The Impact of the Securities Market Amendment Act 2002 on Insider Trading in New Zealand

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Insider trading has a number of harmful effects that can result in financial market distortions, reducing its efficient functioning. Much of this harm comes from the large profits insiders expropriate from small investors and the resulting loss of confidence in the market by the investing community. This causes investors to reduce investment and participation in the market and imposes higher risk premiums and transaction costs on share prices to compensate for the added risk of trading against an insider. Studies have however shown that the regulatory regime of a country can impact on the degree of harm suffered by a market from the presence of insiders.

However, perceptions and commentaries on the laws governing insider trading in New Zealand over the past decade and a half have been generally dismissive. These views, in no small part, have been driven by the lack of successful enforcement since their introduction in 1988, despite a number of high profile situations that have reinforced the belief that insider trading is rife in the market. Etebari, Tourani-Rad and Gilbert (2004) also showed that under the previous regime, insider's trades earned profits that were significantly higher than both those of ordinary investors as well as insiders from more effectively regulated markets. To rectify this problem the Securities Market Amendment Act 2002 was enacted, targeting the major weaknesses of the previous law. The new law now requires all corporate insiders, executives, directors and substantial shareholders, to disclose details of their transactions within 5 working days and allows the Securities Commissions to prosecute an insider. These changes should reduce the amount of insider trading and therefore improve confidence in the New Zealand Stock Exchange. This paper examines the effect that these changes have had on the structure of the New Zealand market to see if the changes have been effective.

To examine the effect on the market we looked at 85 companies that were listed on the NZSX between January 1996 and March 2004. For each company, information was collected on their *bid-ask spread*, to proxy transaction costs, *dividend yield*, used to proxy the cost of capital, *liquidity*, used to proxy market depth and lastly return *variance*, used to proxy volatility. The finance literature suggests that if the law changes have been effective then the costs of insider trading should increase due to a higher likelihood of being caught and successfully prosecuted. This should dissuade insiders from engaging in illegal trading

resulting in less information asymmetry and increased investor participation in the market. Therefore, if the new laws have been effective we would expect to see decreases in the bid-ask spreads (Chung and Chaoenwong (1998)), cost of capital (Bhattacharya and Daouk (2002)) and return variance (Kyle (1985)) and an increase in liquidity (Kyle (1985)).

To compare between the pre-change period, January 1996 to December 2001, and the post-change period, December 2002 to March 2004, we used a variety of econometric techniques to examine the changes in the variables examined between the pre and post-change periods.

The results suggest that the new laws have had a positive impact on the structure of the market. In Table 1 we observe both economically and statistically significant changes in the mean level of each variable between the pre and post-change periods. Dividend yield, bid-ask spreads and return volatility all declined from 6.31%, 3.06% and .036 on average to 3.23%, 2.25% and .02 respectively following the introduction of the new laws. Liquidity, as expected increased, rose from an average of .08% of the outstanding market capitalization traded daily to over .11%, representing a marked increase in the daily trading volume. It is also interesting to note that the changes are significant for virtually every year except for return volatility in 1996. This suggests that the changes observed are more than just the result of normal economic cycles. The results are also all in the directions predicted by the literature if a reduction in insider trading had occurred, supporting the belief that the new law has been effective to date.

The change in the mean level is strengthened by the results of the rolling regressions shown in Figure 1. The four graphs show the 100 day rolling regression coefficient when each variable is regressed against a constant. Each graph shows a marked change in the regression coefficient of the variable being graphed before and after the change in the legislation. What is interesting to note however is the almost immediate effect that the introduction of the laws have had on the market. Following the introduction of the new laws (represented by the horizontal line) there is an almost immediate decrease in the level of bid-ask spreads, dividend yields and return volatility while liquidity steadily starts to increase. Further the immediacy of the impact strongly suggests that the changes observed are the result of the new laws and further adds to the

earlier finding that the changes are unlikely to be the result of normal economic cycles. The results overall, therefore, seem to show a structural break occurring at the time the new law took effect, resulting in reduced insider trading and greater efficiency in the market.

The results of our investigation suggest that the Securities Market Amendment Act 2002 has reduced the level of insider trading in the New Zealand market. The changes in the market structure as a result of the increase in confidence in the exchange have resulted in reduced transaction costs, risk premiums and increased activity in the market.

In a separate study, we examined the profitability of insider trades before and after the December 2002 introduction of the new laws. The results showed an economically but not statistically significant decline in the profits of insider purchases, possibly caused by a change in the information used by insiders (Gilbert, Tourani-Rad, Wisneskini (2005)). Once more, this points towards the fact that the introduction of the new laws has been successful.

While the act appears to have fulfilled its goals, further study is required to see whether the efficiency gains noted are permanent, what impact enforcement, successful or unsuccessful, has on the market and whether further changes are needed or justifiable.

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Table 1: Impact of Regulatory Change on the Market Microstructure

Panel A: Difference in Mean Dividend Yield

	Mean	T-Stat	p-values	Wilcoxon	p-values
Pre Regulation Change					
1996	0.0557	-2.2333	0.0286	-2.0230	0.0215
1997	0.0626	-2.7362	0.0078	-3.1026	0.0010
1998	0.0753	-3.8812	0.0002	-5.4245	0.0000
1999	0.0654	-2.9147	0.0047	-3.7278	0.0001
2000	0.0609	-2.9536	0.0042	-3.8554	0.0001
2001	0.0588	-2.6656	0.0094	-3.1682	0.0008
Post Change					
Post	0.0323				

Panel B: Differences in Mean Bid Ask Spreads

	Mean	T-Stat	p-values	Wilcoxon	p-values
Pre Regulation Change					
1996	-3.6027	-2.2546	0.0268	-2.0529	0.0200
1997	-3.6315	-1.9456	0.0551	-1.4920	0.0679
1998	-3.2308	-7.9399	0.0000	-6.3061	0.0000
1999	-3.5099	-4.3871	0.0000	-4.5713	0.0000
2000	-3.4984	-3.9294	0.0002	-4.3081	0.0000
2001	-3.4544	-5.7297	0.0000	-5.4855	0.0000
Post Change					
Post	-3.7943				

Panel C: Difference in Mean Liquidity

	Mean	T-Stat	p-values	Wilcoxon	p-values
Pre Regulation Change					
1996	0.0008	2.5412	0.0129	1.2028	0.1145
1997	0.0008	2.4695	0.0156	2.0485	0.0203
1998	0.0007	2.9096	0.0046	1.9311	0.0267
1999	0.0008	2.3514	0.0211	2.1050	0.0176
2000	0.0008	2.7762	0.0068	2.2923	0.0109
2001	0.0008	3.0935	0.0027	2.3369	0.0097
Post Change					
Post	0.0011663				

Panel D: Differences in the Return Volatility Means

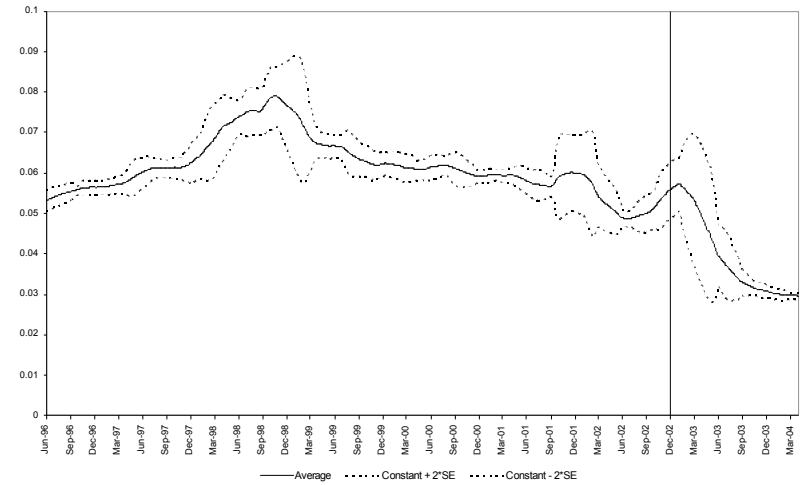
	Mean	T-Stat	p-values	Wilcoxon	p-values
Pre Regulation Change					
1996	-8.2281	1.1959	0.2351	-0.2631	0.3962
1997	-8.0981	2.3293	0.0222	1.7461	0.0404
1998	-7.6468	6.9550	0.0000	5.6104	0.0000
1999	-7.9400	3.6478	0.0005	4.2178	0.0000
2000	-7.7784	6.2686	0.0000	5.1349	0.0000
2001	-7.8299	5.0419	0.0000	4.5176	0.0000
Post Change					
Post	-8.3935				

Note: The sample consists of 8330 firm months observations. All yearly means were calculated as calendar years with the exception of the post change period where the sample ran from April 2003 to March 2004. T-Stats were calculated using the matched pairs t-test. *Dividend Yield* is defined as the monthly average of the annualised dividend yield. *Bid-Ask Spreads* are defined as the natural log of the monthly average of the daily ask price minus the bid price divided by the midpoint of the spreads. *Liquidity* is defined as the monthly average of the daily dollar value of trading divided by the market value of the company. *Volatility* defined as the natural log of the variance of returns over the period -30,0, averaged over each calendar month.

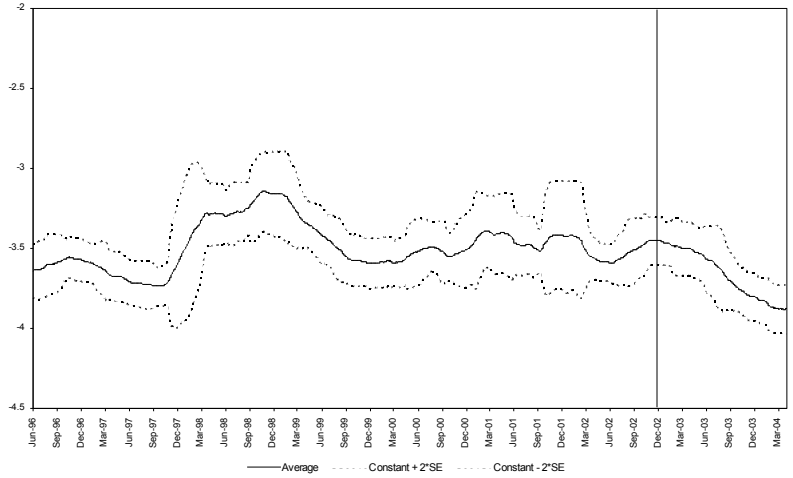
Source : Gilbert, Tourani-Rad and Wisniewski (2004)

Figure 1: 100 Day Moving Average of Market Structure Variables

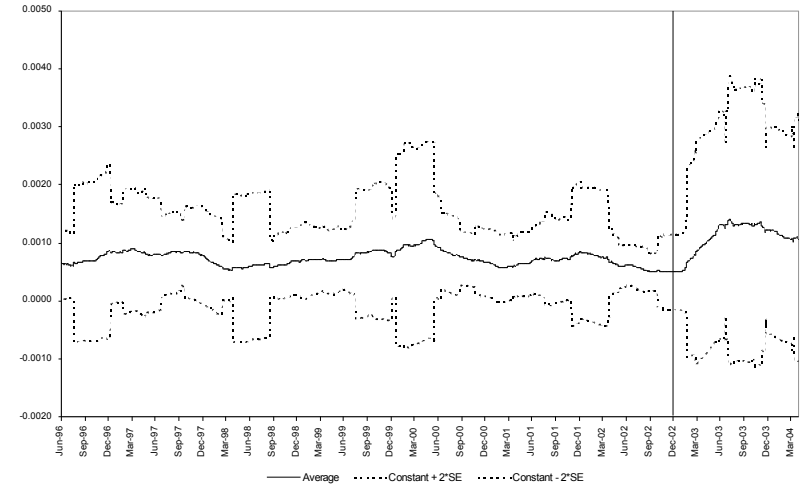
Panel A: Dividend Yield



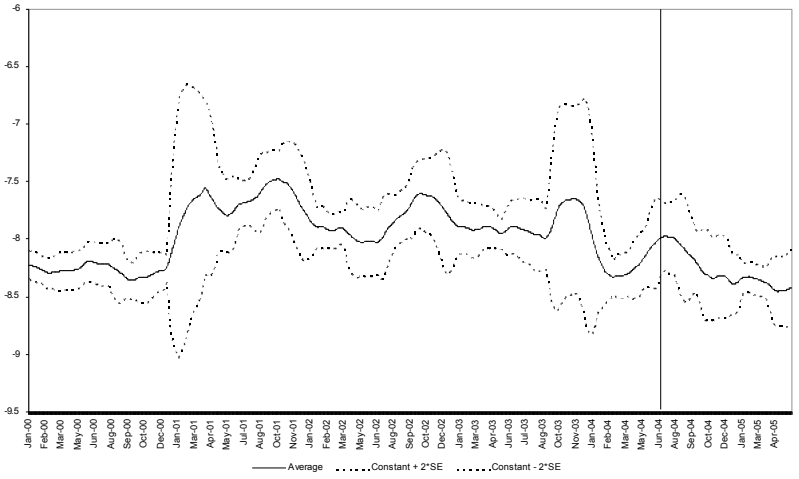
Panel B: Bid Ask Spread



Panel C: Liquidity



Panel D: Return Volatility



Note- The vertical axis represents the moving average estimated over the previous 100 days for each variable averaged over 85 companies. The dividend yield is defined as the annualised dividend yield. The daily bid ask spread is defined as the natural logarithm of the bid price minus the ask price divided by the midpoint of the spreads. The liquidity is defined as the dollar value of trading divided by the current market capitalisation. The share volatility was defined as the natural log of the variance in returns over the previous 30 days. The vertical line represents the date of the new legislation.

Source : Gilbert, Tourani-Rad and Wisniewski (2004)