INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

Bell & Howell Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600

CANADIAN MARKET REACTION TO DIVIDEND OMISSION AND RESUMPTION ANNOUNCEMENTS

Julie L'Heureux

A Thesis

In

The Faculty

Of

Commerce and Administration

Presented in Partial Fulfillment of the Requirements
For the Degree of Master of Science in Administration at
Concordia University
Montreal, Quebec, Canada

February 2000

ABSTRACT

Canadian market reaction to dividend omission and resumption announcements

Julie L'Heureux

This study examines share price reaction and changes in beta and trading activity surrounding announcements of dividend omissions and resumptions made by Canadian corporations. Significant negative abnormal returns are identified for a three-day announcement period. No significant shift in beta is found. The abnormal returns are not related to corporate size or to the size of the dividend changes. Dividend omission announcements generate changes in trading value. When the dividend omission sample is split into two subgroups according to the subsequent dividend policies of the corporations, the market model CAR are comparable and insignificantly different from each other. Dividend resumption announcements are not followed by significant changes in share price, beta or trading activity. All reported findings are robust to various estimation biases.

ACKNOWLEDGEMENTS

I wish to thank Lawrence Kryzanowski and Richard Chung for their insightful suggestions and programming support. Helpful comments were made by Abraham Brodt.

TABLE OF CONTENTS

CANADIAN MARKET REACTION TO DIVIDEND OMISSION AND RESUMPTION ANNOUNCEMENTS

1. INTRODUCTION

Any news influences stock prices whether it is market-wide or company-specific news. Earnings, sales, growth estimates, mergers, and changes in strategy are all examples of announcements made by corporations on a daily basis. Investors reflect each news event by adjusting expected returns, and therefore, share prices. While corporations do not determine sales or revenues, they are able to control other variables like product development, share and debt issuance, acquisitions, and dividend policy. Thus, when corporations announce the development of a new product, the acquisition of assets, or a change in dividend policy, investors use the new information to adjust share prices.

Top management's decision to change the corporation's dividend policy conveys company-specific information to investors. Dividend changes are often seen as signals about a corporation's cash flows. According to the dividend signaling theory, dividend increases and initiations are seen as a positive signal, while dividend reductions and omissions are seen as a negative signal. Since investors assume that dividends paid in the past will be sustained into the future, dividend reductions and omissions are seen as signals of poor prospects for corporations. As a result, top management only reduces or omits dividend payments as a last resort.

All previous studies find abnormal returns associated with announcements of dividend changes. Some studies also find that trading activity increases during this period. The greater

the dividend change, the larger the abnormal return documented. Furthermore, dividend changes by smaller corporations yield a greater investor reaction than those made by larger corporations. Thus, while much support exists for the widely accepted theory that dividend changes convey information about past and current earnings, whether dividend changes convey information about future earnings is still open to debate.

The literature has focused on dividend changes announced by U.S. corporations. Thus, the primary purpose of this thesis is to examine the market impact of dividend omissions and dividend resumptions announced by Canadian corporations. A market model is used to measure abnormal security return behaviour around these events. The market model used allows for beta shifts by using dummy variables, and adjusts for thin trading problems and non-synchronous trading by regressing a corporation's returns on lagged, synchronous and leading market returns. Company-specific variables are used to examine the determinants of any abnormal returns in cross-sectional regressions. The dividend omission sample is split into two subgroups according to the corporations' subsequent dividend policy. All the tests are repeated for the two subgroups. Finally, a market model is used to measure abnormal security return behaviour around the dividend resumption announcements made subsequently by the omitting corporations.

The major findings are that dividend omission announcements are associated with negative abnormal returns and changes in trading value, but no changes in beta. No relation is found between the market model CAR and corporation-specific variables. Corporations that later resume their dividend payments are larger in size than corporations that do not resume their payments, but no difference is found between their respective dividend omission abnormal returns. No significant evidence is found to support the claim that dividend resumption announcements are followed by significant increases in share prices. All the results are robust to sensitivity tests for various types of estimation biases.

This thesis is organized as follows. The next section reviews the relevant literature based on U.S. samples. A description of the data is presented in section III, and the methodology is discussed in section IV. A presentation and analysis of the results follows in section V. The last section provides a summary and some concluding remarks.

2. LITERATURE REVIEW

The literature on dividend signaling theory is reviewed first. A review of the literature on Beta shifts follows. Estimation biases and the methods to correct them are reviewed last.

2.1 Dividend Signaling Theory

According to Lintner (1956), changes in dividends depend on current and past earnings. Corporations only increase dividends when top management believes that earnings will support the new dividend level indefinitely. Miller and Modigliani (1961) argue that in perfect markets dividend policy is irrelevant. In a world with no taxes, agency costs and information asymmetry, external financing is easy to obtain for all corporations. As a result, whether a corporation uses free cash flows to pay out dividends and gets financing to make investments, or uses free cash flows to make investments, makes no difference to the value of the corporation. In the presence of market imperfections, Miller and Modigliani (1961) argue that dividend policy might have some relevance. Corporate taxes affect corporations' value, personal taxes create categories of investors, and differences between shareholders' and top management's objectives create agency costs. When markets are characterized by asymmetric information, top management can use dividends as a vehicle to convey information to investors. Dividend signaling theory implies that top management's decision to initiate or increase dividends conveys positive information about the corporation's cash flows, and that top management's decision to omit or reduce dividends conveys negative information. This argument is widely accepted.

Empirical studies using samples of U.S. corporations that changed their dividend policy support the theory. Michaely, Thaler and Womack (1995) find that dividend initiations are

followed by positive abnormal returns of 3.4%, and dividend omissions are followed by abnormal losses of 7.0%. The authors find that stock dividends are not seen as a perfect replacement for cash dividends. Corporations substituting stock dividends for cash dividends find that their stock prices decrease by an abnormal 3.1% during the 3-day event period. When Michaely et al. lengthen the time frame of their analysis to examine the long-term effect of the change in dividend policy, they find evidence that initiating corporations continue to enjoy positive abnormal returns and omitting corporations continue to suffer negative abnormal returns for a year after the announcement. Denis, Denis and Sarin (1994) also find evidence supporting the signaling hypothesis. Corporations announcing dividend increases enjoy a 1.25% abnormal return, and corporations announcing dividend reductions suffer a –5.71% abnormal return. Denis et al. find evidence that analysts significantly revise their earnings estimates in the direction of the dividend change following the announcements, and that corporations change their capital expenditures in the direction of the dividend change following the announcements. Dielman and Oppenheimer (1984) examine investor behavior around large dividend changes. They find that corporations experience significant abnormal returns around announcement dates. Similarly, Christie (1994) finds that corporations suffer negative abnormal returns when reducing or omitting dividends. Thus, dividend changes are not anticipated by investors and convey new information to the market.

To explain abnormal returns following dividend changes, the signaling theory hypothesizes that the size of investors' reaction depends on the size of the surprise. The greater the change in the dividend amount and yield, the larger the abnormal return. Denis et al. (1994) find evidence that dividend change announcements are positively related to the size of the dividend change and to dividend yield. Dividend increases (reductions) that are larger than the median dividend change are associated with an excess return of 1.25% (-1.89%) more than that for smaller dividend changes. Ghosh and Woolridge (1988) find evidence that for every 10% cut in dividends, corporations suffer 32.7 basis points of negative abnormal returns. Christie (1994)

finds that the absolute change in the dividend amount contributes significantly to the variation in risk-adjusted abnormal returns of stocks with dividend reductions and omissions. He also finds that the percentage change in dividend is significant for dividend reductions, and that dividend yield is significant for dividend omissions. Michaely et al. (1995) report a relation between dividend yields and abnormal returns. Dielman and Oppenheimer (1984) find that the longer the time period since the previous dividend omission, the greater the loss in return during the current dividend omission event period. All of these studies confirm that the reaction of investors to dividend change announcements is positively related to the size of the "news". Since the magnitude of a dividend change is a measure of its information content, these studies provide strong support for the signaling theory.

The dividend signaling theory also implies that top management of smaller corporations can use dividends to convey information not yet expected or available to investors. Small corporation stocks have less liquidity and higher transaction costs (higher bid-ask spreads) due to less information available through financial press coverage and analysts scrutiny. Thus, announcements made by smaller corporations generate greater market surprises than announcements made by larger firms. Christie (1994) finds that larger corporations suffer less than smaller corporations when announcing dividend omissions. Similarly, Ghosh and Woolridge (1988) find higher abnormal returns associated with dividend changes of smaller corporations.

Using dividend changes to convey information also creates trading activity pressure. Michaely et al. (1995) show that trading volume, a proxy for information flow, increases during the event period. This provides evidence that investors trade to adjust share prices so that prices reflect the new dividend level. Furthermore, trading value, a proxy for thin trading, also is predicted to increase due to dividend change announcements.

2.2 Changes in Beta

The market model, which is used in most event studies, suffers from one major drawback. It assumes that beta is constant throughout the test period. Michaely et al. (1995) find that betas increase after dividend omissions and decrease after dividend initiations, and that these shifts are not responsible for the documented abnormal returns. Shifts in beta suggest that a corporation's systematic risk is affected by new information reaching the market. This suggests that investors adjust their risk expectations when certain types of new information become available. Many methods are available to account for these possible changes in systematic risk. Kryzanowski and Zhang (1993) use a two-beta market model with a pre- and post-event beta. Standard t-tests and sign tests are used to measure the significance level of the difference in the two beta coefficients. Denis and Kadlec (1994) estimate betas using two regressions based on pre- and post-event periods. The difference in the betas for the pre- and post-event periods is tested for significance using standard t-tests and Wilcoxon signed ranks tests. Dielman and Oppenheimer (1984) measure a beta increment corresponding to the post-event beta change. In their study of large dividend changes including omissions and resumptions, Dielman and Oppenheimer (1984) find that the average beta of corporations reducing or omitting dividends shifts upward after the event period.

2.3 Estimation Biases

The accuracy with which security returns are measured and systematic risk is estimated is affected by the market microstructure. Scholes and Williams (1977) show that non-synchronous trading, which occurs when share prices recorded at the end of a day represent the outcome of a transaction that occurred earlier in that day, cause estimation biases. Measurement errors occur when comparing last traded prices of less liquid and infrequently traded stocks to the closing price of a more liquid and frequently traded benchmark. Thus, abnormal returns and systematic risks calculated using these non-synchronous trades can be incorrectly defined. Cohen et al. (1980) (1983) show that delays in the trading process cause beta estimates to be biased. Price-adjustment delays occur when prices adjust only slowly to new information reaching markets due to the iliquidity and infrequent trading of stocks. Since investor reactions are not immediate, serial correlation is found between security returns. As a result, abnormal returns may not appear immediately after an announcement and may even be sustained for longer periods than expected under perfect capital markets. Furthermore, estimates of systematic risk may be biased. To correct for these two estimation biases, a procedure advanced by Scholes and Williams (1977) (hereafter, SW) and modified by Dimson (1979), Cohen et al. (1980) (1983) and Fowler and Rorke (1983) can be used. It consists of regressing a corporation's daily share returns on lagging, synchronous and leading daily market returns. In Kryzanowski and Zhang (1993), abnormal returns and changes in systematic risk still hold after correcting for estimation biases. On the other hand, Denis and Kadlec (1994) find that the change in beta is no longer significant after correcting for estimation biases. The SW procedure to alleviate estimation problems is used in this study.

3. SAMPLING PROCEDURE AND DESCRIPTION OF THE DATA

A preliminary sample of 328 dividend omission announcements for common and preferred shares from 1985 to 1994 is identified from the TSE Monthly Review. After omissions of preferred share dividends are excluded, 229 announcements of common share dividend omissions remain. The focus is on corporations with established dividend policy by including only those which declared two annual dividends, or four semi-annual dividends, or eight quarterly dividends before omitting such payments. A total of 170 dividend omission announcements satisfied this criterion. A search of Lexis-Nexis and the Canadian Business and Current Affairs databases identified 124 public announcement dates for dividend omissions. Of these, two corporations were undergoing a merger, and therefore were eliminated from the sample. Thus, the final sample contains 122 dividend omissions.

Almost all corporations paid quarterly dividends prior to the omission (92 cases). Nevertheless, 21 corporations paid semiannual dividends and 9 paid annual dividends. Dividend omissions of straight voting common shares represent 55% of the dividend omission announcements (see Table 1). Twenty-two dividend omissions occur for non-voting or sub-voting shares only. The remaining 36 dividend omission announcements occur for both voting and non-voting share classes of the same corporation simultaneously. In other words, 18 corporations announce a dividend omission on both their voting and non-voting classes of shares. For three of these cases, the non-voting shares are not included in the sample because they paid stock dividends instead of cash dividends before the omission.

As reported in Table 2, dividend omissions occur more often during economic recessions. The number of dividend omission announcements increases considerably in the economic

recession years of 1990, 1991 and 1992. Furthermore, 46% of the corporations announcing dividend omissions report their financial results or announce restructuring plans simultaneously (see Panel A of Table 3). Only 10% of the sample corporations omit their common and preferred share dividends simultaneously (see Panel B of Table 3). This suggests that a corporation's financial misfortune may not be serious enough to warrant major corporate and financial restructuring. Two dummy variables are used herein to account for these events. The first dummy controls for simultaneous announcements such as financial reporting, share repurchase, exchange offer and restructuring. The second dummy controls for the simultaneous omission of common and preferred share dividends.

Share prices and issued capital are used in the calculation of the market value of common shares (hereafter, MVCS). This proxy for size is obtained by searching the TSE Monthly Review for the month prior to the dividend omission announcements. Indicated dividend yields and rates paid by corporations prior to the dividend omissions also are obtained from the TSE Monthly Review for the month prior to the dividend omission announcements. On average, corporations announcing dividend omissions paid dividends of $0.41 (annual indicated rate) and had dividend yields of 5.62% prior to the dividend omission. The average (median) corporation size is $162 million ($42 million). The skewness in size is explained by the presence of a few very large corporations in the sample, as evidenced in Table 4. The fifth size quintile has a wide range and an average MVCS almost six times greater than the fourth size quintile. Finally, from Table 4 it is apparent that the larger the corporation, the greater is the dividend amount paid before the omission, but the smaller is the dividend yield.

The Financial Post Dividend Record is used to investigate the subsequent dividend policy of each corporation included in the dividend omission sample. For 43 of the 122 dividend omissions (35%), corporations resume their dividends after an average halt of 19 months (see

Panel A of Table 5). Eighteen corporations are de-listed from the TSE, and the remaining 61 corporations do not resume dividend payments nor are de-listed from the TSE. Approximately 86% of the corporations resume dividend payments by paying an average cash dividend of $0.09 (see Panel B of Table 5). The remaining 14% resume dividend payments by paying stock dividends. A dummy variable is created to differentiate between corporations that resume by paying cash dividends and those that resume by paying stock dividends. Finally, 44% of dividend resuming corporations pay a dividend amount less than the dividend amount paid before the dividend omission (see Panel C of Table 5). This comparison between resuming dividend amounts and dividend amounts paid before the dividend omission announcements is incorporated into the analysis.

Based on the U.S. Standard Industrial Classification (SIC) codes and the North American Industry Classification System (NAICS) codes, Table 6 presents the sample's industry representation. Twenty-five percent of the dividend omissions occur in the manufacturing industry.

4. METHODOLOGY

4.1 Dividend Omission Sample Tests

The event period abnormal return is calculated from day –1 to day +1 with day 0 corresponding to the day of the dividend omission announcement. The estimation period starts 250 trading days prior to the dividend omission announcement date and ends 250 days after day 0. The market is proxied by the TSE 300 index. The following dummy variable technique is used to calculate abnormal returns:

$$\text{Model 1:}\quad R_{it} = \alpha_i + \beta_i R_{mt} + \gamma_{it} D_{1t} + \varepsilon_{it}$$

where R_{it} is the return of security i over day t; R_{mt} is the return of the market over day t; D_{1t} is a dummy variable that takes on a value of one on the days of the event period (days –1, 0 and +1) and a value of 0 otherwise; and ε_{it} is assumed to be a mean zero, normally distributed error term. β_i represents the systematic risk for security i over the entire period. The abnormal return parameter γ_{it} directly isolates the component of the security's daily return that is due to the event itself. The cumulative abnormal return (hereafter, CAR) for days –1, 0 and +1 is represented by $3\gamma_{it}$.

This dummy variable technique is equivalent to using the traditional two-step market model. The results obtained are directly comparable to the results of prior dividend omission studies. Unfortunately, model 1 suffers from the same drawbacks as the traditional market model technique. Model 1 assumes a constant beta throughout the test period. To determine whether the average systematic risk (beta) of the securities shifted at the time of the announcement, the following model is estimated:

$$\text{Model 2: } R_{it} = \alpha_i + \beta_{i1} R_{mt} + \beta_{i2} R_{mt} D_2 + \gamma_{it} D_{1t} + \varepsilon_{it}$$

where R_{it}, R_{mt}, D_{1t} and ε_{it} are as explained above; D_2 is a dummy variable that takes on a value of one on and after the event period (days –1 to +250), and a value of 0 before the event period (days –250 to –2). $R_{mt} D_2$ decomposes beta into a pre-omission and post-omission component. Thus, the beta of corporation i is β_{i1} before the dividend omission announcement, and is $\beta_{i1} + \beta_{i2}$ on and after the dividend omission announcement. Thus, β_{i1} represents the beta for security i over the entire period, while β_{i2} represents the change in beta for security i on and after the dividend omission. Testing the significance of the $R_{mt} D_2$ coefficient estimate indicates whether top management's decision to omit dividends causes changes in the corporation's systematic risk. As in the first model, the abnormal return parameter γ_{it} directly isolates the component of the security's daily return that is due to the event itself. The CAR for days –1, 0 and +1 (the event period) is represented by $3\gamma_{it}$.

To examine further the significance of the changing beta, the differences between the pre-omission and post-omission beta are calculated. Standard t-tests for the mean change in beta are conducted. To do such, the following model is estimated:

$$\text{Model 3: } R_{it} = \alpha_i + \beta_{i1} R_{mt} D_2 + \beta_{i2} R_{mt} D_3 + \gamma_{it} D_{1t} + \varepsilon_{it}$$

where R_{it}, R_{mt}, D_2, D_{1t} and ε_{it} are as explained above; D_3 is a dummy variable that takes on a value of one before the event period (days –250 to -2), and a value of 0 on and after the event period (days –1 to +250). β_{i1} represents the systematic risk for security i on and after the dividend omission announcement, while β_{i2} represents the systematic risk for security i before the

dividend omission announcement. As before, the CAR for days –1, 0 and +1 is represented by $3\gamma_{it}$. This model specifically allows for testing the significance of changes in systematic risk.

Finally, to test whether non-synchronous trading and price adjustment delays affect the results, the pre- and post-omission betas are re-estimated using the AC method proposed by Dimson (1979) and refined by Fowler and Rorke (1983). Specifically, the following regression of the observed security returns against leading, synchronous and lagged values of market returns is used:

$$\text{Model 4: } R_{it} = \alpha_i + \Sigma_{k=-1}^{+1} \beta_{i1k} R_{mt+k} D_2 + \Sigma_{k=-1}^{+1} \beta_{i2k} R_{mt+k} D_3 + \gamma_{it} D_{1t} + \varepsilon_{it}$$

where R_{it}, D_1, D_2, D_3 and ε_{it} are as explained above; and R_{mt+k} is the return to the market over day t + k. The weighted sum of the β_{i1k} estimates represent the systematic risk for security i on and after the dividend omission, while the weighted sum of the β_{i2k} estimates represent the systematic risk of security i before the dividend omission. This methodology corrects for estimation biases that are due to measurement inaccuracies in security returns, provided that infrequent trading does not last for more than one day. After correcting for estimation biases, any significant change in beta that still remains is totally attributable to top management's decision to omit dividends.

The first estimated cross-sectional regression evaluates the relationship between CAR and the two dummy variables created to incorporate confounding events. Specifically,

$$\text{Model 5: } CAR_i = \alpha + \beta_1 \text{DummyResults}_i + \beta_2 \text{DummyPS}_i + \varepsilon_i$$

where CAR_i is the cumulative abnormal return of security i over the 3-day event period, defined earlier as $3\gamma_{it}$; $DummyResults_i$ is a dummy variable that takes on the value of one if the corporation announces a dividend omission and some financial news simultaneously, and a value of zero if the corporation announces a dividend omission only; $DummyPS_i$ is a dummy variable that takes on the value of one if the corporation omits common and preferred share dividends simultaneously, and a value of zero if the corporation omits common share dividends only; and ε_i is assumed to be a mean zero, normally distributed error term.

Running the following regression tests the relationship between CAR and dividend yield, dividend amount, and corporation size:

$$\text{Model 6: } CAR_i = \alpha + \beta_1 DivYield_i + \beta_2 DivAmount_i + \beta_3 MVCS_i + \varepsilon_i$$

where CAR_i and ε_i are as explained above; $DivYield_i$ is the dividend yield of security i before the omission; $DivAmount_i$ is the dividend amount of security i before the omission; and $MVCS_i$ is the market value of the common shares of security i.

Next, the following regression is run to examine investors' ability to anticipate which corporations will resume their dividend payment:

$$\text{Model 7: } CAR_i = \alpha + \beta_i ResDummy_i + \varepsilon_i$$

where CAR_i and ε_i are as explained above; and $ResDummy_i$ is a dummy variable that takes on the value of one if the dividend of security i is later resumed, and a value of zero otherwise. This model specifically checks if there is a difference in abnormal returns that may be found for omitting corporations which subsequently resume their dividend payments. Furthermore, the

CAR of corporations omitting dividends and later resuming them is compared with the CAR of corporations which do not resume paying dividends. Specifically, the sample is split into 2 sub-samples; the first one contains the 43 corporations that omit their dividends and subsequently resume them, while the second sub-sample contains the remaining 79 omitting corporations that do not resume their dividend payments. Then, the dividend omission event period CAR for each sub-sample is calculated and statistically compared using the paired difference t-test.

Two indicators of trading activity are obtained from the TSE Equity History File for each trading day from –250 days prior to the dividend omission announcement to +250 days after. These indicators are trading volume in number of shares traded per day and trading value in dollars per day. Abnormal trading activity (hereafter, ATA) is calculated as the difference between daily trading activity (volume and value) during the event period and normal trading activity. Specifically:

$$ATA_i = \text{Event period trading activity}_i - \text{Normal trading activity}_i$$

The control period used to calculate normal trading activity is from day –250 to day –20.

Changes in trading activity also are estimated by comparing pre- and post-omission trading activity measures. Thus, trading volume and value are computed for the 249 days before the dividend omission announcements (days –250 to –2), and for the 252 days after the dividend omission announcements (days –1 to +250). Pre- and post-omission trading activity measures are compared using the standard t-test and the Wilcoxon rank-sum test.

Finally, the relationship between changes in beta and changes in trading activity is analyzed. The sample of dividend omissions is partitioned into quartiles according to changes in trading activity. Then, changes in beta within each quartile are studied. Specifically, within each trading quartile, pre- and post-omission beta estimates are computed using the three dummy variable models introduced earlier. The difference between the two beta coefficients is calculated. Standard t-test and the Wilcoxon rank-sum test are used to measure the significance of this difference.

4.2 Dividend Resumption Sample Tests

Similarly to the dividend omission sample, the estimation period for the dividend resumption sample starts 250 days prior to the dividend resumption announcements and ends 250 days after the dividend resumption announcements. Event period abnormal returns are calculated from day –1 to day +1 with day 0 corresponding to the day of the dividend resumption announcement. To calculate abnormal returns, model 2 of the dividend omission sample is applied to the dividend resumption sample. Specifically:

$$\text{Model 8: } R_{it} = \alpha_i + \beta_{i1} R_{mt} + \beta_{i2} R_{mt} D_2 + \gamma_{it} D_{1t} + \varepsilon_{it}$$

where R_{it}, R_{mt}, D_{1t}, D_2 and ε_{it} are as explained above. $R_{mt} D_2$ decomposes beta into a pre-and post-resumption component. Thus, the beta of corporation i is β_{i1} before the dividend resumption announcement, and $\beta_{i1} + \beta_{i2}$ on and after the dividend resumption announcement. β_{i2} thus represents the change in beta for security i on and after the dividend resumption date. Testing the significance of the $R_{mt} D_2$ coefficient estimate indicates whether top management's decision to resume dividends causes changes in the corporation's systematic risk.

Similarly, model 6 of the dividend omission sample, which measures the relationship between CAR and the size of the "news", is performed using the dividend resumption sample. Specifically:

$$\text{Model 9: } CAR_i = \alpha + \beta_1 \, ResDivAmt_i + \beta_2 \, MVCS_i + \varepsilon_i$$

where CAR_i, $MVCS_i$ and ε_i are as explained above; and $ResDivAmt_i$ is the dividend amount of security i paid by the corporation after it decided to resume paying dividends.

The following regression is run to examine the relationship between the CAR and resumption characteristics:

$$\text{Model 10: } CAR_i = \alpha + \beta_1 \, MonthsOmi_i + \beta_2 \, DummyCash_i + \beta_3 \, DummyMore_i + \varepsilon_i$$

where CAR_i and ε_i are as explained above; $MonthsOmi_i$ is the number of months elapsed between the dividend omission and dividend resumption; $DummyCash_i$ is a dummy variable that takes on the value of one if the corporation resumes by paying a cash dividend, and a value of zero if the corporation resumes by paying a stock dividend; and $DummyMore_i$ is a dummy variable that takes on the value of one if the corporation's dividend resumption amount is the same or greater than the dividend amount it was paying prior to the omission.

ATA, pre- and post-resumption trading activity, and the relationship between beta changes and trading activity are calculated for the dividend resumption sample using the same methodology as was used for the dividend omission sample.

4.3 Test of Robustness using Returns Based on Spread Midpoints

Share prices used to calculate daily returns reflect the last transaction of the day. On dividend omission (resumption) announcement days, the last trade of the day is more likely to be a sell (buy) executed at the bid (ask) price. In addition, potential shifts in systematic risk following dividend omission (resumption) announcements may result in wider (smaller) bid-ask spreads though lowering (increasing) even further the last share price recorded. As a result, CARs and estimates of systematic risk may be biased. To alleviate this problem, models 1, 2 and 3 are run with daily spread midpoints, defined as the average of the bid and ask prices. The difference between the results obtained using daily closing price returns and results obtained using spread midpoint returns are tested for significance using a standard T-test for means.

5. EMPIRICAL RESULTS

5.1 Dividend Omission Sample Results

Figure 1 shows that the share prices of corporations decrease around the announcement of dividend omissions. This is confirmed by the estimates of cumulative abnormal returns (CAR) and betas obtained from the estimations of models 1, 2, 3 and 4 that are summarized in Table 7. Corporations omitting dividends suffer a 5.78% decline in their share price during the 3-day event period. When using the models that allow systematic risk to change (i.e., models 2 and 3), corporations suffer a negative 5.88% CAR. Conducting the same tests using mid-spread returns instead of closing price returns yields similar results. Thus, the results support the theory that dividend omissions convey unfavorable information to the market, and investors react negatively to corporations announcing dividend omissions.

Results for model 2 show a slight but insignificant drop in beta after the omission announcement (coefficient is –0.006 with a t-value of –0.03). Based on the model 3 estimates, β_1 (pre-omission beta) is 0.627 and β_2 (post-omission beta) is 0.633. The difference of 0.006 between the two betas is insignificant (t-statistic of 0.0396). These beta results are counter to the findings of Michaely et al. (1995) and Dielman and Oppenheimer (1984). The results suggest that beta is constant throughout the test period, and that beta does not shift around and after the dividend omission announcements.

After correcting for non-synchronous and thin trading problems, the CAR is –6.07% for the 3-day event period (see model 4 results in Table 7). This is slightly higher than the estimated CAR of models 1, 2 and 3. A comparison of the beta coefficients from models 1, 2, 3 and 4

reveals that the estimated betas decrease when a correction is made for non-synchronous trading. As before, the difference between the two betas is insignificant. More importantly, estimation biases are not responsible for the 3-day event period CAR evidenced earlier. Thus, abnormal returns surrounding dividend omissions are due to the unexpected information conveyed by top management decisions to omit dividends.

Market model CAR is not related to corporation-specific variables. Model 6 results reported in Table 8 show that CAR is not significantly related to the size of the dividend change. The coefficients for the dividend yield and amount are slightly negative, implying that higher values are associated with a greater negative CAR. However, the dividend yield coefficient is the only one significant at the 10% level. Similarly, large corporations announcing dividend omissions generate slightly smaller negative abnormal returns than smaller corporations, but the results are not significant. Simultaneously announcing other news such as financial reports, share repurchases, exchange offers and restructuring does not affect investors' reaction. Furthermore, when corporations announce that they are omitting both common and preferred share dividends, no significant additional CAR is reported (see model 5 results in Table 8).

The results reported for model 7 in Table 8 show that investors are unable to discern between corporations who later resume paying dividends from corporations who do not resume dividends. The coefficient of ResDummy, the dummy variable used to characterize corporations who later resume paying dividends, is not significant. Thus, the market model CAR is the same whether corporations subsequently resume their dividend payments or not. As expected, investors cannot anticipate which omitting corporations will subsequently resume paying dividends.

The comparison between the corporations omitting dividends and not subsequently resuming them (subgroup 1), and the corporations omitting dividends and later resuming them (subgroup 2) is presented in Figures 2 and 3, and in Tables 9 and 10. Figures 2 and 3 present the share prices of the first and second subgroups, respectively, around the dividend omission announcement period. Both graphs show a decrease in share price around day 0. This is confirmed by the results reported in Table 9. Corporations that are part of the first subgroup suffer a 5.89% loss during the 3-day period surrounding the dividend omission announcements. Similarly, corporations that are part of the second subgroup suffer a 5.56% loss during the same event period. The difference between the two subgroups is insignificant (see the CAR t-statistic reported in Table 10). Significant t-statistics are identified for the differences in size and dividend yield, implying that the two subgroups have different characteristics before the dividend omission announcements.

Trading volume and value does not fluctuate greatly around the dividend omission announcements, but increase much later after the announcements (see Figures 4 and 5). The results reported in Table 11 are somewhat supportive of these observations. While trading volume increases during the 5-day event window and after the dividend omission announcements, the differences are only significant at a confidence level of 10%. Trading values decrease significantly during the 20-day event window, but increase significantly during the 5-day event window. Trading values also increase on and after the omission announcement compared to before it, but the differences are only significant at a 10% level. These results are partially consistent with previous research and the signaling theory, which predicts an increase in trading activity after new information reaches the market.

Based on the quartile comparisons reported in Table 12, dividend omissions are followed by significantly negative abnormal returns for corporations that are either widely or thinly traded. Investor reaction to omission announcements is similar for all corporations. Changes in beta from pre- to post omission announcements are not significant. This implies that beta is constant and not sensitive to dividend omission announcements for various trading activity levels.

5.2 Dividend Resumption Sample Results

Omitting corporations, which later decide to resume paying dividends, suffer a very small and insignificant loss in share price when they announce the dividend resumption (see results reported in Table 13). Figure 6 shows that the share prices of corporations announcing a dividend resumption do not move significantly. Furthermore, the beta coefficients do not change after the resumption suggesting that beta is constant throughout the test period. The CAR based on mid-price returns instead of closing price returns is negative but still insignificant. These results suggest that dividend resumption announcements do not convey any new information to the market.

While the average CAR is not significant, it is related to the size of the resuming dividend amount (see model 9 results reported in Table 14). The higher the dividend amount declared at resumption, the more negatively investors react. Corporations also suffer when they decide to pay an amount greater than the dividend amount they originally omitted (see model 10 results reported in Table 14). Contrary to Dielman and Oppenheimer (1984), the time between the omission announcement and the resumption announcement is not significantly related to the CAR. Finally, resumption announcements made by small corporations do not reveal more information to the market than announcements made by large corporations.

Trading activity surrounding dividend resumption announcements is fairly constant (see Figures 7 and 8). The results reported in Table 15 confirm this. During the 20-day and 5-day event windows, trading volume and trading value do not change significantly (see Panels A and B results). The comparison of trading activity before and after the resumption announcements do not yield significant differences (see Panel C results). Furthermore, the CAR of the resuming corporations is still insignificant whether the corporations are thinly or widely traded (see results

reported in Table 16). These results suggest that resumption announcements do not convey any new information to the market. Investors have already incorporated the news into their expectations about the underlying corporations.

Similarly, the CARs for three equally divided samples by trading volume for dividend resumption announcements are insignificant (see results reported in Table 16). The differences between pre- and post-resumption betas are not significant for each of these three groupings.

6. CONCLUDING REMARKS

This thesis examines the share price reaction to dividend omission announcements made by Canadian corporations. The market model is used to obtain abnormal returns after adjusting for shifts in beta. Corrections are made for non-synchronous trading problems. The relationship between market model CAR and corporation-specific variables is examined. Tests of changes in trading activity surrounding the dividend omission announcements are provided. The dividend omission sample also is split into two according to top management's subsequent dividend policy. The market model and cross-sectional regressions are repeated for the sub-sample of omitting corporations that subsequently resume their dividend payments.

The first major finding is that dividend omission announcements generate negative abnormal returns and changes in trading value. No significant shift in beta is found, and the abnormal return results are not affected by estimation biases. The second major finding is that the negative CAR is not related to corporate size or the size of the dividend changes. In addition, simultaneously announcing preferred with common dividend omissions does not generate additional abnormal returns. Omitting corporations that subsequently resume their dividend payments generate negative CAR that are no different from the ones generated by omitting corporations that do not subsequently resume their dividend payments. Finally, top management's decision to resume dividend payments after omitting them earlier does not generate significant abnormal returns. However, the market model CAR are related to the dollar amount of the dividend resumption. No changes in beta and trading activity are reported for dividend resumption announcements.

The findings are somewhat consistent with previous empirical findings for U.S. corporations. The findings are also somewhat supportive of the dividend signaling theory. Top management's decision to omit the dividend payment is seen as a negative signal by investors. The reported changes in trading activity suggest that investors trade to adjust share prices so that share prices reflect the change in dividend policy. Though omitting corporations that later resume their dividend payments are larger in size and have lower dividend yields, investors are unable to predict which corporations will subsequently resume their dividend payments. Furthermore, dividend resumption announcements do not convey any new information to investors.

Future research on changes in dividend policy made by Canadian corporations should shed light on the type of information signaled by the dividend change.

7. BIBLIOGRAPHY

Christie, W.G., 1994, Are Dividend Omissions Truly the Cruelest Cut of All, Journal of Financial and Quantitative Analysis (September), 459-480.

Chung, R. and L. Kryzanowski, 1998, Are the Market Effects Associated with Revisions to the TSE 300 Index Robust?, Multinational Finance Journal (March), 1-36.

Cohen, K.J., G.A. Hawawini, S.F. Maier, R.A. Schwartz and D.K. Whitcomb, 1980, Implications of Microstructure Theory for Empirical Research on Stock Price Behavior, Journal of Finance (May), 249-257.

_____, 1983, Friction in the Trading Process and the Estimation of Systematic Risk, Journal of Financial Economics (12), 263-278.

Denis, D.J., D.K. Denis and A. Sarin, 1994, The Information Content of Dividend Changes: Cash Flow Signaling, Overinvestment and Dividend Clienteles, Journal of Financial and Quantitative Analysis (December), 567-587.

Denis, D.J. and G.B. Kadlec, 1994, Corporate Events, Trading Activity, and the Estimation of Systematic Risk: Evidence From Equity Offerings and Share Repurchases, Journal of Finance (December), 1787-1811.

Dielman, T.E. and H.R. Oppenheimer, 1984, An Examination of Investor Behavior during Periods of Large Dividend Changes, Journal of Financial and Quantitative Analysis (June), 197-216.

Dimson, E., 1979, Risk Measurement When Shares are Subject to Infrequent Trading, Journal of Financial Economics (7), 197-226.

Eckbo, B.E., 1990, Valuation Effects of Greenmail Prohibitions, Journal of Financial and Quantitative Analysis (December), 491-505.

Fowler, D.J. and C.H. Rorke, 1983, Risk Measurement When Shares are Subject to Infrequent Trading: Comment, Journal of Financial Economics (12), 279-283.

Ghosh, C. and J.R. Woolridge, 1988, An Analysis of Shareholder Reaction to Dividend Cuts and Omissions, Journal of Financial Research (winter), 281-294.

Kryzanowski, L. and H. Zhang, 1993, Market Behavior around Canadian Stock Split Ex-dates, Journal of Empirical Finance, 57-81.

Kryzanowski, L. and H. Zhang, 1996, Trading Patterns of Small and Large Traders Around Stock Split Ex-dates, Journal of Financial Research (spring), 75-90.

Lintner, J., 1956, Distribution of incomes of corporations among dividends, retained earnings, and taxes, American Economic Review (46), 97-113.

Michaely, R., R.H. Thaler and K.L. Womack, 1995, Price Reactions to Dividend Initiations and Omissions: Overreaction or Drift?, Journal of Finance (June), 573-608.

Scholes, M. and J. Williams, 1977, Estimating Betas From Non-Synchronous Data, Journal of Financial Economics (5), 309-328.

8. TABLES

8.1 Sample Description Tables

Table 1: Dividend omissions by share classes

Class of common shares	Number of omissions	Percentage of omissions
Straight voting common shares	67	54.9%
Non-voting or sub-voting common shares only	22	18.0%
Voting and non-voting common shares simultaneously	33[1]	27.1%
Total:	122	100%

Table 2: Annual distribution of dividend omissions

Year	Number of omissions	Percentage of omissions	Economic recession years
1985:	1	0.8%	
1986:	6	4.9%	
1987:	1	0.8%	
1988:	6	4.9%	
1989:	10	8.2%	
1990:	36	29.5%	
1991:	26	21.3%	**68.0%**
1992:	21	17.2%	
1993:	10	8.2%	
1994:	5	4.1%	
Total:	122	100%	

[1] 18 corporations omit dividends on their voting and non-voting classes of shares simultaneously. However, in 3 of these 18 cases, the second class in not included in the sample because it paid stock dividends instead of cash dividends before the omission.

Table 3: Dividend omission and confounding event announcements

Events announced	Number of omissions	Percentage of omissions
	Panel A	
Dividend omission only	66	54.1%
Dividend omission and financial results	46	37.7%
Dividend omission and other news[2]	10	8.2%
Total	122	100%
	Panel B	
Common share dividend omission only	110	90.2%
Common and preferred share dividend omissions	12	9.8%
Total	122	100%

Table 4: Characteristics of corporations omitting dividends, by size quintile

Size quintile	Average (median) MVCS ($ million)	MVCS range Min-Max ($ million)	Average (median) share price ($)	Average (median) dividend rate ($)	Average (median) dividend yield (%)
1	6.56	1.72 - 11.92	3.5	0.19	6.33
	(7.29)		(2.75)	(0.15)	(4.8)
2	20.49	12.47 - 31.97	6.11	0.27	6.18
	(19.11)		(4.15)	(0.20)	(3.81)
3	45.59	32.82 - 66.31	5.30	0.30	6.62
	(42.16)		(4.75)	(0.20)	(4.92)
4	116.42	69.71 - 184.3	11.32	0.50	4.69
	(104.17)		(5.375)	(0.20)	(3.64)
5	658.24	222.48 - 1,627.37	15.58	0.82	4.20
	(645.99)		(12.00)	(0.30)	(2.91)

[2] Other news includes common share repurchase, exchange offer, corporate restructuring and sale of subsidiary. Merger and acquisition news is excluded from the sample.

Table 5: Characteristics of the omission and resumption process

Panel A

	Number of omissions	Percentage of omissions	Average (median) number of months since omission	Range (Min-Max) number of months
Corporations resuming dividend payments	43	35.3%	18.8 (17)	2 – 70
Corporations de-listed for M&A reasons	12	9.8%	23.8 (15)	6 – 56
Corporations de-listed (no reason given)	6	4.9%	15 (14.5)	5 – 26
Corporations not resuming and not de-listed	61	50%		
Total	122	100%		

Panel B

	Number of omissions	Percentage of omissions	Average amount	Median amount
Corporations resuming using stock dividends	6	13.9%	0.197 cash equivalent	
Corporations resuming using cash dividends	37	86.1%	0.09	0.05
Total	43	100%		

Panel C

	Number of omissions	Percentage of omissions
Resuming dividend amount less than dividend amount paid before the omission	19	44.2%
Resuming dividend amount same as dividend amount paid before the omission	16	34.2%
Resuming dividend amount more than dividend amount paid before the omission	8	18.6%
Total	43	100%

Table 6: Distribution of omitting corporations by industry

NAICS code	SIC code	Description	Number of omissions	Percentage of omissions
11	0100 to 0971	Agriculture, forestry and fishing	5	4.1%
21	1011 to 1499	Mining	18	14.7%
23	1521 to 1799	Construction	1	0.8%
31-33	2011 to 3999	Manufacturing	31	25.4%
22-48-49-51-56	4011 to 4971	Transportation, communication, and other public utilities	8	6.6%
42	5012 to 5199	Wholesale trade	3	2.5%
44-45-72	5211 to 5999	Retail trade	13	10.7%
52-53	6011 to 6799	Finance, insurance and real estate	21	17.2%
51 to 56, 62-71-72	7011 to 8999	Services	17	13.9%
	9999	Non-classified (holding corporations)	5	4.1%
		Total	122	100%

8.2 Dividend Omission Sample Result Tables

Table 7: Estimates of CAR and of the explanatory variable coefficients obtained from models 1, 2, 3 and 4.

The models are given by:

Model 1: $R_{it} = \alpha_i + \beta_i R_{mt} + \gamma_{it} D_{1t} + \varepsilon_{it}$

Model 2: $R_{it} = \alpha_i + \beta_{i1} R_{mt} + \beta_{i2} R_{mt} D_2 + \gamma_{it} D_{1t} + \varepsilon_{it}$

Model 3: $R_{it} = \alpha_i + \beta_{i1} R_{mt} D_2 + \beta_{i2} R_{mt} D_3 + \gamma_{it} D_{1t} + \varepsilon_{it}$

Model 4: $R_{it} = \alpha_i + \Sigma_{k=-1}^{+1} \beta_{i1k} R_{mt+k} D_2 + \Sigma_{k=-1}^{+1} \beta_{i2k} R_{mt+k} D_3 + \gamma_{it} D_{1t} + \varepsilon_{it}$

where R_{it} is the return of security i over day t; R_{mt} is the return of the market over day t; D_{1t} is a dummy variable that takes on a value of one on the days of the event period (days –1, 0 and +1) and a value of 0 otherwise; D_2 is a dummy variable that takes on a value of one on and after the event period (days –1 to +250), and a value of 0 before the event period (days –250 to –2); D_3 is a dummy variable that takes on a value of one before the event period (days –250 to -2), and a value of 0 on and after the event period (days –1 to +250); R_{mt+k} is the return to the market over day t + k, and ε_{it} is assumed to be a mean zero, normally distributed error term. The reported weighted sum of the β_{i1k} estimates represent the systematic risk for security i on and after the dividend omission, while the reported weighted sum of the β_{i2k} estimates represent the systematic risk of security i before the dividend omission. The cumulative abnormal return (CAR) for days –1, 0 and +1 is represented by $3\gamma_{it}$. The t-statistics are given in parentheses. * and ** indicate significance at 5% and 1% levels respectively.

	Closing price returns				Mid-spread returns			
	CAR	R_m	$R_m D_2$	$R_m D_3$	CAR	R_m	$R_m D_2$	$R_m D_3$
Model 1:	-0.0578**	0.627**			-0.0672**	0.681**		
	(-4.75)	(9.58)			(-4.59)	(6.85)		
Model 2:	-0.0588**	0.633**	-0.006		-0.0701**	0.569**	0.299	
	(-4.74)	(8.60)	(-0.03)		(-4.64)	(7.98)	(1.12)	
Model 3:	-0.0588**		0.627**	0.633**	-0.0701**		0.867**	0.569**
	(-4.74)		(4.66)	(8.60)	(-4.64)		(3.42)	(7.98)
Model 4:	-0.0607**		0.313**	0.2524**				
	(-4.82)		(5.40)	(8.01)				

Table 8: Coefficient estimates from cross-sectional regressions for models 5, 6 and 7.

The three estimated models are:

$$\text{Model 5: } CAR_i = \alpha + \beta_1 \, DummyResults_i + \beta_2 \, DummyPS_i + \varepsilon_i$$

$$\text{Model 6: } CAR_i = \alpha + \beta_1 \, DivYield_i + \beta_2 \, DivAmount_i + \beta_3 \, MVCS_i + \varepsilon_i$$

$$\text{Model 7: } CAR_i = \alpha + \beta_i \, ResDummy_i + \varepsilon_i$$

where CAR_i is the cumulative abnormal return of security i over the 3-day event period, defined earlier as $3\gamma_{it}$; $DummyResults_i$ is a dummy variable that takes on the value of one if the corporation announces a dividend omission and some financial news simultaneously, and a value of zero if the corporation announces a dividend omission only; $DummyPS_i$ is a dummy variable that takes on the value of one if the corporation omits common and preferred share dividends simultaneously, and a value of zero if the corporation omits common share dividends only; $DivYield_i$ is the dividend yield of security i before the omission; $DivAmount_i$ is the dividend amount of security i before the omission; and $MVCS_i$ is the market value of common shares of security i; $ResDummy_i$ is a dummy variable that takes on the value of one if the dividend of security i is later resumed, and a value of zero otherwise; and ε_i is assumed to be a mean zero, normally distributed error term. The T-statistics are given in parentheses. * and ** indicate significance at 5% and 1% levels respectively.

Model 5:	Intercept	DummyResults	DummyPS		F-value
	-0.0418**	-0.0209	-0.0787		2.632
	(-2.55)	(-0.80)	(-1.81)		
Model 6:	Intercept	DivYield	DivAmt	MVCS	F-value
	-0.0367	-0.0043	-0.0171	5.42 E-11	3.099
	(-1.71)	(-1.81)	(-1.52)	(1.35)	
Model 7:	Intercept	ResDummy			F-value
	-0.0602**	0.0043			0.026
	(-3.79)	(0.16)			

Table 9: Estimates of CAR and of the explanatory variable coefficients obtained from models 1, 2 and 3 for omitting corporations which later do not resume their dividend payments and for omitting corporations which later resume their dividend payments.

The models are given by:

$$\text{Model 1: } R_{it} = \alpha_i + \beta_i R_{mt} + \gamma_{it} D_{1t} + \varepsilon_{it}$$

$$\text{Model 2: } R_{it} = \alpha_i + \beta_{i1} R_{mt} + \beta_{i2} R_{mt} D_2 + \gamma_{it} D_{1t} + \varepsilon_{it}$$

$$\text{Model 3: } R_{it} = \alpha_i + \beta_{i1} R_{mt} D_2 + \beta_{i2} R_{mt} D_3 + \gamma_{it} D_{1t} + \varepsilon_{it}$$

where R_{it} is the return of security i over day t; R_{mt} is the return of the market over day t; D_{1t} is a dummy variable that takes on a value of one on the days of the event period (days –1, 0 and +1) and a value of 0 otherwise; D_2 is a dummy variable that takes on a value of one on and after the event period (days –1 to +250), and a value of 0 before the event period (days –250 to –2); D_3 is a dummy variable that takes on a value of one before the event period (days –250 to -2), and a value of 0 on and after the event period (days –1 to +250); and ε_{it} is assumed to be a mean zero, normally distributed error term. The cumulative abnormal return (CAR) for days –1, 0 and +1 is represented by $3\gamma_{it}$. The t-statistics are given in parentheses. * and ** indicate significance at 5% and 1% levels respectively.

	Omitting corporations which later do not resume their dividend payments				Omitting corporations which later resume their dividend payments			
	CAR	R_m	$R_m D_2$	$R_m D_3$	CAR	R_m	$R_m D_2$	$R_m D_3$
Model 1:	-0.0589**	0.607**			-0.0556**	0.663**		
	(-4.52)	(6.74)			(-2.22)	(7.66)		
Model 2:	-0.0597**	0.608**	-0.041		-0.0571**	0.679**	0.058	
	(-4.46)	(5.89)	(-017)		(-2.25)	(7.54)	(0.44)	
Model 3:	-0.0597**		0.566**	0.608**	-0.0571**		0.737**	0.679**
	(-4.46)		(2.86)	(5.89)	(-2.25)		(6.17)	(7.54)

Table 10: Comparison of the characteristics of resuming corporations and non-resuming corporations

Paired difference t-tests are conducted to measure the significance of the difference between the characteristics of corporations resuming their dividend payments and the characteristics of corporations not resuming their dividend payments. The p-values are given in parentheses. * and ** indicate significance at 5% and 1% levels respectively.

	CAR	Size (MVCS) (in millions)	Dividend amount before omission	Dividend yield before omission
Resuming corporation mean value	-0.0556	241.5	0.3262	3.9316
Non-resuming corporation mean value	-0.0589	120.4	0.4502	6.4423
T-statistics t'	-0.1591	-1.9434*	0.7465	3.2688**
	(0.87)	(0.05)	(0.45)	(0.001)

Table 11: Tests of changes in trading activity

Panels A and B test the significance of abnormal trading activity, which is defined as the difference between daily trading activity during the event period and normal trading activity estimated from day –250 to day –21. Panel C tests the difference between pre-omission trading activity from day –250 to day –2, and post-omission trading activity from day –1 to day +250. The p-values are given in parentheses. * and ** indicate significance at 5% and 1% levels respectively.

Panel A: Event period from day –20 to +20

Trading volume (# shares)				*Trading value ($)*			
Mean normal period	Mean event period	T-test value	Wilcoxon Z value	Mean normal period	Mean event period	T-test value	Wilcoxon Z value
16,746	20,080	0.8510	-0.3691	156,893	146,276	-0.2504	-2.1184*
		(0.39)	(0.71)			(0.80)	(0.03)

Panel B: Event period from day –5 to +5

Trading volume (# shares)				*Trading value ($)*			
Mean normal period	Mean event period	T-test value	Wilcoxon Z value	Mean normal period	Mean event period	T-test value	Wilcoxon Z value
16,746	25,877	1.6893	-0.8579	156,893	186,586	0.5293	-2.5009**
		(0.09)	(0.39)			(0.5972)	(0.01)

Panel C: Pre-omission vs. post-omission

Trading volume (# shares)				*Trading value ($)*			
Mean pre-omission	Mean post-omission	T-test value	Wilcoxon Z value	Mean pre-omission	Mean post-omission	T-test value	Wilcoxon Z value
15,224	21,587	-1.6521	-1.0269	155,116	184,665	-0.5521	1.7858
		(0.10)	(0.30)			(0.58)	(0.07)

Table 12: Comparison of pre-omission and post-omission betas for corporations ranked by changes in trading activity.

The sample of omitting corporations is separated into quartiles according to abnormal trading volume. For each quartile, model 3 is run: $R_{it} = \alpha_i + \beta_{i1} R_{mt} D_2 + \beta_{i2} R_{mt} D_3 + \gamma_{it} D_{1t} + \varepsilon_{it}$ where R_{it} is the return of security i over day t; R_{mt} is the return of the market over day t; D_{1t} is a dummy variable that takes on a value of one on the days of the event period (days –1, 0 and +1) and a value of 0 otherwise; D_2 is a dummy variable that takes on a value of one on and after the event period (days –1 to +250), and a value of 0 before the event period (days –250 to –2); D_3 is a dummy variable that takes on a value of one before the event period (days –250 to -2), and a value of 0 on and after the event period (days –1 to +250); and ε_{it} is assumed to be a mean zero, normally distributed error term. The cumulative abnormal return (CAR) for days –1, 0 and +1 is represented by $3\gamma_{it}$. The difference between pre-omission beta β_{i2} and post-omission beta β_{i2} is tested for significance using a paired difference t-test and a Wilcoxon signed-rank test. T-statistics are given in parentheses, except as noted otherwise. * and ** indicate significance at 5% and 1% levels respectively.

	CAR	$R_m D_2$	$R_m D_3$	T-test value	Wilcoxon Z value
Quartile 1:	-0.0434	0.5125**	0.6615**	0.5884	-0.5492
	(-1.78)	(2.36)	(5.09)	(p-value: 0.56)	(p-value: 0.58)
Quartile 2:	-0.0363**	0.6216	0.5264**	-0.2553	0.3954
	(-2.62)	(1.93)	(2.80)	(p-value: 0.80)	(p-value: 0.69)
Quartile 3:	-0.0811**	0.5054	0.5138**	0.0218	0.0659
	(-2.93)	(1.43)	(3.34)	(p-value: 0.98)	(p-value: 0.95)
Quartile 4:	-0.0736**	0.8582**	0.8220**	-0.1882	0.4433
	(-2.45)	(5.41)	(7.60)	(p-value: 0.85)	(p-value: 0.66)

8.3 Dividend Resumption Sample Result Tables

Table 13: Estimates of CAR and of the explanatory variable coefficients obtained from model 8.

The estimated model is:

Model 8: $R_{it} = \alpha_i + \beta_{i1} R_{mt} + \beta_{i2} R_{mt} D_2 + \gamma_{it} D_{1t} + \varepsilon_{it}$

where R_{it} is the return of security i over day t; R_{mt} is the return of the market over day t; D_{1t} is a dummy variable that takes on a value of one on the days of the event period (days –1, 0 and +1) and a value of 0 otherwise; D_2 is a dummy variable that takes on a value of one on and after the event period (days –1 to +250), and a value of 0 before the event period (days –250 to –2); and ε_{it} is assumed to be a mean zero, normally distributed error term. The cumulative abnormal return (CAR) for days –1, 0 and +1 is represented by $3\gamma_{it}$. The t-statistics are given in parentheses. * and ** indicate significance at 5% and 1% levels respectively.

	Closing price returns			Mid-spread returns		
	CAR	R_m	$R_m D_2$	CAR	R_m	$R_m D_2$
Model 8:	-0.0075	0.656**	-0.425	-0.0341	0.142	-0.539
	(-0.52)	(4.02)	(-1.31)	(-0.81)	(0.37)	(-0.58)

Table 14: Coefficient estimates for cross-sectional regressions for models 9 and 10.

Models 9 and 10 are given by:

Model 9: $CAR_i = \alpha + \beta_1 ResDivAmt_i + \beta_2 MVCS_i + \varepsilon_i$

Model 10: $CAR_i = \alpha + \beta_1 MonthsOmi_i + \beta_2 DummyCash_i + \beta_3 DummyMore_i + \varepsilon_i$

where CAR_i is the cumulative abnormal return of security i over the 3-day event period, defined earlier as $3\gamma_{it}$; $ResDivAmt_i$ is the resuming dividend amount paid by corporation i; $MVCS_i$ is the market value of the common shares of security i; $MonthsOmi_i$ is the number of months elapsed between the dividend omission and dividend resumption; $DummyCash_i$ is a dummy variable that takes on the value of one if the corporation resumes by paying a cash dividend, and a value of zero if the corporation resumes by paying a stock dividend; and $DummyMore_i$ is a dummy variable that takes on the value of one if the corporation's dividend resumption amount is the same or greater than the dividend amount it was paying prior to the omission; and ε_i is assumed to be a mean zero, normally distributed error term. The t-statistics are given in parentheses. * and ** indicate significance at 5% and 1% levels respectively.

Model 9:	Intercept	ResDivAmt	MVCS	F-value
	0.0285	-0.3281**	1.38 E-11	12.45
	(1.86)	(-4.98)	(0.42)	

Model 10:	Intercept	MonthsOmi	DummyCash	DummyMore	F-value
	-0.0128	0.0006	0.0256	-0.0984**	1.62
	(-0.51)	(0.62)	(0.65)	(-2.13)	

Table 15: Tests of changes in trading activity

Panels A and B test the significance of abnormal trading activity, which is defined as the difference between daily trading activity during the event period and normal trading activity estimated from day –250 to day –21. Panel C tests the difference between pre-resumption trading activity from day –250 to day –2, and post-resumption trading activity from day –1 to day +250. The p-values are given in parentheses. * and ** indicate significance at 5% and 1% levels respectively.

Panel A: Event period from day –20 to +20

Trading volume (# shares)				*Trading value ($)*			
Mean normal period	Mean event period	T-test value	Wilcoxon Z value	Mean normal period	Mean event period	T-test value	Wilcoxon Z value
44,820	33,326	-0.5753 (0.57)	-0.7987 (0.42)	729,237	634,162	-0.2215 (0.83)	-0.5873 (0.56)

Panel B: Event period from day –5 to +5

Trading volume (# shares)				*Trading value ($)*			
Mean normal period	Mean event period	T-test value	Wilcoxon Z value	Mean normal period	Mean event period	T-test value	Wilcoxon Z value
44,820	32,848	-0.5771 (0.57)	-1.1041 (0.27)	729,237	635,935	-0.2080 (0.84)	-0.8575 (0.39)

Panel C: Pre-resumption vs. post-resumption

Trading volume (# shares)				*Trading value ($)*			
Mean pre-resumption	Mean post-resumption	T-test value	Wilcoxon Z value	Mean pre-resumption	Mean post-resumption	T-test value	Wilcoxon Z value
43,746	46,840	-0.1463 (0.88)	-0.0705 (0.94)	717,898	859,995	-0.3181 (0.75)	-0.3054 (0.76)

Table 16: Comparison of pre-resumption and post-resumption CAR and betas for corporations ranked by changes in trading activity

The sample of resuming corporations is separated into equal thirds according to abnormal trading volume. For each grouping, model 3 is run: $R_{it} = \alpha_i + \beta_{i1} R_{mt} D_2 + \beta_{i2} R_{mt} D_3 + \gamma_{it} D_{1t} + \varepsilon_{it}$ where R_{it} is the return of security i over day t; R_{mt} is the return of the market over day t; D_{1t} is a dummy variable that takes on a value of one on the days of the event period (days –1, 0 and +1) and a value of 0 otherwise; D_2 is a dummy variable that takes on a value of one on and after the event period (days –1 to +250), and a value of 0 before the event period (days –250 to –2); D_3 is a dummy variable that takes on a value of one before the event period (days –250 to -2), and a value of 0 on and after the event period (days –1 to +250); and ε_{it} is assumed to be a mean zero, normally distributed error term. The cumulative abnormal return (CAR) for days –1, 0 and +1 is represented by $3\gamma_{it}$. The difference between pre-resumption beta β_{i2} and post-resumption beta β_{i2} is tested for significance using a paired difference t-test and a Wilcoxon signed-rank test. T-statistics are given in parentheses, unless otherwise noted. * and ** indicate significance at 5% and 1% levels respectively.

	CAR	$R_m D_2$	$R_m D_3$	T-test value	Wilcoxon Z value
Third 1:	0.0007	0.8503**	0.8985**	0.1800	-0.9193
	(0.09)	(6.22)	(3.89)	(p-value: 0.86)	(p-value: 0.36)
Third 2:	0.0017	0.4078	0.4192**	0.0279	0.8372
	(0.06)	(1.14)	(2.11)	(p-value: 0.98)	(p-value: 0.40)
Third 3:	-0.0269	-0.3299	0.7021	1.0652	-0.7217
	(-0.70)	(-0.37)	(1.80)	(p-value: 0.30)	(p-value: 0.47)

Figure 1: Median closing price against time
Dividend omission sample - all corporations

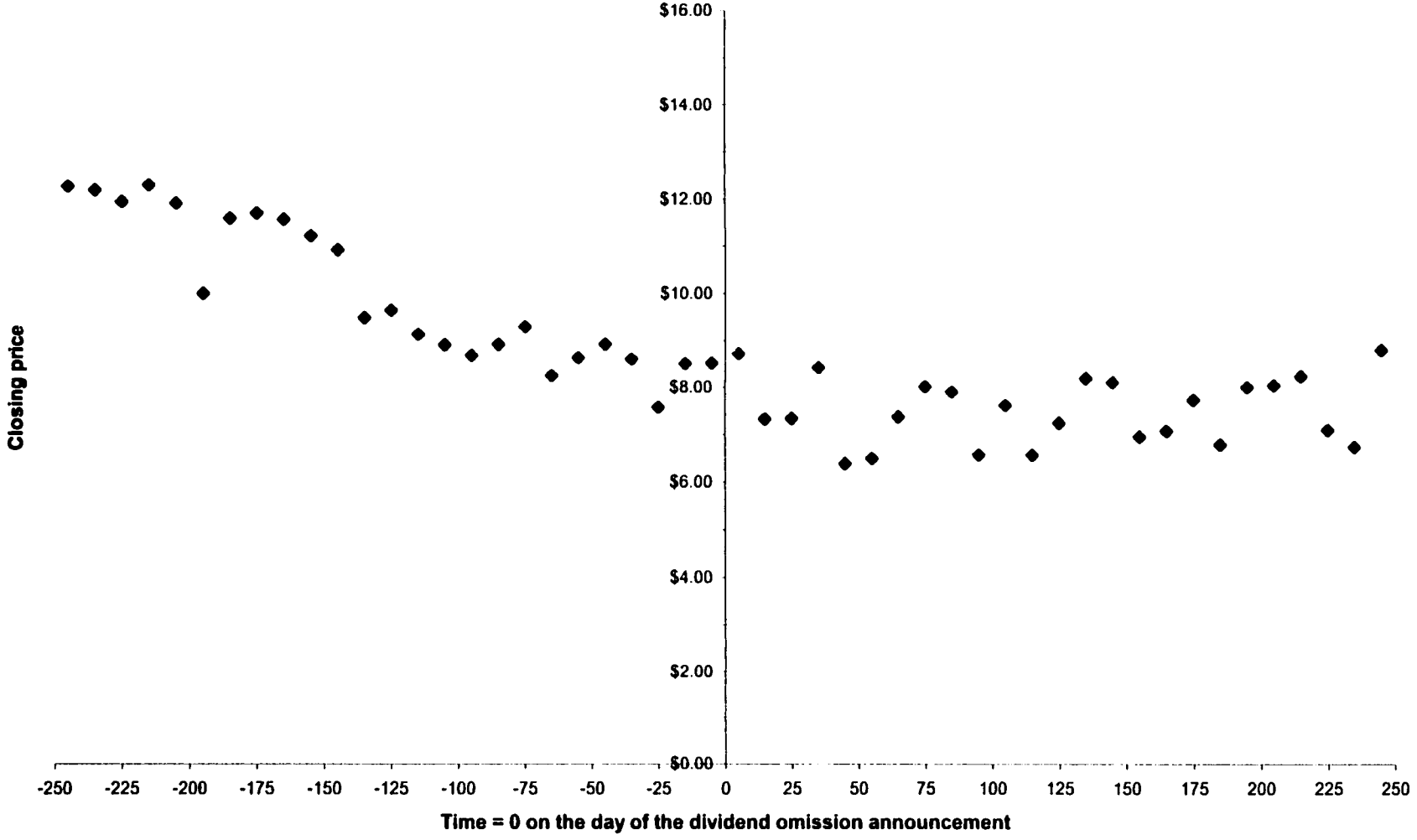

Figure 2: Median closing price against time
Dividend omission sample - subset of non resuming corporations only

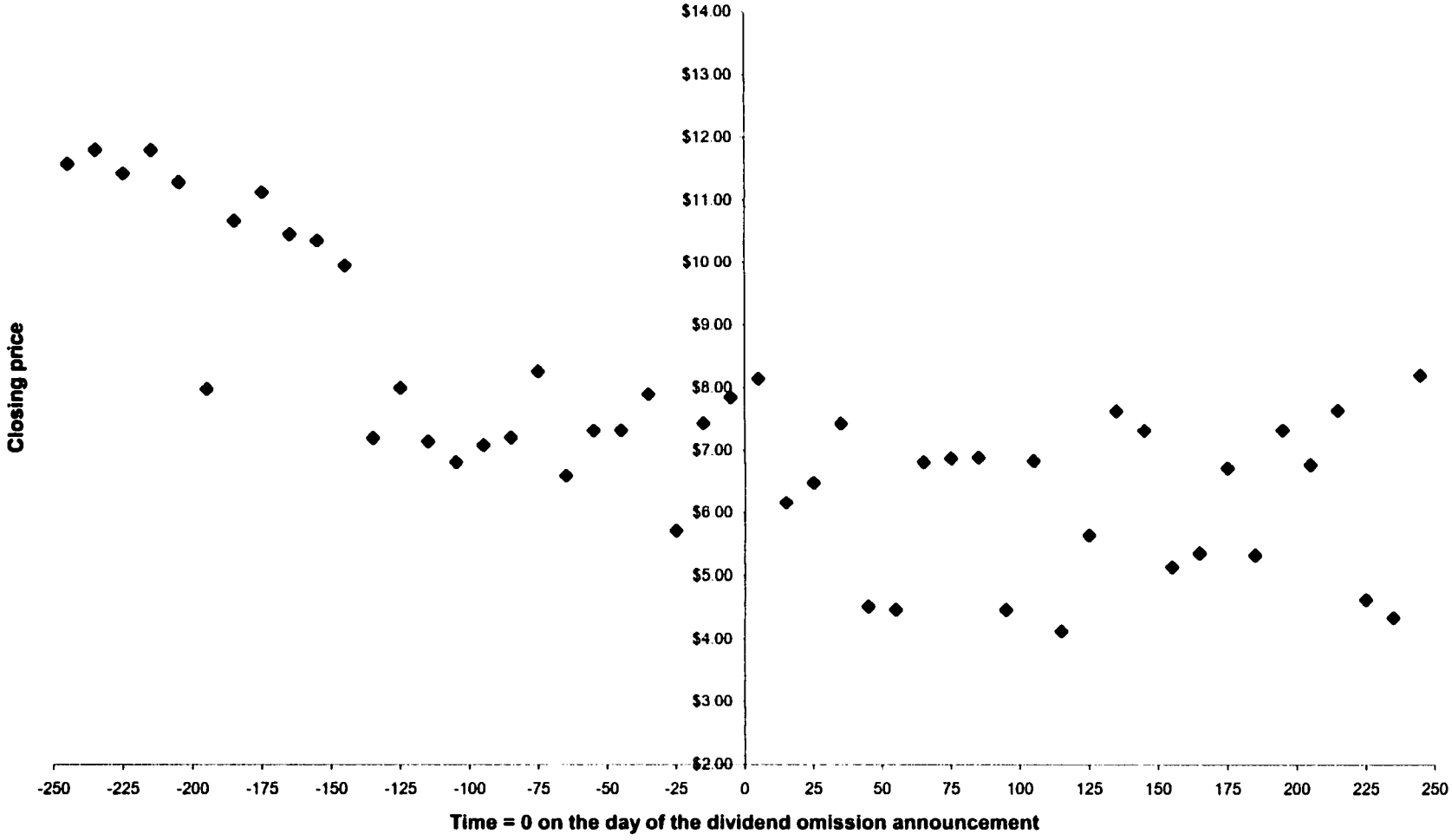

Figure 3: Median closing price against time
Dividend omission sample - subset of resuming corporations only

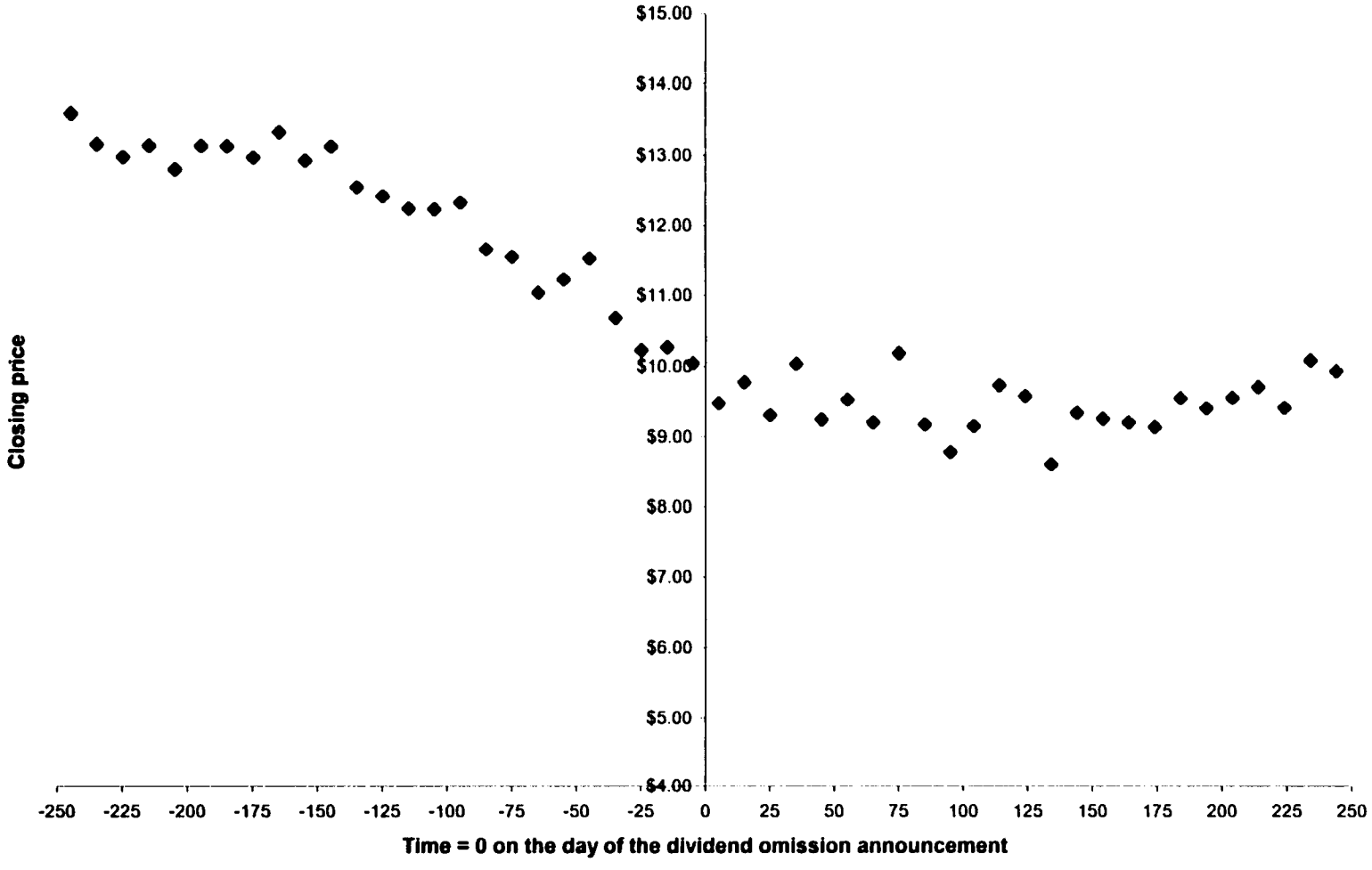

Figure 4: Median trading volume against time
Dividend omission sample - all corporations

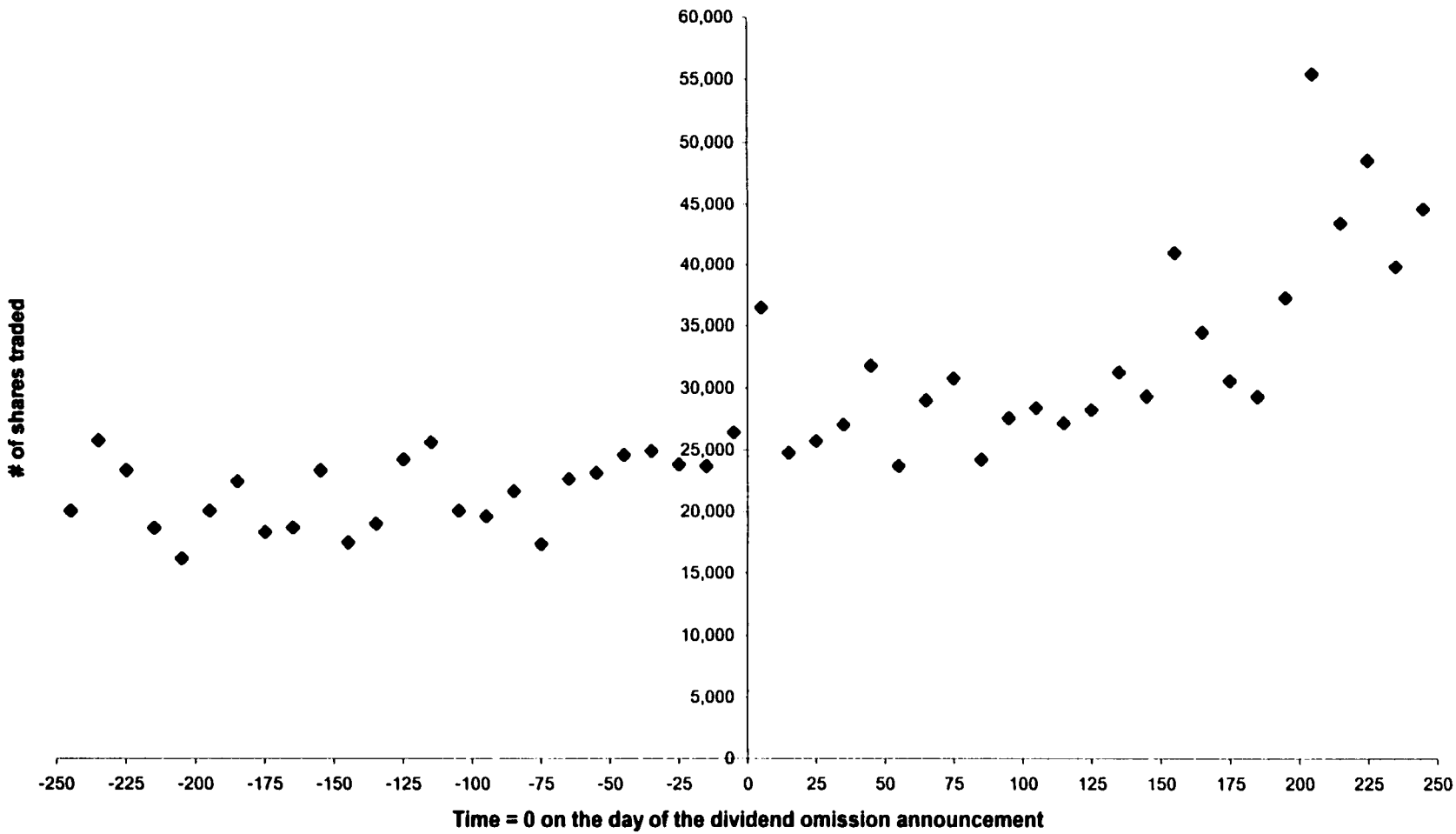

Figure 5: Median trading value against time
Dividend omission sample - all corporations

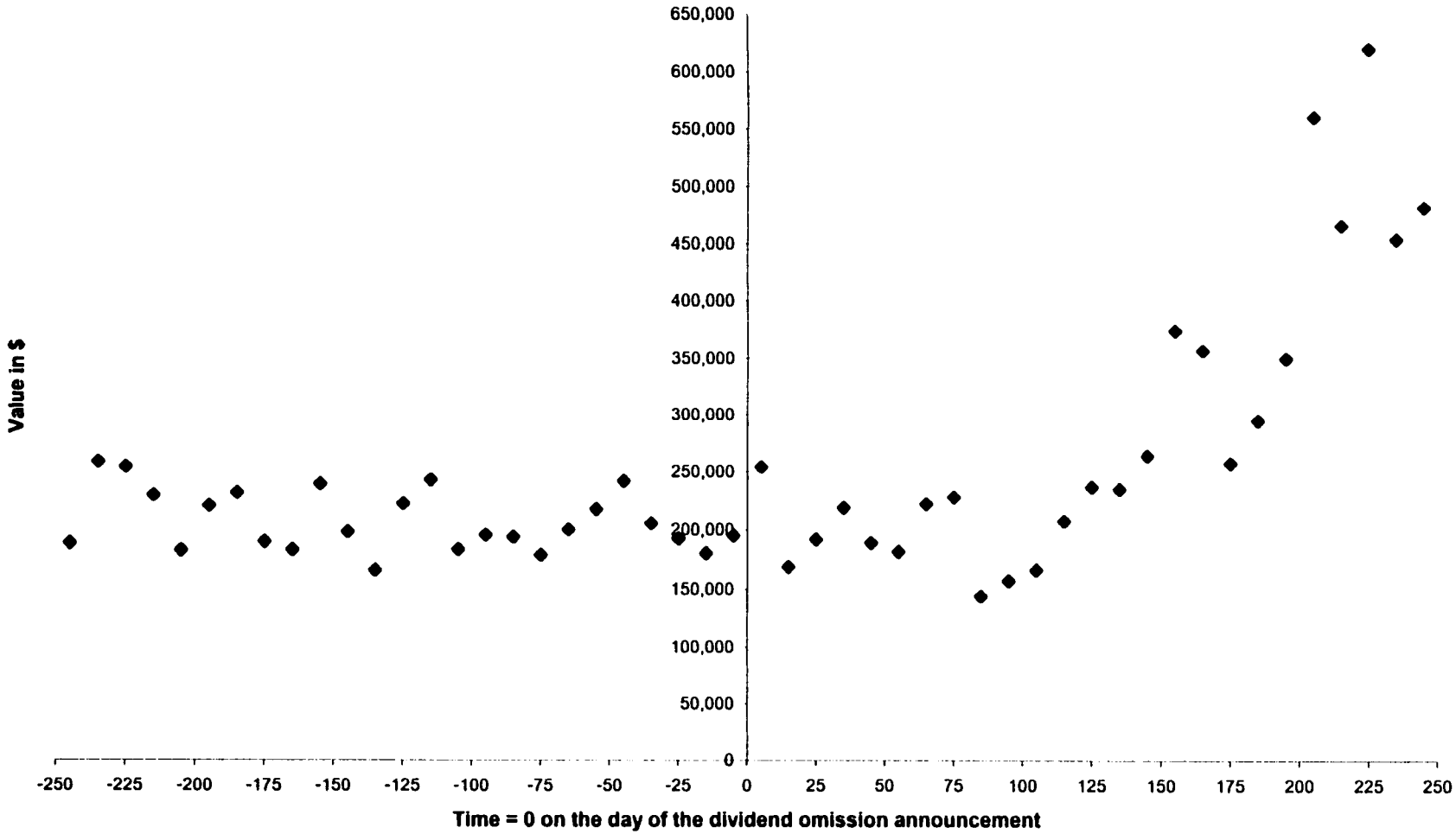

Figure 6: Median closing price against time
Dividend resumption sample

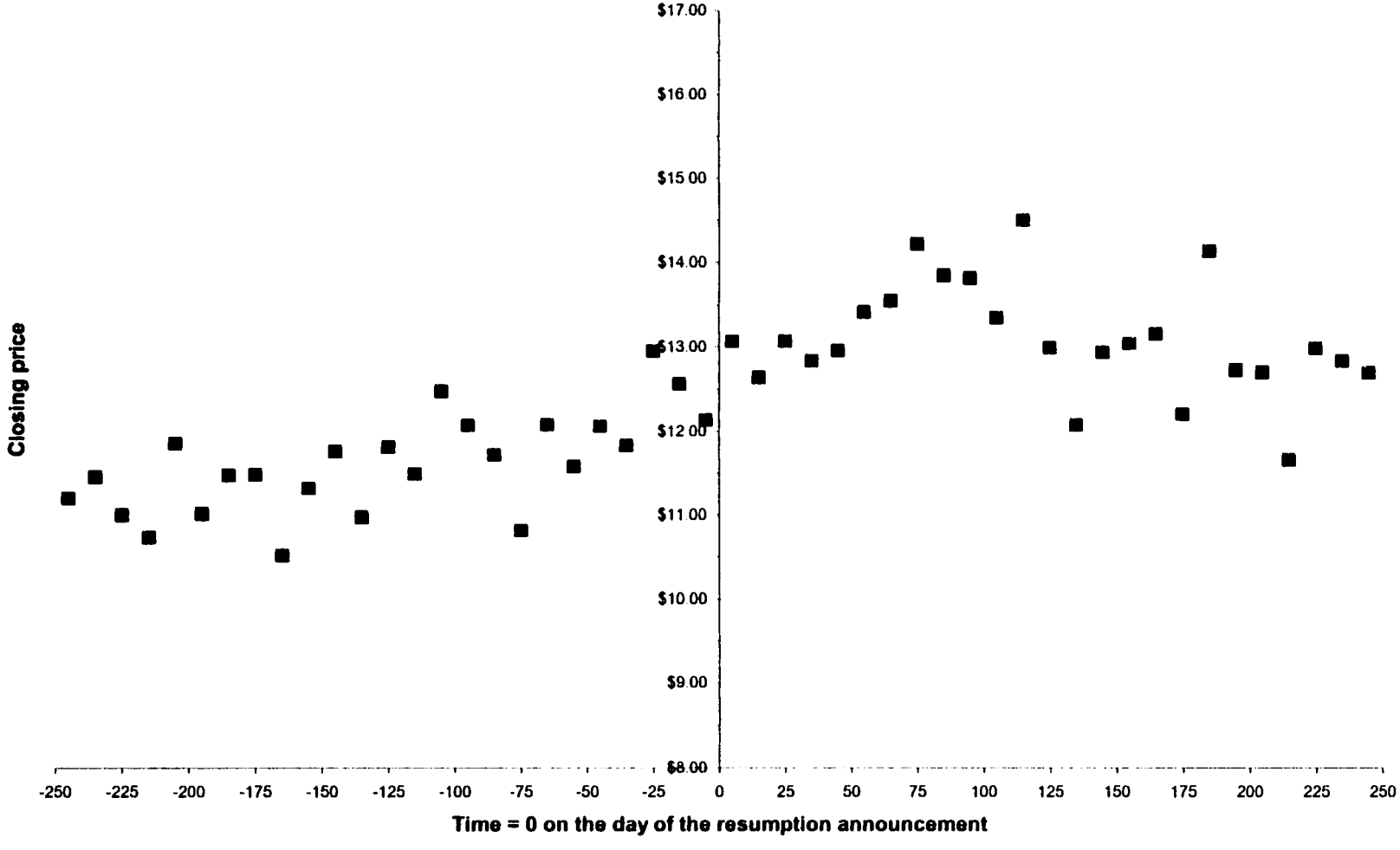

Figure 7: Median trading volume against time
Dividend resumption sample

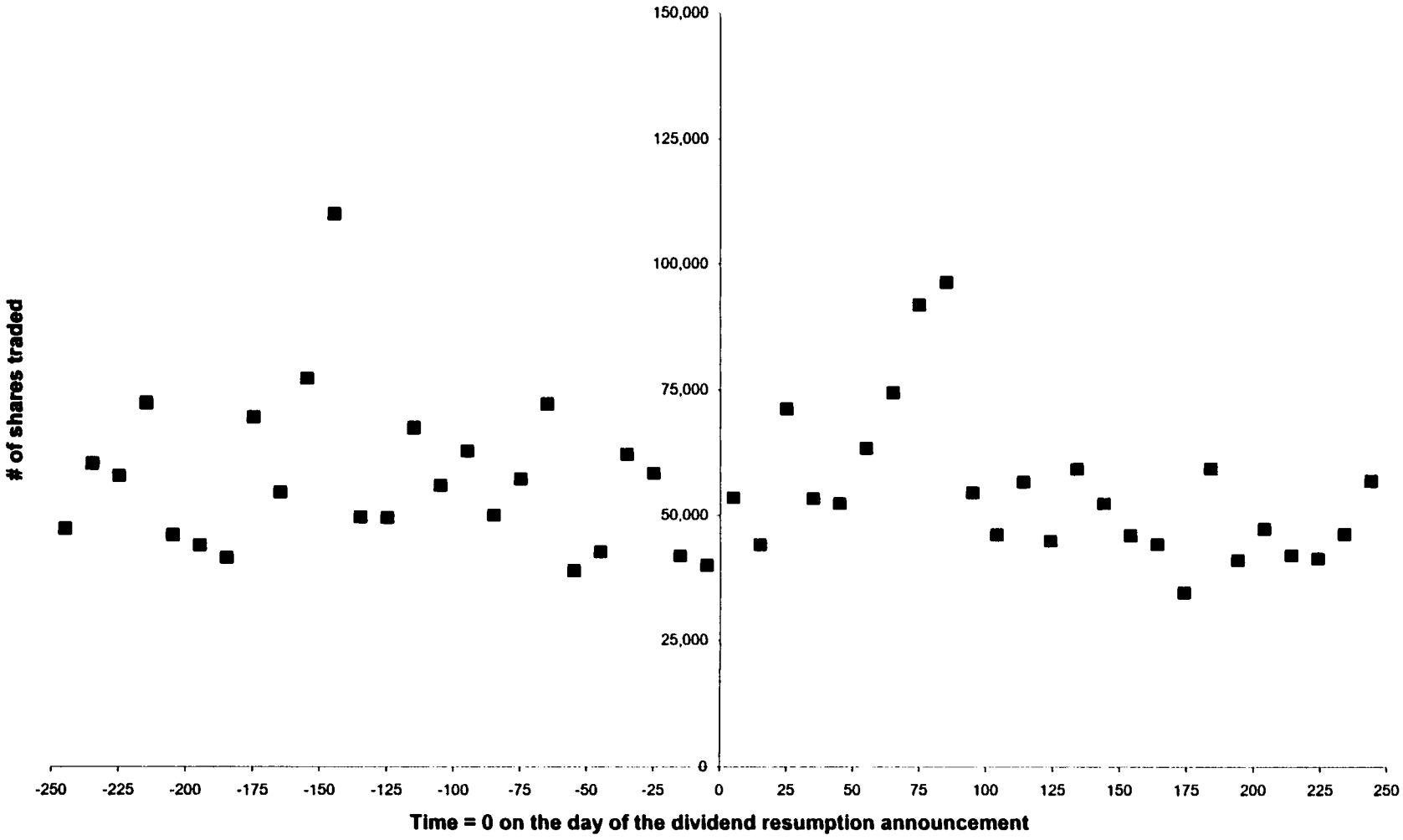

Figure 8: Median trading value against time
Dividend resumption sample