“Risk Changes and Information Effects Following Dividend Initiation Announcements: Evidence Based on Seemingly Unrelated Regression Method”

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Risk Changes and Information Effects Following Dividend Initiation Announcements: Evidence Based on Seemingly Unrelated Regression Method[1]

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Abstract

Prior studies have shown that dividend initiation announcements have information effects on the announcing firms. Also, there is evidence to suggest that firms in the same industry face similar operating conditions and production and cost structures. Hence if the initiation of cash dividend payment results from factors that affect the economic conditions of the industry as a whole, then the announcement could convey information on other firms in the industry. Also, extant literature has shown that corporate events such as dividend announcements can alter the risk of affected firms. In this paper, I provide new evidence on the information content of dividend by analyzing the effects of dividend initiation announcements on both the announcing firms and their industry counterparts. The results show that dividend initiation announcements are risk-altering events as both the announcing firms and their industry counterparts exhibit changes in risk during the dividend initiation period. The results are consistent with the argument that dividend initiation announcements convey information on other firms in the industry. The study has implications for empirical studies on dividend announcement effects. The results imply that by focusing on only announcing firms, prior dividend information-content studies have underestimated the information effects associated with this popular corporate event.

JEL Classification: G14, G35
Key words: Information transfer, CAPM, risk, dividend initiation, announcements.

1. Introduction

Several studies have documented that dividend initiation announcements have information effects on the announcing firms. However, very few studies have examined the effects of dividend initiation announcements on other firms in the same industry. Examining the information effects of dividend initiation announcements on other firms in the industry is important because there is evidence to suggest that firms in the same industry face similar operating conditions and production and cost structures. It is therefore reasonable to surmise that market participants could interpret dividend initiation announcements as reflecting the profitability of the industry as a whole. Thus, dividend initiation by one firm can affect the stock price of other firms in the industry. However, if improved profitability of the announcing firm that induced the initiation of dividend is achieved at the expense of other competitors in the industry, then competitors would be adversely affected since in that case the dividend initiation firm's good news is the competitor's bad news. The objective of this paper is to examine whether there is information transfer effects associated with dividend initiation announcements. This paper employs a seemingly unrelated regression (SUR) technique in a CAPM framework to examine risk changes following the announcement of dividend initiation[3].

The motivation for examining dividend information effects in the form of risk changes emanates from several considerations. First, extant literature has shown that value-altering events

[1] I thank Art Moreau, Jayne Godfrey, Christine Brown, Kim Sawyer, Kevin Davis and Bruce Grundy for their constructive comments on this paper. This paper has also benefited from comments from participants at the 1999 Multinational Finance Conference in Toronto, Canada and the workshop/seminar programs at The University of Melbourne and University of Tasmania in Australia.
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[3] Dividend initiation is defined as the first corporate cash dividend payment after going public or the resumed dividend payment after a 5-year period of suspension.

can also change the risk of the firm. Brown, Harlow and Tinic (1993) argue that in an efficient market, forces that alter the expected returns of firms also change risk in the same direction. There is empirical evidence to show that dividend initiation is value altering and that the announcement elicits positive abnormal returns to shareholders. Putting the finding of these two strands of research together, the issue of whether dividend initiation affects the risk of firms remains an empirical question. This paper provides further evidence on dividend information effect in the form of risk changes. Second, predictions of both signaling and agency cost theory motivate the need to examine information effects in the form of risk changes. Bhattarcharya (1979), and Miller and Rock (1985) have argued that dividend payments signal information about future profitability. Jensen, Solberg and Zorn (1992) also show that greater business risk is associated with lower dividend payments. By extension, business risk can decrease with increases in dividend payments. By initiating dividend payments, a firm's risk can fall. These predictions motivate the examination of dividend initiation information effects on the announcing firms.

The empirical literature is also replete with research that provides evidence of changes in risk following the release of firm-specific news. For example, Ohlson and Penman (1985) and Lamoureux and Poon (1987) document an abrupt increase in the daily variance of stock returns after stock split. Brennan and Copeland (1988) find out that systematic risks tend to be higher on announcement of stock splits than in the period surrounding the announcement date. Brown, Harlow and Tinic (1988, 1993) show that following the release of new firm-specific information, both risk and expected returns of affected firms change in a systematic fashion[1].

Stock splits are cosmetic corporate announcements since cash flows are unaffected by this transaction. If such cosmetic announcements can cause changes in risk and expected return, then the initiation of corporate cash dividend payment could also cause changes in risk. It is conceivable that events such as dividend initiation will produce risk changes if the announcement is perceived to reflect better profitability and future cash flow for the announcing firms as argued by Miller and Rock (1985). Thus, one would expect that cash flow risk and hence, solvency risk will decrease following dividend initiation.

The results are summarized as follows: Dividend initiation announcements are risk altering events, as both announcing and non-announcing firms exhibit changes in risk during the dividend initiation period. Furthermore, I find that the percentage of announcing firms with information content effect in the form of changes in risk is smaller than the percentage of non-dividend announcing firms with information transfer effects. I attribute this result to information revelation through trade. In general, the sample of dividend initiation firms analyzed in this study comprises of relatively small firms whose stocks are not traded frequently. As a result, the information is not revealed through the small, infrequently traded announcing firms. The non-dividend announcing firms, on the other hand, are large firms whose stocks are frequently traded. Since market participants perceive the dividend initiation announcements to be informative about the whole industry, traders may buy and sell the shares of these large non-announcing firms upon the announcement of dividend initiation by industry counterparts. In the process, these non-announcing firms tend to reveal the information effects. Our results are consistent with the argument that the market uses the information contained in the dividend initiation announcements to value firms in the industry. The results also suggest that by focusing on only announcing firms, prior dividend information-content studies have underestimated the information effects associated with this dividend announcement.

The rest of the paper is organised as follows. Section 2 presents a review of the relevant literature while Section 3 discusses the data and methodology. The results, as well as the limitations of the study are presented in Section 4. Finally, Section 5 provides a summary and conclusion.

2. Literature Review

Studies by Bhattarcharya (1979) and Miller and Rock (1987) suggest that dividend announcements convey information about a firm's future profitability and cash flows. Several studies

[1] Although this paper is not about stock split, the evidence in the stock split literature about changes in beta is used to buttress the proposition that certain firm specific events can alter the beta of affected firms.

provide empirical evidence to show that dividend announcements have information effects. For example, both Charest (1978) and Aharony and Swary (1980) document 2-day abnormal returns of 1% for firms which pay quarterly dividends. Bajaj and Vijh (1995) also find that the average announcement period excess return for a sample of firms announcing dividend payment is 0.21%. These studies show that the magnitude of the abnormal returns associated with regular dividend payment is small. However, dividend initiation announcements, unlike regular cash dividend payments, usually elicit a large and significant market reaction. Asquith and Mullins (1983) document 2-day abnormal returns of 4.7% for dividend initiation firms. Vankatesh (1989) also documents excess returns of 5.2% for a sample of firms that initiated dividend payment. Similar results are provided by Deshpande and Jog (1989) and Michaely et al. (1995).

While the literature shows that dividend announcements have information effects on the announcing firms' stock returns, very few studies examine whether the dividend announcements have effects on other firms. Boim (1974) examined the impact of Consolidated Edison's dividend omission announcement on other industry counterparts and found that the announcement adversely affected the returns of both Consolidated Edison and other firms in the Utility industry. However, such single-firm single-industry study suffers from problems of generalization beyond the utility industry. In relatively recent studies, Laux et al. (1998) and Howe and Shen (1998) examined the information transfer effects associated with regular dividend and dividend initiation announcements respectively. The results of these studies are inconclusive because while Laux et al. find that announcing firms' rivals react to large revisions in regular dividends, Howe and Shen find that the stock price of non-dividend initiating firms do not react to dividend initiations announcements. The current study provides further evidence relating to the intra-industry effects of dividend initiation announcements. It examines whether the risk of affected firms changes following dividend initiation announcements.

Two different relations between dividend payments and risk changes have been posited in the literature. These are the 'good news' (reduction in risk) school which emanates from the signalling hypothesis and the 'no good news' school which draws from the information gathering hypothesis. Jensen, Solberg and Zorn (1992) show that greater risk is associated with lower dividend payments. Bar Yosef and Kolodny (1976) and Bar Yosef and Huffman (1986) also show that the size of the dividend declared is an increasing function of expected cash flows, ie. a lower payout ratio or small amount of cash dividend is associated with higher uncertainties of expected cash flow. Dravid (1987) reports a decrease in the variances of stock returns at the time of stock dividend announcements. These authors posit a negative relationship between dividend payments and risk. Their conclusions are consistent with the signalling hypothesis that predicts a negative association between the payout ratio and exposure to risk.

The proponents of the 'not-good news' school, especially Kim and Verrecchia (1991), submit that since dividend announcement is known to convey information to the market, the volatility of stock price around dividend announcements should be higher because the announcement stimulates more private information gathering and uncertainty. The authors find that the systematic risk during the announcement period is larger than that estimated during the non-event period. Kalay and Loewenstein (1985) also find that for a sample of 302 dividend announcing firms, 145 (48%) had higher variances on the event period as compared to 17 (5.6%) with lower variances. Kalay and Loewenstein also show that although the variance of stock returns is higher during the dividend announcement period than otherwise, not all of the increased risk is diversifiable. In fact, they find that announcement period betas are higher on average by 0.09. If the incremental risk of a random day is not totally diversifiable, then risk adverse investors would require a higher expected rate of return during the period. Therefore finding significantly higher average returns around announcement days cannot necessarily be interpreted as good news. The abnormal returns merely reflect the compensation required by investors for the larger uncertainty over this period. In that case, finding abnormal returns around the announcement date is not inconsistent with market efficiency as long as these abnormal returns can be attributed to corresponding increases in the relevant measure of risk that are large enough to fully explain the abnormal returns (Brown Har-

low and Ticnic (1993) and Bajaj and Vijh (1995))[1]. Thus empirical evidence that shows that the abnormal returns realized around dividend announcement periods are higher than normal is consistent with market efficiency if the relevant measure of risk is used[2].

Given that dividend initiation involves a drastic policy change, it is expected that the change in risk, if any, will be substantial, since as the first dividend, the announcement could generate increased uncertainty regarding earnings stability and future cash dividend prospects. In that case betas can become temporarily larger during the period surrounding the dividend initiation. Bar Yosef and Brown (1977) and Brown et al. (1988) document that systematic risk of common stock exhibit significant but temporal changes around firm specific events such as stock splits. Also Brown et al. (1993) show that generally, risk changes that occur in the immediate aftermath of a major change in stock price typically attenuate with the passage of time. The increase in risk is usually transitory and shows mean reverting tendencies.

While it has been shown that following dividend announcements the variance of stock return increases, it is sometimes difficult to surmise how supposedly firm-specific announcements such as dividend initiation would affect the risk (beta) of the firm. Dividends help resolve firm-specific risk which by their idiosyncratic nature should not be priced according to a portfolio-based asset pricing model, a setting in which market prices on average are set by well-diversified investors (Kalay and Loewenstein, 1985). However, as Bajaj and Vijh (1995) argue, in short term trading in the course of information events, the marginal traders are not necessarily well diversified. Bajaj and Vijh submit that stock price around dividend announcement days is influenced by information-motivated traders. These short-term traders, on average, receive excess returns as compensation for the risk borne in the information production process. Furthermore, Otchere (1999) shows in a portfolio context that dividend initiation has mean, variance and covariance effects and that the announcements can lead to changes in betas of the announcing firms as well as those of other firms in the industry. The author shows that if total wealth of investors is represented as $\sum_{i=1}^{N} x_j p_j$, where x_j represents quantities of stock held and p_j represents the stock prices, then major firm-specific informational events, such as dividend initiation announcements that induce trading of one or more stocks in the portfolio will lead to portfolio rebalancing and this is likely to affect the weight and therefore beta of other firms in the portfolio.

3. Data and Methodology

3.1. Sample Selection Procedure

This study is based on Australian sample for the period from January 1990 to December 2000. Two separate samples, namely dividend initiation and non-dividend initiation samples are formed. Dividend announcement dates were obtained from Bloomberg database. To be included in the sample, dividend initiation firms must satisfy the following criteria.

1. The dividend is the first in the history of the firm since listing on the Australian Stock Exchange (ASX) or the resumed dividend after missing dividend payments for 5 years.
2. Daily stock prices and volume data are available on the ASX or Equinet database for the period from January 1990 to December 2000[3].
3. There were no significant contemporaneous announcements (for example, stock splits etc.) during the 5 days surrounding the announcement date.
4. The firm should have paid dividends for at least one year since initiating or resuming dividend payments.
5. The dividend declared date is available in the Bloomberg dividend records.

[1] It should be mentioned that Chen, Grundy and Stambaugh (1990) do not find any cross-sectional relation between dividend yield and risk-adjusted expected returns.

[2] Evidence of increased volatility for other corporate announcements has been documented by Christie (1983).

[3] The sample firms need not have data throughout the whole study period since for the differential information analysis the tests are based on different sub-periods.

6. The dividends should have been declared at least 30 days after the listing date.

The final sample consists of 308 firms (comprising 264 dividend initiation firms and 44 dividend resumption firms) representing 22 ASX industrial groups. The distribution of the sample is shown in Table 1.

Table 1

Distribution of sample by Industry Groups

	Initiation	Resumption	Total
MINING SECTOR			
Gold	13	5	18
Energy	2	5	7
Other Metals	5	2	7
TOTAL MINING (a)	*20*	*12*	*32*
FINANCIAL SECTOR			
Banks & Finance	7	0	7
Insurance	3	0	3
Investment & Financial Services	29	9	38
Property Trust	19	1	20
TOTAL FINANCIAL (b)	*58*	*10*	*68*
OTHERS			
Alcohol & Tobacco	5	1	6
Developers & Contractors	17	1	18
Building Materials	15	3	18
Food & Household Goods	17	2	19
Retail	17	3	20
Media	19	3	22
Paper & Packaging	14	0	14
Chemicals	5	1	6
Transport	11	0	11
Engineering	25	3	28
Tourism & Leisure	9	1	10
Computer Services	7	1	8
Automotive	9	0	9
Electricals	10	3	13
Manufacturing	6	0	6
NON-FINANCIAL (c)	**186**	**22**	**208**
TOTAL SAMPLE (a+b+c)	**264**	**44**	**308**

The table shows the frequency distribution of the dividend announcing firms. The total sample comprises 308 dividend initiation announcements from 1990 to 2000.

Table 1 shows the breakdown of the sample firms by industry. We find that the distribution of dividend initiation firms is skewed towards the gold, investment and property trust sectors. The average number of announcing firms per industry is 14, ranging from 3 (in the insurance industry) to 38 (in the investment and financial services industry).

Intra-industry information transfer effects are examined by analyzing the effects of dividend initiation announcements on a sample of non-announcing firms. The non-announcing firms consist of firms in the industry not initiating dividends at the time of the initiation firm's announcement. The non-dividend initiation firms must satisfy criteria 2 and 3 above. They are selected according to the two-digit ASX industry classification code, the highest industry classification used in Australia. To keep the data collection and analysis manageable, the maximum number of non-announcing firms in each group is restricted to 15. Should an industrial group have more than the maximum, then 15 firms are selected on the basis of age, availability of stock price, volume, frequency of trade and size data for the sample period. The criteria yielded 126 non-announcing firms. Out of this number, 48 had not paid any dividends since listing on the Australian Stock Exchange. The rest had either suspended dividend payment or were not paying dividends at the time of the announcement. Summary statistics relating to the announcing firms and the industry counterparts that had not paid any dividends in their corporate history are shown in Table 2.

Consistent with Lipson et al. (1995), we find that dividend initiation firms, on average, begin paying dividends 4 years after listing. As shown in Panel A of Table 2, the mean age of the dividend initiation firms is 4.5 years, while the median age is 3.33. The youngest dividend initiation firm paid dividends six months after its initial public offering while the oldest firm paid its first dividend 31 years after listing on the stock exchange. However, most of the dividend initiation firms pay dividends within 2 to 5 years of listing, with only 6% paying dividends at least 10 years after listing (panel B). The mean age of the sample of firms that had not paid any dividends during their corporate lives is 9 years, the oldest being 26 years and the youngest 2 years. A large majority of such firms are in the 5-10 year bracket. This finding is inconsistent with that of Lipson et al. (1995) who find that dividend initiation firms are much older than comparable non-dividend initiation firms. That most of the initiation firms are much younger suggests that dividend initiation announcement perhaps reflects the start of an informational mechanism rather than the announcement being motivated by the existence of free cash flow.

3.2. Research design and methodology

The information effects associated with dividend initiation announcements are analyzed by examining the incremental change in beta. To do this I estimate a multi-variate regression model (MVRM) for both the announcing and non-announcing firms. The MVRM is an application of Zellner (1962) seemingly unrelated regressions (SUR) technique to event studies[1].

The SUR model used in this study is stated as:

$$\begin{aligned} R_{it} &= \alpha_i + \beta_{i1} R_{mt} + \beta_{i2}{}^{D} R_{mt} + \lambda_i Vola + \eta_i Vol + \varphi_i Size + \tilde{\varepsilon}_{it}, \\ &\vdots \\ R_{It} &= \alpha_{It} + \beta_{I1} R_{mt} + \beta_{I2}{}^{D} R_{mt} + \lambda_I Vola + \eta_I Vol + \varphi_I Size + \tilde{\varepsilon}_{It}, \end{aligned} \tag{1}$$

where R_{it} is the equity risk premium on stock i on day t and R_{mt} is the market risk premium on the All Ordinary Index. The model above has three control variables, namely, Volatility ('Vola') defined as the log of high divided by low for the day, Volume ('vol') is the volume of shares outstanding, and size is proxied by market capitalisation. The information effect is captured with the aid of a dummy variable. Any time a firm in the industry makes a dividend initiation an-

[1] Underlying the intra-industry information transfer hypothesis is the likelihood of a cross-sectional correlation in security return residuals because firms in the same industry are affected by common industry factors. The existence of cross correlation or lack of it cannot be assumed a priori. It is useful to test non-zero contemporaneous covariance because if contemporaneous correlation does not exist, then the covariance matrix is diagonal matrix and the least square rule applied separately to each equation is fully efficient. Thus, there is no advantage in using the seemingly unrelated regression (SUR) estimator. Accordingly, a cross-correlation test based on the procedure described in Griffith et al. (1995) is performed. Though not shown here, the results indicate that cross correlation is highly significant in all industry categories except for the computer services and tourism industries where cross correlation is marginally significant at the 10% level.

nouncement, the information dummy variable takes on a value of 1 for each of the 5 days surrounding the announcement and zero otherwise. $D_i R_{mt}$ measures the incremental change in risk of firm *i* caused by the dividend initiation announcement[1].

Table 2

Descriptive Statistics for Dividend Initiation firms and the Non-Dividend Paying firms for the period of 1990- 2000

PANEL A:	*AGE PROFILE OF DIVIDEND INITIATION VS NON-DIVIDEND PAYING FIRMS*	
	Dividend Initiation Firms that continuously paid dividends Years	Non- Dividend Paying Firms Years
Youngest	0.5	2.25
Oldest	31.5	25.92
Median	3.33	8.92
Mean	4.52	9.12
PANEL B:	*FREQUENCY DISTRIBUTION OF THE SAMPLE BY AGE*	
	Continuously Paying Dividend Initiation Firms *N = 141*	Non-Dividend Paying Firms *N = 48*
AGE	%	%
< 1 year	1	0
1 – 2 years	26	0
>2 – 5 years	45	13
>5 – 10 years	21	58
>10 – 20 years	4	27
> 20 years	2	2
PANEL C:	*FREQUENCY DISTRIBUTION OF YEARS OF PAYING DIVIDENDS BEFORE SUSPENSION (for firms that did not continually pay dividend since initiation)*	
Time		%
< 1 year		5
1 – 2 years		54
>2 – 3 years		16
>3 – 5 years		15
>5 – 7 years		10
+ 7 years		0

This table presents the descriptive statistics for the sample firms as of December 1995. Panels A and B show the distribution of the ages of the dividend initiation firms that have continuously paid dividends since initiation and firms which have never paid dividends. Panel C shows the frequency distribution of years that the other initiation firms paid dividends before suspension.

Extant research (including Asquith and Mullins, 1983, Deshpande and Jog 1989, Vanketesh, 1989 and Michealy et al., 1995) shows that dividend initiation announcements generate significant abnormal returns for the announcing firms. However, for the significant abnormal returns to be consistent with an efficient price formation process, the level of systematic risk in the post event period must be different from that measured during the estimation period (Brown, Harlow and Tinic, 1993). This suggests that if dividend initiation announcement contains information,

[1] This framework has been used by Saunders and Smirlock (1987) and Grammatikos and Saunders (1990).

the pre-announcement information set of rational investors (represented by ϕ in this study) must be different from the (conditional) dividend information set (represented by θ). In other words, for firm *i*, $E(R_i \mid \phi) \neq E(R_i \mid \theta)$. Brown, Harlow and Tinic (1993) show that in a CAPM framework, $\Delta E(R_i) = \Delta\beta(E(R_m)$. If dividend initiation has an information effect as measured by risk changes, then the hypothesis of interest is $\beta_{i1} \mid \phi \neq \beta_{i2} \mid \theta$, where β_{i1} is the beta before the announcement and β_{i2} is the post announcement beta. In this paper, we call this test the rational expectation hypothesis test.

The null hypothesis tested is that dividend initiation announcements are purely firm specific events and hence the announcements reflect changes in cash flow and earnings prospects of the announcing firms. The alternative hypothesis is that, dividend initiation announcements convey information about industry counterparts and hence, affect the returns of other firms in the industry. The information effects associated with the announcements are analyzed by first examining whether the incremental change in beta is significantly different from zero (standard test) and second, whether the information period beta is significantly different from the non-information period beta (the rational expectation equilibrium test). For each of these tests, I perform two main analyses, namely, the average industry information effect test (similar to abnormal returns used in event studies) and differential information effect test. These tests are described in detail below.

3.2.1. Standard (Average and Differential) Test

For the average test, the individual betas were combined to get an estimate of an equally weighted portfolio beta for the event period. The average information hypothesis is that, for each industry, the average information period beta coefficient across all firms in the industry is equal to zero. The coefficient of the dummy variables are summed up (or averaged) across sample firms in the industry to determine the information effects. The test restriction is:

$$\sum_{i=1}^{I}\sum_{j=1}^{J}\beta_{2i} = 0, \tag{2}$$

where *i* is the number of firms and *j* is the number of dividend initiation announcements. We recognize that the information effect may not be homogeneous across firms or industries, so we perform differential information test for each firm to determine whether the information period beta is significant, ie. $\beta_{i2} = 0$. For this test, the effects of each announcement on each firm are analyzed separately. Thus, there are as many information variable coefficients (β_{i2}) for each firm as there are dividend initiation announcements in the industry. The percentage of firms with significant information coefficients (i.e., $\beta_{i2} \neq 0$) is computed.

3.2.2. Rational Expectations Equilibrium (Average and Differential) Tests

The rational expectation test involves comparison of the comparison period and information period betas. For this test, the dividend initiation announcement has information effects if $\beta_{j1} \neq \beta_{j2}$, where β_{j1} is the comparison period coefficient and β_{j2} is the information period parameter. For the average rational expectation equilibrium test, the individual betas were combined to obtain an estimate of an equally weighted portfolio beta for the event and non-event period and a test of equality of means was performed. Thus under the rational expectation information hypothesis, information effects associated with dividend initiation announcements for the whole industry is tested as:

$$\sum_{i=1}^{I}\sum_{j=1}^{J}\beta_{2i} \neq \sum_{i=1}^{I}\sum_{j=1}^{J}\beta_{1i}, \tag{3}$$

where β_{i1} is the comparison period coefficient and β_{i2} is the information period coefficient, *j* and *i* are as defined. The rational expectation equilibrium differential test is that for each announcement and for each firm, the information period beta is significantly different from the comparison period beta, ie. $\beta_{i2} \neq \beta_{i1}$. The percentage of firms with significant different betas is analysed.

4. Results

4.1. Combined Sample Results: Standard Average Tests

The analyses are first performed for a combined sample of 204 firms that had data throughout the study period without distinguishing between announcing firms' effects (information content) and non-announcing firms' effect (information transfer). The results of the average information test are shown in Table 3. Column 1 shows the industry category and column 2 indicates the number of firms in this sample. Column 3 shows the number of dividend initiation announcements while columns 4 and 5 present the results of the average tests for the comparison (non-dividend initiation) period and information (dividend initiation) period respectively. Columns 6 and 7 indicate the percentage of firms in the industry with significant coefficient in the comparison period and information period respectively. Column 4 shows that for the comparison period, the average industry beta is significant at 10% or better for all but 5 of the 22 industries examined. However, the evidence in column 6 suggests that for the investment and financial services, property trust, alcohol and tobacco, tourism and leisure and automotive industries, the comparison period beta is driven by a few firms since <40% of firms in the industry had significant beta.

As column 5 indicates, the hypothesis that on average, dividend initiation announcements do not have any information effect is rejected in 64% (14) of the 22 industries. In the insurance, banking, developers and contractors, building materials, alcohol and tobacco, transport, computer services and automotive sectors, the average information parameter is not significant. Although not shown here, of these 8 industries, insurance, development and construction, chemicals, electrical and computer services did not have significant comparison period beta, so the lack of significant information effect is not surprising. Generally, however, the test rejects the hypothesis of no information effect.

A comparison of columns 6 and 7 of Table 3 reveals an interesting phenomenon. For some industries, the percentage of firms with significant information period beta is greater than that of the comparison period. For example, for the insurance, investment, and property trust industries, only 11%, 40% and 40% of firms had significant comparison (pre-dividend announcement) period betas. However, during the dividend initiation period, 33%, 60% and 70% respectively had significant betas. A similar pattern is observed for the chemicals, paper and pulp, retail, electronics, and computer services industries. In fact, for retail and electronics industries, three times as many firms had significant information period beta. This is a strong evidence of information effects associated with dividend initiation.

The average test has a major limitation i.e., it has the tendency to conceal information transfer effects. The limitation of the average test is evident in the number of firms in each industry with information effect betas that are significantly different from zero. In the banking industry for example, the average information effect coefficient is not significant, yet 71% of the firms experienced significant information betas. The finding of no average information effects in these industries could be due to offsetting effects inherent in the average tests. The test might support the hypothesis that the average industry information effect across firms equals zero just because summing coefficients of different signs reduces the magnitude of the sum. Also summing significant and insignificant coefficients increases the sampling variability. Both of these could contribute to accepting the null of no information transfer effect. The results of the average tests could thus be ambiguous. We examine the differential information effects in section 4.3.

4.2. Combined Sample Results: Average Rational Expectation Test

The results of the rational expectation tests for each industry are presented in Table 4. The regression coefficients are shown in column 3 and the chi-square and significance levels are shown in column 4. The data in column 5 represent the percentage of firms with information period coefficient that is significantly different from the comparison period coefficient. The last column shows the percentage of firms whose beta is significant only during the information period. The results show that the comparison period and information period betas are statistically significant for all industries except for the insurance and the computer services industries. On the whole, for

53% of the firms, the information period beta is significantly different from the comparison period beta. The percentage of firms for which the null hypothesis of no information transfer is rejected ranges from 11% in the insurance industry to 86% in the banking industry.

The last column which contains data relating to the percentage of firms with significant beta only during the dividend initiation period reveals strong evidence of information effect associated with dividend initiation announcements. On average about two-thirds of the firms which experienced significant information effects had significant betas only during the event period. Even more interesting is the result that for the insurance and computer services industries where the average test of no information effect cannot be rejected, half to two-thirds of the firms had significant information period beta although the betas in the comparison period were not significant. This evidence suggests that the dividend information effects were incorporated into the firms' beta during the dividend initiation announcement period.

Table 3

Results of Average Information Effect Test for a Sub-sample of Firms with complete data

INDUSTRY	No. of Firms	No. of announcements	Average Test		$\%\beta_{i1}\neq 0$	$\%\beta_{i2}\neq 0$
			Comparison Period	Information Period		
1	2	3	4	5	6	7
MINING						
Gold	13	5	0.48 (7.25)*	1.86 (3.85)*	69	62
Energy	11	4	0.55 (19.12)*	0.46 (2.43)**	73	55
Other Metals	10	3	0.57 (5.16)*	-1.16 (2.70)*	70	50
FINANCIAL						
Banks	7	3	0.42 (12.65)*	-0.07 (0.45)	86	71
Insurance	9	2	0.08 (0.52)*	-0.23 (0.36)	11	33
Investment & Financial Services	10	4	0.36 (3.31)*	0.72 (0.80)*	40	60
Property Trust	10	8	0.27 (1.93)***	-1.21 (2.47)*	40	70
NON-FINANCIAL						
Alcohol & Tobacco	7	5	0.28 (3.08)*	-0.03 (0.09)	29	14
Building Materials	10	2	0.26 (3.25)*	0.17 (0.74)	50	50
Developers & Contractors	9	5	-0.02 (0.28)	0.02 (0.12)	33	33
Food & Household	10	3	0.23 (4.91)*	0.65 (1.81)***	50	50
Retail	12	8	0.12 (2.99)*	-0.19 (3.52)*	25	75
Media	14	4	0.40 (7.18)*	0.40 (2.30)**	64	57
Paper & Packaging	9	6	0.34 (8.24)	-0.48 (3.29)*	56	78

Table 3 (continuous)

1	2	3	4	5	6	7
Chemicals	4	4	0.06 (1.16)	0.55 (1.74)***	25	50
Transport	9	4	0.14 (1.63)***	-0.64 (1.57)	22	33
Engineering	13	5	0.32 (4.44)*	0.59 (3.98)*	54	54
Tourism & Leisure	9	2	0.21 (6.37)*	0.42 (4.93)*	44	44
Computer Services	5	3	0.21 (1.41)	-0.96 (1.05)	20	40
Automotive	8	3	0.25 (4.16)*	-0.28 (1.60)	25	38
Electricals & Electron-ics	9	5	0.08 (1.03)	0.76 (2.18)**	22	67
Manufacturing	6	3	0.60 (4.37)*	1.05 (9.26)*	67	67
TOTAL	204	91			46	53

The sample consists of 204 firms that had data spanning the whole study period from 1990 to 2000. The table reports both the comparison period beta and the information period beta for the average information effect test that for each industry, the change in beta during the announcement period is zero. The test is based on the following SUR regression estimated for each firm: $R_{it} = \alpha_i + \beta_{i1} R_{mt} + \beta_{i2} D R_{mt} + \lambda_i Vola + \eta_i Vol + \varphi_i Size + \tilde{\varepsilon}_{it}$. The results of the average information effect test are based on $\sum_{i=1}^{I} \sum_{j=1}^{J} \beta_{i2} = 0$. Thus there is one coefficient and chi-square statistic for each industry showing the average information effects.

(***, **, *) significant at 1%, 5% and 10% (two-tailed test) respectively.

4.3. Differential Information Effects

The results of the average test suggest that the information effect for the sample is unidirectional and positive. However, I do not presume any direction for the information effect. On one hand, if dividend initiation is perceived to convey information about industry future profitability and cash flow, then the information effects could be positive for the sample firms. On the other hand, for the announcing firms, agency problems can cause dividend initiation firms to react negatively if for example, management uses the cash to pay dividends instead of using it to finance positive NPV projects. Also, if uncertainties increase during the dividend initiation period because of information gathering, then risk will increase. For non-announcing firms, because of competitive shifts and possible re-distributional effects, the spillover effects resulting from the dividend initiation announcements could be positive or negative. In an attempt to obtain further evidence on the differential effects of dividend initiation announcements, each firm's announcement is analyzed separately. For each announcement, we estimate one information variable coefficient for each firm. Table 5 presents a summary of the firm-to-firm announcement effects of dividend initiation for the whole sample. The data presented in column 4 of the table shows the number of firms with significant information effects.

The results shown in this table represent both the own-firm effect and the spillover effects resulting from dividend initiation announcements. This total information effect has not been previously analyzed as prior researchers have considered only announcing firms' own effects. For a total of 1848 firms observations, 1016 (55%) out of them reacted significantly to the dividend ini-

tiation announcements[1]. In 18 out of the 22 industry groups examined, more than 50% of the firms experienced information effects. The information effect is more prevalent in industries such as gold, metals, constructions and banks but less in the computer services, alcohol and tobacco, and transport, food and household. The gold sector had the largest response to dividend initiation announcements, with 63% of the firms experiencing information effects. The results show that the information effect of dividend initiation is not homogeneous.

The results presented in this section consist of the combined information content and information transfer effects. These results could be influenced by volume of shares traded, frequency of trade or size of the firms. To determine the importance of these variables, I break the results down into different categories on the basis of size, volume and frequency of trade. In the next section, the results are presented separately for announcing and non-announcing firms with a view to providing further insights into the nature of the information effects.

Table 4

Results of the Rational Expectation Equilibrium Information Effect Test

INDUSTRY	No of Firms	Coefficient	χ^2 ($p\{\chi^2=0\}$)	$\%\beta_{i1}\neq\beta_{i2}=0$	$\%\beta_{i2}\neq0,\beta_{i1}=0$
1	2	3	4	5	6
MINING					
Gold	13	0.58	121.66 (0.01)	46	38
Energy	11	0.85	998.35 (0.01)	45	40
Other Metals	10	1.04	179.34 (0.01)	40	60
FINANCIAL					
Banks	7	0.39	271.92 (0.01)	86	20
Insurance	9	0.002	18.18 (0.38)	11	67
Investment & Financial Services	10	0.33	100.32 (0.01)	50	100
Property Trust	10	0.04	75.36 (0.01)	50	83
NON-FINANCIAL					
Developers & Contractors	9	0.03	56.31 (0.01)	33	67
Building Materials	10	0.30	136.12 (0.01)	50	60
Alcohol & Tobacco	7	0.18	53.35 (0.01)	14	100
Food & Household	10	0.20	44.03 (0.01)	40	100
Chemicals	4	.13	12.14 (0.09)	50	100
Engineering	13	0.40	57.70 (0.01)	45	57

[1] The sample is larger in the firm-to-firm case because it includes sub-sample analysis for firms that did not have data spanning the full period used for the average tests.

Table 4 (continuous)

1	2	3	4	5	6
Paper & Packaging	9	0.32	105.43 (0.01)	67	67
Retail	12	0.02	90.06 (0.01)	58	78
Transport	9	0.27	69.22 (0.01)	44	67
Media	14	0.47	194.78 (0.01)	64	63
Tourism & Leisure	9	0.20	39.26 (0.01)	33	75
Computer Services	5	0.21	11.49 (0.24)	20	50
Electricals & Electronics	9	0.02	92.87 (0.01)	67	100
Automotive	8	0.19	41.27 (0.01)	38	100
Manufacturing	6	0.82	454.11 (0.01)	67	50
TOTAL	204	91		53	69

The sample consists of 204 firms that had data spanning the whole study period from 1990 to 2000. The table reports both the comparison period beta and the information period beta for the average information effect test that for each industry, the change in beta during the announcement period is zero. The test is based on the following SUR regression estimated for each firm: $R_{it} = \alpha_i + \beta_{i1} R_{mt} + \beta_{i2} D R_{mt} + \lambda_i Vola + \eta_i Vol + \varphi_i Size + \tilde{\varepsilon}_{it}$. The results of the rational expectation equilibrium test are based on a test of $\sum_{i=1}^{I}\sum_{j=1}^{J}\beta_{i2} \neq \sum_{i=1}^{I}\sum_{j=1}^{J}\beta_{i1}$.

4.4. Information Content of Dividend Initiation: New Evidence

The effects of dividend initiation announcements on the announcing firms themselves are presented in Table 6. Column 2 shows the number of firms in the sample while column 3 shows the percentage of firms with significant information effects. In column 4, the percentage of announcing firms with only own firm announcement effects is presented while column 5 shows the percentage of announcing firms with significant betas in the comparison period that also experienced a negative beta during the information period. The last six columns provide evidence on the size, volume of trade and frequency of trade characteristics of the announcing firms that reacted to their own announcements. As column 3 indicates, in 12 out of the 22 industries, at least half of the dividend initiation firms experienced changes in risk. The figures in column 4 show the percentage of announcing firms that received only own-firm dividend initiation announcement effects. Out of the 308 firms that initiated dividend payments, only 31 (10%) had only own-firm announcement effect; that is, the announcements by these firms did not affect other firms. For the computer services sector, the information effect was mostly own firm effect, with 2 out of every 3 announcements having effects on only the announcing firms (information content effects). For the majority of the dividend initiation announcements, the information effects spilled over to other firms. This finding shows that prior studies have underestimated information effects associated with dividend initiation.

Although not shown here, almost all the sample firms had positive comparison period betas. However, the evidence in column 5 of Table 6 shows that about 47% of the announcing firms with significant own-firm effect had substantial reductions in risk during the dividend announcement period. Firms in the property, investment, banks, alcohol and the chemicals industries had significantly large reductions in risk. The seemingly small percentage of firms with significant own-firm effect (48%) and the proportion of these firms with reduction in risk (47%) could be explained in a number of ways. First, the lack of significant reduction in risk could be due to uncertainties about the future cash flows and hence the firms'

ability to maintain future payments. If market participants do not consider the dividend initiation announcement to be a credible signal, then cash flow risk may increase or at a minimum, show no change. Agency argument can also explain the small percentage of announcing firms that had reduction in risk. Investors may perceive the dividend initiation announcement as not value maximizing. Instead of paying dividends, managers could probably have conserved cash to finance positive net present value projects. Since most of the dividend initiation firms are small and young companies (see Table 2), using cash to pay dividends could be interpreted as a bad policy and could result in an increase in risk.

4.4.1. Firm size, volume, frequency of trade and firm's own announcement effects

I analyze the characteristics of the dividend initiation sample based on size, volume and frequency of trade with a view to determining why some announcing firms reacted to the dividend initiation announcement and some did not. That it takes volume to move price is a fact that has been established in extant literature (see for example, Karpoff, 1987). If a small firm makes dividend initiation announcement and does not trade during the announcement period, the stock may not react to the information. However, if the announcement reflects industry profitability, then frequently traded could convey the information associated with the announcement. It is in this regard that we classify the sample firms on the basis of size, volume of trade and frequency of trade with the hope of explaining the results documented for the announcing firms.

Table 5

Results of the Differential Information Effect for the Total Sample

INDUSTRY	No. of observations	No. of announcements	$\%\beta_{j2}\neq 0$
MINING			
Gold	125	18	63
Energy	50	7	58
Other Metals	55	7	55
FINANCIAL SECTOR			
Banks	33	7	51
Insurance	11	3	50
Investment & Financial Services	336	38	60
Property Trust	118	20	56
NON-FINANCIAL			
Alcohol & Tobacco	25	6	44
Building Materials	133	18	56
Developers & Contractors	106	18	58
Food & Household	87	19	46
Retail	107	20	53
Media	146	22	53
Paper	67	14	56
Chemicals	20	6	50
Transport	34	11	47
Engineering	196	28	53
Tourism	50	10	52
Misc. (computer) Services	26	8	35
Automotive	34	9	53
Electricals	56	13	50
Manufacturing	33	6	58
TOTAL	**1848**	**308**	**55**

The table reports the results of the differential information effect test. For each announcement and for each industry, the percentage of firms that experienced significant incremental risk change following dividend initiation announcement is reported. The test is based on ($\beta_{j2} \neq 0$) in the following regression:

$$R_{it} = \alpha_i + \beta_{i1} R_{mt} + \beta_{i2} D R_{mt} + \lambda_i Vola + \eta_i Vol + \varphi_i Size + \tilde{\varepsilon}_{it}.$$

Columns 6 to 11 of Table 6 show some interesting characteristics of the dividend initiation firms that had significant information effects. For the whole sub-sample of announcing firms with information effects, 21% are large firms and 15% are in the small-size quintile, 23% are heavily traded firms (high volume quintile) while 15% are in the low volume quintile. Moreover, 48% of such firms have stocks that trade frequently while 38% are traded infrequently. Recall that property, media, and the banking industries had a high percentage of firms with own firm effects. Generally, these industries consist of large firms. The shares of large firms are likely to be traded by institutional investors. The fact that firms in small and infrequently traded firms in industries such as tourism reacted to their own announcements suggests that dividend initiation in these industries was informative.

Column 3 indicates that the percentage of announcing firms that did not experience any information effect ranges from 25% in the property sector to 100% in the insurance industry. What is surprising is that the percentage of announcing firms with no own-firm dividend announcement effect is more than that with information effects. A possible explanation for the lack of information effects for these firms whose dividend announcements do not show any evidence of information content effects is that the market might have anticipated the announcement and accordingly priced the information before the news was released. Or it is possible that the model is not sufficiently powerful to capture the information effects.

Alternatively, the lack of information effect is consistent with the market having learned that the dividend announcement is not a credible signal and therefore, market participants did not revise their expectation about the firms' prospects. Though not shown here, I find that 22% of the announcing firms with no information effects are small firms while 14% are large ones. Also 22% are in the low volume quintile while only 12% are in the highest quintile; 43% are in the infrequent trading category and 34% are in the frequently traded group. Since most of the announcing firms with no own-firm dividend information effects are in the infrequent trading category, a more plausible explanation for the lack of significant reaction is that the shares of these firms are not traded frequently. Since the announcement has an industry effect, frequently traded firms (mostly large firms) in the industry pick up the information effect through trade. Thus, the finding of no information effect for the announcing firms does not mean the non-existence of information effects associated with dividend initiation announcement.

4.5. Information Transfer (Spill-Over) Effects

The effects of dividend initiation announcements on non-announcing firms are presented in Table 7. Column 2 shows the number of non-announcing firms in the sample, while column 3 indicates the percentage of non-announcing firms in the industry with significant information transfer effects. Column 4 shows the percentage of firms with significantly negative incremental betas during the information period, while columns 5 to 10 show the size, volume and frequency of trade profiles of the non-announcing firms. Out of the 1548 non-announcing sub-sample observations, more than half (56%) experienced significant information transfer effects in the form of changes in risk. In 16 out of the 22 industries, more than 56% of the firms experienced information transfer effects; hence, the existence of firm-to-firm information transfer effects cannot be rejected. As column 4 indicates, about half of these firms had substantial reduction in risk during the period of dividend initiation by firms in the same industries.

Table 7 also shows that 31% of the non-announcing firms that exhibit information transfer effects are in the large quintile, 20% are in the bottom quintile, 27% are in the high trading volume quintile while 14% are in the lowest volume of trade quintile. Moreover, 50% of the firms with significant information effects are in the high frequency of trade category while 38% are in the infrequently traded group. Consistent with the observation made for the announcing firms, I find that frequently traded non-announcing firms exhibit more information transfer effects.

Table 6

Analysis of Dividend Initiation Announcements on Announcing Firms with Information Effects

INDUSTRY	No. of Firms	$\%\beta_{i2}\neq 0$	% with only own-effect	% with Negative β_{i2}	SIZE[1]		VOLUME OF TRADE[1]		FREQUENCY OF TRADE	
					LARGE	SMALL	HIGH	LOW	HIGH	LOW
MINING										
Gold	18	17	0	33	0	0	33	0	33	0
Energy	7	43	0	33	100	0	33	0	67	0
Metals	7	43	0	33	67	0	66	0	67	33
FINANCIAL SECTOR										
Banks	7	56	0	60	60	0	60	0	100	0
Insurance	3	0	0	0	0	0	0	0	0	0
Investment	38	50	0	68	11	26	5	37	37	42
Property	20	75	7	73	25	6	25	12	50	50
NON-FINANCIAL										
Alcohol & Tobacco	6	50	33	67	33	33	0	0	0	33
Building Materials	18	39	0	40	14	29	43	43	57	43
Developers & Contractors	18	33	20	50	0	17	17	0	50	17
Food & Household	19	26	20	60	20	40	20	40	40	60
Retail	20	25	0	40	40	0	40	0	40	40
Media	22	73	6	50	31	12	38	12	56	31
Paper	14	64	0	22	45	22	45	11	56	44
Chemicals	6	50	33	67	33	0	0	0	33	67
Transport	11	45	40	40	20	0	20	20	80	20
Engineering	28	50	0	36	0	14	0	14	43	28
Tourism	10	70	29	14	14	0	14	14	72	14
Computer Services	8	38	67	0	0	67	0	0	0	33
Automotive	9	56	17	50	0	0	20	20	20	80
Electrical	13	62	25	25	13	37	0	0	38	62
Manufacturing	6	67	0	50	0	0	25	25	50	50
TOTAL	**308**	**48**	**10**	**47**	**21**	**15**	**23**	**15**	**48**	**38**

[1]High and low consist of the top and bottom quintiles respectively.

This table reports the size, volume of trade and frequency of trade characteristics of announcing firms that experienced risk changes.

4.6. Comparison of information content and information transfer effects

Although the foregoing analysis indicates that dividend initiation announcements are associated with both own-firm announcement (information content) effects and other firms' (information transfer) effects, some of the results require further discussion. Recall that the proportion of announcing firms for which dividend initiation is good news (as evidenced by a reduction in risk) is less than that for the non-announcing firms. Second, a comparison of own-firm dividend announcement effects and other firms' effect (column 3 of Tables 6 and 7) indicates that the percentage of non-announcing firms that reacted to the dividend announcement (56%) is greater than that of announcing firms that reacted to their own-announcements (48%). In fact, in 8 out of the 22 industries analyzed (namely, gold, energy, metals, insurance, development and construction, building material, food and household, and retail), the information effects are largely spillover effects rather than firm-specific (announcing firms') effects. These results show that focusing on only firm specific effects would lead to a significant underestimation of the information effects associated with dividend initiation announcements.

The finding that the dividend initiation was perceived to be good news to a greater percentage of non-announcing firms than to announcing firms could be explained by agency arguments. As mentioned previously, if managers initiate dividend payments in order to please shareholders instead of conserving cash for good projects, the announcement would not generate significant information effects. However, since the non-announcing firms have not paid any cash, they do not face any cash flow risk emanating from the dividend announcement yet they could experience information effects if the announcement reflects industry profitability.

The size, volume and especially frequency of trade characteristics of the sub-sample groups can also help explain why more industry counterparts experienced information effect than announcing firms. Although the results seem to support the hypothesis that dividend initiation announcements contain information, Tables 6 and 7 show that a large percentage of the dividend initiation firms are relatively small firms whose stocks are not traded frequently. As a result, the information may not be revealed through them. The non-dividend announcing firms, on the other hand, are large firms whose stocks are frequently traded. Since market participants perceive the dividend initiation announcements to be informative about the whole industry, traders buy and sell the shares of these large non-announcing firms and in the process, the non-announcing firms tend to reveal the information effects.

One limitation of the study is worth mentioning. The finding that a significant number of the announcing firms did not show any evidence of risk change does not imply that dividend initiation announcements are not value altering or risk changing events for these announcing firms. Research of this type is a joint test of the dividend information effects and the empirical validity of the CAPM, and by default, the information transfer model employed in the study. Some research shows that the positive linear relationship between stock return and beta as posited by CAPM does not hold (e.g. Tinic and West, 1986). Given the joint nature of the hypothesis examined, it is possible that the results obtained in this study could reflect the inadequacy of the CAPM as an equilibrium model in determining expected returns rather than reflecting the lack of information effect.

Table 7

Results of Dividend Initiation Announcement on Announcing Firms with no Information Effects

INDUSTRY	No. of Firms	% $\beta_{i2}\neq 0$	% with Negative β_{i2}	SIZE[1]		VOLUME OF TRADE[1]		FREQUENCY OF TRADE	
				LARGE	SMALL	HIGH	LOW	HIGH	LOW
MINING									
Gold	107	68	38	16	25	27	1	59	30
Energy	43	68	38	65	15	60	4	67	7
Metals	48	90	30	44	11	48	4	52	30
FINANCIAL SECTOR									
Banks	34	50	59	68	0	58	0	100	0
Insurance	8	75	50	50	0	50	17	83	17
Investment	298	61	51	12	26	6	33	41	39
Property	98	52	59	22	2	24	8	51	47
NON-FINANCIAL									
Alcohol & Tobacco	19	42	13	13	13	25	25	75	25
Building Materials	115	60	49	37	29	35	23	52	48
Developers & Contractors	88	64	50	8	28	8	0	48	32
Food & Household	68	51	26	26	37	18	37	24	53
Retail	87	61	49	11	13	9	13	28	32
Media	124	50	44	43	0	36	18	61	38
Paper	53	50	39	43	7	39	0	61	25
Chemicals	14	47	43	75	13	0	0	63	38
Transport	23	48	73	64	0	64	0	91	0
Engineering	168	54	31	14	31	7	23	40	48
Tourism	40	50	37	17	4	32	21	37	58
Computer Services	18	33	50	0	83	0	17	17	83
Automotive	25	48	42	17	8	8	0	8	92
Electrical	43	47	65	16	37	11	0	25	60
Manufacturing	27	56	53	20	20	20	20	20	33
TOTAL	**1548**	**56**	**49**	**31**	**20**	**27**	**14**	**50**	**38**

[1]High and low consist of the top and bottom quintiles respectively .

This table reports the size, volume of trade and frequency of trade characteristics of non-announcing firms that experienced risk changes.

A corollary of this argument relates to the constituents of the market index (the All-Ordinary Index) used in this study. The index comprises the top 300 firms listed on the ASX. Since a large number of the firms used in this study are small, the index may not be a good proxy as a market index for determining expected return and risk of such firms.

4. Summary and Conclusion

In this paper, information transfer effects associated with dividend initiation announcements are analyzed by using SUR estimation method. The results are summarised as follows: First, the hypothesis that on average there is no intra-industry information effect for the sample is rejected. Also, I find evidence to support the proposition that dividend initiation is a major informational event that affects the risk of the sample. Furthermore, the analysis shows that the percentage of announcing firms whose dividend initiation announcements have information content effect is smaller than the percentage of non-dividend announcing firms that experienced significant information transfer effects. I attribute this result to trade and information revelation. In general, the sample of dividend initiation firms analyzed in this study consists of relatively small firms whose stocks are not traded frequently. As a result, the information is not revealed through them. The non-dividend announcing firms, on the other hand, are large firms whose stocks are frequently traded. Since market participants perceive the dividend initiation announcements to be informative about the whole industry, investors trade the shares of these large non-announcing firms. In the process, these non-announcing firms tend to reveal the information. Our results that dividend initiations are risk-altering events are consistent with those of Brown, Harlow and Tinic (1988, 1993) and Brennan and Copeland (1988) who also found that stock split announcements elicit changes in risk of affected firms. The results documented in this study suggest that information effects associated with dividend initiation announcements are greater than has been documented.

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