in the abnormal returns between common stock exchanges and cash offers. The results are independent of the type of takeover bid, i.e., merger or tender offer, and of bid outcomes. These findings, supported by analysis of nonconvertible bonds, are attributed mainly to signalling effects and imply that the inconclusive evidence of earlier studies on takeovers may be due to their failure to control for the method of payment.

RECENT STUDIES ON CORPORATE takeovers provide inconclusive results on the valuation effects of acquisitions on the common stock of bidding firms.¹ Substantial differences are reported between the studies that analyze acquisitions initiated as tender offers and those that confine their samples to merger proposals. The existence of mixed empirical findings for the bidding firms makes it difficult to interpret existing evidence and to draw conclusions about the managers' acquisition motivations. Nevertheless, the reason for the substantial difference between empirical findings on mergers and tender offers still remains an unresolved issue. It is observed, however, that mergers are usually common stock exchange offers whereas tender offers are usually cash offers. Given that different methods of financing a project have different signalling implications (Myers and Majluf [39]), the differential stock returns of bidders in mergers and tender offers may be due to the method of acquisition financing.

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¹ For a comprehensive review of existing empirical evidence, see Jensen and Ruback [26] and Halpern [21]. Studies on mergers show that bidding firms earn either statistically significant negative abnormal returns (Dodd [13], Firth [18], and Eger [17]) or insignificant positive abnormal returns (Asquith [2], Eckbo [16], Dennis and McConnell [12], and Amihud, Dodd, and Weinstein [1]) around the announcement of the merger proposal. By contrast, studies on tender offers (Dodd and Ruback [14], Bradley [6], and Bradley, Desai, and Kim [7]) report small but statistically significant positive abnormal returns to the stockholders of the bidding firms.

Even though the method of payment in takeovers has been suggested to be important,² no study provides a direct confirmation of the bidders' differential return relationship across different methods of payment. However, a growing literature on common stock issues reports negative stock price reaction to new common stock offerings.³ Since the proceeds from new stock offerings are generally used to finance capital expenditures, part of which represents corporate acquisitions, these findings might be viewed as an indirect evidence of a differential return relationship across different methods of payment. Nevertheless, it is important to investigate whether these findings are robust to the particular use of the new capital.

The purpose of this study is to explore the impact of the method of payment on the common stock prices of bidding firms at the announcement of unanticipated takeover proposals. The analysis is concerned mainly with the valuation effects associated with two distinct methods of payment: i.e., common stock exchanges and cash offers. The results indicate that bidding firms suffer significant losses in pure stock exchange acquisitions, but they experience "normal" returns in cash offers. These results hold true for both types of acquisitions, mergers and tender offers. Moreover, the evidence is consistent with the recent findings provided by the empirical literature on new offerings of common stock.

The following section derives the predictable hypotheses. Section II discusses the data and methodology used. Section III presents the empirical evidence, and the last section summarizes the study and draws conclusions.

I. Predictable Hypotheses

The following analysis draws arguments from the extant theoretical literature in finance to explain why the various methods of payments employed to finance corporate acquisitions might have different valuation effects on the bidding firms' common stock prices. First, in a world of asymmetric information, the method of payment may signal valuable information to the market. If the bidding firms' managers possess information about the intrinsic value of their firm, independent of the acquisition, which is not fully reflected in the preacquisition stock price, they will finance the acquisition in the most profitable way for the existing stockholders. In the context of the Myers and Majluf [39] model, the managers will prefer a cash offer if they believe that their firm is undervalued, while a common stock exchange offer will be preferred in the opposite case. (See DeAngelo, DeAngelo, and Rice [11].) Accordingly, the market participants interpret a cash offer as good news and a common stock exchange offer as bad news about the bidding firm's true value. If such information effects are important, the bidding firm's stock price change at the proposal's announcement will reflect both the gain from the takeover (weighted by the probability that the takeover

² Carleton, Guilkey, and Harris [9] have suggested that cash takeovers might be sufficiently different from noncash takeovers so that failure to distinguish between them could lead to inappropriate generalizations.

³ See Asquith and Mullins [4], Kalay and Shimrat [27], Masulis and Korwar [36], and Mikkelsen and Partch [37].

bid will go through) and the information effects. Therefore, other things being equal, the returns to bidding firms in cash offers will be higher than in common stock exchange offers.⁴ Furthermore, since most tender offers are financed via cash, whereas most merger proposals call for the exchange of common stock, the information-effect argument implies that returns in tender offers will be higher than in mergers (Jensen and Ruback [26]). Consequently, the difference in empirical findings between studies on mergers and tender offers might simply be due to the opposite information effects implied by a common stock exchange offer relative to a cash offer utilized to finance mergers and tender offers, respectively.

Second, cash offers and exchange offers have different tax implications. Cash offers generate tax obligations for the target firms' stockholders but allow the acquiring firms to raise the depreciation basis of acquired assets to their market value. Common stock exchange offers are, in general, tax-free acquisitions, so that any capital gains realized by the target firm's stockholders are deferred until the stock is sold, but the depreciation basis of acquired assets remains the same. Due to this differential tax treatment, the bidding firm must pay a higher acquisition price in the case of a cash offer to offset the tax burden of the selling stockholders (Wansley, Lane, and Yang [42]). The higher acquisition price in a cash transaction relative to an exchange offer reflects, in part, the additional tax credits captured by the acquiring firm in a taxable acquisition (i.e., higher depreciation tax shields in a cash offer), and, therefore, it is not clear whether the acquiring firm really has a net benefit from the acquisition of additional tax credits associated with a cash offer once the higher acquisition price is considered.⁵

Third, the combination of two firms lacking perfect positive correlation of cash flows can decrease the default risk of the combined entity and, therefore, increase its debt capacity due to the co-insurance effect (Lewellen [33]).⁶ Also, the debt capacity of the new entity will increase if there is any latent debt capacity in the acquired firm. In either case, unless capital restructuring occurs, at least part of the benefits from higher debt capacity accrues to the merging firms' bondholders at the stockholders' expense (Higgins and Schall [23], Galai and Masulis [20],

⁴ The above predictable hypothesis is also consistent with the predictions of other signalling models. Leland and Pyle [32] conclude that equity issues by entrepreneurs to outside investors are negative signals about a firm's value. Moreover, Fishman [19] shows that cash offers have a lower "cost of signalling" relative to securities offers, and announcement of a cash offer leads to higher revaluations for both the bidder's and target's shares than announcement of a securities offer.

⁵ These benefits depend on the degree of competition in the market for corporate control, on alternative tax shields (DeAngelo and Masulis [10]), and on the effective corporate tax rate of other possible bidders.

⁶ This requires a model of optimal capital structure that links firm risk and debt level (Kraus and Litzenberger [31]). However, the existence of an optimal capital structure is a debatable issue. Specifically, Miller [38] shows that, in a world of differential personal taxes, the marginal personal tax disadvantage of debt, combined with supply-side adjustments by firms, will offset the corporate tax advantage of debt and drive market prices at equilibrium, implying capital-structure irrelevancy to any given firm. On the other hand, DeAngelo and Masulis [10] show that the presence of corporate-tax-shield substitutes for debt (i.e., accounting depreciation, depletion, and investment tax credits) implies a market equilibrium in which each firm has a unique optimal capital structure.

and Kim and McConnell [28]). Thus, a common stock exchange offer leads to a wealth transfer from stockholders to bondholders, implying a fall in stock prices. On the other hand, as shown by Eger [17], a cash acquisition might offset the negative changes in the bidding firms' common stock prices, caused by the co-insurance effect, leaving the bidding firms' stock prices unchanged.

In summary, a review of related corporate finance theory suggests that the method of payment employed to finance a takeover has an impact on the announcement-period common stock returns of bidding firms. In particular, common stock financing is expected to have a negative impact (due to signalling and co-insurance effects) on common stock returns. Cash financing, on the other hand, is expected to have a non-negative effect.

II. Data and Methodology

A. Data

The data analyzed in this study were drawn from public announcements of proposals to acquire a target firm by means of tender offer or merger.⁷ The sample contains bidding firms engaged in successful takeovers⁸ in the period 1972 through 1981 for which there are daily stock returns available on the tapes of the Center for Research in Security Prices (CRSP). A merger bid was considered successful if it resulted in a completed merger and the target firm disappeared as a separate entity. A tender offer was considered successful if the bidding firm acquired a majority interest (i.e., more than fifty percent) of the target firm's common equity. The merger sample excludes merger proposals preceded by successful tender offers. The group of tender offers contains only those bids that were initially announced in the form of a tender offer.

The sample was identified by a search of *The July 1981 Statistical Report on Mergers and Acquisitions* [40] of the Federal Trade Commission (FTC) and the *Wall Street Journal Index*. The announcement date of the proposed bid is the initial date of the first public announcement of the offer in the *Wall Street Journal*. In the case that the original bid was rejected or challenged by a rival bidding firm, the date(s) of the subsequent revised bid(s) was (were) found from the *Wall Street Journal Index*. In order to determine accurately event dates and to insulate the bid announcements from other contemporaneous corporate events, the corporate history, contained in the *Wall Street Journal Index*, *Moody's Industrials*, and *Funk and Scott Index*, was reviewed for all firms included in the tentative sample for the six-month period prior to the event date. As a result of this screening process, firms that experienced concurrent major corporate events (i.e., other takeover activities, divestitures, common stock repurchases, exchange offers, new offerings of securities, and large new contracts) for the fifteen-day period prior to or at the announcement date ($t = 0$) were not included in the final

⁷ In a tender offer, the bidding firm makes an offer directly to the stockholders of the target firm. In a merger proposal, the offer is made to the target firm's management.

⁸ The possibility of a bias introduced by using only successful takeovers is addressed in the next section.

sample. The method of payment was identified from the *Wall Street Journal Index* and the forms 13D and 14D filed with the Securities and Exchange Commission (SEC) at the announcement of each proposed takeover.⁹

The overall sample was divided into stock exchange offers if the entire transaction was financed through an exchange of common stock, cash offers if the entire amount was paid in cash, and combinations of common stock and cash. The final sample contains 167 acquiring firms, composed of sixty common stock exchange offers, one hundred cash offers, and seven combinations of common stock and cash where stock represents forty-nine to sixty percent of the transaction. Furthermore, the sample is divided into 126 merger proposals and forty-one tender offers. The merger set contains sixty stock exchange offers, sixty-four cash offers, and two combinations of cash and common stock. The tender offer set consists of thirty-six cash offers and five combinations of cash and common stock, with stock being the dominant source of funds. Out of the 167 announcements of the initial takeover bids, fourteen were not successful at the first offer and the bidding firms revised their bids.¹⁰ All the bidding firms are listed on the New York Stock Exchange (NYSE) except one that is listed on the American Stock Exchange (AMEX). The distribution of acquisitions is given in Table I. It should be noted that there is a concentration of takeover announcements in the period 1977 through 1979. This reflects the recent acquisition boom that started in the final quarter of 1976 and maintained its momentum (with the exception of 1980) until the present.¹¹

The size characteristics (mean, standard deviation, median, and interquartile range) of stock exchange offers, cash offers, mergers, and tender offers appear in Table II.¹² In Table II, item (1) presents the book value of total assets of acquiring firms at year end prior to announcement, taken from the annual *COMPUSTAT* tapes. Item (2) shows the value of the acquisition (*VALTR*), that is, the dollar amount of the transaction, taken from the *Wall Street Journal Index* and/or the forms 13D and 14D. Items (3) and (4) depict the market value of common equity of the acquiring (*MVEQA*) and target firms (*MVEQT*), respectively, at year end prior to the initial announcement of the takeover bid. The relative size of the acquisition is measured by two ratios. The first, *RELSIZE1*, is defined as the market value of equity of the target firm divided by the market value of equity of the acquiring firm and appears in row (5). The second, *RELSIZE2*, is contained in row (6) and is defined as the value of a transaction divided by the market value of equity of the acquiring firm. The summary statistics shown in Table II

⁹ With the exception of one firm, proposed and actual methods of payment were identical.

¹⁰ For stock exchange offers, one firm had to revise its bid once. Within the cash-offers group, ten firms had to revise their bids once ($n = 10$), four had to twice ($n = 4$), and, in the combinations group, three firms revised the bid once ($n = 3$), two revised it twice, and one revised it three times.

¹¹ As noted in *Mergers and Acquisitions* (Spring 1977, p. 3) "merger activity took an explosive upward turn in the final quarter of 1976." Also, *Mergers and Acquisitions* (Spring 1986, p. 1) observes that "the acquisition activity is back on an upswing after its mid-1980 drag."

¹² The number of firms in the various groups, presented in Table II, does not always add to 167. This is because many target firms were not listed on the NYSE or AMEX. Also, the value of transaction could not be obtained for fifty-three firms, and ten firms could not be found in the *COMPUSTAT* tapes.

Table II
Summary Statistics of Size Characteristics of Corporate Takeover Bids Classified According to Method of Payment and Type of Acquisition^a

Size Variable	Method of Payment		Type of Acquisition	
	Common Stock Exchange Offers	Cash Offers	Merger Proposals	Tender Offers
(1) Book Value of Total Assets of Acquiring Firms ^b	2295; 1374; 5 (2836; 1469)	2714; 1444; 93 (4882; 2235)	2411; 1428; 118 (2910; 1776)	3140; 1465; 39 (6679; 2151)
(2) Value of Acquisitions (VALTR)	168; 100; 43 (198; 159)	278; 140; 63 (415; 354)	229; 117; 89 (286; 310)	820; 122; 25 (1905; 329)
(3) Market Value of Common Equity of Acquiring Firms (MVEQA) ^c	1651; 1146; 60 (1626; 1724)	1613; 629; 100 (3029; 1373)	1553; 858; 126 (2083; 1557)	1994; 648; 41 (3676; 1802)
(4) Market Value of Common Equity of Target Firms (MVEQT) ^b	154; 84; 34 (194; 195)	175; 118; 46 (185; 187)	184; 101; 64 (208; 222)	136; 88; 20 (120; 115)
Relative Size of Acquisitions:				
(5) $RELSIZE1 = \frac{MVEQT}{MVEQA}$	13.9%; 9.4%; 34 (17.3%; 14.4%)	22.4%; 13.9%; 46 (26.9%; 21.4%)	18.6%; 14.2%; 64 (21.8%; 19.4%)	21.1%; 10.6%; 20 (28.3%; 19.4%)
(6) $RELSIZE2 = \frac{VALTR}{MVEQA}$	16.5%; 6.6%; 43 (21.5%; 20.7%)	24.5%; 14.5%; 63 (28.7%; 28.4%)	20.6%; 10.3%; 89 (24.4%; 20.9%)	35.1%; 19.4%; 25 (39.9%; 37.8%)

^a Statistics given are the mean followed by the median and number of observations; the standard deviation and interquartile range are in parentheses. Means, medians, standard deviations, and interquartile ranges for items (1) to (4) are expressed in millions of dollars.

^b At year end prior to announcement.

^c Equals the number of shares outstanding times price per share at year end prior to announcement.

indicate that the size variables are not symmetrically distributed. Nevertheless, it is evident from Table II that target firms are, in general, smaller than bidding firms and that the relative size of acquisitions is larger in tender offers relative to mergers and in cash offers relative to stock exchange offers.

B. Methodology

The research hypotheses examined in this study are tested by applying an event-type methodology similar to that described in Dodd and Warner [15]. The ordinary-least-squares coefficients of the market-model regression were estimated over the period $t = -136$ to $t = -16$ relative to the date of the proposal's initial announcement in the *Wall Street Journal*, $t = 0$. Daily abnormal common stock returns were calculated for each firm i over the interval $t = -15$ to $t = +15$. For a sample of N firms, a daily average abnormal return (AR) for each day t was computed by

$$AR_t = \frac{1}{N} \sum_{i=1}^N [R_{it} - \hat{a}_i - \hat{b}_i R_{mt}], \quad t = -15, \dots, 0, \dots, +15, \quad (1)$$

where R_{it} is return for the common stock of firm i on day t , R_{mt} is return for the CRSP equally weighted market index on day t , and $\hat{a}_i$, $\hat{b}_i$ are ordinary-least-squares estimates of the market-model parameters.

Average cumulative abnormal returns ($CAR_{T1,T2}$) were also derived by summing the AR_t 's over various intervals. The expected values of AR_t and $CAR_{T1,T2}$ are zero in the absence of abnormal performance. The test statistics of AR_t and $CAR_{T1,T2}$ are based on the average standardized abnormal return ($ASAR_t$) and the average standardized cumulative abnormal return ($ASCAR_{T1,T2}$), respectively, where

$$ASAR_t = \frac{1}{N} \sum_{i=1}^N \frac{R_{it} - \hat{a}_i - \hat{b}_i R_{mt}}{S_{it}}, \quad (2)$$

$$ASCAR_{T1,T2} = \sum_{t=T1}^{T2} ASAR_t, \quad (3)$$

and S_{it} is the square root of firm i 's estimated forecast variance computed by

$$S_{it} = \left[S_i^2 \left[1 + \frac{1}{L} + \frac{(R_{mt} - \bar{R}_m)^2}{\sum_{k=1}^L (R_{mk} - \bar{R}_m)^2} \right] \right]^{1/2}. \quad (4)$$

In (4), S_i^2 is the residual variance for security i from the market-model regression, L is the number of observations during the estimation period, R_{mk} is the return on the market portfolio for the k th day of the estimation period, R_{mt} is the return on the market portfolio for day t , and $\bar{R}_m$ is the average return of the market portfolio for the estimation period. Assuming that the individual abnormal returns are normal and independent across t and across securities, the statistics Z_t and $Z_{T1,T2}$, which follow a unit-normal distribution (Dodd and Warner [15]), are used to test the hypotheses that the average standardized abnormal returns and the average cumulative standardized abnormal returns equal zero, where

$$Z_t = \sqrt{N} \times ASAR_t, \quad (5)$$

and

$$Z_{T_1, T_2} = \frac{\sqrt{N}}{\sqrt{T_2 - T_1 + 1}} \sum_{t=T_1}^{T_2} ASAR_t. \quad (6)$$

III. Empirical Findings

A. Event Study Analysis: Overall Results

Table III presents results for the behavior of the average daily and cumulative abnormal returns of bidding firms' stocks around the initial announcement of sixty exchange offers and one hundred cash offers, for the period -10 to $+10$ days relative to the announcement day ($t = 0$). The first column presents the event date, relative to the announcement day, in terms of trading days. The second column contains the daily portfolio abnormal returns (hereafter *AR*'s) for each event day for the bidders using stock exchange offers. The third column

Table III

Daily Average Abnormal Returns (*AR*) and Cumulative Abnormal Returns (*CAR*) for the Sample of Sixty Bidding Firms in Successful Common Stock Exchange Offers and One Hundred Bidding Firms in Successful Cash Offers, from Ten Days before and Ten Days after the Initial Announcement (Day Zero) of a Takeover Bid

Years 1972 through 1981						
(1) Event Day	Stock Exchange Offers			Cash Offers		
	(2) <i>AR</i> %	(3) <i>Z</i> -Score	(4) <i>CAR</i> %	(5) <i>AR</i> %	(6) <i>Z</i> -Score	(7) <i>CAR</i> %
-10	0.23	0.97	0.23	0.01	0.33	0.01
-9	-0.31	-1.30	-0.08	-0.10	-0.52	-0.09
-8	0.13	0.42	0.05	-0.10	-1.29	-0.19
-7	0.03	0.31	0.08	0.08	0.43	-0.11
-6	0.16	0.53	0.24	0.07	0.37	-0.04
-5	-0.09	-0.42	0.15	0.12	0.72	0.08
-4	0.25	1.06	0.40	0.09	0.83	0.17
-3	-0.21	-0.89	0.19	-0.09	-0.21	0.08
-2	0.25	1.53	0.44	-0.06	0.40	0.02
-1	-0.78	-3.95*	-0.34	-0.05	0.02	-0.03
0	-0.69	-3.22*	-1.03	0.29	1.56	0.26
+1	-0.22	-1.35	-1.25	-0.35	-1.74	-0.09
+2	0.00	-0.21	-1.25	-0.06	0.32	-0.15
+3	-0.07	-0.04	-1.32	0.09	0.75	-0.06
+4	-0.17	-0.90	-1.49	-0.14	-1.33	-0.20
+5	-0.25	-1.06	-1.74	-0.22	-1.26	-0.42
+6	-0.18	-1.21	-1.92	0.07	0.91	-0.35
+7	-0.16	-0.13	-2.08	0.33	1.11	-0.02
+8	0.21	0.64	-1.87	-0.01	0.22	-0.03
+9	0.00	-0.69	-1.87	-0.15	-0.74	-0.18
+10	0.27	1.29	-1.60	0.05	1.09	-0.13

* Significant at the 0.01 level.

contains the Z -statistics corresponding to the AR 's, and the fourth column depicts the cumulative portfolio abnormal returns (hereafter CAR 's). Columns (5), (6), and (7) present the AR 's, Z -statistics, and CAR 's, respectively, for the bidders using cash offers.

As shown in Table III, announcements of acquisition proposals have a negative effect on common stock prices of bidding firms that use common stock financing. The portfolio abnormal return on the day prior to the first announcement of the acquisition proposal in the *Wall Street Journal* ($t = -1$) is -0.78 percent, which is significantly different from zero at the 0.01 level ($Z = -3.95$). The announcement-day ($t = 0$) portfolio abnormal return is -0.69 percent, which is also significant at the 0.01 level ($Z = -3.22$). In addition, the two-day ($t = -1$ to $t = 0$) announcement-period CAR is -1.47 percent, which is significant at the 0.01 level ($Z = -5.07$). Based on the results obtained from the sample of sixty bidding firms, it is concluded that, on average, stockholders of acquiring firms experience significant losses when their firm acquires another one through an exchange of common stock.

In contrast to the bidders using exchange offers, the results on the bidders using cash offers (reported in columns (5), (6), and (7) in Table III) indicate that stockholders of bidding firms experience, on average, "normal" rates of return when their firms pay cash for the shares of common stock of the target firms. Specifically, the announcement-day ($t = 0$) portfolio abnormal return is 0.29 percent, which is statistically insignificant at conventional levels ($Z = 1.56$). Also, at event day -1 , the portfolio abnormal return is -0.05 percent, which is insignificant as well ($Z = 0.02$). In addition, the two-day ($t = -1$ to $t = 0$) announcement-period abnormal cumulative return is 0.24 percent, which is also statistically insignificant ($Z = 1.11$).

To facilitate the comparison of the abnormal returns between the two portfolios of bidding firms, the daily mean differences are derived by subtracting the associated average abnormal returns. Over the announcement period, significant differences exist in the two daily abnormal returns. In particular, on event-day 0, the daily mean difference of abnormal returns between the bidders using exchange offers and cash offers is -0.98 percent, which is significantly different from zero at the 0.01 level ($Z = -3.50$).¹³ Also, the daily mean difference for event-day -1 is -0.73 percent, which is significant at the 0.01 level ($Z = -3.13$). However, no differences in returns across methods of payment are noticed in the preannouncement or postannouncement periods. The results show that common stock-financing bidding firms and cash-financing bidding firms are evaluated

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$$Z = \frac{ASAR_1 - ASAR_2}{\sqrt{\frac{1}{N_1} + \frac{1}{N_2}}},$$

where $ASAR_1$ and $ASAR_2$ are the average standardized abnormal returns for stock exchange offers and cash offers, respectively, and N_1 , N_2 represent the numbers of securities in the two groups, respectively.

Table IV

Daily Average Abnormal Returns (AR) for Bidding Firms in Successful Takeovers, Classified According to Type of Acquisition and Method of Payment, from Five Days before and Five Days after the Initial Announcement (Day Zero) of a Takeover Bid

Years 1972 through 1981								
	Merger Proposals				Tender Offers			
	Common Stock Exchange Offers (N = 60)		Cash Offers (N = 64)		Combinations (Cash and Common Stock) (N = 5)		Cash Offers (N = 36)	
(1) Event Day	(2) AR%	(3) Z-Score	(4) AR%	(5) Z-Score	(6) AR%	(7) Z-Score	(8) AR%	(9) Z-Score
-5	-0.09	-0.42	0.24	0.97	-0.01	0.57	-0.10	-0.08
-4	0.25	1.06	-0.06	0.32	0.17	-0.07	0.35	0.95
-3	-0.21	-0.89	-0.13	-0.19	0.38	0.59	-0.01	-0.10
-2	0.25	1.53	-0.06	0.27	-0.66	-1.06	-0.05	0.30
-1	-0.78	-3.95*	0.04	0.06	-3.09	-4.65*	-0.21	-0.05
0	-0.69	-3.22*	0.33	1.58	-1.02	-0.71	0.22	0.49
+1	-0.22	-1.35	-0.37	-1.63	-0.93	-1.27	-0.31	-0.80
+2	0.00	-0.21	0.15	0.77	-0.53	-0.78	-0.45	-1.20
+3	-0.07	-0.04	0.15	1.44	-0.25	-0.35	-0.03	-0.66
+4	-0.17	-0.90	-0.07	-0.47	-0.12	-0.32	-0.28	-1.59
+5	-0.25	-1.06	-0.29	-1.04	-1.21	-1.62	-0.09	-0.71

* Significant at the 0.01 level.

differently by the investors at the announcement day of a takeover bid.¹⁴ Cash offers are associated with normal returns to the bidders, whereas pure stock exchange takeovers are associated with negative abnormal returns.¹⁵

B. Additional Evidence: Price Effects by Type of Bid and Success of Bid

The findings shown in Table III are based on a sample of acquisitions that groups together merger proposals and tender offers. Since earlier studies confine their samples to one type of acquisition only (i.e., mergers or tender offers), it is important to investigate whether the conclusions on the impact of the method of payment are valid for the subsets of mergers and tender offers as well. Table IV

¹⁴ Results were also derived for the 153 firms with original bids that were accepted, and the conclusions were unchanged. In addition, for the firms with revised bids, the announcement date was redefined as the date of the revised bids. The market model's parameters from the original estimation period were utilized to generate these new announcement-period abnormal returns. The results were not materially different from those reported in Table III. Due to the small number of firms with revised bids (one stock exchange offer, ten cash offers, and three combinations), results are not reported here, but they are available from the author.

¹⁵ Results were also derived for the portfolio of bidding firms that utilized a combination of common stock and cash. These results are similar to those of the stock exchange offers and are available upon request.

presents daily average abnormal returns for bidding firms in successful takeovers, classified according to the type of acquisition and the method of payment for the period -5 to $+5$ days relative to the announcement day. Columns (2) through (5) show AR 's and Z -statistics for merger proposals in common stock exchange offers (columns (2) and (3)) and in cash offers (columns (4) and (5)). Columns (6) through (9) have AR 's and Z -statistics for tender offers in combinations of cash and common stock offers (columns (6) and (7)) and in cash offers (columns (8) and (9)).

As shown in Table IV, cash offers are associated with normal returns in both mergers and tender offers. Common stock exchange offers in mergers and combinations of common stock and cash (where common stock represents fifty-one to sixty percent of the transaction) tender offers are both associated with negative abnormal returns.¹⁶ With respect to mergers, the daily mean differences of average abnormal returns between sixty stock exchange offers and sixty-four cash offers for event days -1 and 0 are -0.82 percent ($Z = -2.82$) and -1.02 percent ($Z = -3.41$), respectively, which are significant at the 0.01 level. With respect to tender offers, the daily mean difference at event day -1 between thirty-six cash offers and five combinations of common stock and cash is 2.88 percent, which is significant at the 0.01 level ($Z = 4.34$). These results imply that different methods of payment are associated with different abnormal returns in both types of acquisitions, mergers and tender offers.

The exclusion of unsuccessful bids from the sample may introduce a serious bias if distribution of failures is different across financing categories.¹⁷ Specifically, if stock exchange offers are more likely to fail than cash offers, the negative abnormal returns of bidders in exchange offers could also be attributed to the higher probability of failure, relative to cash offers, and it would be difficult to distinguish between this effect and the information effect. It is, therefore, important to consider whether cash offers or exchange offers are more likely to fail.

To address this issue, a sample of unsuccessful takeover bids was obtained by examining the *Wall Street Journal Index* for the years 1972 through 1983 and the *W. T. Grimm & Co. Mergerstat Review* [43] for the years 1981, 1982, and 1983. An unsuccessful merger bid was a bid that was abandoned and in which the target firm continued to exist as a separate firm with no other merger bids for at least one year. An unsuccessful tender offer was a bid that failed and in which the bidding firm did not acquire significant interest (more than twenty percent) of the target firm's common equity for at least one year subsequent to the initial bid. These takeover bids were followed in the *Wall Street Journal* backward and forward in time to determine the date of the initial bid and the

¹⁶ Four out of the five firms in the group of combinations of cash and stock tender offers have significant negative abnormal returns. Still, the average abnormal return for event day $t = -1$ ($AR_{-1} = -3.09$ percent, $Z = -4.65$) looks rather unusual. To ensure that these large negative returns were not attributable to corporate events unrelated to takeover bids, the *Wall Street Journal* was reviewed for these four firms for the ten-day period surrounding the announcement date. The review indicated no other corporate announcements within this period. Indeed, the *Wall Street Journal* articles attributed the observed large stock price reductions solely to the takeover bid announcements.

¹⁷ An anonymous referee is acknowledged for raising this point.

final outcome. By applying selection criteria comparable to those employed for obtaining the successful bids, a sample of sixty-four unsuccessful bids was obtained for the period 1973 through 1982. The sample of unsuccessful bids contains forty-seven cash offers, twelve stock exchanges, and five combinations of cash and stock.

The samples of successful and unsuccessful bids contain 147 cash offers divided into forty-seven (thirty-two percent) unsuccessful and one hundred (sixty-eight percent) successful offers. Also, there are seventy-two stock exchange offers, out of which twelve (seventeen percent) are unsuccessful and sixty (eighty-three percent) are successful bids. It is evident, therefore, that stock exchange offers do not have larger probability of failure than cash offers, which implies that the negative abnormal returns of bidders in stock exchange offers in comparison with the "normal" returns of bidders in cash offers are not driven by a higher probability of failures of exchange offers relative to cash offers. This conclusion is further supported by analyzing abnormal stock returns of unsuccessful takeover bids around the bid's initial announcement for bidders in stock exchange offers and cash offers.

Table V presents the average daily and cumulative abnormal returns of bidding firms' stocks around the initial announcement of eventually unsuccessful takeover bids for twelve exchange offers and forty-seven cash offers for the period -5 to +5 days relative to the announcement day ($t = 0$). The findings in this table are presented in the same format as in Table III. Regarding the exchange offers, the portfolio abnormal return on the day prior to the announcement of the first takeover attempt in the *Wall Street Journal* ($t = -1$) is -1.92 percent,

Table V

Daily Average Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR) for the Samples of Twelve Bidding Firms in Unsuccessful Common Stock Exchange Offers and Forty Seven Bidding Firms in Unsuccessful Cash Offers, from Five Days before and Five Days after the Initial Announcement (Day Zero) of a Takeover Bid

Years 1973 through 1982						
(1) Event Day	Stock Exchange Offers			Cash Offers		
	(2) AR%	(3) Z-Score	(4) CAR%	(5) AR%	(6) Z-Score	(7) CAR%
-5	-0.48	-0.46	-0.48	-0.05	-0.35	-0.05
-4	-0.20	-0.74	-0.68	-0.11	-0.34	-0.16
-3	-0.07	-0.49	-0.75	0.24	1.05	0.08
-2	0.58	1.34	-0.17	-0.16	-0.25	-0.08
-1	-1.92	-3.74*	-2.09	0.14	0.22	0.06
0	-2.09	-3.69*	-4.18	0.31	1.09	0.37
+1	0.07	0.29	-4.11	-0.20	-1.52	0.17
+2	0.13	0.22	-3.98	-0.12	-0.14	0.05
+3	-0.50	-0.99	-4.48	-0.13	-0.64	-0.08
+4	0.90	1.70	-3.58	0.04	-0.08	-0.04
+5	-0.38	-0.54	-3.96	-0.11	0.37	-0.15

* Significant at the 0.01 level.

which is significantly different from zero at the 0.01 level ($Z = -3.74$). The announcement-day AR ($t = 0$) is -2.09 percent, which is also statistically significant at the 0.01 level ($Z = -3.69$). For cash offers, the corresponding two daily average abnormal returns are 0.14 percent ($Z = 0.22$) and 0.31 percent ($Z = 1.09$), respectively, which are statistically insignificant at conventional levels. The daily mean differences of AR 's between the bidders using exchange offers and cash offers for event days $t = -1$ and $t = 0$ are -2.06 percent ($Z = -3.49$) and -2.40 percent ($Z = -3.86$), respectively, which are statistically different from zero at the 0.01 level. Similar to the findings from the successful bids, the evidence from unsuccessful takeover attempts suggests that stock exchange offers are associated with negative abnormal returns. Therefore, excluding unsuccessful bids from the remainder of the analysis does not appear to bias the results.

C. Abnormal Returns of Bidding Firms' Nonconvertible Bonds

The negative abnormal returns to stockholders of bidders in exchange offers are also consistent with a wealth-transfer effect from stockholders to bondholders due to the co-insurance effect. Earlier studies on acquisitions provide mixed evidence on the existence of wealth-transfer effects. Kim and McConnell [28], Asquith and Kim [3], and Dennis and McConnell [12] find that nonconvertible bondholders of bidding firms neither gain nor lose from mergers. Eger [17], though, reports marginally significant (t -test = 1.69) positive abnormal returns to the bondholders of bidding firms at event day $t = 0$.¹⁸ In light of these findings, it is important to analyze the announcement-period returns to the nonconvertible bondholders of bidders using exchange offers and cash offers. Evidence of positive abnormal returns to nonconvertible bondholders in acquisitions using exchange offers will support the wealth-transfer hypothesis.

To test for a wealth-transfer effect, publicly traded nonconvertible bond issues were identified from the *Moody's Bond Record* for all firms in the original sample. To be included in the sample, a bond issue had to trade at least four times over the period $t = -30$ to $t = -6$ relative to the announcement day of the takeover bid as reported in the *Wall Street Journal* ($t = 0$). Also, it had to trade at least once over the sixteen-day period $t = -5$ to $t = +10$. For each nonconvertible bond, closing prices were obtained for each day on which trading occurred during the period of forty-one days from -30 to $+10$. From these prices, daily bond returns were computed including daily accrued interest, as well. The coupon rates and dates of interest payments were obtained from the *Moody's Bond Record*. Of the 167 bidding firms from 1972 to 1981, there were found thirty firms with a total of fifty-eight publicly traded nonconvertible bond issues. Of these thirty firms, there are twelve stock exchange offers, sixteen cash offers, and two cash

¹⁸ Earlier studies on other corporate events also provide mixed evidence on the existence of wealth-transfer effects. Specifically, Kim, McConnell, and Greenwood [29] indicate that stockholders have earned excess returns and old bondholders have suffered windfall losses when firms have formed captive finance subsidiaries. Masulis [34] provides evidence that, at the announcement of debt-for-equity exchange offers, nonconvertible bondholders suffer significant losses. However, recent studies on stock offerings that analyze bond price reactions to the announcements of new issues of equity find no evidence of wealth transfer to bondholders (Kalay and Shimrat [27] and Korwar [30]).

Table VI
Daily Average Abnormal Returns (AR) for the Nonconvertible Bonds of Bidding Firms in Twelve Common Stock Exchange Offers and Sixteen Cash Offers from Five Days before and Five Days after the Initial Announcement (Day Zero) of a Takeover Bid

Years 1972 through 1981						
(1) Event Day	Stock Exchange Offers			Cash Offers		
	(2) AR%	(3) Z-Score	(4) (N)	(5) AR%	(6) Z-Score	(7) (N)
	(Number of Bonds = 24; Number of Firms = 12)			(Number of Bonds = 28; Number of Firms = 16)		
-5	-0.34	-0.50	13	-0.34	-1.10	20
-4	0.04	0.60	10	-0.29	-1.36	18
-3	0.09	0.51	13	0.35	0.87	20
-2	-0.67	-1.68*	14	0.14	0.74	23
-1	-0.90	-1.81*	14	0.19	0.54	22
0	-0.18	-1.31	14	0.35	1.28	19
+1	-0.15	-0.22	12	0.57	0.83	21
+2	-0.12	-1.08	15	0.14	0.77	21
+3	-0.34	-1.89*	16	0.04	0.84	21
+4	0.13	1.29	14	0.18	1.35	17
+5	0.45	0.79	15	0.14	1.69	19

* Significant at the 0.10 level.

and stock offers, having a total of twenty-four, twenty-eight, and six nonconvertible bonds, respectively.

The mean-adjusted-returns model (see Brown and Warner [8]) was utilized to generate abnormal bond returns. The calculation of bond returns was complicated by their infrequent trading. This problem was handled by applying a version of the Handjinicolaou and Kalay [22] methodology as used by Hite and Owers [24]. That is, if the bond traded on day $t - n$ and next on day t , the return was treated as an n -day return, $R_{it}(n)$, and an unbiased estimate of the return on day t was $R_{it}(n)/n$. The parameters of the returns distributions were estimated for the twenty-six days from -31 to -6. During the event period from -5 to +10, if the bond traded on day $t - n$ and next on day t , an abnormal return, AR_{it} , was computed only for day t as $AR_{it} = R_{it}(n) - n\bar{R}_i$, where $\bar{R}_i$ is the estimate of the mean bond return from the estimation period. The individual abnormal returns were standardized by dividing them by $S_i\sqrt{n}$, where S_i is the standard deviation of abnormal returns estimated for each bond during the estimation period. Average daily and cumulative abnormal bond returns and test statistics were obtained by utilizing the same procedure used for stock returns.¹⁹

Table VI presents daily average abnormal returns (AR) for the nonconvertible bonds of bidding firms in twelve stock exchange offers and sixteen cash offers.

¹⁹ Since a bond is included in the portfolio only on days for which a trade occurs, the size of the portfolio is not necessarily constant.

The format of this table is similar to that of Table V, with the exception of columns (4) and (7), which present the number of bonds contained in the portfolios for each day in the period -5 to $+5$ relative to event day 0.

The evidence presented in Table VI does not support the wealth-transfer hypothesis, which predicts that wealth losses to the stockholders of bidding firms at the announcement of a stock exchange offer constitute wealth transfer from them to the bondholders. For bidding firms using stock exchange offers, the daily average abnormal return on event day $t = -1$ is -0.90 percent ($Z = -1.81$), which is statistically significant at the 0.10 level. On event day $t = 0$, AR is -0.18 percent ($Z = -1.31$), which is statistically insignificant at conventional levels. Over the postannouncement period $t = +1$ to $t = +5$, AR 's are insignificant except on trading day $t = +3$, which experiences an abnormal return of -0.34 ($Z = -1.89$), statistically significant at the 0.10 level. In the case of cash offers, nonconvertible bondholders experience "normal" returns around the announcement period ($t = -5$ to $t = +5$). The daily mean differences of abnormal returns between bidders using exchange offers and cash offers for event day $t = -1$ and $t = 0$ are -1.09 percent ($Z = -1.65$) and -0.53 percent ($Z = -1.83$), which are statistically significant at the 0.10 level. For the postannouncement period ($t = +1$ to $t = +5$), the associated differences are insignificant except on day $t = +3$, on which the difference is -0.38 percent ($Z = -1.98$), statistically significant at the 0.05 level. These findings suggest that nonconvertible bondholders do not gain at the announcements of takeover bids. Instead, there is weak evidence that they lose when the acquisition is financed through an exchange of common stock.²⁰ This evidence further supports the information hypothesis.²¹

D. Cross-Sectional Analysis

In order to obtain additional insights into the price effects from takeover bids, the following general cross-sectional regression is run for individual announcement-period stock returns:

$$ASCAR_{(-1,0)i} = a_0 + a_1 FIN_i + a_2 PREM_i + a_3 S_i + a_4 D1_i + e_i, \quad (7)$$

where $ASCAR_{(-1,0)}$ is the two-day ($t = -1$ to $t = 0$) average standardized cumulative abnormal return at the first announcement of an eventually successful takeover bid; FIN is the proportion of the transaction funded through exchange of common stock; $PREM$ is the bid premium as a percentage of the bidding firm's stock price one month prior to the first announcement of the bid; S is the relative

²⁰ Results were also obtained by taking from each firm one bond issue only (the most frequently traded). However, the conclusions were not altered.

²¹ Since the daily bond returns are not adjusted for general interest rate movements, it is possible that the standard deviation of the daily abnormal returns is overestimated (due to more noise), and, consequently, the Z -statistics are underestimated. If there is bias, however, it is likely to affect the Z -statistics of both portfolios (i.e., stock exchange offers and cash offers), and therefore, the Z -statistics of the daily mean differences of abnormal bond returns between the two groups may not be biased seriously.

size of the acquisition measured by the market value of common equity of the target firm, at year end prior to the first announcement, divided by the corresponding market value of the bidding firm's common equity; $D1$ is a dummy variable for the type of acquisition ($D1 = 1$ for merger proposals; $D1 = 0$ for tender offers).

A common stock exchange offer increases the acquiring firm's number of shares outstanding. Therefore, the proportion of the acquisition financed through an exchange of common stock is proportional to the decrease in fractional managerial stockholdings (assuming no change in the absolute managerial shareholdings). Such a reduction, however, predicts a drop in firm value according to the Leland and Pyle [32] signalling model and Jensen and Meckling [25] agency theory, which suggest that the larger the decrease in management's fractional shareholdings, the greater the negative stock price reaction.

The inclusion of the bid premium serves as a proxy of the offer's probability of success and, as such, controls for the part of announcement-period abnormal returns that may reflect the market's forecast on the offer's outcome. This follows from evidence documented by Walkling [41] that indicates that bid premiums measured prior to market receipt of relevant offer information do appear as significant determinants of tender offer success. The relative-size variable is used in order to account for difficulties in measuring abnormal returns due to the larger size of bidders relative to the size of their targets. (See also, Asquith, Bruner, and Mullins [5].) Finally, the dummy variable $D1$ is employed to test whether the information effect of the method of payment used in acquisitions remains robust after accounting for the type of acquisition (i.e., tender offer versus merger).

Table VII reports results of different versions of the general regression model described in equation (7). In regression (1), the two-day average cumulative standardized abnormal returns are regressed on the FIN variable. In regression (2), variable $PREM$ is added. Regression (3) substitutes $PREM$ with the relative-size variable S . Regression (4) employs all three variables, that is FIN , $PREM$, and S , and, in regression (5), the dummy variable $D1$ is added, as well.

The findings indicate that the only significant variable is the proportion of the acquisition financed through an exchange of common stock. These findings are consistent with the Leland and Pyle signalling model and Jensen and Meckling agency theory and lend support to the hypothesis that announcement-period abnormal stock returns to bidding firms reflect information effects associated with the method of payment used to finance the acquisition.²²

²² Simple regressions employing the variables $PREM$ ($n = 80$) and S ($n = 83$), respectively, did not reveal any explanatory power for these variables. Furthermore, simple and multiple regressions adding a dummy variable for original versus revised bids were run. In these regressions, twenty-three additional announcement-period abnormal returns were added to represent the revised bids. These regression results were not materially different from those reported in Table VI. In addition, results were obtained from regressions where the bid premium was scaled by the target firm's stock price one month prior to the bid. Similar to the results shown in Table VII, FIN was the only significant variable. However, the F -statistic for regression (4) became significant at the 0.10 level.

Table VII
Estimated Coefficients and *t*-Statistics (in Parentheses) from Regressing the Two-Day
(*t* = -1 to *t* = 0) Average Standardized Cumulative Abnormal Returns, $ASCAR_{(-1,0)}$, for Bidding
Firms at the Announcement of Takeover Bids on the Proportion of the Transaction Funded through
Exchange of Common Stock (*FIN*),^a the Premium (*PREM*),^b the Relative Size of the Acquisition
(*S*),^c and the Type of Acquisition (*D1*)^d

	Years 1972 through 1981						
	$ASCAR_{(-1,0)} = a_0 + a_1FIN_i + a_2PREM_i + a_3S_i + a_4D1_i + e_i$						
	a_0	a_1	a_2	a_3	a_4	N	Significance of <i>F</i>
Regression 1	0.087 (0.40)	-1.182 (-3.29)**	—	—	—	167	10.82 0.01
Regression 2	-0.06 (-0.12)	-1.114 (-2.02)*	-0.006 (-0.62)	—	—	80	5.54 2.30 0.10
Regression 3	0.100 (0.22)	-1.26 (-2.20)*	—	-1.126 (-0.95)	—	72	6.77 2.51 0.09
Regression 4	0.260 (0.48)	-1.234 (-2.14)*	-0.005 (-0.55)	-1.093 (-0.92)	—	72	7.18 1.75 0.16
Regression 5	0.085 (0.13)	-1.35 (-2.13)*	-0.006 (-0.59)	-1.121 (-0.93)	0.314 (0.13)	72	7.45 1.35 0.26

^a Equals the amount of common stock exchanged divided by the value of the transaction.
^b Bid premium as a percentage of the bidding firm's stock price one month prior to the first announcement of the bid.
^c Equals the market value of common equity of the target firm divided by the market value of common equity of the acquiring firm at year end prior to the announcement.
^d *D1* = Dummy variable for type of acquisition. (*D1* = 1 for merger proposals; *D1* = 0 for tender offers.)
* Significant at the 0.05 level.
** Significant at the 0.01 level.

IV. Summary and Conclusions

This study provides a direct confirmation of a differential-return relationship across different methods of payment for bidding firms announcing takeover bids. The results on the pure stock exchange bidding firms show that their stockholders experience significant losses at the announcement of the takeover proposal. On the other hand, the results on the cash-financing bidding firms show that their stockholders earn "normal" rates of return at the announcement period. Moreover, the differences in the abnormal returns between these two groups are statistically significant and independent of the type of takeover studied (i.e., merger versus tender offers). In addition, results based on unsuccessful bids indicate that stock exchange offers are associated with negative abnormal returns regardless of the outcome of the bid. The evidence is supported by regression analysis of the announcement-period abnormal returns on the proportion of the acquisition financed with common stock, the bid premium, and the relative size and type of acquisition. Based on these results, the following conclusions may be drawn.

The findings are consistent with the signalling hypothesis, which implies that financing a takeover through exchange of common stock conveys the negative information that the bidding firm is overvalued. This conclusion might also be supported by comparing these findings to evidence documented in studies of issuer exchange offers and of seasoned common stock offerings.²³ Masulis [35] finds that issuer exchange offers that involve the issuance of common stock and the retirement of debt are associated with average announcement-period stock returns of -9.91 percent. He ascribes his findings to leverage-induced wealth-transfer effects, corporate tax effects, and information effects. Recent studies on new stock offerings report an average drop of approximately three percent in stock prices at the announcement of seasoned issues of new equity by industrial firms (Asquith and Mullins [4], Kalay and Shimrat [27], Masulis and Korwar [36], and Mikkelsen and Partch [37]). Those findings are attributed mainly to information effects. Finally, the present study reports a much smaller negative price change at the announcement of common stock-financed takeovers. It can be concluded, therefore, that evidence reported here is consistent with a positive takeover announcement effect partially offsetting the negative common stock-financing announcement.

The findings from nonconvertible bonds provide evidence that bondholders do not gain at the announcement of takeover bids. Instead, there is weak statistical evidence that they lose when the acquisition is financed with common stock, implying that the wealth transfer to bondholders is not the source of the negative abnormal stock returns to the bidders in stock exchange offers.

Moreover, the lack of a statistically significant positive abnormal stock return is also consistent with the view that a competitive market for corporate control

²³ Exchange offers represent pure capital-structure rearrangements. Stock offerings have capital-structure implications, as well, and corporate acquisitions financed via common stock can be viewed as a special case of new offerings. The distinct difference between exchange offers and the other two corporate events is that exchange offers do not necessarily involve change in the capital expenditures and total assets, while the latter do.

forces the bidding firms to pay the target firm's stockholders a fair price for any benefits they obtain from the acquisition.

Finally, the evidence of this study provides an explanation for the difference in findings between earlier studies on mergers and tender offers. Given that tender offers are usually cash offers and mergers are usually common stock exchange offers, the difference in earlier findings may be due to the failure to control for the method of payment. It is interesting that cash offers that are typically associated with hostile takeovers (due to quicker registration) and, thus, higher premiums have the non-negative bidder returns, while generally friendly exchange offers that typically have lower premiums are associated with negative returns.

REFERENCES

1. Yakov Amihud, Peter Dodd, and Mark Weinstein. "Conglomerate Mergers, Managerial Motives and Stockholder Wealth." *Journal of Banking and Finance* 10 (October 1986), 401-10.
2. Paul Asquith. "Merger Bids, Uncertainty, and Stockholder Returns." *Journal of Financial Economics* 11 (April 1983), 51-83.
3. ——— and E. Han Kim. "The Impact of Merger Bids on the Participating Firms' Security Holders." *Journal of Finance* 37 (December 1982), 1209-28.
4. Paul Asquith and David W. Mullins, Jr. "Equity Issues and Offering Dilution." *Journal of Financial Economics* 15 (January/February 1986), 61-89.
5. Paul Asquith, Robert F. Bruner, and David W. Mullins, Jr. "The Gains to Bidding Firms from Merger." *Journal of Financial Economics* 11 (April 1983), 121-39.
6. Michael Bradley. "Interim Tender Offers and the Market for Corporate Control." *Journal of Business* 53 (October 1980), 345-76.
7. ———, Anand Desai, and E. Han Kim. "The Rationale behind Interim Tender Offers: Information or Synergy?" *Journal of Financial Economics* 11 (April 1983), 183-206.
8. Stephen J. Brown and Jerold B. Warner. "Using Daily Stock Returns: The Case of Event Studies." *Journal of Financial Economics* 14 (March 1985), 3-31.
9. Willard T. Carleton, David K. Guilkey, and Robert E. Harris. "An Empirical Analysis of the Role of the Medium of Exchange in Mergers." *Journal of Finance* 38 (June 1983), 813-26.
10. Harry DeAngelo and Ronald W. Masulis. "Optimal Capital Structure under Corporate and Personal Taxation." *Journal of Financial Economics* 8 (June 1980), 3-29.
11. Harry DeAngelo, Linda DeAngelo, and Edward M. Rice. "Going Private: Minority Freezouts and Stockholder Wealth." *Journal of Law and Economics* 28 (October 1984), 367-401.
12. Debra K. Dennis and John J. McConnell. "Corporate Mergers and Security Returns." *Journal of Financial Economics* 16 (June 1986), 143-87.
13. Peter R. Dodd. "Merger Proposals, Management Discretion and Stockholder Wealth." *Journal of Financial Economics* 8 (June 1980), 105-37.
14. ——— and Richard Ruback. "Tender Offers and Stockholder Returns: An Empirical Analysis." *Journal of Financial Economics* (December 1977), 351-73.
15. Peter Dodd and Jerold B. Warner. "On Corporate Governance: A Study of Proxy Contests." *Journal of Financial Economics* 11 (April 1983), 401-38.
16. Espen B. Eckbo. "Horizontal Mergers, Collusion, and Stockholder Wealth." *Journal of Financial Economics* 11 (April 1983), 241-73.
17. Carol Ellen Eger. "An Empirical Test of the Redistribution Effect in Pure Exchange Mergers." *Journal of Financial and Quantitative Analysis* 18 (December 1983), 547-72.
18. Michael Firth. "Takeovers, Shareholder Returns, and the Theory of the Firm." *Quarterly Journal of Economics* 94 (March 1980), 235-60.
19. Michael J. Fishman. "A Theory of Takeover Bidding." Working paper, University of Chicago, December 1984.
20. Dan Galai and Ronald W. Masulis. "The Option Pricing Model and the Risk Factor of Stock." *Journal of Financial Economics* 3 (January/March 1976), 53-81.

21. Paul J. Halpern. "Corporate Acquisitions: A Theory of Special Cases? A Review of Merger Studies Which Use Residual Analysis." *Journal of Finance* 38 (May 1983), 297-317.
22. George Handjinicolaou and Avner Kalay. "Wealth Redistributions or Changes in Firm Value. An Analysis of Returns to Bondholders and Stockholders around Dividend Announcements." *Journal of Financial Economics* 13 (March 1984), 35-63.
23. Robert C. Higgins and Lawrence D. Schall. "Corporate Bankruptcy and Conglomerate Merger." *Journal of Finance* 30 (March 1975), 93-113.
24. Gailen L. Hite and James E. Owers. "Security Price Reactions around Corporate Spin-Off Announcements." *Journal of Financial Economics* 12 (December 1983), 409-36.
25. Michael Jensen and William E. Meckling. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics* 3 (October 1976), 305-60.
26. Michael C. Jensen and Richard S. Ruback. "The Market for Corporate Control. The Scientific Evidence." *Journal of Financial Economics* 11 (April 1983), 5-50.
27. Avner Kalay and Adam Shimrat. "Firm Value and Season Equity Issued: Price Pressure, Wealth Redistribution or Negative Information." Working paper, New York University, October 1985.
28. E. Han Kim and John J. McConnell. "Corporate Mergers and the Co-Insurance of Corporate Debt." *Journal of Finance* 32 (May 1977), 349-65.
29. ——— and Paul R. Greenwood. "Capital Structure Rearrangements and Me-First Rules in an Efficient Capital Market." *Journal of Finance* 32 (June 1977), 789-809.
30. Ashok N. Korwar. "The Effect of New Issues of Equity: An Empirical Investigation." Working paper, University of Iowa, 1983.
31. Alan Kraus and Robert Litzenberger. "A State Preference Model of Optimal Financial Leverage." *Journal of Finance* 28 (September 1973), 911-22.
32. Hayne E. Leland and David H. Pyle. "Information Asymmetries, Financial Structure, and Financial Intermediation." *Journal of Finance* 32 (May 1977), 371-87.
33. Wilbur O. Lewellen. "A Pure Financial Rationale for the Conglomerate Merger." *Journal of Finance* 26 (May 1971), 521-37.
34. Ronald W. Masulis. "The Effects of Capital Structure Change on Security Prices: A Study of Exchange Offers." *Journal of Financial Economics* 8 (June 1980), 139-78.
35. ———. "The Impact of Capital Structure Change on Firm Value: Some Estimates." *Journal of Finance* 38 (March 1983), 107-26.
36. ——— and Ashok N. Korwar. "Seasoned Equity Offerings. An Empirical Investigation." *Journal of Financial Economics* 15 (January/February 1986), 91-118.
37. Wayne H. Mikkelson and M. Megan Partch. "Valuation Effects of Security Offerings and the Issuance Process." *Journal of Financial Economics* 15 (January/February 1986), 31-60.
38. Merton Miller. "Debt and Taxes." *Journal of Finance* 32 (May 1977), 261-75.
39. Stewart C. Myers and Nicholas J. Majluf. "Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have." *Journal of Financial Economics* 13 (June 1984), 187-221.
40. *The July 1981 Statistical Report on Mergers and Acquisitions*. Bureau of Economics, Federal Trade Commission, 1981.
41. Ralph A. Walkling. "Predicting Tender Offer Success: A Logistic Analysis." *Journal of Financial and Quantitative Analysis* 20 (December 1985), 461-78.
42. James W. Wansley, William R. Lane, and Ho C. Yang. "Abnormal Returns to Acquired Firms by Type of Acquisition and Method of Payment." *Financial Management* 12 (Autumn 1983), 16-22.
43. W. T. Grimm and *Company Mergerstat Review*. W. T. Grimm and Company, Chicago, 1981, 1982, 1983.