RAISING CAPITAL: THEORY AND EVIDENCE

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Corporations raise capital by selling a variety of different securities. The *Dealers' Digest* (1985) reports that over $350 billion of public securities sales were underwritten between 1980 and 1984. Of that total, 63 percent was straight debt, 24 percent was common stock, 6 percent was convertible debt, 5 percent was preferred stock, and the remaining 2 percent was convertible preferred stock. Besides choosing among these types of securities, corporate management must also choose among different methods of marketing the securities. In issues that accounted for 95 percent of the total dollars raised between 1980 and 1984, the contracts were negotiated between the issuing firm and its underwriter; in only 5 percent of the offers was the underwriter selected through a competitive bid. Shelf registration, a relatively new procedure for registering securities, was employed in issues accounting for 27 percent of the total dollars raised; the remaining 73 percent was raised through offerings using traditional registration procedures.

Despite the critical role that capital markets play in both financial theory and practice, financial economists have only recently begun to explore the alternative contractual arrangements in the capital raising process and the effect of these choices on a company's cost of issuing securities. This article has two basic aims: (1) to examine the theory and evidence concerning the market's response to security offer announcements by public corporations; and (2) to evaluate the different methods of marketing corporate securities (rights versus underwritten offers, negotiated versus competitive bid contracts, traditional vs. shelf registration, etc.), with attention given to the special case of initial public equity offers.

MARKET REACTIONS TO SECURITY OFFER ANNOUNCEMENTS

A public company seeking external capital must first decide what type of claim to sell. In making that decision, it is important to understand the market's typical reaction to these announcements.

Presented in Table 1 is a summary of the findings of recent academic research on the market's response to announcements of public issues (grouped by industrial firms and utilities) of common stock, preferred stock, convertible preferred stock, straight debt and convertible debt. Perhaps surprisingly, the average abnormal returns (that is, the price movements adjusted for general market price changes) are consistently either negative or not significantly different from zero; in no case is there evidence of a significant positive reaction. Furthermore, the market's response to common stock issues is more strongly negative than its response to preferred stock or debt offerings. It is also more negative to announcements of convertible than non-convertible securities, and more negative to announcements of offerings by industrials than utilities.

I would first like to examine potential explanations of these findings. Let me start by briefly noting a number of arguments that have been

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Management may possess important information about the company that the market doesn't share. Investors recognize this information disparity and revise their estimate of a company's value in response to management's announced decisions.

TABLE 1
THE STOCK MARKET RESPONSE TO ANNOUNCEMENTS OF SECURITY OFFERINGS

In the columns below are the average two-day abnormal common stock returns and average sample size (in parentheses) from studies of announcements of security offerings. Returns are weighted averages by sample size of the returns reported by the respective studies listed below. (Unless noted otherwise, returns are significantly different from zero.) Most of these studies appear in the forthcoming issue of the University of Rochester's *Journal of Financial Economics* 15 (1986).

Type of Security Offering	Types of Issuer: Industrial	Utility
Common Stock	-3.14%[a]	-0.75%[b]
	(155)	(403)
Preferred Stock	-0.19% [c,*]	+0.08% [d,*]
	(28)	(249)
Convertible Preferred Stock	-1.44% [d]	-1.38% [d]
	(53)	(8)
Straight Bonds	-0.26% [e,*]	-0.13% [d]
	(248)	(140)
Convertible Bonds	-2.07%[e]	n.a.[g]
	(73)	

[a] Source: Asquith/Mullins (1986), Kolodny/Suhler (1985), Masulis/Korwar (1986), Mikkelson/Partch (1986), Schipper/Smith (1986)
[b] Source: Asquith/Mullins (1986), Masulis/Korwar (1986), Penway/Radcliffe (1985)
[c] Source: Linn/Pinegar (1986), Mikkelson/Partch (1986)
[d] Source: Linn/Pinegar (1986)
[e] Source: Dann/Mikkelson (1984), Eckbo (1986), Mikkelson/Partch (1986)
[f] Source: Eckbo (1986)
[g] Not available (virtually none are issued by utilities)
[*] Interpreted by the authors as not statistically significantly different from zero

proposed to account for at least parts of this overall pattern of market responses, and then go on to consider each in more detail.

EPS Dilution: The increase in the number of shares outstanding resulting from an equity (or convertible) offering is expected to reduce (fully diluted) reported earnings per share, at least in the near term. New equity is also expected to reduce reported ROE. It has been suggested that such anticipated reductions in accounting measures of performance reduce stock prices.

Price Pressure: The demand curve for securities slopes downward. A new offering increases the supply of that security relative to the demand for it, thus causing its price to fall.

Optimal Capital Structure: A new security issue changes a company's capital structure, thus altering its relationship to its optimal capital structure (as perceived by the market).

Insider Information: Management may possess important information about the company that the market doesn't share. Investors recognize this information disparity and revise their estimate of a company's value in response to management's announced decisions. This effect works through two channels:

Implied Cash Flow Change: Security offers reveal inside information about operating profitability; that is, the requirement for external funding may reflect a shortfall in recent or expected future cash flows.

Leverage Change: Increases in corporate leverage are interpreted by the market as reflecting management's confidence about the company's prospects. Conversely, decreases in leverage, such as those brought about by equity offers, reflect management's lack of confidence about future profitability.

Unanticipated Announcements: To the extent an offer is anticipated, its economic impact is already reflected in security prices. Thus, market reactions to less predictable issues should be greater, other things equal, than to more predictable issues.

Ownership Changes: Some security offerings accompany actual or expected changes in the ownership or organization of the company, which in turn can influence market reaction to the announcement.

Before considering each of these possibilities at greater length, let me emphasize that some of the above arguments have more explanatory power than others. But no single explanation accounts, to the exclusion of all others, for the complete pattern of market responses documented by the research.

Studies of stock price reactions to accounting changes have provided convincing testimony to the sophistication of the market, which contradicts the claims of the EPS dilution argument.

EPS Dilution

Many analysts argue that announcements of new equity issues depress stock prices because the increase in the number of shares outstanding is expected to result in a reduction, at least in the near term, of reported earnings per share. The expected fall in (near-term) EPS causes stock prices to fall.

Underlying this argument is the assumption that investors respond uncritically to financial statements, mechanically capitalizing EPS figures at standard, industry-wide P/E multiples. Such a view is, of course, completely at odds with the theory of modern finance. In an efficient market, the value of a company's equity—like the value of a bond or any other investment—should reflect the present value of all of its expected future after-tax *cash flows* (discounted at rates which reflect investors' required returns on securities of comparable risk). This view thus implies that even if near-term EPS is expected to fall as the result of a new equity offering, the issuing company's stock price should not fall as long as the market expects management to earn an adequate rate of return on the new funds. In fact, if the equity sale is perceived by the market as providing management with the means of undertaking an exceptionally profitable capital spending program, then the announcement of an equity offering (combined perhaps with an announcement of the capital expenditure plan) should, if anything, cause a company's price to rise.

There remains a strong temptation, of course, to link the negative stock price effects of new equity announcements to the expected earnings reduction. But to accept this argument is to mistake correlation for causality. We must look to other events to assess whether it is the expected earnings dilution that *causes* the market reaction, or whether there are other, more important factors at work. I believe that studies of stock price reactions to accounting changes have provided convincing testimony to the sophistication of the market, which contradicts the claims of the EPS dilution argument.[1] Such studies provide remarkably consistent evidence that markets see through cosmetic accounting changes, and that market price reactions generally reflect changes in the expected underlying cash flows—that is, in the long-run prospects for the business. In short, there is no plausible theoretical explanation—nor is there credible supporting evidence—that suggests that the reductions in expected EPS accompanying announcements of stock offerings should systematically cause the market to lower companies' stock prices.

Price Pressure

In a somewhat related explanation, some argue that the price reduction associated with the announcement of a new equity or convertible issue is the result of an increase in the supply of a company's equity. This price pressure argument is based on the premise that the demand schedule for the shares of any given company is downward sloping, and that new shares can thus be sold only by offering investors a discount from the market price. The greater the proportional amount of new shares, the larger the discount necessary to effect the sale.

Modern portfolio theory, however, attaches little credibility to the price pressure argument—not, at least, in the case of widely-traded securities in well-established secondary markets. The theory says that investors pricing securities are concerned primarily with risk and expected return. Because the risk and return characteristics of any given stock can be duplicated in many ways through various combinations of other stocks, there are a great many close substitutes for that stock. Given this abundance of close substitutes, economic theory says that the demand curve for corporate securities should more closely approximate a horizontal line than a sharply downward sloping one. A horizontal demand curve in turn implies that an issuing company should be able to sell large quantities of new stock without any discount from the current market price (provided the market does not interpret the stock sale itself as releasing negative insider information about the company's prospects relative to its current value).

What does the available research tell us about the price pressure hypothesis? I will simply mention a few studies bearing on this question.

The first serious study of price pressure was Myron Scholes's doctoral dissertation at the University of Chicago. Scholes examined the effect on share

1. For an excellent review of this research, see Ross Watts, "Does It Pay to Manipulate EPS?," *Chase Financial Quarterly* (Spring 1982). Reprinted in *Issues in Corporate Finance* (New York: Stern Stewart & Co., 1983).

prices of large blocks offered through secondary offerings. According to the price pressure hypothesis, the larger the block of shares to be sold, the larger the price decline would have to be to induce increasing numbers of investors to purchase the shares. By contrast, the intrinsic value view suggests that the stock price would be unaffected by the size of the block to be sold. It says that at the right price, the market would readily absorb additional shares.

Scholes found that while stock prices do decline upon the distribution of a large block of shares, the price decline appears to be unrelated to the size of the distribution. This finding suggests that the price discount necessary to distribute the block is better interpreted as a result of the adverse information communicated by a large block sale than as a result of selling pressure. This interpretation was reinforced by the additional finding that the largest price declines were recorded when the secondary sale was made by corporate officers in the company itself—that is, by insiders with possibly privileged information about the company's future.[2]

In another study on price pressure, Avner Kalay and Adam Shimrat recently examined bond price reactions to new equity offers. They reason that if price pressure (and not adverse information) causes the negative stock price reaction, there should be no reduction in the value of the company's outstanding bonds upon the announcement of the stock issue—if anything, the new layer of equity should provide added protection for the bonds and cause their prices to rise. The study, however, documented a significant drop in bond prices, suggesting that the market views an equity offering as bad news, reducing the value of the firm as a whole.[3]

Another recent study of price pressure was conducted by Scott Linn and Mike Pinegar. They examined the price reaction of outstanding preferred stock issues to announcements of new preferred stock issues by the same company. They found that the price of an outstanding preferred stock did not fall with the announcement of an additional new preferred issue, thus providing no support for the operation of price pressure in the market for preferred stock.[4]

In short, there is little empirical evidence in support of price pressure in the market for widely-traded stocks. The observed stock price declines, as I shall suggest later, are more plausibly attributed to negative "information" effects.

Optimal Capital Structure

Financial economists generally agree that firms have an optimal capital structure and a number of researchers have suggested that the price reactions documented in Table 1 reflect companies' attempts to move toward that optimum. This explanation might be useful if we found broad samples of firms experiencing positive market responses to their new security issues. But because the market reaction to most security offerings appears systematically negative (or at best neutral), it is clear that any attempt by firms to move toward a target capital structure is not the dominating factor in the market's response. If we were to use the market's reaction to new security offerings as the basis for any useful generalization about companies' relationship to their optimal structure, we would be put in the embarrassing position of arguing that new security offerings routinely move companies away from, not toward, such an optimum. Thus, I raise this possibility largely to dismiss it.

Information Disparity Between Management and Potential Investors

The documented reductions in firm value associated with security sales—which, after all, are voluntary management decisions—thus present financial economists with a puzzle. One possible explanation is that new security sales are optimal responses by management to changes for the worse in a company's prospects. Alternatively, a company's current market valuation may seem to management to reflect excessive confidence about the future, and it may attempt to exploit such a difference in outlook by "timing" its equity offerings. Investors habituated to stock offerings under such conditions will discount, as a matter of course, the stock prices of companies

2. For the published version of Scholes's dissertation, see "Market for Securities: Substitution versus Price Pressure and the Effects of Information on Share *Prices*," *Journal of Business* 45 (1972), 179-211.

3. Avner Kalay and Adaen Shimrat, "Firm Value and Seasoned Equity Issue: Price Pressure, Wealth Redistribution, or Negative Information," New York University working paper, 1986.

4. See Scott Linn and J. Michael Pinegar, "The Effect of Issuing Preferred Stock on Common Stockholder Wealth," unpublished manuscript, University of Iowa, 1985.

The market responds negatively, as a rule, to announcements of security sales, dividend reductions, and decreases in new investment.

announcing security offerings. In such circumstances, even if a security sale increases the value of the firm by allowing it to fund profitable projects, it could lead potential investors to suspect that management has a dimmer view of the company's future than that reflected in its current market value.

It is now well documented that managers have better information about the firm's prospects than do outside investors.[5] There is also little doubt that outsiders pay attention to insider trading in making their own investment decisions. Given these observations, I believe that the findings in Table 1 are driven in large part by this potential disparity of information between management and the market, and the incentives it offers management in timing the issue of new securities.

Furthermore, I would argue that, as a result of this potential information disparity, new security offerings affect investors outlook about a company through two primary channels: (a) the implied change in expected net operating cash flow and (b) the leverage change.

Implied Changes in Net operating Cash Flow. Investors, of course, are ultimately interested in a company's capacity to generate cash flow. Although a new security offering might imply that the company has discovered new investment opportunities, it might also imply a shortfall in cash caused by poor current or expected future operating performance. As accounting students learn in their first year of business school, "sources" must equal "uses" of funds. Consequently, an announcement of a new security issue must imply one of the following to investors: (1) an expected increase in new investment expenditure, (2) a reduction in some liability (such as debt retirement or share repurchase) and hence a change in capital structure, (3) an increase in future dividends, or (4) a reduction in expected net operating cash flow. If new security sales were generally used only in anticipation of profitable new investment or to move capital structure closer to an optimal target ratio, then we should expect positive stock price reactions to announcements of new offerings. But if unanticipated security issues come to be associated with reductions in future cash flows from operations, then investors would systematically interpret announcements of security sales as bad news.

This argument can be generalized to consider other announcements which do not explicitly link sources and uses of funds. Using the above line of reasoning, we would interpret announcements of stock repurchases, increases in investment expenditures, and higher dividend payments as signaling increases in expected operating cash flow and, thus, as good news for investors. Conversely, security offerings, reductions in investment expenditures, and reductions in dividend payments all would imply reductions in expected operating cash flow.

The academic evidence on market responses to announcements of new securities sales, stock repurchases, dividend changes, and changes in capital spending (summarized in Table 2) is broadly consistent with this hypothesis. As shown in the upper panel of Table 2, announcements of security repurchases, dividend increases, and increases in capital spending are greeted systematically by increases in stock prices. The market responds negatively, as a rule, to announcements of security sales, dividend reductions, and decreases in new investment (an exception has been the oil industry in recent years, in which case the market's response to increases in capital spending has been negative, and positive to announced cutbacks in investment). On the basis of this evidence, the market appears to make inferences about changes in operating cash flow from announcements that do not explicitly associate sources with uses of funds.

I should point out, however, that although this explanation helps to explain non-positive price reactions to announcements of all security sales, it provides no insight into the questions of why investors respond more negatively to equity than debt sales, to convertible than non-convertible issues, and to sales by industrials rather than utilities.

Information Disparity and Leverage Changes. Suppose that a potential purchaser of securities has less information about the prospects of the firm than management. Assume, furthermore, that management is more likely to issue securities when the market price of the firm's traded securities is higher than management's assessment of their value. In such a case, sophisticated investors will reduce their estimate of the value of the firm if and when management announces a new security issue. Furthermore, the larger the potential disparity in information between insiders and investors, the greater the revision in expectations and the larger the negative price reaction to the announcement of a new issue.

5. See Jeffrey Jaffe's seminal study of insider trading, "Special Information and Insider Trading," *Journal of Business* 47 (1974), 410-420.

Because debt and preferred stock are more senior claims on corporate cash flows, the values of these securities are generally less sensitive to changes in a company's prospects than is the value of common stock.

TABLE 2
THE STOCK MARKET RESPONSE TO ANNOUNCEMENTS OF CHANGES IN FINANCING, DIVIDEND, AND INVESTMENT POLICY

In the columns below are the average two-day common stock abnormal returns and average sample size from studies of changes in financing, dividend, and investment policy grouped by implied changes in corporate cash flows. Returns are weighted averages by sample size of the returns reported by the respective studies. (Unless otherwise noted, returns are significantly different from zero.) Full citations for all studies mentioned can be found in the reference section at the end of this issue.

Type of Announcement	Average Sample Size	Two-Day Announcement Period Return
Implied Increase in Corporate Cash Flow		
Common Stock Repurchases:		
Intra-firm tender offer[a]	148	16.2%
Open market repurchase[b]	182	3.6
Targeted small holding[c]	15	1.6
Calls of Non-Convertible Bonds[d]	133	-0.1*
Dividend Increases:		
Dividend initiation[e]	160	3.7
Dividend increase[f]	280	0.9
Specially designated dividend[g]	164	2.1
Investment Increases[h]	510	1.0
Implied Decrease in Corporate Cash Flow		
Security Sales:		
Common stock[i]	262	-1.6
Preferred stock[j]	102	0.1*
Convertible preferred[k]	30	-1.4
Straight debt[l]	221	-0.2*
Convertible debt[l]	80	-2.1
Dividend Decreases[f]	48	-3.6
Investment Decreases[h]	111	-1.1

[a] Source: Dann (1981), Masulis (1980), Vermalen (1981), Rosenfeld (1982)
[b] Source: Dann (1980), Vermalen (1981)
[c] Source: Bradley/Wakeman (1983)
[d] Source: Vu (1986)
[e] Source: Asquith/Mullins (1983)
[f] Source: Charest (1978), Aharony/Swary (1980)
[g] Source Brickley (1983)
[h] Source: McConnell/Muscarella (1985)
[i] Source: Asquith/Mullins (1986), Masulis/Korwar (1986), Mikkelson/Partch (1986), Schipper/Smith (1986), Pettway/Radcliff (1985)
[j] Source: Linn/Pinegar (1986), Mikkelson/Partch (1986)
[k] Source: Linn/Pinegar (1986)
[l] Source: Dann/Mikkelson (1984), Eckbo (1986), Mikkelson/Partch (1986)
* Interpreted by the authors as not significantly different from zero.

Because debt and preferred stock are more senior claims on corporate cash flows, the values of these securities are generally less sensitive to changes in a company's prospects than is the value of common stock. Thus, this problem of potential insider information that management faces whenever it issues a new security is most acute in the case of equity offerings. Similarly the values of convertible debt and convertible preferred stock are also generally more sensitive to changes in firm value than non-convertible debt and preferred because of their equity component—but less sensitive, of course, than common stock; hence the information disparity should be more problematic for convertible than for straight securities.

The market responds positively to leverage-increasing transactions and negatively to leverage-decreasing transactions; the larger the change in leverage, the greater the price reaction.

The case of utility offerings is somewhat different. In the rate regulation process, managers of utilities generally petition their respective regulatory authorities for permission to proceed with a new security issue. This petitioning process should reduce the price reaction of utilities announcements relative to industrials for three reasons: (1) it could reduce the differential information between manager and outsiders; (2) it could limit managers' discretion as to what security to sell; (3) it could reduce managers ability to "time" security offerings to take advantage of inside information. Because of this regulatory process, utilities do not face as great a problem in persuading the market to accept its securities at current prices.

Thus, while this information disparity hypothesis does not predict whether the response to announcements of debt and preferred issues will be negative or positive, it does predict that the reaction to common stock sales will be more negative than the response to preferred or debt, more negative to convertible than non-convertible issues, and to industrial than utility offers.[6]

This second, leverage-related channel through which the information disparity problem operates can be distinguished from the implied cash flow explanation by examining evidence from events that *explicitly* associate sources and uses of funds: namely, exchange offers, conversion-forcing calls of convertible securities, and security sales in which the proceeds are explicitly intended for debt retirement. Research on announcements of these transactions (summarized in Table 3) documents the following: (1) the market responds positively to leverage-increasing transactions and negatively to leverage-decreasing transactions; (2) the larger the change in leverage, the greater the price reaction. Accordingly, debt-for-common offers have larger positive stock price reactions than preferred-for-common offers, and common-for-debt offers have larger negative price reactions than common-for-preferred offers.

In Table 4 the analysis of the two channels is combined to provide additional insight into the information disparity explanation. The events to the upper left of the table tend to have positive stock price reactions, those in the lower right tend to have negative reactions, while those along the diagonal tend to be insignificant. Hence, a common stock offering, which implies both a reduction in future operating cash flow and a reduction in leverage, prompts the largest negative market response of all the security offers. A stock repurchase, by contrast, suggests increases both in operating cash and leverage, and accordingly receives strong endorsement by the market. It seems to provide a credible expression to investors of management's confidence about the company's future performance (at least relative to its current value).

Unanticipated Announcements

Because stock price changes reflect only the unanticipated component of announcements of corporate events, the stock price change at the announcement of a security offering will be larger, all else equal, the more unpredictable is the announcement. For example, debt repayment (either from maturing issues or sinking-fund provisions) requires the firm to issue additional debt to maintain its capital structure. Given a target capital structure and stable cash flows, debt repayment must be matched with a new debt issue; hence the more predictable are principal repayments, the more predictable will be new debt issues. Similarly, the predictability of earnings (and thus internally generated equity) will determine the predictability of a new equity issue. Therefore, one should expect a new debt issue to be more predictable than a new equity issue because principal repayments are more predictable than earnings.

Another reason for the greater predictability of public debt offerings is related to the cost structures of public versus private debt. Flotation costs for publicly-placed debt appear to have a larger fixed component and more pronounced economies of scale than bank debt. Thus, a firm tends to use bank lines of credit until an efficient public issue size is reached; then the firm issues public debt and retires the bank debt. If investors can observe the amount of bank borrowing and the pattern of public debt issues, then more predictable announcements of public bond issues should have smaller price reactions.

Utilities use external capital markets with far greater frequency than industrials, thus making utility issues more predictable. For this reason alone we would expect utilities' stock prices to exhibit a

6. But if the evidence across classes of securities is consistent with the information asymmetry hypothesis, some data within security classes is apparently inconsistent. When Eckbo (1986) and Mikkelson/Partch (1986) disaggregate their bond data by rating class, neither study finds higher rated, less risky (and thus less sensitive to firm value) bonds to be associated with smaller abnormal returns. Eckbo also finds more negative abnormal returns to mortgage bonds than non-mortgage bonds. (References for studies are cited in full at the end of this issue.)

A stock repurchase, by contrast, suggests increases both in operating cash and leverage, and accordingly receives strong endorsement by the market.

TABLE 3
THE STOCK MARKET RESPONSE TO ANNOUNCEMENTS OF PURE FINANCIAL STRUCTURE CHANGES: EXCHANGE OFFERS, SECURITY SALES WITH DESIGNATED USES OF FUNDS, AND CALLS OF CONVERTIBLE SECURITIES

Below is a summary of two-day announcement effects associated with the events listed above. Because each of these transactions explicitly associate sources with uses of funds, they represent virtually pure financial structure changes. (Unless otherwise noted, returns are significantly different from zero.) Full citations for all studies mentioned can be found in the reference section at the end of the article.

Type of Transaction	Security Issued	Security Retired	Average Sample Size	Two-Day Announcement Period Return
Leverage-Increasing Transactions				
Stock Repurchases[a]	Debt	Common	45	21.9%
Exchange Offer[b]	Debt	Common	52	14.0
Exchange Offer[b]	Preferred	Common	9	8.3
Exchange Offer[b]	Debt	Preferred	24	2.2
Exchange Offer[c]	Income Bonds	Preferred	24	2.2
Transactions with No Change in Leverage				
Exchange Offer[d]	Debt	Debt	36	0.6*
Security Sale[e]	Debt	Debt	83	0.2*
Leverage-Reducing Transactions				
Conversion-forcing Call[e]	Common	Convertible	57	-0.4*
Conversion-forcing Call[e]	Common	Preferred	113	-2.1
Security Sale[f]	Convertible Debt	Convertible Bond	15	-2.4
Exchange Offer[b]	Common	Debt	30	-2.6
Exchange Offer[b]	Preferred	Preferred	9	-7.7
Security Sale[f]	Common	Debt	12	-4.2
Exchange Offer[c]	Common	Debt Debt	20	-9.9

[a] Source: Masulis (1980)
[b] Source: Masulis (1983) (Note: These returns include announcement days of both the original offer and, for about 40 percent of the sample, a second announcement of specific terms of the exchange.)
[c] Source: McConnell/Schlarbaum (1981)
[d] Source: Dietrich (1984)
[e] Source: Mikkelson (1981)
[f] Source: Eckbo (1986) and Mikkelson/Partch (1986)
* Not statistically different from zero.

smaller reaction to announcements of new security sales. In short, the relative predictability of announcements of security offerings helps explain both the observed differences in market reactions to common stock versus debt issues and to the offerings of industrials versus those of utilities.

Changes in Ownership and Control

Some security sales involve potentially important changes in ownership or organizational structure. In such transactions, part of the observed price reaction may reflect important changes in the ownership and control of the firm. For example, equity carve-outs (also known as partial public offerings) are transactions in which firms sell a minority interest in the common stock of a previously wholly-owned subsidiary. In contrast to the negative returns from the sale of corporate common stock reported earlier equity carve-outs are associated with significant *positive* returns of 1.8 percent for the five days around the announcement.

In this case, the problem of the potential information disparity which appears to plague equity offerings seems to be offset by positive signals to investors. What are these signals? As Katherine Schipper and Abbie Smith have argued in their important study, equity carve-outs may suggest to the market that management feels the consolidated firm is not receiving full credit in its current stock price for the value of one of its subsidiaries. If such is the information management communicates by offering separate equity claims on an "undervalued" subsidiary, then

In contrast to the negative returns from the sale of corporate common stock, equity carve-outs are associated with significant positive returns.

TABLE 4

LEVERAGE CHANGE	IMPLIED CASH FLOW CHANGE: Negative	No Change	Positive
No Change	Common Sale	Convertible Bond Sale to Retire Debt Common/Preferred E.O. Preferred/Debt E.O. Common/Debt E.O. Common Sale to Retire Debt Call of Convertible Bonds Call of Convertible Preferred	Calls of Non-Convertible Bonds
Negative	Convertible Preferred Sale Convertible Debt Sale Investment Decrease Dividend Decrease	Debt E.O./Debt E.O.	Dividend Increases Investment Increases
Positive	Preferred Sale Debt Sale	Common Repurchase Finance with Debt Debt/Common E.O. Preferred/Common E.O. Debt/Preferred E.O. Income Bond/Preferred E.O.	Common Repurchase

Significant Negative Stock Price Reaction

Insignificant Stock Price Reaction

Significant Positive Stock Price Reaction

carve-outs could provide a means of raising new equity capital that neutralizes the negative signal released by announcements of seasoned equity offerings. Also worth noting, the public sale of a minority interest in a subsidiary carries potentially important control implications. For example, the sale of subsidiary stock allows management of the subsidiary to have a market-based compensation package that more accurately reflects the subsidiary's operating performance. In fact, 94 percent of the carve-outs studied adopted incentive compensation plans based on the subsidiary's stock.[7]

Academic research in general suggests that changes in ownership and organization affect stock prices (see Table 5). The evidence summarized in the upper panel suggests that voluntary organizational restructuring on average benefits stockholders. The research findings summarized in the lower panel suggests that announcements of transactions that increase ownership concentration raise share prices while those that reduce concentration lower share prices. For example, in equity offers where a registered secondary offering by the firm's management accompanied the primary equity, the average stock price reaction was -4.5 percent, almost 1.5 percent more negative than the average response to industrial equity offerings. This is the case, incidentally, in which the information problem becomes most acute: not only is the firm issuing new stock, but management is using the offering to further reduce its ownership stake—the reverse of a leveraged buyout.

Summing Up the Market's Reaction to Securities Offerings

Table 6 offers a pictorial summary of the various hypotheses and how each contributes to our understanding of the research findings on new security issues. Those arguments focusing on the information gap between management and investors appear to have the most explanatory power. The extent to which announcements are unanticipated helps explain differences in the market's response to debt vs. equity offerings, and to industrial vs. utility issues. And in the special cases when the offer accompanies ownership or organizational changes, there are important additional insights available. The price pressure hypothesis may have some validity, but for widely-traded securities I remain skeptical. The dilutive effects on EPS and ROE of new equity and convertible offerings are nothing more than accounting illusions; *given* that the security

7. See the article immediately following in this journal: Katherine Schipper and Abbie Smith, "Equity Carve-outs." See also the academic piece on which the above article is based, "A Comparison of Equity Carve-outs and Seasoned Equity Offerings: Share Price Effects and Corporate Restructuring," *Journal of Financial Economics* 15 (1986), pp.153-186.

Carve-outs could provide a means of raising new equity capital that neutralizes the negative signal released by announcements of seasoned equity offerings.

TABLE 5
THE MARKET RESPONSE TO ANNOUNCEMENTS OF ORGANIZATIONAL AND OWNERSHIP CHANGES

In the columns below are summaries of the cumulative average abnormal common stock returns and average sample size from studies of announcements of transactions which change corporate control or ownership structure. Returns are weighted averages by sample size of the returns reported by the respective studies. (Unless otherwise noted, returns are significantly different from zero.) Full citations for all studies mentioned can he found in the reference section at the end of this issue.

Type of Announcement	Average Sample Size	Cumulative Abnormal Returns
Organizational Restructuring		
Merger: Target[a]	113	20.0%
Bidder[a]	119	0.7*
Spin-Off[b]	76	3.4
Sell-Off: Seller[c]	279	0.7
Buyer[d]	118	0.7
Equity Carve-Out[e]	76	0.7*
Joint Venture[f]	136	0.7
Going Private[g]	81	30.0
Voluntary Liquidation[h]	75	33.4
Life Insurance Company Mutualization[i]	30	56.0
Savings & Loan Association Charter Conversion[i]	78	5.6
Proxy Fights[k]	56	1.1
Ownership Restructuring		
Tender Offer: Target[l]	183	30.0
Bidder[l]	183	0.8*
Large Block Acquisition[m]	165	2.6
Secondary Distribution: Registered[n]	146	-2.9
Non-Registered[n]	321	-0.8
Targeted Share Repurchase[o]	68	-4.8

[a] Source: Dann (1980), Asquith (1983), Eckbo (1983), Jensen/Ruback (1983)
[b] Source: Hite/Owers (1983), Miles/Rosenfeld (1983), Schipper/Smith (983), Rosenfeld (1984)
[c] Source: Alexander/Benson/Kampmeyer (1984), Rosenfeld (1984), Hite/Owers (1985), Jain (1985), Klein (1985), Vetsuypens (1985)
[d] Source: Rosenfeld (1984), Hite/Owers (1985), Jain (1985), Klein (1985)
[e] Source: Schipper/Smith (1986)
[f] Source: McConnell/Nantell (1985)
[g] Source: DeAngelo/DeAngelo/Rice (1984)
[h] Source: Kim/Schatzberg (1985)
[i] Source: Mayers/Smith (1986)
[j] Source: Masulis (1986)
[k] Source: Dodd/Warner (1983)
[l] Source: Bradley/Desai/Kim (1985), Jensen/Ruback (1983)
[m] Source: Holderness/Sheehan (1985), Mikkelson/Ruback (1985)
[n] Source: Mikkelson/Partch (1985)
[o] Source: Dann/DeAngelo (1983), Bradley/Wakeman (1983)
* Interpreted by the authors as not significantly different from zero.

is fairly priced at issue, and that management expects to earn its cost of capital on the funds newly raised, there is no real economic dilution of value caused by a new equity offering. Finally, optimal capital structure theories, at this stage of development, seem to offer little insight into the general pattern of price reactions to new security sales.

Alternative Methods of Marketing Security Offerings

Once having decided on the terms of a security to sell, management then must choose among a number of methods to market the issue. It can offer the securities on a pro rata basis to its own stock-

Despite evidence that the out-of-pocket expenses of an equity issue underwritten by an investment banker are from three to 30 times higher than the costs of a non-underwritten rights offering, over 80 percent of equity offerings employ underwriters.

TABLE 6

POTENTIAL EXPLANATIONS	RESEARCH FINDING: Returns < 0	Common < Debt or Preferred	Convertibles < Non-Convertibles	Industrials < Utilities
Optimal Capital Structure	No	No	No	No
Implied Cash Flow Change	Yes	No	No	No
Leverage Change	No	Yes+	Yes	Yes
Unanticipated Announcements	No	Yes	No	Yes
Ownership Changes	Yes*	Yes*	Yes*	No
Price Pressure	No	No	No	No

+ But only for Debt, not Preferred
* In Special Cases

holders through a rights offering, it can hire an underwriter to offer the securities for sale to the public, or it can place the securities privately. If management chooses to use an underwriter, it can negotiate the offer terms with the underwriter, or it can structure the offering internally and then put it out for competitive bid. The underwriting contract can be a firm commitment or a best efforts offering. Finally, the issue can be registered with the Securities and Exchange Commission under its traditional registration procedures; or, if the firm qualifies, it can file a shelf registration in which it registers all securities it intends to sell over the next two years.

Let's look at the major alternatives for marketing securities to provide a better understanding of why certain methods predominate.

Rights versus Underwritten Offerings

The two most frequently used methods by which public corporations sell new equity are firm-commitment underwritten offerings and rights offerings. In an underwritten offering, the firm in effect sells the issue to an investment bank, which resells the issue to public investors (or forms a syndicate with other investment banks to do so). The initial phases of negotiation between the issuing company and the investment banker focus on the amount of capital, the type of security, and the terms of the offering. If the firm and its chosen underwriter agree to proceed, the underwriter begins to assess the prospects, puts together an underwriting syndicate, prepares a registration statement, and performs what is known as a "due diligence" investigation into the financial condition of the company.

In a rights offering, each stockholder receives options (or, more precisely, warrants) to buy the newly issued securities. One right is issued for each share held. Rights offerings also must be registered with the SEC.

Despite evidence that the out-of-pocket expenses of an equity issue underwritten by an investment banker are from three to 30 times higher than the costs of a non-underwritten rights offering,[8] over 80 percent of equity offerings employ underwriters. Perhaps the most plausible rationale for using underwriters is that they are effective in monitoring the firm's activities and thus provide implicit guarantees to investors when they sell the securities. This monitoring function would be especially valuable in light of the information disparity between managers and outside stockholders discussed in the first part of this article.

Thus, in addition to providing distribution channels between issuing corporations and investors, the investment banker performs a monitoring function analogous to that which bond rating

8. See my paper, "Alternative Methods for Raising Capital: Rights versus Underwritten Offerings," *Journal of Financial Economics* 5 (1977), 273-307.

The less the potential disparity between management's and the market's estimation of the value of the company, the greater are the likely savings to a company from using the competitive bidding process.

agencies perform for bondholders and auditing firms perform for investors and other corporate claimholders. While such activities are expensive, such monitoring of management increases the value of the firm by raising the price investors are willing to pay for the company's securities

Negotiated versus Competitive Bid Contracts

The evidence also suggests that competitive bid offerings involve lower total flotation costs than negotiated offers.[9] In fact, it has been estimated that companies which use negotiated contracts can expect their total issue costs to be higher, on average, by 1.2 percent of the proceeds. Nevertheless, the primary users of competitive bids are regulated firms which are required to do so. Companies not facing this regulatory constraint (Rule 50 of the Public Utilities Holding Company Act) appear overwhelmingly to choose negotiated offers.

This behavior may be attributed partly to the fact that the variance of issuing costs has been found to be higher for competitive bid than for negotiated offers. Executives whose compensation is tied to accounting earnings might prefer a more stable, if somewhat lower, bottom line resulting from the use of negotiated offerings. Another potentially important problem with competitive bids is the difficulty in restricting the use of information received by investment bankers not awarded the contract. Hence, companies with valuable proprietary information are likely to find the confidentiality afforded by negotiated bids more attractive.

Probably most important, though, is that the monitoring, and thus the guarantee provided investors, is much more effective in the case of negotiated offerings than in competitive bids. With a negotiated offer, the issuing firm has less control over the terms and timing of the offer; hence, investors have fewer worries that the issue will be structured to exploit their information disadvantage.

This leads me to generalize about the kinds of companies which are likely to benefit from using competitive bids. The less the potential disparity between management's and the market's estimation of the value of the company, the greater are the likely savings to a company from using the competitive bidding process. For this reason, regulated utilities (those not already subject to Rule 50) stand to benefit more from the use of competitive bids than unregulated firms. Also, in the case of more senior claims such as debt and preferred stock, the informational asymmetry problem is less pronounced, as I have suggested, because the value of the claim is less sensitive to firm value. Thus straight debt, secured debt and non-convertible preferred stock should all be sold through competitive bids more frequently than common stock, convertible preferred stock or convertible bonds. And this is apparently the case.[10]

Shelf versus Traditional Registration

Prior to any public security offering, the issue must be registered with the SEC. Using traditional registration procedures, the issuing firm, its investment banker, its auditing firm, and its law firm all typically participate in filing the required registration statements with the SEC (as well as with the appropriate state securities commissions). The offering can only proceed when the registration statement becomes effective.

In March of 1982, however, the SEC authorized Rule 415 on an experimental basis, and it was made permanent in November 1983. It permits companies with more than $150 million of stock held by investors unaffiliated with the company to specify and register the total dollar amount of securities they expect to offer publicly over the next two years. The procedure is called shelf registration because it allows companies to register their securities, "put them on the shelf" and then issue the securities whenever they choose.

After the securities are registered, management can then offer and sell them for up to two years on a continuous basis. Rule 415 also allows the company to modify a debt instrument and sell it without first filing an amendment to the registration Statement. Thus, shelf registration allows qualifying firms additional flexibility both in structuring debt issues and in timing all security issues.

9. See Sanjai Bhagat and Peter Frost, "Issuing Costs to Existing Shareholders in Competitive and Negotiated Underwritten Public Utility Equity Offerings," *Journal of Financial Economics* 15 (1986).

10. See the article which appears later in this issue, James R. Booth and Richard L. Smith, "The Certification Role of the Investment Banker in the Pricing of New Issues." The article is based on their study, "Capital Raising, Underwriting and the Certification Hypothesis," *Journal of Financial Economics* 15 (1986).

Because of the additional flexibility afforded management by the shelf procedure, there is greater opportunity for management to exploit its inside information and issue (temporarily) overvalued securities.

Because of the additional flexibility afforded management by the shelf procedure, there is greater opportunity for management to exploit its inside information and issue (temporarily) overvalued securities. Thus, the information disparity problem attending new issues should be especially great in cases of shelf registration. Potential investors anticipating this problem will exact an even larger discount in the case of shelf offerings than in offerings registered through traditional procedures. Hence stock price reactions to announcements of new offerings registered under Rule 415 could be more negative, other things equal, than those under traditional registration procedures.

It is largely for this reason, I would argue, that shelf registration has been used far more frequently with debt than with equity offerings.

A Special Case: Initial Public Offerings

Private firms that choose to go public typically obtain the services of an underwriter with which to negotiate an initial public equity offering (IPO). IPOs are an interesting special case of security offers. They differ from offerings previously discussed in two important ways: (1) the uncertainty about the market clearing price of the offering is significantly greater than for public corporations with claims currently trading; (2) because the firm has no traded shares, examination of stock price reactions to initial announcements is impossible. The first difference affects the way these securities are marketed; the second limits the ways researchers can study the offerings.

Underpricing

The stock price behavior of IPOs from the time the initial offer price is set until the security first trades in the aftermarket demonstrates unmistakably that the average issue is offered at a significant discount from the price expected in the aftermarket. In fact the average underpricing appears to exceed 15 percent. (For a summary of the results of studies of offer prices for initial public equity offerings as well as new issues of seasoned equity and bonds, see Table 7.) Once the issue has begun trading in the aftermarket, however, the returns to stockholders appear to be normal.

In an IPO, as suggested, there is a large amount of uncertainty about the market-clearing price. Furthermore, as some observers have argued, this uncertainty creates a special problem if some investors are considerably more knowledgable than others—for example, institutions relative to, say, individuals (especially since the Rules of Fair Practice of the NASD prohibit raising the price if the issue is oversubscribed). Assume, for the sake of simplicity, that we can divide all potential investors into two distinct groups: "informed" and "uninformed." Under these conditions, if the initial offer price were set at its expected market-clearing price, it is not difficult to demonstrate that uninformed investors would earn systematically below normal returns. If an issue is believed by informed investors to be underpriced, then those investors will submit bids and the issue will be rationed among informed and uninformed investors alike. If the issue is overpriced, however, informed investors are less likely to submit bids and the issue is more likely to be undersubscribed. In this process, uninformed investors systematically receive more of overpriced issues and less of under-priced issues.[11]

Recognizing their disadvantaged position in this bidding process, uninformed investors will respond by bidding for IPOs only if the offer price is systematically below their estimate of the aftermarket price in order to compensate them for their expected losses on overpriced issues. Such a bidding process would also account for the well-documented observation that underpricing is greater for issues with greater price uncertainty.

The above explanation has been tested using data from IPOs in the following way. Given that there is an equilibrium amount of underpricing (i.e., one which has proved to be acceptable to issuers in order to sell the issue), we can hypothesize that an investment banker that repeatedly prices issues below this equilibrium level will lose the opportunity for further business. If the investment banker repeatedly overprices (or does not underprice by enough), however, he loses investors.

A recent study by Randy Beatty and Jay Ritter estimated an underpricing equilibrium and then examined the average deviation from that level of underpricing by 49 investment bankers who handled

11. For a systematic formulation of this "informed-uninformed" investor dichotomy and its effects on IPO pricing, see Kevin Rock, "Why New Issues Are Underpriced," *Journal of Financial Economics* 15 (1986).

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TABLE 7
THE UNDERPRICING OF NEW SECURITY ISSUES

Presented below is a summary of estimates of the underpricing of new securities at issuance by type of offering. Underpricing is measured by the average percentage change from offer prices to afiermarket price. Full citations for all studies mentioned can be found in the reference section at the end of this issue.

Type of Offering	Study	Sample Period	Sample Size	Estimated Underpricing
Initial Public Equity Offering	Ibbotson (1974)	1960-1969	120	11.4%
Initial Public Equity Offering	Ibbotson/Jaffe (1975)	1960-1970	2650	16.8
Initial Public Equity Offering	Ritter (1984)	1960-1982	5162	18.8
		1977-1982	1028	26.5
		1980-1981	325	48.4
Initial Public Equity Offering	Ritter (1985)	1977-1982		
Firm Commitment			664	14.8
Best Efforts			364	47.8
Initial Public Equity Offering	Chalk/Peavy (1985)	1974-1982	440	13.8
Firm Commitment			415	10.6
Best Efforts			82	52.0
Equity Carve-Outs	Schipper/Smith (1986)	1965-1983	36	0.19
Seasoned New Equity Offering	Bhagat/Frost (1986)	1973-1980	552	-0.30
Negotiated			479	-0.25
Competitive Bid			73	-0.65
Primary Debt Issue	Weinstein (1978)	1962-1974	412	0.05
	Sorenson (1982)	1974-1980	900	0.50
	Smith (1986)	1977-1982	132	1.60

four or more initial public offerings during the period 1977-1981. When they compared the subsequent performance of the 24 underwriters whose average deviation from their estimated normal underpricing was greatest with that of the remaining 25 underwriters, the market share of those 24 firms fell from 46.6 to 24.5 percent during 1981-1982; and five of the 24 actually closed down. For those 25 with the smallest deviation from the estimated underpricing equilibrium, market share goes from 27.2 to 21.0 percent, and only one of the 25 ceases operation. (The remaining 54.5 percent of the business in 1981-1982 was underwritten by firms which did fewer than four IPOs from 1977-1981.)[12]

As Table 7 shows, security issues by public corporations are also typically underpriced, but much less so than in the case of IPOs Seasoned new equity issues have been found to be underpriced by 0.6 percent. There is some disagreement about the degree of underpricing of seasoned bonds, with estimates ranging from 0.05 percent to as high as 1.2 percent of the offer price. Seasoned equity issues by utilities, however, appear to be *overpriced* by 0.3 percent.

Best Efforts versus Firm Commitment Contracts

There are two alternative forms of underwriting contracts that are typically used in IPOs The first is a firm commitment underwriting agreement, in which the underwriter agrees to purchase the whole issue from the firm at a specified price for resale to the public. The second is a "best efforts" agreement. In such an arrangement, the underwriter acts only as a marketing agent for the firm. The underwriter does not agree to purchase the issue at a predetermined price, but simply sells as much of the security as it can and takes a predetermined spread. The

12. See Randolph P. Beatty and Jay R. Ritter, "Investment Banking, Reputation, and the Underpricing of Initial Public Offerings," *Journal of Financial Economics* 15 (1986).

In a best efforts contract, the firm provides potential investors not only with an implicit call option (because of the rule against raising the price), but also gives them the option to put the shares back to the firm if the issue is undersubscribed. The Green Shoe option is equivalent to granting the investment banker a warrant with an exercise price equal to the offer price in the issue.

issuing company gets the net proceeds, but without any guarantee of the final amount from the investment banker. This agreement generally specifies a minimum amount that must be sold within a given period of time; if this amount is not reached, the offering is cancelled. From 1977-1982, 35 percent of all IPOs were sold with best efforts contracts. Those issues, however, raised only 13 percent of the gross proceeds from IPOs over that period, implying that larger IPOs tend to use the firm commitment method.

The choice between firm commitment and best efforts comes down, once again I think, to resolving the problems created by the information disparity between informed and uninformed investors. The preceding argument for underpricing firm commitments can be contrasted with the incentives in a best efforts contract. Consider that in the case of a best efforts IPO, if the issue is overpriced and the issue sales fall short of the minimum specified in the underwriting contract, the offer is cancelled and the losses to uninformed investors are reduced. Structuring the contract in this manner reduces the problem faced by uninformed potential security holders, and thus reduces the discount necessary to induce them to bid.

Thus, the relative attractiveness of the two types of contracts will be determined, in part, by the amount of uncertainty associated with the price of the issue. The prohibition against raising prices for an oversubscribed issue (imposed by the NASD's Rules of Fair Practice) means that the company has effectively given a free call option to potential stockholders. Thus, relative to a best efforts contract, the expected proceeds to the issuer in a firm commitment IPO are reduced as the amount of uncertainty about after-market prices increases. In a best efforts contract, the firm provides potential investors not only with an implicit call option (because of the rule against raising the price), but also gives them the option to put the shares back to the firm if the issue is undersubscribed. Because of these implicit options provided investors in best efforts contracts, the greater the uncertainty about the after-market price of an IPO, the more attractive are best efforts contracts to investors; hence, the more likely are issuers to choose that form over a firm commitment.

To summarize, firm commitment offerings are more likely the less the uncertainty about the market-clearing security price. Consistent with this hypothesis, one study found that the average standard deviation of the aftermarket rates of returns for 285 best efforts offerings was 7.6 percent in contrast to a 4.2 percent standard deviation for 641 firm commitment offerings.[13]

Stabilization Activity and the Green Shoe Option

Underwriters typically attempt to stabilize prices around the offer date of a security. In the case of primary equity offers by listed firms, this stabilization is accomplished by placing a limit order to purchase shares with the specialist on the exchange. I believe this activity represents a bonding mechanism by the investment banker—one that promises investors that if the issue is overpriced, they can sell their shares into the stabilizing bid, thereby cancelling the transaction.

The Green Shoe option (so named because it was originally used in an offering by the Green Shoe Company) is frequently employed in underwritten equity offers. It gives the underwriter the right to buy additional shares from the firm at the offer price. This is equivalent to granting the investment banker a warrant with an exercise price equal to the offer price in the issue. The total quantity of shares exercisable under this option typically ranges between 10 and 20 percent of the offer. Obviously, the option is more valuable if the offer price is below the market value of the shares; thus, the Green Shoe option is another potentially effective bonding mechanism by which the investment banker reassures investors that the issue will not be overpriced. That is, if a new offering prospectus contains a Green Shoe provision, potential investors (especially the less-informed) will reduce their forecast of the probability that the issue will be overpriced because the returns to the underwriter from the Green Shoe are lower if the warrant cannot be exercised.

13. See Jay Ritter, "The 'Hot Issue' Market of 1980," *Journal of Business* 57 (1984).

Implications for Corporate Policy

Recent research on the stock market response to new security offers consistently documents a significant negative reaction (on the order of 3 to 4 percent on average) to announcements of new equity issues by industrial companies. Convertible issues, both debt and preferred, also typically are greeted by a negative, though smaller, price change (of roughly 1 to 2 percent). By contrast, the market reaction to straight debt and preferred issues appears to be neutral.

The critical question, of course, is: Why does the market systematically lower the stock prices of companies announcing new stock and convertible offers? Such financing decisions, after all, are voluntary choices by management intended, presumably, to increase the long-run value of the firm by providing necessary funding.

After consideration of several possible explanations, I argue that the primary cause of this negative response is the potential for management to exploit its inside information by issuing overvalued equity (or convertibles, which of course have an equity component). Investors recognize their vulnerability in this process and accordingly reduce their estimate of the firm's value. The result, in the average case, is that the new equity is purchased by investors at a discount from the pre-announcement price.

This theory and evidence has a number of managerial implications. Perhaps the most important is that management should be sensitive to the way the market is likely to interpret its announcement of a new issue. For example, if the company is contemplating a primary equity offering and an executive asks to include a registered secondary in the offer, the board of directors should recognize that this can be a very expensive perk; in such cases the market price typically falls by almost 5 percent upon the announcement. This is probably the surest means of arousing the market's suspicion that insiders have a different view of the company's future than that reflected in the current stock price.

Perhaps the best way for management to overcome this information problem is to state, as clearly as possible, the intended uses for the funds. For example, if management intends to use the proceeds for plant expansion, management should say so—emphatically. We know that the market responds positively, on average, to announcements of increases in capital spending plans (with the exception of the case of oil companies in recent years, where the reverse has been true).[14] Consequently, short of revealing proprietary information which could compromise the firm's competitive position,[15] management should benefit from the attempt to be as forthright as possible in sharing with the investment community its investment opportunities, corporate objectives, capital structure targets, and so forth.

This strategy is not meant to contradict the obvious: namely, that current stockholders benefit when management issues stock or convertibles when the market price proves to have been high; and that debt or preferred stock is better if the company proves to be undervalued (though, in the absence of significant inside information, I would suggest that this can only be determined with hindsight). The problem, however, is that this kind of managerial opportunism may prove an expensive strategy for a firm that wants to maintain its access to capital markets. If management develops a reputation for exploiting inside information, the price discount the market exacts for accepting subsequent new issues could be even larger.

In the second part of the article, I attempt to show how the use of investment bankers as underwriters also helps to solve this financing problem arising from the possibility of insider information. The fact that management may have an incentive to issue overvalued securities causes a demand for "bonding" the firm's actions—that is, investors will offer more for the securities if they are provided a credible promise that they will not be exploited.

In those cases where the information disparity between management and investors is likely to be greatest, and to have the worst potential consequences for new investors (i.e., for equity holders, and especially in the case of smaller firms in less heavily traded markets), the demand for the bond-

14. A study by John McConnell and Chris Muscarella ("Corporate Capital Expenditure Decisions and the Market Value of the Firm," *Journal of Financial Economics* 14 (1985)) found that announcements of increases of corporate capital spending were accompanied by a 1 percent increase, on average, of the announcing company's stock price.

15. For example, when Texas Gulf Sulphur discovered substantial mineral deposits in Canada, immediate release of this information would have substantially increased the cost of adjacent mineral rights then under negotiation.

The largest price declines were recorded when the secondary sale was made by corporate officers in the company itself—that is, by insiders with possibly privileged information about the company's future.

ing or certification provided by the banker is also likely to be the greatest. For this reason I have argued that underwritten issues provide stronger guarantees to investors than rights offers; issues with negotiated underwriting contracts are more strongly bonded than competitive bid issues; issues registered using traditional procedures are more strongly bonded than those employing the new shelf registration procedures; and issues containing a Green Shoe option are more strongly bonded than those without. Therefore, for example, an industrial equity issue should more frequently be registered using traditional rather than shelf registration procedures, and sold under a negotiated, firm commitment rather than a competitive bid contract; it is also more likely to include a Green Shoe option. By contrast, a nonconvertible debt issue by a utility is more likely to be sold under a competitive bid contract and registered using the new shelf registration procedures.

The above argument is not to deny that shelf registration procedures have significantly lowered the fixed costs of public issues for some industrial companies. In fact it should be especially cost-effective for large, well-established companies, especially in the case of public debt offers.

To take greatest advantage of the potential savings from shelf registration, I believe that management must change some of its practices with respect to debt offerings. Instead of using a line of credit at a bank until a large public issue can be made, qualifying companies could use the shelf registration process to place several smaller issues. In order to retain the additional liquidity in secondary markets associated with larger issues, I expect companies to begin offering multiple issues with the same coupon rate, coupon dates, maturity dates, and covenants—instead of designing all new issues to sell at par.