

# THE IMPACT OF EARNINGS AND DIVIDEND INFORMATION ON THE VALUATION CONSEQUENCES OF EXTERNAL FINANCING ANNOUNCEMENTS

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## 〈Abstract〉

This paper relates the valuation consequences of common-stock, convertible-debt and straight-debt offering announcements to the issuing firms' stock price performance in periods before the announcements. Similar to previous studies on equity offerings, we find that the announcement effects of security offerings, regardless of offering types, are negatively correlated with the short-term pre-offering stock returns. We show that the informational impact of the preceding earnings and dividend(E/D) announcements account for the previous findings of the negative correlation. We further report that security issues following "good-news" E/D announcements result in larger stock price declines than issues following "bad-news" E/D announcements. The finding is consistent with the hypothesis that the E/D information affects the investors' assessments of the firm's cash flow expectations and of the probability of external financing.

## 1. Introduction

Empirical studies have documented that stock price reactions to common stock offering announcements are related to the firm's pre-announcement stock price performance. Masulis and Korwar(1986) report a negative correlation when the pre-offering stock price run-up is measured over three months. Asquith and Mullins(1986) document a positive correlation when the pre-offering abnormal return is measured over one year.

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Korajczyk, Lucas and McDonald(KLM : 1990) confirm that the correlation is negative(positive) when the run-up is measured over a short(long) pre-issue period. Informational asymmetry models of Lucas and McDonald(1990) and Choe, Masulis and Nanda(1993) provide an explanation for the positive correlation. They predict that, if good-quality firms delay project financing until the degree of information asymmetry is reduced, stock issues by such firms will follow a period of sustained stock price increases. Since their announcement effects would not be as negative as those of poor-quality firms, there should be a positive correlation. The negative correlation, however, remains a puzzle.

The purpose of this study is to provide further evidence on the negative correlation and then to seek plausible explanations for the empirical regularity. We first document that the negative correlation is observed not only for equity offering announcements but also for convertible-debt and straight-debt offering announcements. We then posit and test the hypothesis that the negative correlation is due to the informational impact of earnings and dividend(E/D, hereafter) announcements that closely precede security offering announcements. We relate the information in E/D announcements to the price reaction to a subsequent security offering announcement for two reasons : (1) The issuer may have incentives to coordinate the timing of the offering announcement relative to E/D announcements;(2) E/D announcements and the subsequent security offering announcement are interrelated within the firm's cash flow identity.

It is often claimed that an equity offering announcement can be timed after announcements of earnings and/or dividends so that the stock offering can be made at a "good" price. Good-news E/D announcements may positively influence the offer price(John and Williams(1985)). E/D announcements per se might lower the degree of information asymmetry so that the adverse selection problem of Myers and Majluf(1985) is minimized(KLM(1991); Dierkens(1991)) The idea has been tested on samples of common-stock offering announcements. KLM(1991) report that the negative valuation consequences of equity offering announcements are smaller, the more closely they follow earnings announcements. Loderer and Mauer(1992), on the other hand, report that the timing and the informativeness of dividend announcements do not have a material impact on the valuation implications of subsequent equity offering announcements. We extend the inquiry by examining samples of debt offering

announcements in addition to equity offering announcements. The experiment using samples of debt offerings is critical as it allows us to test whether some models of information asymmetry pertain to the case of debt offerings as well.

In addition, the information in E/D announcements is important in determining how the market responds to subsequent external financing announcements. If the sequence of the above announcements reveals the firm's expected net operating cash flows,<sup>1)</sup> the market's assessments of the cash flow expectations and the probability of external financing should be affected by the information conveyed by the preceding E/D announcements.<sup>2)</sup> For instance, good-news E/D announcements increase the market's cash flow expectations and lower the probability of external financing. A subsequent security issue would reverse the positive E/D information as the market realizes that its initial reaction to the E/D announcements may have been too optimistic. On the other hand, when a security offering follows bad news E/D announcements, its negative valuation effect should be mitigated (or foreshadowed) by the E/D announcements which have already revealed some of the negative information that would otherwise be inferred from the security issuance.

We report that, regardless of offering types, the offering announcement effects are negatively related to the pre-offering E/D information. We also show that the negative correlation between the offering announcement and the pre-offering price performance is substantially weakened once the E/D information is removed. The results suggest that stock price reactions to E/D announcements account for previous findings that the stock price effect of a security offering is negatively related to the short-term pre-offering stock returns. We also document that, regardless of offering types, security issues following "good news" E/D announcements result in larger stock price declines than issues following "bad news" E/D announcements. The finding is consistent with

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1) Miller and Rock(1985) employ a model where investors assess implied changes in expected net operating cash flows from E/D announcements. Empirical evidence supporting the information content of dividends and earnings is abundant. Smith(1986) summarizes empirical evidence that other components of the firm's cash flow identity, such as security repurchases and capital expenditures, can also make investors revise their cash flow expectations.(See Dann(1981), Vermaelen(1981) and Mcconnell and Muscarella(1985).)

2) See Healy and Palepu(1988), Ofer and Siegel(1987), and Venkatesh(1989) for inter dependencies between dividends and earnings. See also Brown, Choi and Kim(1994) and Leftwich and Zmijewski(1994) for the relative information content of earnings and dividends.

the hypothesis that E/D information affects the investors' expectations of the firm's cash flow and their assessment of the probability of external financing.

The paper proceeds as follows : Section II describes the data and sampling design; Section III reports the empirical results and then relates them to recent documented empirical regularities on the capital raising process; and Section IV contains a brief summary and concluding remarks.

## II. The Sample Design and Data Description

### A. The Security Offering Data

This study is based on a sample of 788 announcements of registered security offerings by 545 industrial firms for the eight-year period 1978-1985. The initial sample of security offerings are selected from the Registered Offering Statistics(ROS) File of the Securities and Exchange Commission(SEC). The stock return data are obtained from the CRSP Daily Returns File. This criterion limits the sample firms to those listed on the New York Stock Exchange(NYSE) or the American Stock Exchange(ASE). We exclude all the offerings by utility or financial firms in order to obtain a homogeneous sample.(See Masulis and Korwar(1986) and Asquith and Mullins(1986) who report different market responses between utilities and industrials.)

We limit the sample to those offerings which are publicly underwritten for cash sales and are registered with the SEC as primary offerings. Rights offerings, extended offerings, shelf-registered offerings, secondary offerings, non-cash offerings and private placements are thus excluded. Joint offerings of two or more types of securities are also excluded. In order to screen major external financing announcements, we require the size of the offering to be at least as large as five percent of the market value of equity of the issuer two days before the announcement date. In addition, in view of the evidence that the valuation effects for short-term debt issues are different from those for long-term debt offerings(James(1987)), we require debt issues to have a maturity of ten years or more. Finally, in order to identify the event date, we exclude observations if the offering announcement is not reported in the Wall Street Journal Index(WSJI). We also exclude observations if there are contemporaneous events on the day of or on the

day before WSJI reporting.

Though not reported, only six percent of all external financing announcements in the sample are made by firms in the smallest-size quintile of NYSE and ASE firms.<sup>3)</sup>

On the other hand, firms in the two large-size quintiles account for 58 percent of all the sampled security offerings. These observations suggest that small firms have poor access to long-term public issue markets and that their financing needs are probably served by bank loans or private placements. The median firm size is \$765 million for the straight-debt sample, \$210 million for the convertible-bond sample, and \$156 million for the common-stock sample. The median issue size (the offering amount divided by the market value of equity two days before the announcement) for the common-stock, convertible-debt, and straight-debt offering samples are 0.15, 0.19 and 0.16, respectively.

## B. Market Reaction to External Financing Announcements

Panel A of Table 1 reports the average two-day abnormal returns ( $PE_{offer}$ ) at security offering announcements. The two-day event period includes the day (i.e., day zero) when the offering is reported in the Wall Street Journal Index (WSJI) and the day before. In most cases, the WSJI dates coincide with the day after the registration date. An abnormal return is defined as a prediction error of the market model. Its estimation is based on 250 daily return observations (at least 100 daily return observations) ending 251 trading days prior to the event date. The CRSP equally-weighted index is used as a proxy for the market index.<sup>4)</sup>

Consistent with earlier studies, the announcement effects of security offerings are significantly negative for common stock and convertible debt issues, and the effects are negative but insignificant for straight debt issues. The results imply that security issuance is bad news to the market, supporting the adverse selection models (Myers and Majluf (1984) and Lucas and McDonald (1990)) and the dividend signalling model (Miller and Rock (1985)). The results are also consistent with the pecking order

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3) At the end of each year, we rank all the NYSE and ASE firms in terms of the market value of equity and classify them into five quintiles.

4) We also replicated the study using the abnormal returns retrieved from the CRSP Excess Returns File and found the results to be qualitatively the same. The results are not reported here but are available from the authors upon request.

hypothesis(Myers and Majluf(1984) and Krasker(1986)) in that the price effect is relatively more negative for securities of higher risk.

**Table 1**  
Abnormal Returns in Percent Around Security Offering Announcements,  
Pre—Offering Cumulative Abnormal Returns and E/D Announcement Effects

	Type of Security		
	Common Stock	Convertible Debt	Straight Debt
<b>Panel A : Announcement Effect of Security Offerings<sup>a</sup></b>			
APE [−1,0]	−2.66%	−1.84%	−0.28%
[t−value]	[−12.03]***	[−6.75]***	[−1.50]
N	363	137	288
Percent Negative PE <sub>offer</sub>	76%###	74%###	54%
<b>Panel B : Pre—Issue Cumulative Abnormal Returns<sup>a</sup></b>			
ACPE [−250,−21]	18.18%	8.85%	4.27%
[t−value]	[7.14]***	[2.72]***	[1.88]*
N	363	137	288
ACPE [−20,−2]	1.76%	2.71%	−0.17%
[t−value]	[2.62]***	[2.64]**	[−0.34]
N	363	137	288
<b>Panel C : Pre—Issue E/D Announcement Effects<sup>b</sup></b>			
APEED	0.15%	0.92%	0.51%
[t−value]	[0.44]	[1.54]	[1.50]
N	215	80	154
Percent Positive PE <sub>ED</sub>	52%	64%##	51%

a APE=the average two—day abnormal return ;  
ACPE=the average cumulative abnormal return.  
The market model parameters for the computation of the announcement effects and the cumulative abnormal returns are estimated using the period [−500,−251] with at least 100 daily return observations.

b The pre—issue E/D announcement effect(PEED) is the sum of the two—day abnormal returns in percent of the earnings and dividend announcements which occur within 20 trading days prior to the offering announcement. In the case where earnings and dividend announcements are made on the same day(or one day apart), PEED is the two—day(or three—day) abnormal return ending on the announcement date of the joint(or second) announcement.

\*\*\* Significant at the 1% level(two—tailed test).

\*\* Significant at the 5% level(two—tailed test).

\* Significant at the 10% level(two—tailed test).

### Significantly different from 0.5 at the 1% level(two—tailed test).

## Significantly different from 0.5 at the 5% level(two—tailed test).

Panel B reports cumulative abnormal returns over the two pre-offering periods, [-250,-21] and [-20,-2] relative to the announcement day. Consistent with Asquith and Mullins(1986) and Lucas and McDonald(1990), the long-term(i.e., 11-month) price run-up is significantly positive for equity issues. Consistent with Dann and Mikkelson(1984), our results indicate that the long-term price run-up is also significantly positive for convertible debt and straight debt issues. The price run-up is largest(smallest) for the external financing decision with the most(least) risk. The pattern that a security offering follows a long-term abnormal increase in share value is consistent with the information asymmetry models of Lucas and McDonald(1990) and Choe, Masulis and Nanda(1993). The one-month cumulative abnormal return is significantly positive for common-stock and convertible-debt issues, but insignificant for straight-debt issues.

Panel C shows average abnormal returns for E/D announcements(PEED) that precede external financing announcements within 20 days. The valuation effect is the sum of the two-day abnormal returns for both the earnings and the dividend announcements which occur within 20 days prior to the security offering announcement.<sup>5)</sup> These pre-issue E/D announcements, on average, have insignificantly positive abnormal returns for convertible debt and straight debt offerings. Inconsistent with the street wisdom that common stock issues are timed after good-news E/D announcements, PEED is not significant for common-stock issues.<sup>6)</sup>

### III. Empirical Results

#### A. Regression Tests

##### 1. The Relation Between the Announcement Effects and the Pre-Offering Abnormal Returns

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5) PEED includes the valuation effect of only those announced within the 20-day pre-issue period. When the earnings and dividend announcements are made on the same day(or on two consecutive days), PEED is computed over two(three) days ending at the date of the joint(second) announcement.

6) Loderer and Mauer(1992) present similar evidence that the issuing firms exhibit no abilities to time their equity issues after good-news dividends.

We first regress the two-day announcement effect on the relative offer size and the short- and long-term pre-offering abnormal returns. Table 2 reports the results of the regression for the common-stock, the convertible-debt and the straight-debt offering samples.

**Table 2**

Regression Results of the Impact of Issue Size and Pre-offering Cumulative Abnormal Returns on the Two-day Abnormal Returns of Security Offering Announcements (t-statistics are in parentheses)

$$\text{Model}^a \text{ PE}_{\text{offer}} = a_0 + a_1 \text{ROFFER} + a_2 \text{CPE}[-20,2] + a_3[-250,-21]$$

Type of Security	$a_0$	$a_1$	$a_2$	$a_3$	Adj.R <sup>2</sup>	F	N
Common Stock	-2.13 (-7.41)***	-2.54	-0.038 (-3.51)***	0.007 (-2.21)**	0.05 (1.55)	6.75	363
Convertible Debt	-1.03 (-2.71)***	-2.80 (-3.07)***	-0.039 (-1.77)*	0.010 (1.43)	0.10	5.90	1.37
Straight Debt	0.13 (0.52)	-1.62 (-2.68)***	-0.042 (-1.82)*	0.001 (0.11)	0.02	3.19	288

a  $\text{PE}_{\text{offer}}$  = the two-day abnormal return in percent around the offering announcement.

ROFFER = the relative issue size, measured by amount of the offering divided by the market value of equity two days prior to the offering announcement.

CPE[-20,2] = the cumulative abnormal return in percent over the 19-day period ending two days before the offering announcement.

CPE[-250,-21] = the cumulative abnormal return in percent over the 230-day period ending 21 days before the offering announcement.

\*\*\* Significant at the 1% level (two-tailed test).

\*\* Significant at the 5% level (two-tailed test).

\* Significant at the 10% level (two-tailed test).

The coefficient  $a_1$  measures the market's response per unit of external financing. The coefficient  $a_2$  denotes the relation between the announcement effect and the short-term pre-offering abnormal return, and  $a_3$  denotes the relation between the announcement effect and the long-term pre-offering abnormal return. Consistent with Asquith and



Mullins(1986) and Masulis and Korwar(1986),  $a_1$  is significantly negative at the 0.01 level for all three offering types. That is, the larger the external financing needs, the more the negative price impact. This is in contrast to Mikkelson and Partch(1986), Barclay and Litzenberger(1988), Hansen and Crutchley(1990) and Dierkens(1991) who report no significant relation. Consistent with Masulis and Korwar(1986) and KLM(1990),  $a_2$  is significantly negative for equity issues(at the 0.05 level) and for the convertible-debt and the straight-debt offering samples(at the 0.10 level). The coefficient  $a_3$  is positive but insignificant for any of the three offering types.

The results indicate that the negative correlation between the announcement effect and the short-term pre-issue abnormal return pertains not only to equity issues but also to convertible-debt and straight-debt issues. Given that the correlation is negative also for debt offering announcements, the data do not support capital-structure related hypotheses such as Masulis and Korwar(1986). The Myers-Korwar hypothesis predicts a positive correlation for debt issues because the positive stock price run-up makes debt financing comparatively more anticipated, thus less surprising.

The positive correlation between the offering announcement effect and the long-term pre-issue abnormal return is weak for the common-stock and convertible-debt offering sample, and is insignificant for the straight-debt offering sample. The positive, albeit weak, correlations for equity-like securities are consistent with the timing models of Lucas and McDonald(1990) and Choe, Masulis and Nanda(1993) in that the degree of overvaluation of equity is the smallest when equity-like securities are offered after periods of sustained price increases.

## 2. The Impact of Earnings and Dividend Information

In this section, we posit and test the hypothesis that the negative correlation reported in Table 2 is due to the informational impact of earnings and dividend(E/D) announcements that precede offering announcements. We use the following regression equation:

$$PE_{\text{offer}} = b_0 + b_1 ROFFER + b_2 PEED + b_3 NCPE[-20, -2] + b_4 CPE[-250, -21] \quad (1)$$

where PEED is the abnormal returns for E/D announcements that precede offering announcements within two to 20 days ;  $PE_{ED}$  is set equal to zero if the offering

announcement is not preceded by either earnings or dividend announcement within 20 days ; and  $NCPE[-20, -2]$  is the short-term pre-issue abnormal return, net of  $PE_{ED}$ .<sup>7)</sup> As before,  $PE_{offer}$  is the two-day offering announcement effect ;  $ROFFER$  is the offer size relative to the market value of equity two days before the announcement ; and  $CPE[-250, -21]$  is the long-term pre-issue abnormal return. The coefficient  $b_1$  measures the market's response per unit of external financing. The coefficient  $b_2$  denotes the impact of the E/D information on the valuation consequences of external financing announcements. The coefficient  $b_3$  is the relation between the offering announcement effect and the short-term pre-offering abnormal return when the E/D information is removed. The coefficient  $b_4$  denotes the relation between the announcement effect of external financing and the long-term, pre-offering abnormal return.

Table 3 reports the results of the regression for the three types of security offerings. Similar to the Table 2 results, the coefficient  $b_1$  is significantly negative for the common stock offering sample(at the 0.01 level) and for the convertible-debt and straight-debt offering samples(at the 0.05 level). Consistent with our hypothesis,  $b_2$  is significantly negative for the common-stock offering sample(at the 0.05 level). Similarly, the coefficient is significantly negative for the convertible-debt sample(at the 0.10 level) and for the straight-debt offering sample(at the 0.01 level), suggesting that the market's response to security offering announcements, regardless of offering types, are inversely related to the E/D information. On the other hand, the coefficient  $b_3$  is negative but insignificant for all three offering types. That is, when the E/D information is removed, the offering announcement effect is no longer significantly related to the remaining, short-term abnormal return. The results suggest that the observed negative correlation between the offering announcement effect and the short-term pre-issue abnormal return is primarily due to the informational impact of the

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7) We choose the 20-day cut-off period because it is necessary to insure that the sequence of the announcements takes place within a relatively short period of time such that managers' information does not materially change between the announcements. If the cut-off period is too long, the offering announcement would reflect new information observed by the management after the E/D announcements. Consistent with this notion, the evidence is weaker though qualitatively unchanged when we replicated the analysis using the 40- and 60- day cut-off periods.

**Table 3**  
**Regression Results of the Impact of Issue Size and Pre-offering**  
**Cumulative Abnormal Returns,**  
**and the E/D Information on the Two-day Abnormal**  
**Returns of Security Offering Announcements**  
 (t-statistics are in parentheses)

$$\text{Model}^a \text{ PE}_{\text{offer}} = b_0 + b_1 \text{ROFFER} + b_2 \text{PE}_{\text{ED}} + b_3 \text{NCPE}[-20,2] + b_4 \text{CPE}[-250,-21]$$

Type of Security	$b_0$	$b_1$	$b_2$	$b_3$	$b_4$	Adj.R <sup>2</sup>	F	N
Common Stock	-2.15 (-7.50)***	-2.48 (-3.43)***	-0.13 (-2.39)**	-0.029 (-1.62)	0.007 (1.54)	0.05	5.89	363
Convertible Debt	-1.16 (-2.93)***	-2.28 (-2.26)**	-0.12 (-1.71)*	-0.035 (-1.60)	0.010 (1.43)	0.10	4.83	137
Straight Debt	0.09 (0.39)	-1.30 (-2.11)**	-0.17 (-2.81)***	-0.029 (-1.25)	-0.014 (-0.26)	0.04	3.75	288

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- $\text{PE}_{\text{offer}}$  = the two-day abnormal return in percent around the offering announcement.
  - ROFFER = the relative issue size, measured by amount of the offering divided by the market value of equity two days prior to the offering announcement.
  - $\text{PE}_{\text{ED}}$  = the sum of the two-day abnormal returns in percent on the earnings and dividend announcements which occur within 20 trading days prior to the offering announcement. In the case where earnings and dividend announcements are made on the same day (or one day apart),  $\text{PE}_{\text{ED}}$  is the two-day (or three-day) abnormal return ending at the announcement date of the joint (or second) announcement.  $\text{PE}_{\text{ED}} = 0$  when there is neither earnings nor dividend announcement within 20 trading days prior to the offering announcement.
  - $\text{NCPE}[-20,2]$  = the cumulative abnormal return in percent over the 19-day period ending two days before the offering announcement, net of  $\text{PE}_{\text{ED}}$ .
  - $\text{CPE}[-250,-21]$  = the cumulative abnormal return in percent over the 230-day period ending 21 days before the offering announcement.

\*\*\* Significant at the 1% level (two-tailed test).

\*\* Significant at the 5% level (two-tailed test).

\* Significant at the 10% level (two-tailed test).

preceding E/D announcements. As in Table 2, the coefficient  $b_4$  is positive but insignificant for all three offering types.

## B. Cash Flow Signal Interdependence

In this section, we explore economic reasons for the negative correlation between the valuation consequence of an external financing announcement and the preceding E/D information. Because the external financing announcement effect can be mitigated (i.e., overshadowed) by the preceding negative E/D information, it is conceivable that the offering announcement effect may be comparatively less negative when it follows bad-news E/D announcements. When an external financing announcement is preceded by positive E/D information, the market's reaction to the financing announcement is likely to reflect the reversal of the optimism associated with the E/D announcements. To test this hypothesis, we classify the samples into two subsamples: (i) offerings that are preceded by positive E/D announcements (positive E/D subsample); (ii) offering announcements that are preceded by negative E/D announcements (negative E/D subsample). Offerings that are not preceded by E/D announcements within 20 trading days are excluded.<sup>8)</sup>

Panel A of Table 4 compares the average abnormal returns for the positive E/D and the negative E/D subsamples of common stock offering announcements. Consistent with our hypothesis, the average abnormal return for the positive E/D sample is significantly more negative than that for the negative E/D sample at the 0.01 level in terms of both the conventional t-test and the Wilcoxon rank-sum test. In addition, the proportion of negative abnormal returns in the positive E/D sample is considerably larger than that in the negative E/D sample.

Panel B reports the results for convertible bond offering announcements. Consistent with our hypothesis, the abnormal return for the positive E/D subsample is significantly more negative than that for the negative E/D subsample at the 0.01 level in terms of both the conventional t-test and the Wilcoxon rank-sum test. Further, about 86 percent of the positive E/D subsample exhibit negative abnormal returns on convertible-bond offering announcements while only 59 percent of the negative E/D subsample exhibit negative price effects.

Panel C reports the results for straight-debt offering announcements. The average

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8) The proportion of offering announcements preceded by E/D announcements within 20 days is 59 percent for the common-stock sample and for the convertible-bond sample, and 54 percent for the straight-debt sample.

**Table 4**  
 Average Two-day Abnormal Returns (APE<sub>offer</sub>) in Percent Around  
 Announcements of Common Stock, Convertible Debt, and Straight Debt  
 Offerings When the Sample is Classified According to the Sign of  
 the Valuation Effects of Antecedent Earnings/Dividend Announcements

Type of Security	(1) Preceded by positive PE <sub>ED</sub> <sup>a</sup>	(2) Preceded by negative PE <sub>ED</sub> <sup>b</sup>	Test of H <sub>0</sub> <sup>c</sup> PE <sub>offer</sub> (1) > PE <sub>offer</sub> (2)
<b>A : Common Stock</b>			
APE <sub>offer</sub> in percent	-3.17	-1.78	t = -2.30(.011)
[t-value]	[-8.61]***	[-3.67]***	Wilcoxon Z = -2.42(.008)
N	112	103	
Percent Negative PE <sub>offer</sub>	81%###	66%###	
<b>B : Convertible Debt</b>			
APE <sub>offer</sub> in percent	-3.02	-0.98	t = -3.02(.002)
[t-value]	[-7.63]***	[-1.72]*	Wilcoxon Z = -2.72(.003)
N	51	29	
Percent Negative PE <sub>offer</sub>	86%###	59%	
<b>C : Straight Debt</b>			
APE <sub>offer</sub> in percent	-0.88	0.46	t = -3.50(.001)
[t-value]	[-2.71]***	[1.40]	Wilcoxon Z = -2.90(.002)
N	79	75	
Percent Negative PE <sub>offer</sub>	66%###	39%##	

a This sample includes offering announcements that are preceded by E/D announcements within 20 days and the combined valuation effect of the E/D announcements is positive.

b This sample includes offering announcements that are preceded by E/D announcements within 20 days and the combined valuation effect of the E/D announcements is negative.

c One-tail test probability values are reported in parentheses.

\*\*\* Significant at the 1% level (two-tailed test).

\*\* Significant at the 5% level (two-tailed test).

\* Significant at the 10% level (two-tailed test).

### Significantly different from 0.5 at the 1% level (two-tailed test).

## Significantly different from 0.5 at the 5% level (two-tailed test).

abnormal return for the positive E/D subsample is significantly negative while that for the negative E/D subsample is insignificantly positive. Consistent with our hypothesis, the average abnormal return for the positive E/D subsample is significantly different from that for the negative E/D subsample at the 0.01 level in terms of the conventional t-test and the Wilcoxon rank-sum test.<sup>9)</sup> Additionally, 66 percent of the positive E/D subsample exhibit negative price effects while only 39 percent of the negative E/D subsample exhibit negative price effects.

It is interesting to notice that a straight-debt offering is found to be bad news if it follows positive E/D information. This is contrasted to the finding that the announcement effects of straight debt issues are insignificant when they are not conditioned on E/D information (e.g., Dann and Mikkelson (1984), Eckbo (1986), and Table 1). The result suggests that the effect of straight debt offerings is difficult to measure unconditionally, but that the underlying effect is negative unless the cash flow information is significantly mitigated.

The results in Table 4 indicate that: (1) the negative price effects of external financing announcements are comparatively more negative when they follow good-news E/D announcements, reflecting that the security issues reverse the optimism in the preceding E/D information; and, (2) the negative price effects of external financing announcements are substantially mitigated by the information in the bad-news E/D announcements. Taken together, the results in Tables 3 and 4 are consistent with our hypothesis that E/D information affects the market's assessment of the probability of external financing and its cash flow implications.

Our findings provide interesting comparisons with KLM (1991), Dierkens (1991), and Loderer and Mauer (1992). KLM (1991) and Dierkens (1991) find weak evidence that equity issues tend to follow closely earnings announcements and that such accounting information disclosures reduce the degree of informational asymmetry so that the negative valuation implications of equity issues are mitigated. Our study instead relates the market's reaction to security offering announcements to the information conveyed by the preceding E/D announcements. We provide a contrasting explanation for their finding that the valuation consequences of equity offering announcements are

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9) For all three types of security offerings, the difference in PEoffer between the two samples remains pronounced when the relative issue size is controlled.

reduced when they are closely preceded by earnings announcements. Our findings indicate that the reduction in the informativeness of security issues is due to the informational impact of preceding E/D information and is confined to those cases which are closely preceded by bad-news E/D announcements.

Loderer and Mauer(1992), on the other hand, report that the valuation consequences of equity offering announcements are unrelated to their timing relative to preceding dividend announcements. They also show that the information in the dividend announcements do not have a discernible impact on the valuation implications of equity offering announcements. They report, however, that the informativeness and the negative valuation consequences of equity offering announcements are greater for firms that pay dividends(except dividend decreases) than for firms that do not pay dividends. The latter finding is consistent with our result that the valuation consequences of security offerings are mitigated by good-news E/D information. The results of Loderer and Mauer(1992) combined with our findings suggest that the sign and magnitude of the E/D information is important in determining the valuation implications, i.e., the positive information in good-news E/D announcements is reversed when subsequent security issues are announced ; bad-news E/D announcements foreshadow(mitigate) the unfavorable information in the subsequent security issues.

Our findings also provide an interesting contrast with Healy and Palepu(1990) who report little impact of equity issues on future earnings and analysts' earnings forecasts, but show that systematic risk and residual variance increase following equity issues. The findings of Healy and Palepu(1990) are inconsistent with the interpretation of our findings. It is difficult to reconcile the two results. However, the negative correlations between  $PE_{offer}$  and  $PE_{ED}$  for a sample of 363 equity offerings(or 788 security offerings) as opposed to 93 equity offerings in Healy and Palepu(1990) can hardly be expected if security issues are unrelated to the changes in the market's assessment of earnings expectations and/or of the probability of value-decreasing external financing. Consistent with our interpretation, Hansen and Crutchley(1990) report that long-term earnings decline is responsible for security offerings. More studies are needed to clarify the issue.

## IV. Concluding Remarks

Extant studies report that the wealth effects of equity offering announcements are negatively related to the short-term, pre-offering stock price performance. Using a sample of 788 announcements of common-stock, convertible-debt, and straight-debt offerings by industrial firms, we find that the negative correlation is significant for all three types of security offerings. We also find that the negative correlation is considerably weakened once the information in the preceding E/D announcements is removed, suggesting that the E/D information accounts for previous findings that the stock price effect of a security offering announcement is negatively related to short-term pre-offering stock returns. Further, we find that, regardless of offering types, the valuation implications of external financing is more negative when they are preceded by good-news E/D announcements than when preceded by bad news E/D announcements. The results, especially that the negative correlation pertains to all three types of security offerings, are consistent with the hypothesis that the probability of external financing and its cash flow implications are influenced by the information conveyed by the preceding E/D announcements.

The study also helps us understand how the capital market assimilates information from a sequence of interrelated cash flow signals. That is, the valuation effect of an external financing announcement should be influenced by the extent to which the market is informed of the cash flow identity prior to the announcement. Empirical studies on the price impact of cash flow signals such as earnings, dividends, investments and external financing announcements typically examine each cash flow signal in isolation. The results reported in the present paper suggest that the valuation effects of a sequence of these signals should be evaluated with a due consideration for their interactions with other cash flow signals.



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