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**AFTER-MARKET PERFORMANCE OF DIVIDEND INITIATION AND
RESUMPTION FIRMS: EVIDENCE FROM CANADA.**

By

Isaac Kwabena Otchere, BSc Admin (1988), M.A (1992)

**A Thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfillment of the requirement for the degree of**

Master of Management Studies

School of Business

Carleton University

Ottawa, Canada

September 16, 1994

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**After-market Performance of Dividend Initiation and Resumption Firms:
Evidence from Canada**

submitted by ISAAC KWABENA OTCHERE, B.Sc., M.A.

in partial fulfilment of the requirements for
the degree of Master of Management Studies

Thesis Supervisor

Director, School of Business

Carleton University

September 23, 1994

Abstract.

This research empirically examines the market reaction to the announcement of dividend initiation and resumption for the period 1976-80 and the subsequent three-year stock market performance of the sample firms. For the event analysis, the study presents evidence that stock prices, on average, react positively to the announcement of dividend initiation and resumption on and around the announcement date. Using a sample of 73 initiation and 74 resumption firms, the study records a statistically significant abnormal returns of 1.9% and 1.68 % for initiation and resumption samples respectively.

Furthermore, based on a larger sample of 182 firms, the study also finds that, in the three years after announcement, dividend initiation and resumption firms significantly outperform the TSE 300 and Value Weighted benchmarks. The long-term cumulative mean adjusted return over the TSE300 index is 10.86% one year after announcement, 13.90% two years later and 13.95% on the third anniversary. The results, supported by wealth relative measure, show that, for the initiation sample, increase in returns does not continue beyond the second anniversary. However, for the resumption sub-sample, returns continue to increase, albeit at a decreasing rate, in the third year. The study also presents evidence that the long-term improvement in returns starts in the year preceding the announcement.

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TABLE OF CONTENTS

	Acceptance Sheet	ii
	Abstract	iii
	Acknowledgements	iv
	Table of Content	v
	List of Tables	vii
	List of Figures	viii
	List of Appendices	ix
CHAPTER 1	Introduction and Purpose of Study	
1.1	Introduction	1
1.2	Purpose of Study	2
1.3	Objective of Study	2
CHAPTER 2	Information Content of Dividends	
2.1	Theoretical Research	6
2.2	Prior Empirical Research	11
2.3	Comparison with other studies	14
	Methodological Considerations	
2.4	Size Effect	15
2.5	Industry Factor	16
2.6	Return Estimation and Thin Trading	17
2.7	Long-term Performance Measures	18
CHAPTER 3	Hypotheses and Data	
3.1	Research Questions	21
3.2	Research Model	22
3.3	Testable Hypotheses	24
3.4	Description of Sample and Data	27
CHAPTER 4	Methodology and Design	
4.1	Event Study Analysis	34
4.2	Test of Size Effect	38
4.3	Dividend Yield Analysis	38
4.4	Cross-Sectional Analysis	39
4.5	Test of Long term Performance	40

CHAPTER 5	Tests and Empirical Findings	
5.1	Dividend Initiation Results	44
5.2	Dividend Resumption Results	48
5.3	Comparison of Initiation and Resumption Samples	51
5.4	Sensitivity of Results to Different Market Proxies	52
5.5	Size Effect Analysis	56
5.6	Dividend (Yield) Size and Announcement Effect	60
5.7	Industry effect and Dividend Initiation/Resumption	63
5.8	Cross-Sectional regression Analysis	65
5.9	Analysis of Long-Term Performance	71
5.10	Sensitivity Test of Long-Term Performance	74
5.11	Relative Long-term Performance of Sample Firms	77
5.12	Long-Term Performance based on Wealth Relative	79
CHAPTER 6	Summary and Conclusion	
6.1	Summary	83
6.2	Conclusion	86
CHAPTER 7	Benefits, Limitations, Issues for Future Research	
7.1	Benefits	87
7.2	Limitations	89
7.3	Issues for Further Research	90
Bibliography		91

LIST OF TABLES

1	Summary of Empirical Studies	13
2	Frequency Distribution of Sample By Year	29
3	Month-by-month Distribution of Sample	31
4	Industry Classification of Sample Firms	32
5	Summary of Methodological Approaches	43
6	Abnormal Returns Associated with Dividend Initiation	45
7	Abnormal Returns Associated with Dividend Resumption	49
8	Market Reaction to Dividend and Estimation Methods	53
9	Dividend Announcement and Size Effect	57
10	CPEs of High and Low Yield Portfolios	61
11	CPEs of Natural and Non-natural Resource Firms	64
12	Multi-variate Cross Sectional Regression Results	66
13	Long-term Cumulative Average Returns for Sample Firms	72
14	Cumulative Adjusted Abnormal Returns for sample Firms	75
15	Long-term Performance based on Wealth Relative Measure	80

LIST OF FIGURES

FIGURE

1	Research Model	23
2	Market Reaction Associated Initiation and Resumption Samples	50
3	Differences in Daily Returns of Estimation Methods	55
4	Impact of Announcement on Small and Large-sized Firms	59
5	Market Reaction to High and Low Yield Portfolios	62
6	Comparison of Long-term Performance and Benchmarks	73
7	Long-term Performance of Initiation and Resumption Firms	78
8	Performance of Laggards and Good Performers	82

LIST OF APPENDICES

APPENDIX

A	Daily Abnormal Returns of Sample Firms	97
B	Stepwise Regression Results	98
C	Monthly Cumulative Adjusted Returns for Initiation Sample	99
D	Monthly Cumulative Adjusted Returns for Resumption Sample	100

CHAPTER ONE

1.1 INTRODUCTION.

For decades, researchers have tried to explain why and how the stock market reacts to a firm's specific financial decisions, such as dividend changes. Some theoretical work has focused on information asymmetry and signalling to examine whether changes in dividend payments have a 'signalling' value.¹ Empirical research has also centred on the wealth impact of dividend changes around the announcement date. The centrepiece of such research is that a dividend change represents a vehicle through which a firm might signal private information to the market about its current and long term performance.

An empirical question that follows from the foregoing is whether or not one can detect the signalling value of dividend changes by using extreme cases such as dividend initiations and resumptions. This thesis analyzes the information content of dividend initiations/resumptions to ascertain whether such radical shifts in a company's dividend policy have a short term valuation impact, and whether or not they provide a credible signal regarding a firm's long term performance. The thesis findings indicate that dividend initiation/resumption communicates ex-post, management's perception of the firm's performance.

¹ Asymmetric information refers to a situation where, as a result of its familiarity with the firm's plans and new products, management possesses more information concerning the firm's future prospects than do outside investors.

1.2 PURPOSE OF THE STUDY.

Although significant in the context of the signalling hypothesis, the long term stock market performance following the announcement of dividend initiation/resumption has not been analyzed. In the Canadian context, not only is there a serious lack of empirical research on the long-run performance of firms initiating/resuming dividends, but also, there is a scarcity of research on all aspects of dividend initiations/resumptions.

The purpose of this study, therefore, is to use Canadian sample to analyze the market's reaction to firms' initial/resumed dividend payments. Specifically, this research attempts to measure the short-term wealth impact of dividend initiation/resumption on firms listed on the Toronto Stock Exchange using daily returns, and more importantly, the subsequent long term (three years) performance of sample firms using monthly returns. By pursuing these interrelated tasks, the study tests the empirical predictions of signalling-based theories. This research also incorporates the role of firm size in the valuation impact, something which is absent in earlier research on dividend initiation/resumption.

1.3 OBJECTIVES OF THE STUDY.

The objectives of this research are threefold, namely;

1. to examine the short term market reaction of dividend initiation/resumption on stock prices using Canadian sample and paying special attention to methodological issues (for example, controlling for firm size and industry effect).

2. to assess the long term performance of sample firms using stock returns up to three years following the announcement.
3. to understand the factors driving the wealth impact of dividend initiation/resumption that can be of help to parties, such as academicians and practitioners, interested in the impact and ramifications of the event.

It has to be mentioned at the outset that this study is the second of its kind using Canadian data. In one of the first major attempts at evaluating the market reaction to dividend initiation and resumption, Deshpande and Jog (1989) (DJ, hereafter) concluded that the event is associated with significantly positive excess returns during the period surrounding the announcement. However, their finding of a significantly positive abnormal return of 6.44% recorded for the dividend initiation sample for the (1,60) day window is disturbing, not only for its magnitude, but also its implications for the efficiency of the Canadian market. As a result of the small sample size of 21 firms for the initiation sample, (and 67 for the resumption sample), the findings of that study could be idiosyncratic to the sample, and thus should be interpreted with caution. A larger sample size is likely to reflect more accurately, the magnitude of the wealth impact of the event, thus, allowing more definitive conclusions to be drawn. Since 1983, (the terminal year for DJ's sample), there has been a substantial increase in the number of firms initiating/ resuming dividends payments in Canada (147 firms) and this warrants a revisit to the dividend initiation/resumption analyses.

Apart from sample size, DJ's study does not deal with any other aspects of the analysis which may have a bearing on their results, such as the firm size, and sector/industry effect. Extant literature indicates that small firms earn larger risk-adjusted returns than large firms.² It is of interest to know whether the announcement of dividend initiation/resumption affects small and large firms differently. Therefore, to allow for an explanation of the relative price response of small and large firms, the study categorizes firms according to their sizes and analyzes the relative impact of the event.

Moreover, given the preponderance of natural resource firms in the sample (40% for four groups of natural resource firms and 60% belonging to ten different industries as shown in table 4), this study also analyzes the extent to which the results are confounded by natural resource industry characteristics. Furthermore, the thesis examines cross-sectional variation in abnormal returns to ascertain whether or not the market participants evaluate the wealth impact of the announcement in proportion to firm-specific variables. This innovative emphasis on size, industry factor and other non-market variables is not only a welcome improvement in better analyzing the wealth impact of dividend initiation/resumption, but a very befitting response to the gap in the literature.

Several interesting results emerge from this study. Consistent with DJ's results, it was found from this larger study that initial/resumed cash dividend is associated with significantly positive excess returns during the two-day event period. Contrary to DJ's

² See chapter 2 for further discussion of this phenomenon.

results however, this research revealed that most of the market reaction is concentrated in the period immediately surrounding the announcement, suggesting that the Canadian market is efficient in the semi-strong form in the short run. The announcement effect is also larger for small-sized portfolio than large-sized one, while high yield firms also experience greater stock price reaction than low yield firms. In addition, the analysis also finds that, although the sample firms outperform the market three years after the announcement, irrespective of whether abnormal adjusted return is measured by TSE300 or Value weighted or wealth relative measure, the post announcement monthly adjusted returns are often abnormally larger for the resumption sample than the initiation sample. The data also exhibit significant abnormal return over the market index in the year prior to the announcement, results consistent with the observation that capital markets may partially anticipate the favourable inside information that is later conveyed through the dividend signal.

The rest of the thesis is organized as follows. Chapter 2 presents a brief review of the theoretical and empirical evidence on dividend as a signalling mechanism. Chapter 3 discusses the research questions, hypotheses and data sources. The methodology employed in this study is the subject matter of Chapter 4. Chapter 5 presents the results and analysis of the tests while a summary of empirical findings and conclusion are provided in Chapter 6. Finally, Chapter 7 presents the benefits and limitations of the study and also provides direction for further research.

CHAPTER TWO

2. ASYMMETRIC INFORMATION AND INFORMATION CONTENT OF DIVIDEND

2.1 THEORETICAL BACKGROUND.

In their seminal thesis, Modigliani and Miller (1961) (MM hereafter) provide a compelling argument that, corporate dividend policy does not affect the value of a firm. However, the authors acknowledged that under certain conditions, stock prices do respond to announced changes in dividends. This phenomenon, dubbed 'the information content of dividend', is possible, according to M&M, only if

- i. managers possess more information concerning the future prospects of the firms than do outsiders (asymmetric information).
- ii. there is an incentive for the managers to make this information known.³
- iii. the dividend change, as a signal of new information, is credible and
- iv. dividend is one of the least costly signals.

Given these conditions, MM argue that, investors are likely to interpret a change in dividend policy as a change in managers' view of future prospects. M&M, however, assumed away the presence of asymmetric information, the foundation of information content of dividend.

³ For example, managers may want to avoid takeovers by revealing unfavourable information or encourage the market to price firm's shares correctly by revealing favourable information.

This conjecture has not gone unchallenged on both theoretical and practical grounds. Some researchers, focusing on imperfections, have developed models based on asymmetric information. While it is not germane to further the debate, it is useful to note some of the other perspectives on information asymmetry and dividends, in particular that of the pro-dividend school.⁴ A traditional view of this dividend orthodoxy is the 'bird in the hand theory'. This notion, expressed by Graham and Dodd (1951), holds that, investors prefer returns in the form of dividend to capital gains, possibly because stock prices are highly variable. However, the predominant view of the protagonists of information asymmetry is that, corporate managers have greater insights regarding the future of the firm than do investors, and dividend changes provide a vehicle for communicating their superior information concerning their interpretation of the firm's recent and future performance.

Bhattacharya (1979) has constructed a model in which dividend policy serves as a signal of the firm's future cash flow whose distribution is known by management. Miller and Rock (1985) also offer a model of dividend changes under asymmetric information in which managers signal their private information to the market by declaring dividends.⁵ In response to the new information, an efficient market revalues the firm. Ang (1987) also presents a model in which the presence of asymmetric information causes share prices to

⁴ See Ang (1987) for a review of research on dividend.

⁵ Following Downes and Heinkel (1982), the term signal is used to refer to observable firm characteristics which are directly controllable by the firm but indirectly convey information about the distribution of future cash flows.

be undervalued and shows that, if dividends provide a credible signal, share prices increase as more dividends are paid. The traditional view may be dubbed the 'investor expectation hypothesis', while the predominant view represents the 'managerial expectation hypothesis'.

EFFICIENT SIGNALLING VIA DIVIDENDS

Leland and Pyle (1971) submit that, practically, all financial decisions, as well as changes in some non-financial policies, may be interpreted as signals. However, as argued by Ang (1987), managers are supposed to choose a signal on the basis of marginal analysis and the one with the lowest costs is always preferred. The real issue then, is whether or not dividend initiation/resumption constitutes the most cost effective means of communicating private information.

Chew Jr and Stern (1980) argue that, the mere possibility of information gap makes corporate dividends management's most cost effective means of overcoming investor uncertainty. However, the high dissipative costs associated with dividends have produced reservation among some researchers.⁶ To those researchers, it is not clear why firms continue to use dividend as a signalling mechanism when less costly mechanisms can convey the same credible private information to the market. Ramasastry et al (1987) posit

⁶ The dissipative cost of dividend payment include the transaction cost of administering dividend program and the adverse personal taxes and opportunity cost of using cash dividend.

that:

"....dividends do maximize shareholder wealth through signalling equilibria, but only when outside investors ignore other pertinent information [such as a firm's announced investment]... Moreover, these other sources of information may not impose on stockholders such large dissipative costs as the incremental personal taxes on dividends..... dividends have not been shown to be an efficient signal competitive with other technologies for conveying credible private information to the market" (pp 321/2).

Extant literature, provides some, albeit weak, answers to this seemingly vexing question relating to dividend. Pettit (1972) argues that managers are, to some extent, restricted as to the kind of public statement they can make regarding the future earnings generating ability of the firm (p 994). In light of this, they may use dividend payments as a method of indicating their estimation of the firm's earning power and liquidity. Asquith and Mullins (1983) also submit that the use of other signals, especially earning figures, as candidates for conveying private information, is inefficient because they are manipulable and this tendency makes dividend an attractive means for such communication. Though these rebuttals do not convincingly explain why dividend changes are the most efficient (least cost) means of communicating management's confidence, empirical evidence (as summarized in table 1) indicates that, despite the dissipative costs, the market's response to dividend initiation/resumption is significantly positive.

Credibility of Dividends.

For dividend initiation/resumption to serve as a clue to unobserved earnings, it has to be credible. Though penalties, such as reduced employment opportunities, create incentive for managers to make truthful disclosures, yet, as Foster (1986) has argued, the continuing saga of individuals making misleading releases appears to be a phenomenon on all capital markets (p 377). Thus, there exists a strong possibility that managers would step up the stock price by paying out more dividend than the market expected.

The question is whether the market distinguishes between dividend changes that reflect true information and those which are simply mimicking, or whether it can differentiate between a firm with larger-than-expected profitable opportunities and one that pays dividends because it has run out of profitable investment. Undoubtedly, the market will eventually learn about this mimicking and the price will presumably fall back to the correct level. However, as Miller and Rock (1985) have conjectured, this eventual restoration will be of little concern to those shareholders who in the meantime have managed to sell out at the inflated post-announcement price or managers whose compensation is tied to the short-run price performance. A study of the wealth impact is thus in order.⁷ In summary, it is worth reiterating that the major assumption of dividend signalling perspective is that informational asymmetry exists between managers and investors. An appropriate characterization is that managers are believed to have access to

⁷ As a partial solution to the problem of mimicking, Born (1988) proposes a model of 'restricted and unrestricted share ownership for managers in which the restricted shares (which should not be liquidated until after the expected performance can be observed in the market) provides a 'performance bond' against false signalling.

information regarding product opportunities that are not available to outsiders and this information is signalled through dividend.

2.2 PRIOR EMPIRICAL RESEARCH ON DIVIDEND INITIATION/RESUMPTION.

An efficient capital market incorporates all expected dividend changes into the stock price before the event occurs and only the unexpected portion affects the price on the announcement day.⁸ Thus, for specific event such as dividend initiation/resumption, the need to purge investors expectations of the anticipated portion becomes very crucial. This task is difficult because in the real world, every effect has multiple causes and every cause, multiple effects. However, the announcement of dividend initiation/resumption enables one to separate the effects of unexpected dividend since it is a special case that is least expected and thus gives the market a favourable surprise when it occurs. Investors react to the event and revalue the firm accordingly.

Relevant to the foregoing view and the current research, because of its methodological approach and sample characteristics, is the work of Asquith and Mullins (1983). These authors, recognizing the shortcomings of earlier research on dividend announcements, (such as those of Aharony and Swary, 1980, who found an average abnormal returns of

⁸ The term unexpected dividends refers to the portion of a dividend change that is not already impounded into the stock price as of the announcement day.

about 1% over the two-day announcement window), re-examined stock price reaction to dividend announcement. Analyzing a sample of dividend initiation/resumption firms, they show significant abnormal returns of 4.7% at the announcement date. Healy and Palepu (1988) and Vankatesh (1989) also offer corroborative evidence from the US.

Following the lead by Asquith and Mullins (1983) (hereafter AM), DJ (1989) provide evidence of dividend initiation and resumption in Canada. Analyzing separately, a sample of 67 dividend resumption and 21 dividend initiation firms, the authors recorded a two-day announcement effect of 2.71 % for dividend resumption firms and 1.94% for dividend initiation firms. A summary of empirical studies on dividend initiation/resumption is presented in table 1. These studies consistently record large price reaction. However, as the table indicates, studies on dividend initiations/resumptions using Canadian data are scarce and there is virtually no study on the long term wealth impact of these events. The few studies on the subject with a long term perspective analyzed changes in certain accounting variables, thus precluding any analysis of the wealth effect accruing to shareholders. Herein lies the place of this study in the literature.

TABLE 1.

SUMMARY OF EMPIRICAL STUDIES ON DIVIDEND INITIATION/RESUMPTION.

STUDY (YEAR)	STUDY PERIOD	SAMPLE SIZE	TYPE DATA	PERFORMANCE(Δ) EVENT*	SHORT	LONG
<hr/>						
<u>U.S.</u>						
Pettit (1972)	1967-69	38	monthly	7.5%	-	-
Asquith & Mullins (1983)	1963-80	168	daily	3.7%	4.7%	-
Venkatesh (1989)	1972-83	72	quarterly	5.2%	-	-
Healy & Palepu (1988)	1963-80	131	quarterly	-	-	39% [‡]
<u>CANADA</u>						
Adjaoud ¹ (1984)	1963-79	204	monthly	1.92% ¹	3.32%	-
Deshpande & Jog (1989)	1976-83	88	daily	1.94% ^a 2.71% ^b	4.50% 2.33%	t -

* These are 2-Day announcement returns.

¹ Adjaoud's study concern 'unexpected dividend increases' not necessarily dividend initiation or resumption.

^a Results of Dividend initiation firms.

^b The authors analyzed trends in earnings, liquidity and investment.

[‡] The authors analyzed changes in earnings.

[‡] Dividend resumption results.

2.5 COMPARISON OF THIS RESEARCH WITH OTHER STUDIES.

This research has some overlap with earlier empirical work. It is closest in spirit to that of Deshpande and Jog (1989) since it uses Canadian data to address issues similar to those examined in that study. However, there are important differences. As alluded to earlier, this study uses a significantly larger Canadian sample of 147 in comparison with DJ's 88 and twice as long study period.

The most important difference between this study and that by DJ is the incorporation of the well-documented size phenomenon in the analysis. A considerable amount of research exists which indicates that small firms earn larger risk-adjusted returns than large firms. Jog (1988) shows that returns on small firm portfolios in Canada are substantially higher than those of the TSE 300 (p 60). To date, none of the empirical studies in the literature incorporates the role of size into dividend initiation/resumption analysis. As a result of this exclusion, it is of interest not only to study the long term performance of dividend initiation/resumption firms, but also, to determine empirically whether the omission of size alters results substantially.

Although the preceding discussion seems to be couched in terms of a high degree of variance with other research, the thesis is peripherally related to the other work in this area, especially that of DJ (1989). In summary, there are four important differences between this and other existing empirical work in this area. First, this thesis uses a much

larger Canadian sample which permits generalization of result. Second, it examines the short term wealth impact of the announcement of dividend initiation/ resumption incorporating size effect into the analysis. Third, it assesses the long term performance to evaluate whether dividend initiations/resumptions provide the correct signal of firm value. Lastly, it employs a better methodology which also makes the conclusions more robust.

METHODOLOGICAL CONSIDERATIONS

2.4 SIZE EFFECT AND DIVIDEND INITIATION/RESUMPTION ANALYSIS.

Following Banz (1981), there has been a considerable amount of research which has concluded that firms with small capitalization earn larger risk-adjusted returns than larger firms. This phenomenon has been dubbed the 'size effect'.⁹ In Canada, Jog (1988) documents evidence of a small firm effect. Some attribute this phenomenon to different sensitivity to risk (Chan and Chen, 1991), while others view the size effect as a proxy for other variables, such as P/E, earnings surprise etc. (Jacobs and Levi, 1988). As a result of the size phenomenon, the same event is likely to affect the returns of small firms more than it impacts on the returns of a portfolio of large firms.

⁹ The literature is extensive. See Keim (1988) for a survey of empirical research relating to the size anomaly and international evidence of the size effect.

Dividend information is considered as a substitute for other public information and thus it tells about the firm's activities. Moreover, as Adjaoud (1984) has argued, the volume of public information coming from large firms is greater than that coming from small firms. In line with this argument, it is reasonable to argue that small firms will tend to use indirect signals, such as dividends, to communicate large volumes of private information to the public more than do large firms. This expectation is driven by information asymmetry, since small firms have larger asymmetry. It is, therefore, necessary to examine the extent to which size phenomenon influences the market reaction to dividend initiation and resumption.

2.5 INDUSTRY FACTOR ANALYSIS.

Empirical research has confirmed that industry characteristics affect stock return variance (King, 1966; Smith, 1993). This study analyzes the extent to which industry category influences the wealth effect of the announcement. The ideal approach to account for this is to assign a variable to each of the industry categories identified in Table 4. Unfortunately, such a holistic approach is likely to introduce complications into the multiple regression. A second best approach is, therefore, followed in this thesis in which the test will be performed for natural resource and non-natural resource firms through the use of a dummy variable. Such a dichotomous analysis is very significant in the Canadian context given the preponderance of natural resource firms in both the sample and the TSE.

2.6 RETURN ESTIMATION AND THE PROBLEM OF INFREQUENT TRADING.

The pervasiveness of infrequent trading and the attendant problems of beta, and therefore, return estimation when securities are thinly traded, have been noted in the literature (Scholes and Williams, 1977; Dimson, 1979; Fowler, Rorke and Jog 1980).¹⁰ The market model used to estimate returns of such thinly traded firms generates downward biased beta estimates, because such shares will have their covariance with the market substantially underestimated.¹¹

For small firms, the problem of infrequent trading is particularly acute. Therefore, to obtain efficient estimates, there is a general need to consider the impact of infrequent trading on the market parameter estimation. Given that this empirical study is likely to include a large number of such firms, this consideration is all the more important. This study uses the Scholes and Williams (1977) correction technique for beta estimation.

¹⁰ Infrequent and thin trading are used interchangeable and in the context as used by Fowler et al (1980) to describe securities which are not traded continuously but rather sporadically, thus implying gaps between trades.

¹¹ The major source of bias is the tendency for prices recorded at the end of a time period to represent the outcome of the transaction which occurred in or prior to the period in question. Other sources of bias identified in the literature include a widening of the bid-ask spread and an increase in measurement error due to price rounding.

2.7 LONG-TERM AFTER-MARKET PERFORMANCE.

Numerous studies postulate that when a firm announces a higher than expected dividend, the market perceives it as a positive signal of higher than expected earnings (Pettit, 1972; Healy and Palepu, 1988;). This study does not propose to employ earnings per se to test the long term performance, because they are potentially manipulable by management, and therefore, are likely to reflect some degree of idiosyncrasy and self-serving subjectivity, as argued by Covari et al (1991). However, this aspect of the study examines how much of these earnings accrue to shareholders as returns. If dividend initiation/resumption signals better prospects of future cash flows and earnings, stock market performance may provide corroborative evidence.

Additionally, dividend signalling theories suggest that, in the after-market, the initiation/resumption of dividend would reduce information asymmetry and investor uncertainty surrounding the event (Mitra and Rashid, 1993). Herein lies the motivation for the test of the long term wealth performance of dividend initiation/ resumption firms. Given the predictions about the resolution of information symmetry following the announcement of dividend initiation/resumption, an evaluation of the long term wealth performance of sample firms is in order.

A number of studies have investigated the wealth effects of corporate events using stock market returns as performance measures.¹² Market-based performance measures have been used for performance evaluation because, as Antle and Smith (1986) have argued:

"Such measures impound information about changes in a firm's financial conditions which are associated with both current and anticipated actions and events. In addition, the measurement of stock returns is not directly subject to the moral hazard which may underlie financial accounting performance measures reported by the management"

The market-based performance measures that this study uses is the Cumulative Abnormal Return (CAR) measure. The CAR requires an ex-ante expected return generating model that is usually estimated with data prior to the test period. It thus requires, inter alia, a substantial amount of data outside the performance measurement period and the assumption that this external period represents the norm.

Additionally, the standard CAR requires a market portfolio proxy. Following Black, Jensen and Scholes (1972), it has been well known that the choice of a model is crucial in evaluating the performance of a portfolio. It has also been shown in the Canadian context that, the measure of performance cannot be dissociated from the choice of an appropriate index (Grant, 1976; Tinic, West and Barone-Adesi, 1987). It is precisely this measurement problem that compelled Roll (1978) to aptly conclude that the value of any

¹² For example, Ritter (1991) and more recently, Levis (1993) and Aggarwal et al (1993) use the market model to examine the long-run performance of IPO.

index is not to test whether or not the dependent portfolio performs abnormally, but rather to test that the independent market proxy is ex-ante efficient. The serious theoretical difficulties regarding the selection of an index are compounded if the stocks are internationally diversified. The foregoing makes the use of multiple return generation models, some of which are less susceptible to measurement problems of the market model, the more important. Thus, in addition to the single factor model (which is usually used in such analysis), this study will employ the Mean Adjusted Return Model (MARA) model for a sensitivity test.

CHAPTER THREE.

RESEARCH QUESTIONS, HYPOTHESES AND DATA SOURCES.

The preceding chapter provides a basis for the development of testable hypotheses. However, before proceeding further, it is important to state the research questions the thesis seeks to address.

3.1 RESEARCH QUESTIONS.

In furtherance of the objectives of the thesis, the major research questions that the thesis seeks to answer are:

1. Is the level of wealth accruing to dividend initiation and resumption firms significantly greater than the expected returns for the period?.
2. Are the returns subsequent to the dividend initiation/resumption (long term returns) superior to the market returns?
3. To what extent does the size of the dividend account for the wealth impact of dividend?
4. Do the well-documented size effect, beta, listing/resumption interval and industry factor explain the wealth impact of dividend initiation and resumption ?

Results of the first question are intended to test the information content (short-term effect) of dividend initiation/resumption. The second question is also designed to test the efficiency of the market to new information, while the third question aims at providing implications for practitioners. The fourth question tests the relevance of the size effect and industry factor in dividend initiation/resumption analysis and seeks to provide descriptive information pertaining to firms initiating/resuming dividends.

3.2 RESEARCH MODEL

Figure 1 illustrates the research model which incorporates both the anticipated short- and long-term wealth impact of dividend initiation/resumption and the role of firm specific variables in the determination of the wealth impact. Each line in the model represents a research hypothesis and the indicated signs show the expected effects, which are discussed in the following section.

3.3 TESTABLE HYPOTHESES.

Given that, dividend initiation/resumption is likely to give the market a favourable surprise, the relationship between dividend initiation/resumption and market price should be positive. It is, therefore, hypothesized that:

H₁. Dividend initiation/resumption firms record excess rate of return around the announcement date.¹³

Secondly, it is conjectured that the information content (impact) of dividend initiation/resumption by small firms will be comparatively larger than that of large firms, *ceteris paribus*. Hence, it is expected that the relationship between firm size and information content of dividend will be negative.¹⁴ The alternate hypothesis is thus stated as:

H₂: There is an inverse relationship between firm's size and the wealth impact of dividend initiation/resumption.¹⁵

¹³ This, of course, is the alternate hypothesis. The null hypothesis is stated as 'There are no excess returns accruing to dividend initiation/resumption firms around the announcement date'.

¹⁴ Firm size is defined as the market value of common shares outstanding. Market capitalization is used as a proxy for size primarily because of the availability of data.

¹⁵ That is, the wealth impact of dividend initiation/resumption on small firms is relatively greater than that on large firms.

A rejection of H_2 will imply that the size phenomenon does not affect the returns of dividend initiation firms in Canada. To guard against the possibility that these results are driven by relatively few observations, a total sample analysis (based on cross-sectional analysis of the CAR, test #5) will provide corroborative evidence on the importance of size effect in this analysis.

It is also conjectured that, the more favourable the inside information, the larger the size of the dividend and the greater will be the stock price increase in response to the announcement. Therefore it is hypothesized that;

H_3 . The larger the dividend yield, the greater the wealth impact of the announcement.¹⁶

In the long-run after market, the resolution of investor uncertainty surrounding the event will reflect in the disappearance of any excess returns that accrue in the event period. The alternative hypothesis to test this conjecture is;

H_4 . The abnormal returns accruing to dividend initiation/resumption firms continue in the after market.

¹⁶ This paper measures the size of dividend by the dividend yield. Using absolute dividend value could have confounding effect on the results because higher distributions are typically made by more established large firms and yet it is expected that the size of the firm will be inversely related to abnormal returns (ie H_2).

If markets are efficient, the full impact of dividend initiation should be captured on the announcement date. The failure to reject H_4 will imply that semi-strong form of inefficiency exists in the Canadian market.¹⁷ The thrust of this thesis is not to directly test the efficient market hypothesis. However, in the process of examining the long-term impact of the event, the foregoing conjecture implicitly investigates the speed with which the information is impounded into the price of stock. An affirmative answer will also suggest the existence of investment opportunity.

A cross-sectional regression is run to assess the extent to which the abnormal returns accruing to the sample firms are related to explanatory variables, such as dividend yield, firm size, beta, listing/resumption interval and industry effect, since these may proxy for the determinants of dividend. Hypothesis five is thus stated as:

H_5 . The wealth impact of dividend initiation/resumption is jointly related to other factors.

Apart from providing evidence on size effect, and also showing whether or not industry factor is important in this analysis, this diagnostic test is designed to gauge the extent to which these factors may confound the results of the primary test.

¹⁷ Fama (1976) operationalizes the notion of capital market efficiency by defining three types of efficiency, namely the strong form, the semi-strong form and the weak form, each of which is based on a different notion of exactly what type of information is understood to be relevant in the phrase 'all prices fully reflect all relevant information'. The weak form of efficiency implies that no investor can earn excess returns by developing trading rules based on historical price or return information. The semi-strong form of efficiency also asserts that no investor can earn excess returns from trading rules based on any publicly available information, while the strong-form efficiency suggests that no investor can earn excess returns using any information, whether publicly available or not. These forms of efficiency are not mutually exclusive; they differ only in the degree of market efficiency.

3.4 DATA

3.4 DESCRIPTION OF SAMPLE AND DATA

The sample used in this study comprises those TSE-listed firms which announced a dividend initiation/resumption during the period January 1977 to December 1992. Prior to the collection of announcement dates, the various issues of the TSE Daily Record were searched for the effective date, record date, the ex-dividend date, and the indicated amount of dividend.¹⁸ To be included in the sample, firms were also screened to satisfy the following conditions:

- i. the cash dividend should consist of only ordinary shares dividends.
- ii. at the time of the initiation/resumption, the shares should be listed on the TSE at least 10 months before the announcement.¹⁹
- iii. the issuing firm should not be a mutual fund.
- iv. for dividend initiating firms, the dividend should be the first of its kind in the firm's history and for dividend resumption firms, it should be the first payment since dividend suspension.
- v. there should be no contemporaneous earnings announcement effect during the announcement period.

¹⁸ The Record date is defined as the date when the list of shareholders eligible to receive dividend payment is to be drawn.

The Ex-dividend date, whose purpose is to permit record keeping, is usually four business days prior to the record date. During this period, any stock sold does not carry any right to the current dividends.

The Effective date refers to the actual dividend payment date and it is usually two to three weeks after the record date.

¹⁹ This is required to ensure the availability of 240 days stock returns for the estimation of regression coefficients and 60 days for the computation of any excess returns two months before the announcement.

- vi. For firms included in the long term wealth analysis, monthly return data for at least four years surrounding the announcement date (12 months pre- and 36 months post-announcement returns) must be available.

The stock and market return data are drawn from the TSE/Western return file. Following Adjaoud (1980), the announcement date is the one on which the dividend initiation/resumption is announced in the TSE Daily Record, normally the day following the decision at the firm level. For accuracy, the announcement dates were cross-checked with the statistical (archives) section of the TSE. Various issues of Canadian Business Periodicals Index were also checked and firms with contaminating events were excluded. The screening, based on the above criteria, produced a clean sample of 147 firms (73 initiation and 74 resumption).²⁰ Table 2 shows the frequency distribution of the number of dividend initiation/resumption included in the final sample.

²⁰ This includes 48 of DJ sample (their data set is short of 15 observations). There were no stock returns for the rest of DJ's sample.

TABLE 2

Frequency Distribution (by Year) of the Dividend Initiation and Resumption firms;
1977 - 1992.

Year	Combined Sample		Initiation		Resumption	
	Total	%	N	%	N	%
1977	6	4.1	1	1.4	5	6.8
1978	8	5.4	2	2.7	6	8.1
1979	8	5.4	2	2.7	6	8.1
1980	7	4.8	2	2.7	5	6.8
1981	3	2.0	0	0.0	3	4.1
1982	2	1.4	1	1.4	1	1.4
1983	14	9.5	1	1.4	13	17.6
1984	12	8.2	1	1.4	11	14.9
1985	11	7.5	10	13.7	1	1.4
1986	6	4.1	2	2.7	4	5.4
1987	17	11.6	12	16.4	5	6.8
1988	13	8.8	9	12.3	4	5.4
1989	9	6.1	8	11.0	1	1.4
1990	12	8.2	11	15.1	1	1.4
1991	12	8.2	7	9.6	5	6.8
<u>1992</u>	<u>7</u>	<u>4.8</u>	<u>4</u>	<u>5.5</u>	<u>3</u>	<u>4.1</u>
<u>Total</u>	<u>147</u>	<u>100</u>	<u>73</u>	<u>100</u>	<u>74</u>	<u>100</u>

Table 2 indicates that 1987 recorded the largest number of firms initiating/resuming dividends. Following Ritter (1989) the mood of dividend initiation/resumption market in 1987 could be characterized as 'hot market'. To ascertain whether or not there is any seasonality or pattern in the timing of the event, Table 3 categorizes the sample by month of announcement. The table indicates that dividend initiation/resumption in Canada does not follow a seasonal pattern. To obtain a further perspective on the characteristics of the sample, Table 4 categorizes the firms based on the TSE groupings. As it turns out, majority of the firms are in the natural resource industry consisting predominantly of mineral exploration firms.

TABLE 3

Month by month distribution of Dividend initiation/resumption firms

<u>Month</u>	<u># of firms</u>	<u>%</u>
January	6	4.1
February	17	11.6
March	19	12.9
April	14	9.5
May	13	8.8
June	12	8.2
July	5	3.4
August	10	6.8
September	6	4.1
October	18	12.2
November	9	6.1
December	18	12.2
<u>TOTAL</u>	<u>147</u>	<u>100%</u>

Table 4.

INDUSTRY CLASSIFICATION (BY TSE GROUPINGS) OF SAMPLE FIRMS

<u>INDUSTRY</u>	<u># OF FIRMS</u>	<u>% OF TOTAL</u>
<i>NATURAL RESOURCE:</i>		
1. Metals & Minerals	26	17.2
2. Gold	12	8.1
3. Oil and Gas	13	8.8
4. Theris & Forest Products	<u>9</u>	<u>6.1</u>
<i>sub-total</i>	<u>60</u>	<u>40.2</u>
<i>NON-NATURAL RESOURCE:</i>		
5. Consumer Products	17	12.6
6. Industrial Products	23	15.6
7. Real estate & Construction	8	5.3
8. Transportation	4	2.7
9. Pipelines	1	0.7
10. Utilities	2	1.4
11. Communication & Media	9	6.1
12. Merchandising	12	8.1
13. Financial Services	9	6.1
14. Management Services	<u>2</u>	<u>1.2</u>
<i>sub-total</i>	<u>87</u>	<u>59.8</u>
TOTAL	<u>147</u>	<u>100</u>

An interesting observation emerges from Table 4. It shows that there is industrial clustering of the event with the natural resource firms accounting for a substantial portion of dividend initiation/resumption firms. Intuitively, this pattern may seem to lend support to Marsh and Merton (1987) assertion that firms may initiate/resume dividend payment to calibrate their dividend policies relative to their peer firms, especially those in the same industry, an observation which seems to contrast with dividend initiation/resumption as a signalling mechanism.

CHAPTER FOUR

METHODOLOGY AND DESIGN.

4.1 EVENT STUDY (SHORT TERM) ANALYSIS

To keep with the tradition of event studies, this study employs, inter alia, the Abnormal Return (Prediction Error) methodology to examine the wealth impact of dividend initiation/ resumption. Abnormal return is the difference between the observed returns and the expected return predicted by an expected return model. This approach of comparing the returns of the firms with itself is chosen over the seemingly more traditional approach where a firm is matched with a similar, but different, firm based on features such as size because of the attendant difficulty associated with matched pairing. For every firm in the sample, daily abnormal returns are computed for each day of a period denoted event period using the Risk Adjusted Return (Security Market Line, SML) method. The SML estimates the market return using the market model in which expected return of security i is linearly related to the return on a market portfolio as:

$$R_{it} = \alpha_i + \beta_i R_{mt} + u_{it}$$

where R_{it} is the expected return,

$\beta_i = \text{cov}(R_{it}; R_{mt}) / \text{var } R_{mt}$ or beta of stock i

$\alpha_i = \text{expected value of } R_{it} - \beta_i R_{mt}$

U_{it} = model error term of security i over day t , with expected return=0, constant variance and $\text{cov}(U_i, U_j) = 0$ for $i \neq j$.

Abnormal returns are defined as; $AR_{it} = R_{it} - [\alpha_i + \beta_i(R_{mt})]$

where AR_{it} is the abnormal returns for security i ; R_{it} is the observed return on security i and the rest as defined above.

For each security, α and β were computed using simple linear regression of the return of the security on the return of the market index for the 240 day period (ie, -300, -61). In addition to the simple linear regression method of estimation α and β , the Scholes and Williams (S-W) (1977) method was used to correct for thin trading.

To test the sensitivity or robustness of the result, two other expected return models, the Market Adjusted model and Mean Adjusted Return Model (MARA) were also used to compute expected returns.²¹ While each of these three approaches is valuable in

²¹ Market Adjusted Return model which assumes a zero intercept and a beta of 1 for the securities is represented as $AR_{it} = R_{it} - R_{mt}$

The MARA model is: $AR_{it} = R_{it} - \frac{1}{N} \sum_{t=-300}^{-61} R_{it}$

particular circumstances, none is as completely absolved from shortcomings as to warrant its exclusive use in this study.²² Abnormal returns were computed for the prediction periods (-60, 60); (-60, 0); (-5,5); (-1, 0); (0, 0); (1, 60). While the two extreme intervals tell about the behaviour of the returns four months surrounding the announcement, the short term wealth impact is captured by the (-5, 5) interval. The immediate impact of the event is also shown in the event day (day 0) returns, while the event period abnormal return will be tracked by the (-1, 0) returns. The statistical significance of the abnormal returns over a given period t , is tested using student t-statistics as follows:

$$t = AAR_t / \sigma(AAR_t)$$

where AAR_t is the average abnormal returns at time t while

$\sigma(AAR_t)$ denotes the estimated standard deviation of AAR_t .²³

²² . For example, while the MARA is noted for its simplicity, it is a crude method. The market adjusted method is also useful in a well diversified sample with a beta of 1. However, it is a very crude method, because it disregards individual stock's risk. As a result of the high proportion of natural resource companies in the weight of the TSE 300 (as alluded to in chapter 1), the SML is likely to impact bias to the CARs that follow from propitious surprises such as dividend initiation/resumption of small firms.

²³ Two different test could be performed depending on whether the test is a time series or cross-sectional one. In the former case,

$$\sigma(AAR_t) = \left(\frac{1}{N-1} \sum (AAR_{it} - \overline{AAR_t})^2 \right)^{1/2} \quad \text{where } \overline{AAR_t} = 1/N \sum AAR_{it}$$

However, for this cross-sectional analysis, standard deviation is defined as:

$$\sigma(AAR_t) = \left[\frac{1}{N-1} \sum (AR_{it} - AAR_t)^2 \right]^{1/2}$$

See Husson and Jacquillat (1988) for a similar application of this methodology.

Cumulative average abnormal return, which measures the average wealth effect of the event over the period, will be computed, after cross-sectionally averaging the daily abnormal returns (AARs), by summing the AARs over that period as:

$$CAR_{t1,t2} = \sum_{t=t1}^{t2} AAR_t$$

where $t1$ and $t2$ are the boundaries of the period considered (-60 to +60). CARs will also be tested using the following t-statistic will be used.

$$t = \left(\frac{CAR_{t1,t2}}{P} \right) / \left(\frac{\sigma[AAR_t]}{\sqrt{P}} \right)$$

where $P = t_1 - t_2 + 1$ represents the number of days over which the average abnormal returns are calculated.

4.2 TEST OF SIZE EFFECT

To test the size-effect phenomenon, the total sample was grouped according to their market capitalization (a proxy for size). For every stock i , market capitalization was calculated as the product of the share price and the number of shares outstanding at the end of the month preceding the announcement date (that is, $N_{t-1} * P_{t-1}$). To form size-ranked

portfolios, firms in both the initiation and resumption sub-samples were grouped into two portfolios based on their market capitalization. CAR denoted CAR_s and CAR_l are calculated for both groups respectively.

For $t > 0$, the size hypothesis conjectures that $CAR_s > CAR_l$, so that by implication, $[CAR_s - CAR_l] > 0$. In order to assess whether at any particular time $t > 0$, there is indeed a statistically significant difference in investment performance between small and large firms following the announcement, test of difference in means was performed.

4.3 DIVIDEND YIELD ANALYSIS.

To test the importance of the dividend yield in the analysis (ie H_3), a methodology similar to the foregoing was employed. For the firms in each of dividend initiation and resumption categories, two portfolios were formed based on the size of the dividend, as represented by the dividend yield. Cumulative excess returns were then computed and t-test employed to assess the significance of the difference in mean excess returns.

4.4 CROSS-SECTIONAL ANALYSIS OF EVENT-WINDOW WEALTH IMPACT

To examine whether or not the market uses firm specific variables to evaluate the announcement of dividend, this test cross-sectionally assesses the relationship between the event-period excess returns on one hand and explanatory variables such as dividend yield,

firm size, industry factor, beta and listing/resumption interval on the other hand. The following Cross-sectional regression is used to assess the significance of these firm characteristics in explaining the wealth impact of the event.

$$CAR_{-5,5} = \alpha + \beta_1 YLD + \beta_2 \ln MKTCAP + \beta_3 BETA + \beta_4 DMYIND + \beta_5 \ln L/Rint$$

where CAR is the cumulative abnormal returns for the (-5,5) window;²⁴

YLD: the size of the dividend yield;

MKTCAP: market capitalization (proxy for firm size);

BETA: the average beta of the firm for the estimation period.

DMY: Dummy variable for industry factor, which has a value of 1 for non-natural resource firms and 0 otherwise.

L/Rint: the listing or resumption interval.

An important point should be noted. The relation between cumulative excess returns and market capitalization (size proxy) is likely to be quite complicated, for there is no a prior reason to believe that the relation will be linear over time, hence to arrive at a better measure of size, the log form is used. Similarly, for proper measurement, the log of (1+L/Rint) is used for the listing/resumption interval.

²⁴ An eleven-day event period window is used in this analysis in order to capture any leakage of information concerning the dividend initiation during the period prior to the announcement date. Due to the insignificance of the resumption sample CAR during this period, the (-1 0) window return is used.

4.5 LONG TERM PERFORMANCE

The thrust of this section is to assess the long term after-market wealth effect of dividend initiation/resumption firms during the 12 months preceding and 36 months following the first month of announcement. Following Ritter (1991) and more recently, Levi (1993), this study uses, as measures of long-run performance, Cumulative Abnormal Returns and Wealth Relative measure to examine the long term wealth effect of dividend initiation/resumption. However, to avoid the problems of matching and delisting, with its attendant portfolio re-balancing, this study employs a variant of market adjusted abnormal return methodology computed as;

$$R_{it} = \frac{P_{it}}{P_{i0}} - 1$$

where R_{it} is the total return on the i th security from the announcement month to t trading months after the event, P_{it} is the stock price in month t and P_{i0} is the price on the announcement date.²⁵ Similarly, the return on the market index during the same period is also computed as;

$$R_{mt} = \frac{P_{mt}}{P_{m0}} - 1$$

²⁵ This methodology was used by Aggarwal et al (1993) to examine the long term performance of IPOs in Latin America.

where R_{mt} is the total return on market index for any month t , P_{mt} is the market index value at month t and P_{mo} , the market index value in the month of the event. The market adjusted abnormal returns for each dividend initiation/resumption firm in month t is then computed as;

$$ar_{it} = \left(\frac{1 + R_{it}}{1 + R_{mt}} - 1 \right) \times 100$$

where ar_{it} is the market adjusted return on stock i in month t , R_{it} and R_{mt} are as before. The average market adjusted return on a portfolio of n stocks for month t is the equally weighted arithmetic average of the market adjusted returns

$$AR_{it} = \frac{1}{n} \sum ar_{it}$$

The cumulative benchmark adjusted after-market performance from the event month to any period is the summation of the average benchmark adjusted returns

$$CAR_{it} = \sum AR_{it}$$

The statistical test used in the first analysis will be replicated to test the significance of these long term average benchmark adjusted returns.

Alternatively, to ascertain whether dividend initiation/resumption firms perform better than the market for each period in the long term, a wealth relative performance measure will be computed using the procedure employed by Ritter (1991), Levi (1993) and Aggarwal et al (1993) as;

$$WR = \frac{1 + \frac{1}{N} \sum R_{it}}{1 + \frac{1}{N} \sum R_{mt}}$$

where WR is the wealth relative, R_{it} is the return of stock i in month/period t from the initiation/resumption month, R_{mt} is the market return during the same period; and N , the total number of firms in the sample. A wealth relative greater than 1 implies that dividend initiation/resumption firms outperform the market in that period. A wealth relative less than 1 indicates that test firms underperform the market.

A summary of issues considered and the various methodologies employed in this study is given in table 5.

TABLE 5

Summary of Issues considered and Approaches Employed in This Study

<u>Issues</u>	<u>Aspect of Literature</u>	<u>Similar Usage by:</u>
Event (short term)	Dividend	Asquith & Mullins, 1983
Performance (long term)	IPOs [▼]	Ritter, 1991
Size impact	Size effect (overreaction)	Banz, 1981
Benchmark test	Sensitivity	Tinic, et al, 1987.

▼ The acronym for Initial Public Offering.

It is clear from this chapter that in examining the aftermarket impact of dividend initiation/resumption, this thesis innovatively brings together approaches and statistical techniques not generally used in the dividend literature. It is believed that this study will provide a more robust results, and perhaps improve upon earlier research.

CHAPTER FIVE

TESTS AND EMPIRICAL FINDINGS.

This chapter presents the results of the empirical test of the hypotheses in the following order. First, the results of the information content of dividend initiation/resumption is presented and discussed. Next, the relationship between the announcement period CARs (equivalently used here as Cumulative Prediction Error) and firm specific characteristics is discussed. It is followed by analysis of the long term performance.

Information Content of Dividend Initiation/Resumption.

5.1 Dividend Initiation Results:

The basic results of the analysis relating to dividend initiation is presented in Table 6. Panel A of the table presents the results for a six-window period using the Single Factor Model (with the TSE as the market proxy), while panel B presents the same results using MARA. As indicated in the table, the cumulative prediction error associated with the announcement of dividend initiation cluster around the (-5 to 5) period which records about 3.3% excess returns. This significant pre-announcement period abnormal returns for dividend initiation may be attributed to the anticipation or leakage of the announcement during the week preceding the event. This result is consistent with that of Healy and Palepu (1988) who found a significant return of 4% in the (-10,-2) day period. The existence of significant excess returns in the announcement period, however, signifies that dividend initiation is not fully anticipated prior to the announcement period.

Table 6

Abnormal Returns Associated with Announcement of Dividend Initiation.

Panel A: SFM Model (N = 73)

<i>Event window</i>									
<i>From</i>	<i>To</i>	<i>CPE</i>	<i>t_{CPE}</i>	<i>Z_{CSPE}</i> *	<i>P₁</i>	<i>t_{P1}</i>	<i>P₂</i>	<i>t_{P2}</i>	
-60	60	.0278	0.6547	0.6087	.5068	0.1170	.0822	1.2620	
-60	0	.0198	0.6570	0.9567	.4658	-0.5852	.0411	-0.3491	
-5	5	.0329	2.5684	2.8154	.5205	0.3511	.1253	2.8731	
-1	0	.0170	3.1148	3.5880	.5890	1.5215	.1233	2.8731	
0	0	.0163	4.2298	4.0347	.5290	1.5215	.1370	3.4101	
1	60	.0080	0.2673	-0.1003	.4932	-0.1170	.0685	0.7250	

Panel B: MARA Model Results (N = 73)

<i>Event window</i>									
<i>From</i>	<i>To</i>	<i>CPE</i>	<i>t_{CPE}</i>	<i>Z_{CSPE}</i>	<i>P₁</i>	<i>t_{P1}</i>	<i>P₂</i>	<i>t_{P2}</i>	
-60	60	.0508	1.1408	0.6767	.5342	0.5852	.0000	-1.9601	
-60	0	.0254	0.8028	0.5880	.4932	-0.1170	.0137	-1.4231	
-5	5	.0359	2.6779	1.8361	.5205	0.3511	.0137	-1.4231	
-1	0	.0189	3.2987	2.3672	.6027	1.7556	.0685	0.7250	
0	0	.0173	4.2749	2.7746	.6164	1.9897	.0822	1.2620	
1	60	.0254	0.8106	0.3681	.5890	1.5215	.0137	-1.4231	

* Scholte and Williams t-statistic calculated for ZCPE showed no significant difference from the Z_{CSPE} and was therefore not reported.

CPE Cumulative Prediction Error (Cumulative Abnormal Returns).

t_{CPE} Student t-statistic for CPE.

Z_{CPE} Z statistic for standardized CPE.

P_1 Proportion of firms whose CPEs are positive.

t_{P1} Student t-statistic for P_1 .

P_2 Proportion of firms whose CPEs are significantly greater than zero.

t_{P2} Student t-statistic for P_2 .

The event period (-1,0 window) excess return for both the market model and MARA are 1.7% and 1.89% respectively.²⁶ The positive effect on day -1 could be due to the fact that the market receives corporate news before it is published. The announcement day (day 0) excess returns is 1.63% which is statistically significant with about 59% of the sample having positive excess return. Similarly, for the MARA, significantly abnormal positive return of 1.73% occurs on the announcement day (0-0 window) with about 62% of the sample having positive excess returns. It is also evident from the table that the market incorporates the information contained in the dividend announcement immediately into stock price as evidenced by a return of .08% in the 1-60 event window signifying that most of the reaction is concentrated in the week period immediately surrounding the announcement.

The results support the hypothesis that the announcement of dividend initiation has an immediate positive impact on stock price. It is important to emphasize that these results are not attributed to individual outliers as a significant proportion of the firms as indicated by P1 exhibit positive returns, and hence, share prices at the announcement date. The announcement day effect of the event compares favourably with that of Deshpande and Jog (1989) where the CPE of 2.24% and 2.26% are recorded on the announcement day for the market model and the MARA respectively.

²⁶ Dividend announcements are usually made a day before the news is published in the TSE Daily return, hence, a two-day window for -1 and 0 days is employed as the event period.

However, an important difference between the results of this study and those of D&J should be highlighted. D&J's results indicated that over the period 1-60, the firms record abnormal returns of 6.44% with Z statistics of 2.76 for the market model. The findings in this study raise the possibility that the results of D&J's study, particularly relating to (1, 60) window could be sample specific and should be interpreted with caution. The statistically insignificant result of .08% excess return in the (1, 60) period reported in this study supports the conjecture made in Chapter one that D&J's (1, 60) window positive return could simply be sample specific. Given the relatively large sample size of 73 (which includes 10 of the 21 firms in D&J's study), one can confidently argue that the results of this study are more informative and support the assertion that the Canadian market is efficient. This apart, D&J's analysis results relating to the -5 to 5, -1,0 and 0,0 periods are quite robust.

5.2 Dividend Resumption results.

Table 7 presents analogous results of the market reaction to dividend resumption. From panels A and B, it is evident that the resumption of dividend is associated with statistically significant positive excess returns which are concentrated in the (-1,0) period. The prediction error is 1.68% for both SFM (using TSE as a proxy) and MARA for the two-day (-1,0) window. The proportion of firms with positive CPE for this window is

60% and 57% for the Market Model and MARA respectively. The event day (day 0) returns are 1.55% and 1.61% for the market model and MARA respectively with about 59% and 61% of the sample having positive excess returns for market model and MARA respectively.

These results are consistent in sign with those of Deshpande and Jog (1989) and Asquith and Mullins (1983). However, the magnitude of CPEs results of this research are smaller in magnitude as compared with 2.72% in D&J and 3.7% in Asquith and Mullins (1983) for the (-1,0) window. The announcement day (day 0) result compares favourable in magnitude with A&M's of 1.2%. It has to be pointed out that though the excess return of the two-day window period is smaller in magnitude than those of earlier studies, it is, nonetheless, statistically significant.

The day-by-day Prediction errors for the 120 day (-60 to 60) period, for both initiation and resumption, are summarized in Figure 2. Focusing on abnormal returns in the vicinity of the event period, one observes significant excess returns around the announcement date as evidenced by large jumps around day 0.²⁷ It shows that the CARs accumulate to about 1.7% at the announcement date.

²⁷ See appendix A for the daily Excess Returns and Cumulative Excess returns for some selected days around the announcement date.

Table 7

Abnormal Returns Associated with Announcement of Dividend Resumption.**Panel A: SFM Model (N = 74)**

<i>Event window</i>									
<i>From</i>	<i>To</i>	<i>CPE</i>	<i>t_{CPE}</i>	<i>Z_{CSPE}</i>	<i>P₁</i>	<i>t_{P1}</i>	<i>P₂</i>	<i>t_{P2}</i>	
-60	60	.0193	0.4808	0.5823	.6000	1.7321	.0400	-0.3974	
-60	0	.0169	0.5920	0.6804	.5867	1.5011	.0133	-1.4570	
-5	5	.0221	1.8285	1.6696	.5467	0.8083	.0533	0.1325	
-1	0	.0168	3.2563	3.5465	.6000	1.7321	.0667	0.6623	
0	0	.0155	4.2424	4.6882	.5867	1.5011	.1067	2.2517	
1	60	.0024	0.0859	0.1409	.4933	-0.1155	.0267	-0.9272	

Panel B: MARA Model Results (N = 74)

<i>Event window</i>									
<i>From</i>	<i>To</i>	<i>CPE</i>	<i>t_{CPE}</i>	<i>Z_{CSPE}</i>	<i>P₁</i>	<i>t_{P1}</i>	<i>P₂</i>	<i>t_{P2}</i>	
-60	60	.0183	0.4529	0.3525	.5600	1.0392	.0000	-1.9868	
-60	0	.0159	0.5541	0.3953	.5867	1.5011	.0000	-1.9868	
-5	5	.0223	1.8363	1.1999	.5467	0.8083	.0400	-0.3974	
-1	0	.0168	3.2450	2.4090	.5733	1.2702	.0133	-1.4570	
0	0	.0161	4.3896	3.1604	.6133	1.9630	.0400	-0.3974	
1	60	.0024	0.0845	0.1021	.4800	-0.3464	.0133	-1.4570	

CPE	Cumulative Prediction Error (Cumulative Abnormal Returns).
t_{CPE}	Student t-statistic for CPE.
Z_{CSPE}	Z statistic for standardized CPE.
P₁	Proportion of firms whose CPEs are positive.
t_{P1}	Student t-statistic for P1.
P₂	Proportion of firms whose CPEs are significantly greater than zero.
t_{P2}	Student t-statistic for P ₂ .

Figure 2

Market Reaction Associated with Dividend Initiation & Resumption

Figure 2 also indicates that there is some anticipation of information in the week prior to the announcement date. This also compares favourably with the results of D&J. The conclusion drawn from the foregoing is that the announcement of both dividend initiation and resumption is associated with positive impact on share prices, results consistent with Miller and Rock (1985) proposition that an increase in dividends signals a higher than expected cash flows.

5.3 COMPARISON OF INFORMATION CONTENT OF DIVIDEND INITIATION AND DIVIDEND RESUMPTION.

As evident from tables 6 and 7 above, the market seems to anticipate the information about the announcement of dividend initiation one week prior to the announcement, while for the resumption sample, significant returns start accruing only in the event (-1,0) period. Moreover, the results in these tables, supported by Figure 2, reveal an interesting phenomenon. Though the number of firms in the initiation and resumption samples is almost equal, the information contained in dividend initiation is slightly greater than that of dividend resumption especially for the MARA model throughout the 120 days surrounding the announcement. This finding is partially consistent with that of Ghosh and Woolridge (1991) who found that the capital gains recorded by their sample of resumption firms were less than those recorded by Asquith and Mullins (1983) initiation

sample.²⁸ The lesser information contained in dividend resumption is not surprising. Consistent with the explanation given by Ghosh and Woolridge, the resumption firms might have suspended dividend payment because of cash flow problems. Consequently, such firms become the targets for increased attention and constant monitoring by the markets and any improvement in cash flow and hence future dividend action, with regard to the resumption of dividend, can be partly anticipated. Thus, part of the effects of resumption would be incorporated in the stock price during the period surrounding the announcement.

5.4 SENSITIVITY OF RESULTS TO DIFFERENT MARKET PROXIES.

To examine whether the results are sensitive to the market index used in the OLS results, and to account for the limitations of the Single Factor Market model (as discussed in chapter two), the CPEs were computed using MARA and two different market indices, namely, the TSE 300 and Market weighted indices. Table 8 presents the results of the initiation and resumption samples based on each of the three methods for the 120 days surrounding the announcement date.

²⁸ It should perhaps be pointed out that Asquith and Mullins' sample consisted of both initiations and resumptions. The dividend resumption firms were those which had omitted dividend for a period of ten years.

Table 8

Average Event-window Abnormal Returns associated with different estimation methods.*Initiation sample*

<u>Event-window</u>	<u>SFM MODEL CPE</u>		<u>MARA CPE</u>
	<u>TSE 300</u>	<u>MARKET WTD</u>	<u>MARA</u>
-60 - 60	0.0278	0.0315	0.0508
-60 - 0	0.0198	0.0204	0.0254
-5 - 5	0.0329	0.0343	0.0359
-1 - 0	0.0170	0.0172	0.0189
0 - 0	0.0163	0.0167	0.0173
1 - 60	0.0080	0.0112	0.0254

Resumption sample

<u>Event-window</u>	<u>SFM MODEL CPE</u>		<u>MARA CPE</u>
	<u>TSE300</u>	<u>MARKET WTD</u>	<u>MARA</u>
-60 - 60	0.0193	0.0292	0.0183
-60 - 0	0.0169	0.0267	0.0159
-5 - 5	0.0221	0.0230	0.0223
-1 - 0	0.0168	0.0171	0.0168
0 - 0	0.0155	0.0160	0.0161
1 - 60	0.0024	0.0025	0.0024

The t-statistic for all the return generation methods during the (-5,5), (-1,0) and (0-0) windows are statistically significant at 5% level.

The table indicates that in general, the results are robust across return generation models. However, it is evident that there is quite a bit of uniformity in the CPEs for the TSE and Market weighted indices during the $(-1,0)$ window. The magnitude of the capital gains based on these two market based models is smaller than that of MARA.

In Chapter 2, it was mentioned that the use of TSE as a proxy for estimating expected returns is likely to bias the returns of small firms. Although the argument is plausible in theory, it is not supported by the data, since the results based on other models lead to similar conclusions, at least, for the period $(-60,40)$. The results cannot, therefore, be ascribed to the use of TSE 300 Index as a proxy for the market. The results do not lend any significant support for Tinic and West (1986) findings that results of return generation in Canada are sensitive to the choice of returns generating model.

The results for the initiation sample based on these models are presented graphically in figure 3. The results are similar to those presented in table 8 above. Given the robustness of the results across the three SFM's, and for purposes of brevity and comparison with earlier Canadian studies, only the SFM (TSE) and MARA will be used for the analysis.

Figure 3

Difference in Daily Returns of Estimation Methods

5.5 SIZE EFFECT ANALYSIS.

Considering the large amount of literature on the size phenomenon, and to test the expectation that events such as cash dividend announcement would create larger market interest for small firms than it would for large firms, the total sample was split into two equal portfolios, small and large portfolios, and CPE was computed for these portfolios so as to gain further insights into this issue. To ensure that a reasonable number of stocks is available to construct these size-based portfolios, the total sample is used instead of constructing separate portfolios for the initiation and resumption samples. Small- (large) sized portfolio comprises firms with market capitalization smaller (larger) than that of the median firm.²⁹ Table 9 presents the results.

It is evident from columns two and five that a considerably wider disparity exists between the CPEs of small and large firms. While the small firms record a statistically significant capital gain of 2.63% (SFM) in the -1,0 period, shareholders of large firms gain less than 1% returns, thus resulting in a two percentage point difference in the average abnormal returns. On the announcement day itself, small firms shareholders gain a statistically significant return of 2.48% while those of large firms gain only 0.74%.

²⁹ The size of the median firm as measured by market capitalization was \$51,129,000.

Table 9

Information content of dividend initiation/resumption relating to small and large firms.

Panel A: Small Firms CPEs (N = 73)

		<u>SFM (TSE300)</u>			<u>MARA</u>		
<i>Event window</i>		<i>CPE</i>	<i>t_{CPE}</i>	<i>P_i</i>	<i>CPE</i>	<i>t_{CPE}</i>	<i>P_i</i>
<i>From</i>	<i>To</i>						
-60	60	.0633	1.3770	0.5694	0.0810	1.7647	0.6250
-60	0	.0413	1.2665	0.5833	0.0457	1.4002	0.6250
-5	5	.0582	4.1972	0.6667	0.0586	4.2296	0.6806
-1	0	.0263	4.4555	0.6111	0.0269	4.5522	0.6111
0	0	.0248	5.9425	0.6389	0.0248	5.9412	0.6111
1	60	.0220	0.6785	0.5278	0.0354	1.0942	0.5000

Panel B: Large Firms CPE (N = 73)

		<u>SFM (TSE300)</u>			<u>MARA</u>		
<i>Event window</i>		<i>CPE</i>	<i>t_{CPE}</i>	<i>P_i</i>	<i>CPE</i>	<i>t_{CPE}</i>	<i>P_i</i>
<i>From</i>	<i>To</i>						
-60	60	-.0269	-0.6968	0.5270	-.0486	-1.2392	0.4730
-60	0	-.0015	-0.0560	0.4865	-.0200	-0.7173	0.4324
-5	5	-.0017	-0.1421	0.4054	-.0031	-0.2617	0.4189
-1	0	.0079	1.5909	0.5811	.0078	1.5458	0.5541
0	0	.0074	2.1153	0.5405	.0073	2.0402	0.5811
1	60	-.0253	-0.9331	0.4459	-.0286	-1.0365	0.4865

CPE Cumulative Prediction Error (Cumulative Abnormal Returns).

t_{CPE} Student t-statistic for CPE.*P_i* Proportion of firms whose CPEs are positive.

Table 9 shows that, the market reaction to small firms is greater than that of large firms, thus resulting in the rejection of the null hypothesis of no difference between the market reaction of small and large firms following the announcement of dividend initiation/resumption.³⁰ A test of difference in means performed showed a t-statistic of 2.365 which is significant at 1%. This implies that the capital gains resulting from the announcement of dividend is significantly greater when the announcing firm is smaller.

Figure 4 which plots the distribution of the daily abnormal returns, supports the conclusions of the size analysis. As seen from the graph, there is an increase in market reaction during the announcement period for both portfolios, but the capital gains to small-sized portfolio is greater than that of large-sized portfolio. The size-related results suggest that there is greater information asymmetry for smaller firms. This also supports the conjecture that such firms use dividend to communicate large volume of private information than do large firms.

³⁰ These results are not driven by outliers since in both sub-sample, more than 50% of the firms have positive excess returns during the -1,0 and 0 periods.

Figure 4

Impact of Announcement on Small and Large Portfolios

5.6 DIVIDEND SIZE AND ANNOUNCEMENT EFFECT.

To test the hypothesis that the higher the cash dividend, the greater the wealth impact of the event, the total sample was further divided into two equal portfolios based on dividend yield. High yield portfolio comprises those firms with dividend yield above the median yield of 1.82% and low-yield portfolio consists of firms with dividend yield below the median. The CPEs and the associated t-statistics and *P* values are reported in table 10.

It is apparent from the table that, though there is statistically significant announcement effect for both low and high yield sub-samples, the magnitude of the wealth impact for the high yield sub-samples is much greater than that of the small yield. The (-1,0) and (0,0) periods abnormal returns of 2.3% and 2.18% for large yield firms are all statistically significant while only the announcement date (0,0) return of 1% for the low yield sub-sample is significant. The corresponding (-1,0) return of 1.11% is significant at 5% level. A test of difference in means between the two portfolios shows that the difference between the (-1,0) window excess returns is significant at 10%. Though not reported here, similar conclusions hold roughly for MARA. These results support the hypothesis that high dividend yield results in high wealth impact. Figure 5 portrays graphically the difference in market reaction to high and low yield portfolios. Generally, it supports the foregoing conclusions.

Table 10

Cumulative Prediction Errors of High Yield and Low Yield Dividend Stocks (by SFM)**Panel A: CPEs of Low Yield Firms (N = 73)***Event window*

<i>From</i>	<i>To</i>	<i>CPE</i>	<i>t_{CPE}</i>	<i>Z_{CSPE}</i>	<i>P₁</i>	<i>t_{P1}</i>	<i>P₂</i>	<i>t_{P2}</i>
-60	60	-.0193	-0.4498	0.3494	.5405	0.6975	.0541	0.1600
-60	0	.0289	0.9253	1.6301	.5811	1.3950	.0270	-0.9067
-5	5	.0108	0.8136	1.1959	.4189	-1.3950	.0811	1.2268
-1	0	.0111	1.9584	2.3866	.5270	0.4650	.0541	0.1600
0	0	.0100	2.5010	3.1460	.5405	0.6975	.0946	1.7602
1	60	-.0487	-1.5717	-1.1474	.3784	-2.0925	.0541	0.1600

Panel B: CPEs of High Yield Firms (N = 73)*Event window*

<i>From</i>	<i>To</i>	<i>CPE</i>	<i>t_{CPE}</i>	<i>Z_{CSPE}</i>	<i>P₁</i>	<i>t_{P1}</i>	<i>P₂</i>	<i>t_{P2}</i>
-60	60	.0560	1.3753	0.4877	.5616	1.0534	.0548	0.1880
-60	0	.0049	0.1702	-0.1216	.4658	-0.5852	.0274	-0.8861
-5	5	.0456	3.7144	3.4010	.6575	2.6919	.0959	1.7990
-1	0	.0230	4.4010	4.7828	.6712	2.9260	.1370	3.4101
0	0	.0218	5.8999	5.5373	.6301	2.2238	.1507	3.9471
1	60	.0511	1.7814	0.8151	.6027	1.7556	.0274	-0.8861

CPE Cumulative Prediction Error (Cumulative Abnormal Returns).

t_{CPE} Student t-statistic for CPE.*Z_{CSPE}* Z statistic for standardized CPE.*P₁* Proportion of firms whose CPEs are positive.*t_{P1}* Student t-statistic for *P₁*.*P₂* Proportion of firms whose CPEs are significantly greater than zero.*t_{P2}* Student t-statistic for *P₂*.

Figure 5

Market Reaction to High and Low Yield Portfolios

5.7 INFORMATION CONTENT OF DIVIDEND INITIATION/RESUMPTION RELATING TO NATURAL AND NON-NATURAL RESOURCE FIRMS

Given the high proportion of natural resource firms in the sample, it is of interest to ascertain whether or not the positively significant results of the primary test exhibited in Tables 6 and 7 are influenced by industrial characteristics relating to natural resources. To investigate this possibility, the test was redone for natural and non natural resource sub-samples and the results are presented in Table 11. As indicated in the table, a strong dividend effect is apparent in the non natural resource firms where, on average, a statistically significant return of 2.21% (using SFM) accrues to shareholders. The corresponding figure of approximately 1% for natural resource companies is not statistically significant. However, on the announcement date, a statistically significant return of 1.69% and 1.45% are recorded for shareholder of non-natural resource and natural resource firms respectively. The difference in means is significant at 10%. This result shows that there is greater information asymmetry for non-natural resource.

Table 11

Cumulative Prediction Error of Natural Resource and Non-natural Resource firms.*Panel A: CPEs of Natural Resource Firms (N = 60)*

<i>From</i>	<i>To</i>	<u>SFM (TSE)</u>		<u>MARA</u>	
		<i>CPE</i>	<i>t_{CPE}</i>	<i>CPE</i>	<i>t_{CPE}</i>
-60	60	-0.0123	-0.2782	0.0068	0.1471
-60	0	0.0070	0.2226	0.0102	0.3112
-5	5	0.0085	0.6378	0.0120	0.8604
-1	0	0.0095	1.6783	0.0109	1.8428
0	0	0.0145	3.5975	0.0147	3.5074
1	60	-0.0193	-0.6196	-0.0034	-0.1041

Panel B: CPEs of Non-natural Resource firms (N = 87)

<i>From</i>	<i>To</i>	<u>SFM (TSE)</u>		<u>MARA</u>	
		<i>CPE</i>	<i>t_{CPE}</i>	<i>CPE</i>	<i>t_{CPE}</i>
-60	60	0.0269	1.2332	0.0536	1.3414
-60	0	0.0260	0.9389	0.0278	0.9804
-5	5	0.0407	3.4262	0.0410	3.4041
-1	0	0.0221	4.3559	0.0227	4.4141
0	0	0.0169	4.7201	0.0181	4.9726
1	60	0.0223	0.8046	0.0258	0.9064

CPE Cumulative Prediction Error (Cumulative Abnormal Returns).
t_{CPE} Student t-statistic for CPE.
TSE TSE 300 as market proxy

5.8 REGRESSION RESULTS.

Thus far, the analysis has focused on the significance of the wealth effect of the announcement of dividend initiation and resumption. To put the announcement event into a broader perspective, it is instructive to subject the results to further tests to ascertain whether firm specific characteristics do impact the market reaction following the announcement. To accomplish this, the basic test is extended to include regression analysis which provides more insight into the relationship between announcement period wealth effect and size of dividend, market capitalization, listing (age)/resumption interval as well as the possibility of industry effect.³¹ It should be recalled from Tables 6 and 7 that there is more anticipation of the announcement of dividend initiation in the (-5,5) window. For this reason, $CPE_{(-5,5)}$ is used as the dependent variable for the initiation sample whilst the announcement period $CPE_{(-1,0)}$ is used for the resumption regression. Table 12 presents the results of the multivariate regression. As shown in the table, the use of standardized CPE as the dependent variable produced similar results, though as expected, the coefficients were high. Though not reported in the table, the adjusted R for each sample is lower in the standardized regressions.

³¹ Other firm specific factors are plausible candidates for the analysis. However, it is felt that these are among the more interesting characteristics, but no special claim is made for concentrating on these ones.

Table 12

A multivariate regression of event period CPE with parameters estimated using TSE as market proxy.

$$\text{CPE} = \alpha + \beta_1 \text{Yld} + \beta_2 \ln \text{mktcap} + \beta_3 \text{BETA} + \beta_4 \text{Non-Natural} + \beta_5 \ln (1 + \text{R/L int})$$

DEPENDENT VARIABLE	α	β_1	β_2	β_3	β_4	β_5	R^2 Adj R^2
INI ¹ , N=73							
CPE _{.5,5}	.41	0.16	-.04	-0.03	-0.03	-0.02	.21
t-stats	2.645	1.612	-2.270	-1.784	-1.189	-1.170	.15
SCPE* _{.5,5}	3.59	0.35	-0.35	-0.25	-0.06	-0.25	.09
t-stats	1.874	0.294	-1.561	-1.137	-0.164	-1.229	.03
RES ² : n=74							
CPE _{.1,0}	0.003	0.17	-.001	-.001	0.022	.007	.06
t-stats	0.029	0.820	-0.282	-.093	1.123	0.730	-.01
SCPE _{.1,0}	-1.26	5.80	0.07	-0.21	0.49	0.26	.07
t-stats	-0.462	1.150	0.211	-0.748	1.292	1.056	.001

• SCPE is the Standardized CPE

¹ Initiation sample

² Resumption sample

Based on the results in tables 12, the following estimated equations are chosen for analysis.

For Initiation:

$$CPE_{i-5,5} = 0.41 + 0.03Yld - 0.04\ln(SIZE) - 0.03BETA - 0.03Non-Nat - 0.02\ln(1+Listint)$$

(2.645) (1.612) (-2.270) (-1.784) (1.189) (-1.170)

with $R^2=.21$ $F=3.5685$ $DW=2.1029$ $N=73$

For resumption:

$$CPE_{i-1,0} = .003 + .17Yld - .004\ln(SIZE) - .001BETA + .022Non-Nat + .007\ln(1+Resint)$$

(0.029) (0.820) (-0.282) (-0.093) (1.487) (0.730)

with $R^2=.06$ $F=0.9118$ $DW=1.9893$ $N=74$

From these estimated regressions, one finds that most of the variables have the expected signs. The F-statistic for the initiation sample is significant at 1%. The Durbin-Watson statistic for both categories of samples indicates that there is no significant autocorrelation among the explanatory variables.

As shown in the foregoing regression estimates, there is a negative relationship between the abnormal returns and log market capitalization and this holds for both initiation and resumption samples. Under the small firm hypothesis discussed above, the coefficient of log of market capitalization is predicted to be negative. Conventional wisdom is confirmed for the size attribute, for, the size coefficient is significant at 1% for the

initiation sample and has a negative slope in both sub-samples, indicating that portfolio relative size moves inversely with the direction of CPEs. In accordance with the theoretical framework discussed in Chapter 2, this result can be rationalized on the grounds that small firms use dividend as a vehicle to communicate large private information to the public.

Industry dummy is significant at 10% for the resumption sample. The significance of the industry dummy implies that, *ceteris paribus*, a portfolio of non-natural resource firms receives additional 2.2% for the resumption sample during the $(-1,0)$ period over one consisting of natural resources.

The coefficient of Beta can be interpreted as the discount rate effect. If the announcement of dividend initiation/resumption predicts an increase in expected cash flow, the discounted value of that change will be larger for low beta than for higher beta firms. The coefficient of estimation period beta does not generally have statistically significant cross-sectional explanatory power for the resumption sample, though it is significant at 5% for the initiation sample during the $(-5,5)$ period.

Dividend yield has the expected sign in both samples. However, it is only significant for the initiation sample at 10% using a one-tail test.³² The positive dividend coefficient

³² Signalling hypothesis predicts the sign of the dividend coefficient to be positive, and hence, a one tail test is more appropriate.

shows that larger dividend is associated with larger wealth effects. The lack of significance of the dividend yield coefficient in the resumption sample implies that investors value the dividend signal but not the absolute value of the cash dividend. The insignificance of the resumption coefficient is contrary to that of D&J and A&M who found a statistically significant positive dividend relationship.

Though the log of the resumption interval coefficient is positive for the resumption subsample, it is not significant. The lack of significance contrasts with that of D&J who found a positive relationship between resumption interval and CPE. For the initiation sample, the log of listing interval coefficient, a surrogate for age, has a negative sign and is not even significant at 10%. The significance of the coefficient implies that the greater the number of months between the listing date and the first dividend payment date, the smaller the wealth impact of the announcement. Albeit not reported, a breakdown of the time periods indicate that the correlation is stronger, in fact positive, for firms whose listing age is one year or less. This finding, which is opposite to that of the resumption interval, suggests that, more information on the 'older' firms and less on the newly listed firms is available on the market.

The intercept term measures the abnormal returns when the portfolio consists of natural resource firms, and estimation period beta, size of firm, listing/resumption interval and yield are all equal to zero. Furthermore, while not reported here, the result of collinearity diagnostics indicate that there is no significant multicollinearity between the explanatory

variables used in the test.³³ The highest multicollinearity is .33 between beta and size variable for the resumption sample. However, when beta was excluded from the regression, the coefficients remained almost the same with no significant increase in the adjusted R^2 , thus supporting the conclusion that beta does not contribute to the announcement period abnormal returns.

On the question of how much explanatory power the multivariate framework possesses, it is clear the average R^2 is 21% and 6% for both initiation and resumption samples respectively. However, adjusting for degrees of freedom, 15% (-1%) of the variance of the Initiation (resumption) CPEs is explained. The insignificance of the resumption regression parameters and the attendant low adjusted R^2 is puzzling given the results of earlier studies.

Finally, a stepwise regression performed on the total sample to determine which of these explanatory variables are 'best' in explaining the observed abnormal returns shows that of the five variables, firm size is the most explanatory variable followed by dividend yield.³⁴ This implies that part of the large excess returns associated with dividend initiation/resumption is due to the size effect and partly the dividend yield. The finding is revealing since it helps to understand why the two variables have received considerable attention in the academic literature as to their impact on expected return.

³³ Multicollinearity does not bias the regression coefficient. However, it can increase the estimated standard errors of the parameters, hence reducing the estimated t-statistics, thereby rendering the t-tests less powerful.

³⁴ See appendix B for the results of the stepwise regression.

5.9 ANALYSIS OF LONG-TERM PERFORMANCE.

To gain a perspective on the long-term performance of dividend initiation/resumption firms, this section examines monthly abnormal return over 48 months (12 months pre- and 36 months post-announcement returns).³⁵ Following Ritter (1991), months are defined as successive 21-trading day periods relative to the event date. Post announcement months therefore consist of trading day 2-22, 23-43, 44-64 etc). If a firm is de-listed, the CARs are computed based on the number of surviving firms in the portfolio. The long term after market performance of the total sample together with the returns on the various benchmarks is presented in Table 13 using TSE as the benchmark.

From Table 13 and Figure 6, it is clear that the dividend initiation/resumption firms outperformed the two benchmarks used in this study. As shown graphically in Figure 6, not only do the sample firms outperform the benchmarks in the post announcement period but the pre-announcement period as well. Table 13 shows raw returns for the sample and benchmarks and hence does not show the adjusted returns for the sample firms over the market portfolios. These positive returns are reflected in a steady increase in Cumulative Abnormal Returns (CAR) which are shown in Table 14.

³⁵ The long term returns are those from months 1 to 36. To determine whether the event could be predicted based on improvement in returns, 12 months pre announcement period returns are also examined.

Table 13
Long-term Cumulative average returns for Initiation & Resumption firms (Percent).

<u>MTH</u>	<u>N</u>	<u>PORTFOLIO</u>	<u>TSE 300</u>	<u>VALUE WEIGHTED</u>
-12	129	3.51	1.93	1.94
-11	131	4.68	3.41	3.26
-10	134	8.06	5.77	5.93
-9	137	11.03	7.16	7.45
-8	142	12.62	8.80	8.95
-7	142	13.66	10.12	9.93
-6	145	16.20	11.18	11.04
-5	150	16.54	12.47	12.41
-4	152	21.35	14.08	14.17
-3	158	23.67	15.81	15.64
-2	167	26.15	16.60	16.16
-1	178	27.87	17.09	17.20
1	182	31.78	18.54	18.61
2	180	33.25	19.67	20.10
3	182	36.22	20.66	21.29
4	181	38.34	21.54	22.45
5	178	40.22	22.27	23.36
6	176	41.33	23.04	24.35
7	176	44.76	20.05	25.63
8	177	46.29	24.79	26.63
9	174	47.48	25.39	27.64
10	172	49.80	26.60	29.09
11	171	49.39	27.60	30.41
12	173	50.78	28.92	31.88
13	174	52.21	30.26	33.27
14	174	53.08	31.16	34.38
15	172	54.94	32.39	35.93
16	168	55.24	33.62	37.42
17	167	57.83	34.86	38.88
18	164	59.06	36.21	40.44
19	166	60.54	37.13	41.57
20	164	62.81	38.37	43.05
21	162	64.54	39.68	44.48
22	161	64.81	41.08	46.05
23	159	65.59	41.47	46.53
24	159	66.83	42.25	47.53
25	155	68.06	43.18	48.64
26	158	68.87	44.04	49.72
27	150	70.73	45.57	51.39
28	150	72.36	46.23	52.27
29	148	71.93	47.35	53.64
30	147	72.25	47.33	53.82
31	147	72.25	47.98	54.55
32	144	73.03	48.82	55.54
33	141	74.57	49.38	56.27
34	142	73.68	49.98	56.97
35	137	74.58	50.32	57.49
36	137	75.87	50.69	58.02

Figure 6

Comparison of Long Term Performance of Sample Firms and Benchmarks

5.10 SENSITIVITY OF LONG TERM PERFORMANCE TO THE USE OF BENCHMARKS

Since all the sample firms are listed on the TSE, an obvious candidate to use as benchmark return for such analysis is the TSE 300. However, to test whether the results are sensitive to the benchmark used to compute cumulative abnormal returns, this study uses two alternative benchmarks, namely, the TSE 300 index and a Value Weighted Index. However, rather than report in detail the monthly abnormal returns for all the benchmarks, the thesis merely presents excerpts of the results in Table 14. It is clear the table above that, the magnitude of the long-term performance of dividend initiation/resumption firms depends on the choice of the benchmark employed in computing cumulative adjusted returns. The use of the TSE 300 and the Value Weighted as benchmarks results in positive CARs over the entire three-year post-announcement period. The 3-year CARs for the portfolio using the TSE300 as benchmark to compute the CAR is 13.95% (24.13 - 10.18 pre-announcement return) which is significant at 1% while the use of value-weighted index produced CAR of 6.96%. Figure 6 which gives a graphical presentation of the difference in raw performance of sample firms and the benchmarks generally supports the foregoing conclusion.

Table 14

Cumulative Abnormal Returns (%) and t-values of Dividend initiation/resumption firms.

Mth	N	TSE300		VALUE WEIGHTED	
		CAR	t _{CAR}	CAR	t _{CAR}
-9	134	2.06	1.1885	2.00	1.5566
-6	142	3.18	1.3604	3.52	1.5013
-3	152	6.73	2.4384	6.88	2.4906
-1	178	10.18	3.4791	10.51	3.5744
1	182	12.55	4.1678	13.07	4.3213
3	182	14.73	4.5475	14.84	4.5711
6	176	17.43	4.8629	16.84	4.6597
9	174	21.09	5.4216	19.70	5.0208
12	173	21.04	5.0869	18.94	4.5065
15	172	21.94	4.9495	19.23	4.3020
18	164	22.20	4.6412	18.85	3.9070
21	162	24.16	4.7882	20.26	3.9805
24	159	24.08	4.5276	19.71	3.6742
27	150	24.55	4.3082	19.58	3.4060
30	147	24.00	4.0200	18.37	3.0494
33	141	24.41	3.8678	18.26	2.8692
36	137	24.13	3.6503	17.47	2.6196

It could be concluded from the foregoing that a strategy of investing \$1 in dividend initiation/resumption firms at the end of the announcement day and holding it for 3 years would leave the investor with a return of 13.95% over the return on a similar portfolio of TSE 300. The foregoing result is consistent with Healy and Palepu (1988) conclusion that firms which initiate/resume dividend record excess returns in the long run.

One striking feature of Table 14 is that the increase in CAR starts at least 8 month before the announcement. The results, as evidenced by the positive CARs during the pre-announcement period, also indicate that the firms which initiate/resume dividend do perform well in terms of growth in returns for at least 8 months before the announcement. The post-announcement CARs accumulate to a level of about 14% two years after the announcement. From month 25 to month 36, the CAR is virtually unchanged. Moreover, although not reported here, none of the average abnormal returns is significant during this period. There is, therefore, no evidence that growth in return increases in the third year. These pre- and post-announcement months results are consistent with the results of Watt (1973), Healy and Palepu (1988), Deshpande and Jog (1989). It is important to emphasize that the results of the 3 years are not influenced by survivorship bias since a significant proportion of firms with one year excess returns continues to be listed on the TSE three years later.

5.11 RELATIVE LONG-TERM PERFORMANCE OF DIVIDEND INITIATION AND RESUMPTION FIRMS.

To reinforce these findings concerning the behaviour of aggregate long-term performance, the analysis was carried out in more detail for the two sub-samples. The results of the initiation and resumption sub-samples, as shown in Appendix C and D, coupled with Figure 7 indicate that in the two years after dividend announcement, the resumption firms perform better than the initiation sample. For the resumption sample, growth continues steadily over the entire 3-year period culminating in 74.46% post-announcement growth in raw returns, while the initiation sample records growth of 28.29% for the period after reaching a peak of 34.48% at the end of year 2 and then falling steadily to the year 3 level.

Figure 7 suggests that dividend resumption firms are growth firms in the long-term following the announcement of dividend and therefore, may be a better target for investment if ones investment horizon is about three years. It should be recalled that in the event analysis, the market reaction to the announcement of dividend is slightly better for the initiation sample than for the resumption portfolio. The implication of this finding as regards the relative long-term performance is that, the market probably over-estimates the relative growth potentials of the initiation sample.

Figure 7

Comparison of Long Term Performance of Initiation and Resumption Samples

5.12 PERFORMANCE BASED ON WEALTH RELATIVE

To reinforce the foregoing findings and to give a better picture of when growth ceases, this section presents the wealth relative measure based on the TSE and the Value Weighted indices. According to Table 15, Wealth Relative measure varies according to the benchmark employed to assess long term performance. For both TSE and Value Weighted methods, wealth relative is greater than one over the entire 3 year period, confirming the results that an investment in dividend initiation/resumption firms outperforms the benchmark in the long run.

One notable feature of Table 15 is that wealth relative reaches a peak at the end of year 2 and remains almost stable thereafter. For the TSE 300 benchmark for example, the wealth relative increases from 1.04 six months after announcement, peaking off to about 1.08 at the end of year 2. Thereafter, it remains roughly stable. This signifies that increase in returns ceases after 2 years, results consistent with the conclusion of Table 14.

Table 15.

Long Term Performance of sample firms as measured by Wealth Relative.

Holding Period	Wealth Relative	
	TSE300	VALUE WEIGHTED
6 months	1.0413	1.0345
12 months	1.0599	1.0438
18 months	1.0659	1.0425
24 months	1.0750	1.0455
30 months	1.0798	1.0423
36 months	1.0844	1.0345

Lastly, to provide a further investigation into the long-term performance, a proportional test was performed to ascertain the relative performance of pre-announcement 'laggards' and 'better performers'. To accomplish this, each of the samples was grouped into two based on the size of pre-announcement cumulative adjusted return. For each sub-sample, the proportion of the firms with positive pre-announcement abnormal returns is compared with the proportion with positive post announcement ($CAR_{1,24}$) returns. The proportion of the initiation sub-sample with all positive $CAR_{(-1)}$ reduced from 0.5 in the pre-announcement period to 0.25 at the end of the second anniversary of the announcement, while that of the resumption sub-sample reduced from 0.5 to 0.35.³⁶ This result, graphically presented in figure 8, shows that the pre-announcement 'laggards' performed better in the post announcement period. Between the initiation and resumption 'laggards', the initiation sample 'laggards' performed much better in the post announcement period.

In summary, the foregoing analysis shows that, for both dividend initiation and resumption samples, there is a positive relationship between market reaction to announcement of dividend and subsequent long-term (2-year) performance after the announcement, though only the resumption sample CPE coefficient is significant at conventional level. It is also worth stating that, in spite of the differences in institutional framework, the level of excess returns to Canadian sample initiating/resuming dividend is identical to that reported in the US by Asquith and Mullins (1983) for the short-term event analysis and Healy and Palepu (1988) for the long term performance.

³⁶ A difference in proportion test performed shows that the difference in proportion is significant.

Fig 8a. Post-announcement performance of pre announcement initiation laggards and good performers

Fig 8b. Post-announcement performance of pre-announcement resumption laggards and good performers

CHAPTER SIX

SUMMARY AND CONCLUSION.

6.1 SUMMARY.

This study has been a wide-ranging empirical investigation of the market reaction to the announcement of dividend initiation/resumption by firms listed on the TSE during the period 1977-92 and the subsequent 3-year after-market performance of the sample. Consistent with the event study literature, the research first tests the information content hypothesis. The main findings are reiterated as follows:

- i. The announcement of dividend initiation/resumption is associated with statistically significant positive excess returns of 1.9% and 1.68% for both initiation and resumption samples respectively using MARA model (and 1.7% and 1.68% respectively using TSE 300 benchmark). This finding is pervasive because on average, about 60% of the firms have positive announcement day abnormal returns.³⁷
- ii. Contrary to the results of Deshpande and Jog (1989), there is a prima facie evidence (from the (1,60) window CPE of 0.008) that the Canadian market with respect to dividend initiation and resumption is efficient.

³⁷ This proportion is significant at 5% and 10% for the resumption and initiation samples respectively.

- iii. The use of different benchmarks in the SFM context to compute expected returns is robust, since there is no significant difference between the event period CPEs using TSE and Market-weighted methods as indices for the market.
- iv. The event period CPE is more strongly related to firm size than any individual firm characteristic.
- v. The regression results indicate that investors value the dividend signal but not the size of the distribution per se. This finding is consistent with the suggestion that stock price response to dividend initiation cannot be attributed solely to investors' preference for cash.
- vi. A comparison of portfolio CPEs based on size reveals that, in general, the market reaction to small firms is greater than that of large firms following the announcement of dividend, evidence consistent with the much written-about size effect.

What emerges from the long-term analysis is also summarized as follows:

- i. Dividend initiation/resumption firms outperform the TSE and Value weighted benchmarks.

- ii. The sample firms experience growth in returns until two years after the event. Using the TSE benchmark, the Cumulative Adjusted Return is 10.86% one year later, 13.90% two years later and 13.95% during the third anniversary. Wealth relative of 1.06, 1.08 and 1.08 for the first, second and third anniversaries reinforces the finding that growth in returns ceases after the second year.
- iii. Improvement in returns for the sample firms starts at least, eight months before the announcement, thus indicating that capital markets anticipate the favourable inside information that is later conveyed through the dividend signal.
- iv. Dividend resumption firms perform better in the long-term than dividend initiation firms. The resumption firms represent a sample of growth firms since growth continues beyond two years, though returns in year three increase at a decreasing rate.
- v. Pre-announcement period 'laggards' performed better than pre-announcement 'good performers' during the two years following the announcement.

7.2 LIMITATIONS.

This study has a few limitations, the first of which relates to the range of companies in the sample. The study is limited to only publicly-listed common equities on the TSE and this constraint may seem to detract from the generalizability of an otherwise a well-crafted study. It appears that for a much more complete and satisfactory characterization of security markets in Canada as a whole, it would be necessary to include equities listed on other Canadian exchanges, thereby widening the spectrum considerably. However, given that the TSE is the largest of five exchanges in Canada, accounting for 75.2% of the total equity value of \$90.2 billion worth of securities in Canada in 1991 (TSE Review, July 1992), coupled with the fact that, most of the securities listed on other Canadian exchanges are also listed on the TSE, the potential telling effect of this limitation on the generalizability of the results is considerably reduced.

The problem of survivorship bias also seems to depreciate the general applicability of this study. The sample includes only firms which survived the selection criteria among which is the requirement that, to be included in the sample, firms should have had stock returns data for 300 days prior to the announcement date. The import of such a criterion is to significantly reduce the sample size from 280 to 147. Needless to say, most of the firms which did not survive this criterion are newly listed firm, thus creating survivorship bias in the sample. However, it is important to emphasize that these shortcomings will not vitiate the broad conclusions to be drawn from the study. Academicians and researchers, corporate finance managers and investment analysts are likely to find the study useful.

PM-1 3½"x4" PHOTOGRAPHIC MICROCOPY TARGET
NBS 1010a ANSI/ISO #2 EQUIVALENT

PRECISIONSM RESOLUTION TARGETS

6.2 CONCLUSION.

This study presents an empirical test of the after-market performance proposition of the signalling theories relating to dividend initiation/resumption. At the outset, the study underscores some of the inadequacies in existing literature, especially as they relate to the long term wealth effects of dividend initiation/resumption. The short-term results indicate that information asymmetry increases before and immediately after the announcement of dividend as reflected in the presence of abnormal returns. It also provides some evidence, albeit indirect, that the Canadian equity market is efficient in the semi strong form in the short term. The results of significant cumulative positive abnormal returns in the long term analysis provide an investment strategy in which the holding period in a portfolio of initiation and resumption firms is two years. One caveat is necessary here. The results of this thesis are based on 'event' time. However, the portfolio strategy described here has to be based on 'calendar' time. The latter may show significantly different 'risk' characteristics due to potentially small number of stocks in the investor's portfolio.

In accomplishing the objective of the study, this research goes beyond event study methodology to include methodologies that have been used in other areas of finance. Such an inquiry and the eclectic methodological approach would not only augment our understanding of the wealth effect of dividend initiation/resumption on stock price, but would also simultaneously, contribute an empirical base relevant to the literature on dividend initiation and resumption.

CHAPTER SEVEN

BENEFITS AND LIMITATIONS OF THE STUDY AND ISSUES FOR FURTHER RESEARCH.

7.1 BENEFITS.

The benefits of this study need to be reiterated. This work is a valuable exercise since it presents evidence of dividend initiation and resumption from the Canadian financial environment as distinct from the much written-about American markets. Despite the significant institutional, legal and operational differences in the capital markets, this study has shown that the positive market reaction to the announcement of dividend initiation/resumption is not a phenomenon peculiar to the US market. This research, therefore, improves our knowledge of dividend initiation/resumption. A corollary of the foregoing is that the study adds to the growing body of literature on individual country's capital market, which in turn helps to place in perspective, test results on dividend initiation/resumption derived from the US.

Besides adding to the scanty evidence on the subject in Canada, this research is also particularly interesting, not only for its improved methodology over existing empirical work, but also, its scope. This study is the first attempt towards a more comprehensive approach for examining the wealth impact of dividend initiation/resumption. The

innovation in this research is in its integration of four theoretical research issues previously examined separately, namely, the size effect, analysis of industry effect, performance evaluation and sensitivity test of market proxy. The implication of the distinctiveness of this work to academicians hardly needs amplification. The study gives a broader perspective of both the short-term wealth effect of dividend initiation/resumption and the efficiency of Canadian capital market. In important ways, therefore, the study provides more robust and accurate conclusions.

It is also noteworthy that this research is among the few to examine whether dividend initiations/resumptions signal the future correctly. By examining the long term after-market performance of dividend initiation/resumption firms using methodologies which capture better the wealth impact of the event, this thesis can be of practical significance to other interested parties. To practitioners, an understanding of the issues surrounding dividend initiation and resumption, examined in this research, is a vital part of corporate financial management and a crucial aspect of portfolio management. To financial analysts, the study is beneficial because the existence of significantly positive abnormal returns in the long term after market, presents opportunities for portfolio tilting. Corporate financial managers will also be in a better position to assess the implications of their intention to initiate/resume dividend on the stock price, and hence, their shareholders.

7.2 LIMITATIONS.

This study has a few limitations, the first of which relates to the range of companies in the sample. The study is limited to only publicly-listed common equities on the TSE and this constraint may seem to detract from the generalizability of an otherwise a well-crafted study. It appears that for a much more complete and satisfactory characterization of security markets in Canada as a whole, it would be necessary to include equities listed on other Canadian exchanges, thereby widening the spectrum considerably. However, given that the TSE is the largest of five exchanges in Canada, accounting for 75.2% of the total equity value of \$90.2 billion worth of securities in Canada in 1991 (TSE Review, July 1992), coupled with the fact that, most of the securities listed on other Canadian exchanges are also listed on the TSE, the potential telling effect of this limitation on the generalizability of the results is considerably reduced.

The problem of survivorship bias also seems to depreciate the general applicability of this study. The sample includes only firms which survived the selection criteria among which is the requirement that, to be included in the sample, firms should have had stock returns data for 300 days prior to the announcement date. The import of such a criterion is to significantly reduce the sample size from 280 to 147. Needless to say, most of the firms which did not survive this criterion are newly listed firm, thus creating survivorship bias in the sample. However, it is important to emphasize that these shortcomings will not vitiate the broad conclusions to be drawn from the study. Academicians and researchers, corporate finance managers and investment analysts are likely to find the study useful.

7.3 ISSUES FOR FURTHER RESEARCH.

The results obtained and the questions raised and/or left unanswered suggest further research. First, as Table 4 indicates, there is evidence of industry clustering of dividend announcement during the study period as over 40% of the sample are in the natural resource industry. While no explanation is offered for this concentration, this observation coupled with the conjecture made by Marsh and Merton (1987) that firms may calibrate their dividend policy relative to their peer firms, especially those in the same industry, provides impetus for further investigation. As an issue for further studies, it would be revealing to ascertain whether the relatively large number of natural resource firms initiating/resuming dividend is an industry fad. Probably, a detailed case (industry) study would be helpful for identifying industry specific reasons for initiating/resuming dividend.

Furthermore, the thesis has established that the age of initiation firms as measured by the listing interval computed as the difference in months between the day the firm is listed on the TSE and the announcement date is negatively related to the announcement period abnormal returns. This suggests that there is information content associated with being listed on the TSE. The most rewarding direction for future work on this assertion has to be the examination of the information content of listing on the stock market. Lastly, it would also seem interesting to analyze the market reaction to dividend suspension using data from Canadian markets since such an exercise will provide further evidence of the dividend hypothesis.

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APPENDIX A

Daily Abnormal Return and Cumulative Abnormal Return by Market Model around the announcement date.

DAY	INITIATION SAMPLE		RESUMPTION SAMPLE	
	Abnormal Return	Cumulative Abnormal Return	Abnormal Return	Cumulative Abnormal Return
-60	-0.0042	-0.0042	-0.0012	-0.0012
-50	0.0137	0.0076	-0.0028	-0.0033
-40	0.0114	-0.0026	-0.0096	0.0013
-30	0.0090	-0.0043	-0.0063	-0.0028
-20	0.0039	-0.0057	0.0058	0.0010
-10	0.0027	-0.0011	0.0131	-0.0011
-9	0.0016	-0.0011	0.0113	-0.0018
-8	0.0019	0.0003	0.0116	0.0003
-7	0.0002	-0.0017	0.0096	-0.0020
-6	0.0013	0.0010	0.0044	-0.0052
-5	0.0045	0.0033	0.0038	-0.0006
-4	0.0030	-0.0016	0.0028	-0.0009
-3	0.0058	0.0028	0.0032	0.0003
-2	0.0028	-0.0030	0.0001	-0.0031
-1	0.0035	0.0007	0.0014	0.0013
0	0.0198	0.0163	0.0169	0.0155
1	0.0346	0.0148	0.0158	-0.0010
2	0.0319	-0.0027	0.0185	0.0026
3	0.0305	-0.0014	0.0231	0.0047
4	0.0379	0.0074	0.0226	-0.0006
5	0.0341	-0.0038	0.0265	0.0039
6	0.0273	-0.0068	0.0266	0.0001
7	0.0334	0.0060	0.0371	0.0106
8	0.0320	-0.0014	0.0359	-0.0012
9	0.0246	-0.0074	0.0429	0.0069
10	0.0195	-0.0051	0.0309	-0.0120
20	0.0291	0.0092	0.0162	-0.0084
30	0.0240	0.0037	0.0234	0.0008
40	0.0322	0.0005	0.0089	-0.0034
50	0.0273	-0.0054	0.0124	0.0100
60	0.0278	0.0025	0.0193	-0.0031

APPENDIX B

RESULTS OF STEPWISE REGRESSION TO SELECT THE BEST EXPLANATORY VARIABLES.

VARIABLES IN THE EQUATION

Variable Name	Coefficient	t-statistic
Log of SIZE	-0.03	2.206
Yield	0.21	2.108
Constant	0.26	2.351
Adjusted R ²	.07	
F-statistic	6.1981	
D-W	1.9678	

VARIABLES NOT IN THE EQUATION

Variable Name	Coefficient	t-statistic
Listing/Resumption Interval	-0.05	-0.656
Beta	-0.124	-1.502
Industrial characteristics	0.133	1.589

APPENDIX C

MONTHLY CUMULATIVE ADJUSTED ABNORMAL RETURN FOR INITIATION SAMPLE

<u>MTH</u>	<u>N</u>	<u>AV.RETS</u>	<u>t-STAT</u>	<u>CUM.RETS</u>	<u>t-STAT</u>
-12	56	-0.38	-0.2587	-0.38	-0.2252
-11	57	-1.16	-0.7885	-1.54	-0.6002
-10	59	1.04	0.8001	-0.50	-0.1595
-9	60	3.26	1.9882	2.76	0.7524
-8	66	-0.92	-0.6169	1.83	0.4665
-7	67	-0.06	-0.0483	1.78	0.4140
-6	70	1.16	0.6013	2.93	0.6449
-5	73	0.14	0.1424	3.08	0.6449
-4	77	3.76	1.8815	6.84	1.3854
-3	82	1.84	1.4843	8.68	1.7179
-2	90	0.81	0.7478	9.49	1.8741
-1	101	0.86	0.7055	10.35	2.0710
1	104	2.95	2.7353	13.29	2.5920
2	103	0.49	0.4007	13.78	2.5753
3	104	1.41	0.9929	15.19	2.7536
4	105	0.15	0.1626	15.33	2.7035
5	104	0.76	0.7657	16.10	2.7386
6	102	-1.05	-1.1717	15.04	2.4624
7	102	1.05	1.0225	16.09	2.5628
8	102	1.78	1.3109	17.87	2.7727
9	101	0.97	0.9374	18.84	2.8386
10	101	0.28	0.2610	19.12	2.8132
11	101	-1.76	-1.7507	17.35	2.4968
12	100	1.14	0.7305	18.49	2.5911
13	101	1.02	0.6275	19.51	2.1919
14	101	-0.46	-0.4042	19.05	2.5768
15	101	1.47	0.7293	20.53	2.7234
16	96	-1.42	-1.3453	19.11	2.4266
17	95	2.00	1.1380	21.11	2.6201
18	94	0.18	0.1538	23.16	2.7064
19	96	0.69	0.3722	21.99	2.6527
20	93	1.17	0.7306	23.16	2.7064
21	92	-0.73	-0.6918	22.43	2.5673
22	92	-2.25	-2.0474	20.18	2.2756
23	91	1.30	0.9967	21.48	2.3735
24	91	1.13	0.9411	22.61	2.4634
25	90	0.45	0.4160	23.06	2.4639
26	90	-1.70	-1.4416	21.36	2.2516
27	86	-0.21	-0.1785	21.15	2.1511
28	86	0.45	0.5315	21.60	2.1695
29	84	-2.73	-2.1552	18.87	1.5800
30	84	-0.96	-0.6432	17.91	1.7345
31	83	-2.92	-2.1206	14.99	1.4264
32	81	-0.94	-0.5678	14.06	1.3060
33	81	-0.80	-0.6510	13.26	1.2181
34	80	-1.42	-1.0828	11.84	1.0688
35	78	-0.55	-0.4115	11.28	0.9953
36	78	0.40	0.1689	11.68	1.0197

APPENDIX D

MONTHLY CUMULATIVE ADJUSTED ABNORMAL RETURN FOR DIVIDEND RESUMPTION SAMPLE

<u>MTH</u>	<u>N</u>	<u>AV.RET</u>	<u>t-STAT</u>	<u>CUM.RET</u>	<u>t-STAT</u>
-12	71	2.40	1.0655	2.40	1.7548
-11	72	0.23	0.1990	2.63	1.3722
-10	73	1.46	0.8947	4.10	1.7565
-9	75	0.75	0.5402	4.85	1.8258
-8	75	0.14	0.1200	4.99	1.6807
-7	74	-0.70	-0.4793	4.29	1.3103
-6	74	2.04	1.4146	6.33	1.7887
-5	75	-1.23	-1.1299	5.10	1.3580
-4	73	1.15	0.7795	6.26	1.5491
-3	74	-0.74	-0.5851	5.51	1.3041
-2	75	2.55	1.6629	8.06	1.8309
-1	76	1.73	1.2061	9.80	2.1442
1	77	1.58	0.9452	11.38	2.4075
2	76	0.30	0.2321	11.68	2.3659
3	76	2.28	1.6538	13.96	2.7315
4	76	2.82	2.2991	16.78	3.1790
5	74	1.40	0.8817	18.18	3.2978
6	74	2.41	2.1381	20.59	3.6297
7	74	3.94	2.5695	24.53	4.2098
8	75	-0.48	-0.5228	24.05	4.0504
9	73	0.02	0.0172	24.08	3.9036
10	71	2.80	2.4665	26.88	4.1992
11	70	-1.19	-1.1327	25.69	3.8976
12	73	-1.20	-1.0592	24.50	3.7152
13	73	-0.65	-0.4859	23.85	3.5437
14	73	0.50	0.3978	24.35	3.5479
15	71	-0.55	-0.5192	23.80	3.3557
16	72	-0.18	-0.1759	23.62	3.2932
17	72	0.62	0.4289	24.24	3.3209
18	70	-0.85	-0.7699	23.39	3.1063
19	70	0.18	0.1485	23.57	3.0796
20	71	1.23	1.1006	24.80	3.2127
21	70	1.61	0.9867	26.41	3.3453
22	69	0.22	0.1695	26.63	3.2992
23	68	1.48	-0.4700	26.15	3.1698
24	68	-0.17	-0.1287	25.98	3.1047
25	65	-0.15	-0.1112	25.83	2.9769
26	68	2.10	1.4777	27.93	3.2491
27	64	1.07	0.7195	29.00	3.2309
28	64	1.77	1.2802	30.77	3.3846
29	64	-0.29	-0.1977	30.48	3.3112
30	63	1.56	1.1857	32.04	3.4125
31	64	1.99	1.3417	34.03	3.6104
32	63	1.27	1.0703	35.30	3.6728
33	60	3.79	2.4121	39.09	3.9247
34	62	-1.53	-0.9227	37.56	3.7917
35	59	1.38	1.0585	38.94	3.7941
36	59	1.59	0.9275	40.53	3.9074

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