

The Equity and Efficiency of the Australian Share Market with respect to Director Trading

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Abstract

Thirteen (7) percent of own-company trades by directors do not meet the ASX (Corporations Act) requirement of reporting within 5 (14) business days. Such breaches of reporting regulations are particularly important given that directors tend to purchase (sell) shares when the price is low (high), thereby achieving abnormal returns. These abnormal returns are highest for sales in resource companies. Ignoring transaction costs and when trading shares in non-resource companies, outsiders can achieve some of the abnormal returns by imitating director's trades. However, in large part the abnormal returns earned by directors are not earned by outsiders.

1. Introduction

Recent media releases and reports from investment firms have highlighted that many directors ignore the requirements of the Australian Stock Exchange (ASX) to report their trades within five business days of the transactions.¹ These reports also document that some directors are in breach of the Corporations Act, which requires them to report to the market within fourteen days. With corporate governance being given greater focus in Australia and overseas, there is a need for the extent of late reporting to be closely examined – a task central to the current paper.

Brown, Foo and Watson (2003) report that Australian directors on average achieve abnormal returns from trading in shares of their own companies. The current paper extends upon the Brown et al. evidence. We also examine the feasibility of imitators achieving abnormal return from a trading strategy of buying (selling) shares when directors report buying (selling) activity in their own stock. Such analysis has been undertaken for the US market by Seyhun (1986), but is absent in Australia. Lastly, an analysis is undertaken to determine whether directors are able to earn abnormal returns over the period between their trading in shares and the subsequent reporting of those trades. This approach has not been employed in previous studies. Notably, it shows that returns are being missed by outside investors due to late reporting.

Previous research has examined whether the size of the company or the size of the trade affects the ability of directors to achieve abnormal returns from trading in their own company's shares. Seyhun (1986), Gregory, Matatko, Tonks and Purkis (1994) and Lakonishok and Lee (2001) show that abnormal returns achieved by such director-trading in small companies exceeds the counterpart returns in medium to large companies. However, Gregory, Matatko, Tonks and Purkis (1994) show that

¹ See Australian Stock Exchange (ASX) Media Release 27 June 2008 and BT Financial Group (2005).

these abnormal returns are eliminated if a size-adjusted benchmark is used. Brown, Foo and Watson (2003) confirm that company size does not impact the abnormal returns in such trading activity. Given that the data available for the current study is biased towards larger stocks (those in the All Ordinaries Index), we do not conduct any analysis conditioned on size.

It is notable that Brown, Foo and Watson (2003) do find that directors of resource Australia companies achieve abnormal returns from trades in their own companies. Accordingly, we perform our analysis based on the full sample, as well as subgroups of resource and non-resource companies for comparison purposes. Moreover, we extend the work of Brown, Foo and Watson in three ways. First, an examination is undertaken to determine whether abnormal returns may be earned by buying (selling) shares when directors report buying (selling) shares. Second, in this study only trades where the trade and the date of the trade were at the discretion of the director are included.² Third, the Brown, Foo and Watson (2003) study covers the period 1 January 1996 to 30 June 2000. Given the increased emphasis on corporate governance that has occurred since that time, it is important to update with recent data. Accordingly, we examine director trades over the period January 2005 to December 2007.

This paper is organised as follows. Section 2 describes the relevant literature, Section 3 provides a discussion of the methodology, Section 4 examines the data collection and the results are presented in Section 5. Section 6 provides a summary.

² By way of contrast, Brown, Foo and Watson (2003) analyse all trades including "...changes in share holdings for "miscellaneous" and possibly uninformative reasons such as option conversions, rights issues, employee share purchase schemes and participation in dividend reinvestment plans. "Miscellaneous" reasons result mostly in increases in shareholdings and add relatively more noise to the purchases sub-sample".

2. Literature Review

Discussion regarding the late reporting of trading by directors in their own company shares in Australia has largely been confined to the media. This includes a report by BT Financial Group's Position Paper, "Director and Executive Share Trading" released 11 November 2005, examining all trades by directors in 2004 and a media release by the ASX on June 27, 2008 reporting on whether trades by directors over the 3 months to 31 March 2008 were reported to the ASX on time and in accordance with the Corporations Act. In the UK, Balmforth, Burton, Cross and Power (2007) found that 14% of all trades by company directors in the UK were reported late.

The effect of perception of insider trading has been investigated by Brockman and Chung (2003), Easley and O'Hara (2004), Gelos and Wei (2005) and Tookes (2006). Brockman and Chung (2003) show that in Hong Kong investor protection directly affects firm liquidity. Easley and O'Hara (2004) demonstrate that in the US, differences in the composition of information between public and private information affects the cost of capital, with investors expecting a higher return for companies with more private information. Gelos and Wei (2005) show that fewer funds are invested in less transparent countries, while Tookes (2006) shows that in the US, returns in stocks of non-announcing (major) competitors have information for announcing companies.

The most comprehensive study of director trades in Australia following the mandatory reporting of such trades is by Brown, Foo and Watson (2003). This study hypothesises that directors behave as contrarian investors, using inside information to buy shares when the price is low and to sell shares when the price is high. Major findings by Brown, Foo and Watson (2003) are that directors achieve abnormal returns from sales (particularly for resource companies) in that by selling they avoid

future losses; however, the purchases do not capture future abnormal price rises. They do not find any bias due to the size of the company or the size of trade.

Additional Australian studies demonstrate that directors are trading on inside information, that at least some of these trades achieve abnormal returns and that some strategies could provide abnormal returns to an imitator. Chang and Chopra (2007) conclude that Australian director trades contain industry information and an imitator can avoid losses by investing in the relevant industry following a trade by a director. Freeman and Adams (1999) examine the extent of insider trading in Australia, prior to the introduction of reporting requirements by the ASX, based on a survey of company directors. They report (p. 1) that “a significant proportion of directors indicated a propensity to time their trades based on inside information”. Watson and Young (1998) show that insider trading occurs at the time surrounding takeover announcements in Australia.³

Internationally, the most comprehensive study of director trading was undertaken by Seyhun (1986) using US data. He finds that directors achieve abnormal returns from both sales and purchases of shares in their own companies. However, he shows that imitators could not achieve abnormal returns using a trading strategy that mimics the behaviour of the directors. He also shows that those who are expected to know more about the overall affairs of the firm, such as chairmen of the boards of directors or officer-directors, make better trades than officers or share holders alone. In addition, he concludes that insiders know on which inside information to rely and can exploit this information by adjusting the volume of trading. He also shows that the size of the company is important and that ignoring

³ Hotson, Kaur and Singh (2007) also show that directors and imitators profit from trades in small companies.

greater transaction costs for smaller companies may result in an overstatement of abnormal returns achieved by smaller companies.

Several international studies have analysed insider trading abnormal returns available to directors of different sized companies. Lakonishok and Lee (2001) show that abnormal returns are achieved by insiders for purchases of shares in small companies. Gregory, Matatko, Tonks and Purkis (1994) also demonstrate that UK directors can achieve abnormal returns particularly in small companies. However, they show that applying a benchmark that takes account of company size eliminates abnormal returns.

International studies attempt to find additional indicators for abnormal returns of insider trades by directors. Baesel and Stein (1979) show that US directors earn abnormal returns by trading in their own company's shares, and that bank directors achieve the largest abnormal returns. Friederich, Gregory, Matatko and Tonks (2002) show that medium sized trades by UK directors can predict future returns, but that this trading strategy does not result in abnormal returns. Hillier and Marshall (2002) find that director's trading in unison can be a good indicator for future share prices.

A strong asymmetry in insider trading profits is widely documented. Jeng, Metrick and Zeckhauser (2003) find that US directors earn 6% p.a. abnormal returns by purchasing shares of their own companies, but that no abnormal returns are achieved from the sale of shares. Pope, Morris and Peel (1990) find that there appears to be a sharp market movement around the time director's trade in shares of their own company, particularly on the sell side.

The length of time over which abnormal returns are achieved is also examined in international studies. Friederich, Gregory, Matatko and Tonks (2002) show that UK directors achieve abnormal returns from short term trades. Ke, Huddart and Petroni (2003) demonstrate that US directors trade on accounting information up to 2

years prior to an event taking place, but that trading does not generally occur in the 2 quarters immediately prior to the event. They conclude that this is consistent with directors adhering to the antifraud provisions of the Securities and Exchange Act 1934, especially section 10(b), which is designed to prevent insider trading. Lakonishok and Lee (2001) show very little market movement surrounding US director trades at the time of the trade and at the time of reporting. Pope, Morris and Peel (1990) find sharp market movement around the time director's trade in shares of their own company.

There is still some debate about whether those attempting to imitate trades by directors, purchasing (selling) shares when directors report that they have purchased (sold) shares in their own company, can achieve abnormal returns. Gregory, Matatko and Tonks (1997) conclude that abnormal returns can be made by imitators when UK directors sell. Lin and Howe (1990) show that in the US, transaction costs eliminate profits by both inside traders and imitators.

3. Research Method

This study uses the standard event study methodology to examine the abnormal returns from director trades in the shares of their own company. The first section of analysis examines the returns to directors from trading in shares of their own companies – day 0 is the day the trade takes place. The second section of analysis examines whether abnormal returns could be earned by an imitator who trades based on when directors trade – day 0 is the day the trade is reported to the market. The final section of analysis investigates the returns achieved by directors between the time they trade in shares of their own company and the time the trade is reported to the market – day 0 is the day the trade takes place, however, the returns are excluded from the analysis when the trade is reported to the market. Following Gregory,

Matatko and Tonks (1997), Lakonishok and Lee (2001) and Brown, Foo and Watson (2003), abnormal returns are calculated by subtracting the All Ordinaries Accumulation Index.

The pre-event period is 10 days prior to either the trade taking place or the trade being reported to the market, ending on day 0. This approach is consistent with Brown, Foo and Watson (2003) and Seyhun (1986). The post-event period is 10 days after either the trade taking place or the trade being reported to the market.

4. Data

The sample of director trades is obtained from news releases of director's interest from the IRESS Market Technology Ltd (IRESS) database for the period from 1 January 2005 to 31 December 2007. Trades are only included in the sample where the trade and the date of the trade was at the discretion of the director. For this reason director' trades that resulted from dividend reinvestment schemes, the exercise of options, the exercise of rights issues, or from employee share purchase plans, are excluded from the analysis. These trades are obtained for the 473 companies that were included in the All Ordinaries index as at 1 January 2005.

As shown in Table 1, the sample comprises 2932 insider trades by directors: of which 2189 are purchases and 743 sales. The ASX requirement is that directors report trades within five business days. However, of the 2932 trades, 376 or 13% are not reported within five business days. Of the 2189 (743) purchases (sales), 263 or 12% (113 or 15%) are not reported within five business days. This finding is consistent with that of the study by the ASX (as reported in a media release on 27 June 2008). The ASX reported that 538 (13%) of the 4137 notices of director trades breached the ASX reporting requirements. BT Financial Group also released a report

in 2004 that stated that from its study 432 (15%) of the 2936 notices of director trades breached the ASX requirement.

The Corporations Law requirement is that directors report to the market within fourteen days of a trade in their own company. Of the 2932 trades, 212 or 7% are not reported within fourteen days. Of the 2189 (743) purchases, 144 or 7% (68 or 9%) are not reported within fourteen days. This finding is also consistent with the ASX study, where 289 of the 4137 notices (7%) breached the Corporations Act reporting requirements. The average (median) number of days to report is 16 (3) for all trades, 17 (3) for purchases and 15 (4) for sales.

Table 1 also shows the number of trades and the time taken to report trades for resource companies and non-resource companies. The data comprises 259 trades for resource companies; 199 purchases and 60 sales. For non-resource companies there are 2673 trades; 1990 purchases and 683 sales. Of the 259 (2673) trades in resource (non-resource) companies, 22 or 8% (352 or 13%) were not reported within the ASX requirement of five business days. Of the 199 (1990) purchases in resource (non-resource) companies, 17 or 9% (244 or 12%) were not reported within the five business days. Of the 60 (683) sales in resource (non-resource) companies, 5 or 8% (108 or 16%) were not reported within five business days.

Of the 259 (2673) trades in resource (non-resource) companies, 12 or 5% (197 or 7%) were not reported within the Corporation Act requirement of fourteen days. Of the 199 (1990) purchases of shares in resource (non-resource) companies, 10 or 5% (131 or 7%) were not reported within the Corporation Act requirement of fourteen days. Of the 60 (683) sales in resource (non-resource) companies, 2 or 3% (66 or 10%) were not reported within fourteen days. The average (median) number of days to report is 9 (3) for all resource trades, 17 (3) for all non-resource trades, 9 (3) for

resource purchases, 18 (3) for non-resource purchases, 8 (2) for resource sales and 15 (4) for non-resource sales.

These results show the extent of non-compliance with the ASX rules and with the Australian legal requirements by directors required to report trades in their own companies to the market. Approximately 13% (7%) of all trades are not reported to the ASX (market) within the specified timeframe. Such late reporting by directors confirms the perception that the market is not being fully informed.

5. Results

5.1. Returns for Trades by Directors in Relation to the Day of Trade

Table 2 (upper panel) shows the average abnormal returns to directors in relation to the insider purchases subsample in the days before and after they purchase. Nine of the daily average abnormal returns prior to the trade are negative and significantly different from zero at the 5% level (on a two-tailed test). Further, the cumulative abnormal return over the ten days prior to the trade and the day of the trade is -1.9% and significantly different from zero at the 1% level. Conversely, the daily average abnormal return on the second day after the purchase is positive and significantly different from zero at the 5% level. In addition, the 0.3% cumulative abnormal return in the ten days following the trades is significantly different from zero at the 5% level. This demonstrates that directors make an abnormal return of 0.3% by purchasing shares in their own companies.

Table 2 also shows (lower panel) the average abnormal returns to directors in relation to the insider sales subsample in the days before and after the sale. Three of the average abnormal returns prior to the trades are positive and significantly different from zero at the 1% level (on a two-tailed test). Further, the cumulative return over

the ten days prior to the trades and the day of the trade is 1.9% and significantly different from zero at the 1% level. Conversely, three of the abnormal returns after the sale are also negative and significantly different from zero at the 5% level. In addition, the -0.7% cumulative abnormal return in the ten days following the trades is significantly different from zero at the 1% level. This demonstrates that directors avoid losses of 0.7% by selling shares in their own companies.

The upper (lower) panel of Table 3 shows the average abnormal returns to purchases by directors for resource (non-resource) companies. Three (eight) of the average abnormal returns for resource (non-resource) companies prior to the trades are negative and significantly different from zero at the 5% level (on a two-tailed test). Further, the 11-day cumulative abnormal return ($t = -10$ to $t = 0$) is -2.2% and significantly different from zero at the 1% level for resource companies, as is the return of -1.8% for non-resource companies. Conversely, the average abnormal returns for resource and non-resource companies are not significantly different from zero at the 5% following the trades.⁴ The differences between the cumulative abnormal returns for resource and non-resource companies are not significant at the 5% level.

Table 3 also shows the average abnormal returns to directors in relation to counterpart sales transactions for resource and non-resource companies. Of note, resource (non-resource) companies exhibit ($t = -10$ to $t = 0$) cumulative returns of 2.5% (1.8%) – significantly different from zero at the 1% level. Conversely, the -1.6% (-0.6%) cumulative abnormal return in the ten days following the trades for resource (non-resource) companies is significantly different from zero at the 5% (1%) level. This demonstrates that resource (non-resource) company directors achieve an

⁴ The 1.0% (0.3%) cumulative abnormal return for resource (non-resource) companies in the seven (six) days after the trades are significantly different from zero at the 5% level.

abnormal return of 1.6% (0.6%) in avoiding losses by selling shares in their own companies. The differences between the cumulative abnormal returns for resource and non-resource companies are not significant at the 5% level.

Figure 1 provides a graphical representation of Tables 2 and 3. It shows the cumulative abnormal daily returns for 10 days before and after purchases and sales by company directors for all companies, resource companies and non-resource companies. The cumulative abnormal returns prior to a purchase are negative and significant for all three groups. The cumulative abnormal returns after the purchase are also positive and significant for all three groups however, the returns are greater in magnitude for resource companies. For all three groups the significant positive returns prior to a sale are followed by significantly negative returns after the sale with the negative cumulative abnormal returns more pronounced for resource companies.

Figure 2 shows the cumulative abnormal daily returns for 100 days before and after purchases and sales by company directors for all companies, resource companies and non-resource companies. Similar to Figure 1 it shows negative returns prior to a purchase followed by slightly positive returns in the period shortly after the purchase. However, from about 15 days after the purchase the cumulative abnormal returns for all companies and non-resource companies become negative. For resource companies the positive returns after the trades persist for about 30 days. The positive returns prior to a sale are followed by negative returns but only for about 20 days after the sale for all companies and non-resource companies and for about 50 days for resource companies. After this time the cumulative abnormal returns become positive again.

The results reported in this section are broadly consistent with Brown, Foo and Watson (2003) in that prior to purchases companies were experiencing negative returns and prior to sales companies were experiencing positive returns. Following the purchases there are slightly positive returns and following the sales there are negative

returns. These trends do not persist beyond 20 to 30 days following the trades except for sales in resource companies. The results for resource companies are also consistent with Brown, Foo and Watson (2003) in that the sale of shares by directors of resource companies is followed by significantly negative returns. These returns are greater in magnitude than the results for all companies and non-resource companies. This finding is also consistent with Pope, Morris and Peel (1990) who conclude that directors do make abnormal returns particularly in being able to avoid losses by selling prior to share price falls.

5.2. Returns from a Trading Strategy from the Day of Reporting the Trades

This section demonstrates a trading strategy for an outsider to imitate trades by directors by purchasing (selling) shares when a director discloses to the market that they have purchased (sold) shares. It examines the returns before and after purchases and sales of company shares are reported.

The upper (lower) panel of Table 4 shows the average abnormal returns to imitators before and after directors report the purchase (sale) of shares of their own company. Six (one) of the average abnormal returns prior to the purchase (sell) trades being reported are negative (positive) and significantly different from zero at the 1% (5%) level (on a two-tailed test). However, the average abnormal return on the day the purchase (sell) trades were reported is significantly positive (negative) at the 1% (5%) level. The cumulative return over the ten days prior to the purchase (sell) trades being reported is -1.3% (1.6%) and significantly different from zero at the 1% level. As a final point of note in Table 4, the -0.5% cumulative abnormal return in the ten days following the sale of shares being reported is significantly different from zero at the 5% level. This demonstrates that imitators could achieve an abnormal return of 0.5% by short selling shares when directors report the sale of shares.

Table 5 shows the average abnormal returns to imitators in relation to purchases by directors for resource companies (upper panel) and non-resource companies (lower panel). Notably, the average abnormal return on the day the trades were reported is significantly positive at the 1% level for both resource and non-resource companies. The cumulative abnormal return over the ten days prior to the trades being reported is -1.3% (-1.2%), significant at the 1% level for resource (non-resource) companies. There is virtually no evidence of material abnormal profit opportunities in the post-event period. An exception is that we observe an abnormal return of 0.2% (and significantly different from zero at the 1% level) for non-resource companies the day after the trades are reported.

Table 5 also shows the average abnormal returns to imitators for the counterpart sales activity, in the days before and after the reporting of the sale of shares by directors. We see that the average abnormal return on the day the trades were reported is significantly negative at the 5% level for non-resource companies. The cumulative return over the ten days prior to the trades being reported for resource (non-resource) companies is 1.6% (1.6%), significant at the 5% level (significant at the 1% level). We also observe that while imitators could not make any significant abnormal returns for sales in resource companies, they could make a small abnormal return (0.5%) for non-resource companies by taking a short position in the shares after a director reports selling shares in their own companies. These abnormal returns do not include transaction costs or the buy/sell spread. These costs are likely to eliminate the abnormal returns suggested by this analysis, consistent with Seyhun (1986).

Figure 3 provides a graphical representation of Tables 4 and 5. It shows the cumulative abnormal daily returns for 10 days before and after purchases and sales by company directors are reported to the market for all companies, resource companies and non-resource companies. The cumulative abnormal returns prior to a purchase

being reported and including the day the purchase is reported are negative and significant for all companies and non-resource companies. The cumulative abnormal returns after the purchase are positive and significant up to the day after the trades are reported for all companies and non-resource companies. For all companies and non-resources the positive returns prior to a sale being reported are followed by significantly negative returns after the sale is reported. However, the significantly positive cumulative abnormal returns prior to a sale being reported for resource companies are not followed by significant negative cumulative abnormal returns. In this case the peak in positive returns prior to sales and negative returns prior to purchases appears to be at least one day prior to the trades being reported.

Figure 4 shows the cumulative abnormal daily returns for 100 days before and after purchases and sales by company directors are reported for all companies, resource companies and non-resource companies. Similar to Figure 3, it shows negative returns prior to a purchase being reported followed by slightly positive returns in the period shortly after the purchase is reported. However, from about 3 days after the purchase is reported the cumulative abnormal returns for all companies and non-resource companies become negative. For resource companies the positive returns after the trades are reported persist for about 20 days. The positive returns prior to a sale being reported are followed by negative returns but only for about 20 days after the sale is reported for all companies and non-resource companies and for about 70 days for resource companies.

5.3. Abnormal Returns from Trades by Directors prior to Reporting the Trades

This section analyses returns to directors after they trade but before they announce the trade to the market. Day zero is defined as the day the director trades in shares of their

own company. The reported abnormal returns are those from a portfolio that has an equal weight in all shares from time zero to the day prior to the trade being reported.⁵

Table 6 reports average abnormal returns for the overall sample. The upper panel of the table shows that the cumulative abnormal return after the purchase but before reporting is never consistently significantly different from zero at the 5% level. This suggests that directors have great difficulty achieving an abnormal return after the trades for purchases in shares of their own companies that is not available to the market due to the delay in reporting. The lower panel of Table 6 similarly shows that there is very little scope for directors to capture abnormal returns after the inside sales but prior to their reporting. The cumulative abnormal return in the 10 days following the sales is not significantly different from zero at the 5% level.

Table 7 shows the average abnormal returns to directors in the days after they purchase shares in their own company and before the trade is reported for resource and non-resource companies. The table shows a distinct absence of statistical significance. This suggests that directors are not able to achieve abnormal returns for purchases in shares of their own resource or non-resource companies that are not available to the market due to the delay in reporting.

Table 7 also shows the average abnormal returns to directors in the days after they sell shares in their own company and before the trade is reported. Table 7 shows that the cumulative abnormal return in the 10 days following the sales and before the sales were reported are not significantly different from zero for both the resource and non-resource company subsamples. Moreover, the differences between the cumulative abnormal returns for resource and non-resource companies are not significant at the 5% level.

⁵ For example, if a director purchased shares on 15 January, 2007 and reported the trade on 19 January, 2007, then the abnormal returns on that company's shares would be included in the portfolio for days 15 January to 18 January inclusive.

6. Summary

We investigate the extent of directors breaching the reporting requirements of the ASX and the Corporations Act in Australia. We also update the work of Brown, Foo and Watson (2003) to determine whether directors in Australia achieve abnormal returns from trades in their own companies. We apply the methodology of Seyhun (1986) in determining whether an imitator could mimic director trades to earn abnormal returns. Previous research is extended to determine the abnormal returns available to directors between the time of insider trades and the time they report these trades to the market. This methodology has not been adopted in previous literature. Consistent with research by Brown, Foo and Watson (2003) this analysis is conducted for all companies, resource companies and non-resource companies.

Our findings are readily summarised. First, on average, 13% (7%) of insider trades are not reported within the five (14) business days required by the ASX (as specified in the Corporations Act). Second, directors do appear to act as contrarian investors, purchasing (selling) shares when the price is low (high). Third, directors do achieve abnormal returns through trading in shares of their own companies. The abnormal returns are highest for sales in resource companies where directors avoid significant losses by selling shares prior to the share price falling. Fourth, imitators adopting a strategy of purchasing (selling) when directors purchase (sell) shares secure a small abnormal return for all companies and non-resource companies, but not for resource companies. However, it is highly unlikely that this abnormal return could cover transaction costs and the buy/sell spread. Fifth, analysis of returns to directors after they trade but before they announce the trade to the market shows that, over this period, directors are not making returns that are significantly different from zero.

Figure 1 – Abnormal Returns 10 Days Before and After Director Trades in Own-Company Shares

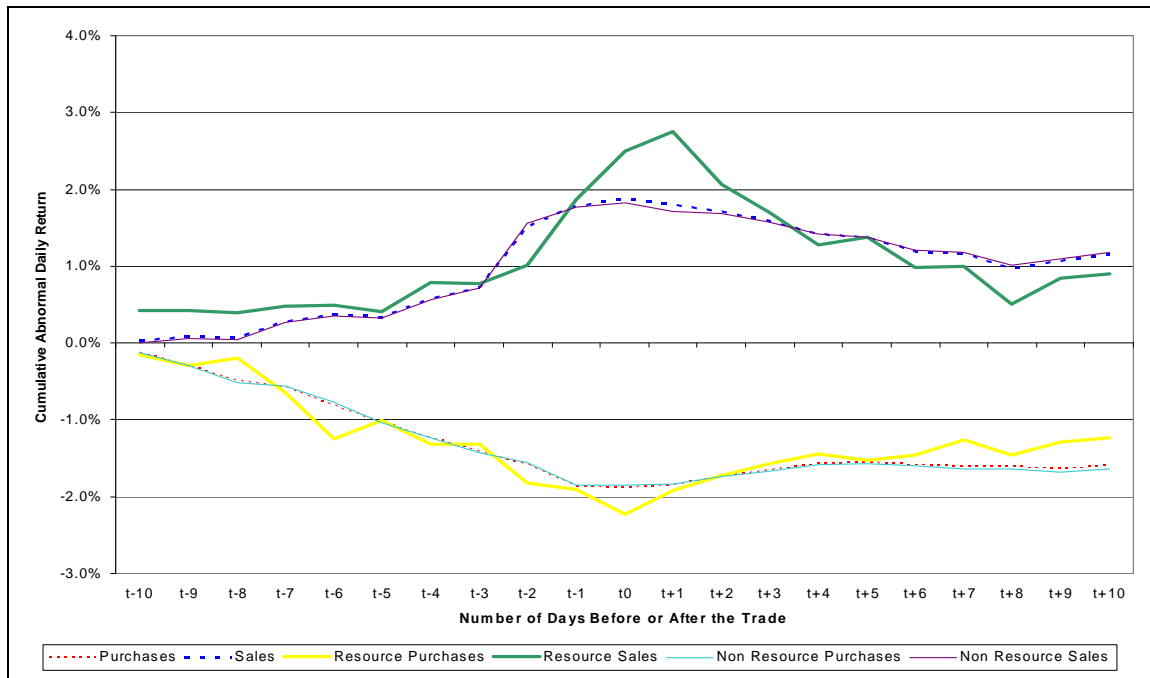


Figure 2 – Abnormal Returns 100 Days Before and After Director Trades in Own-Company Shares

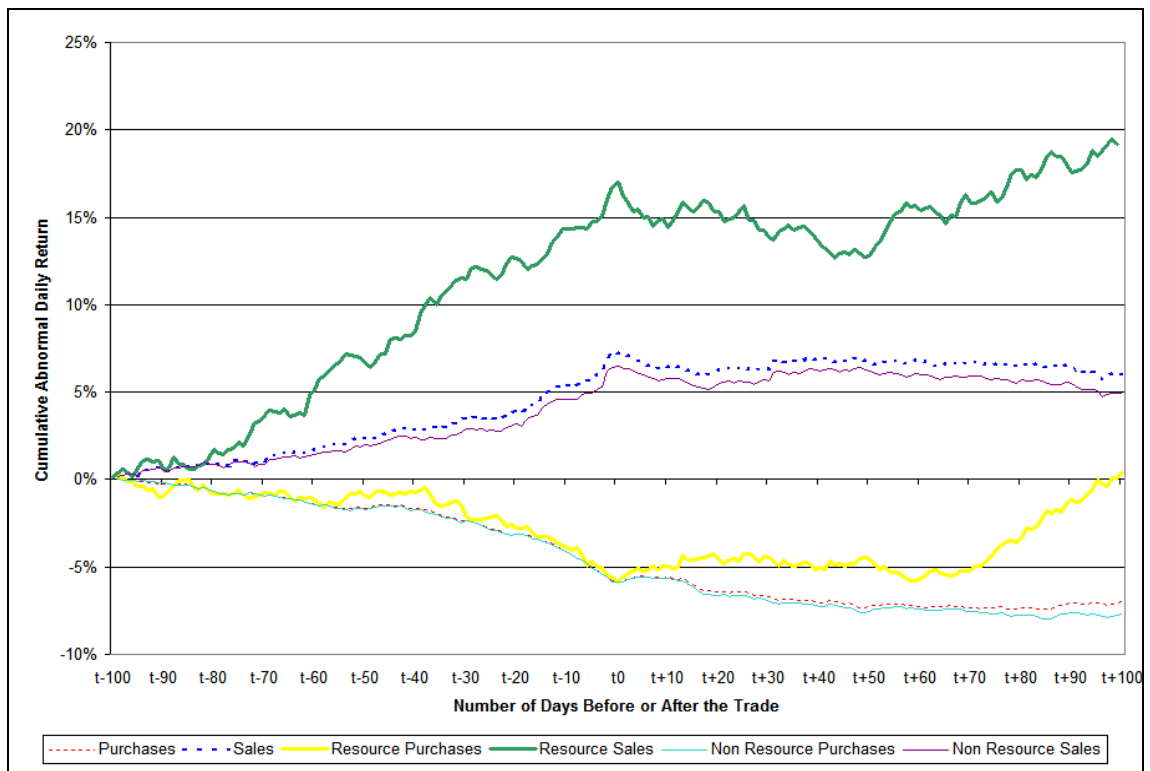


Figure 3 – Abnormal Returns 10 Days Before and After Director Discloses Trades in Own-Company Shares

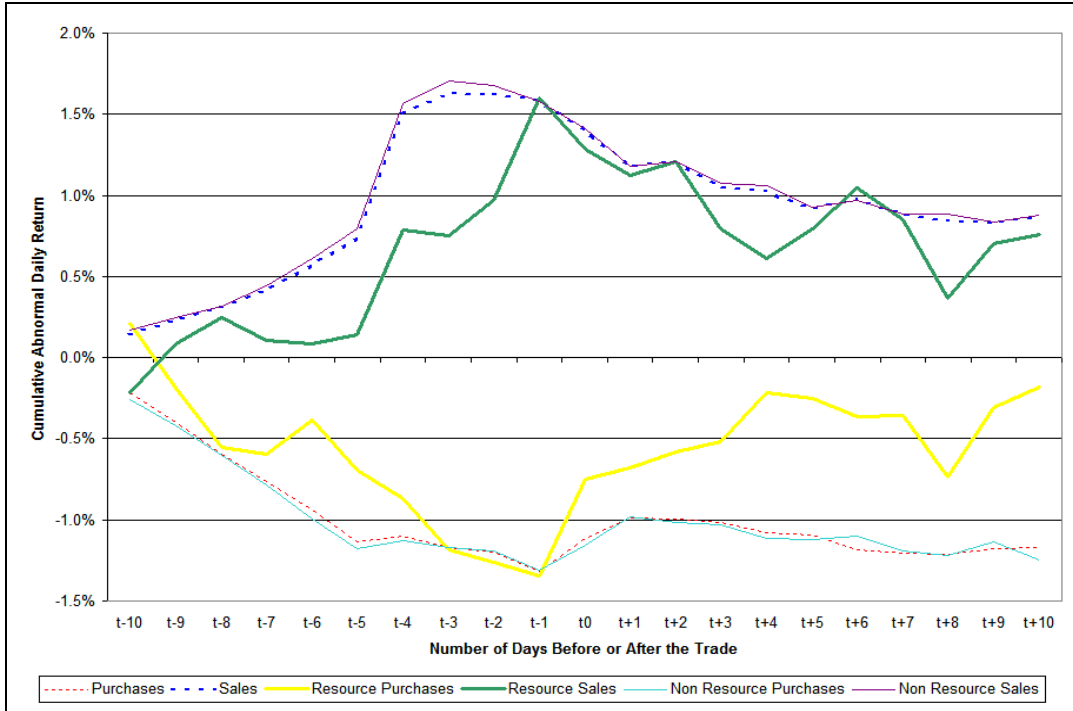


Figure 4 – Abnormal Returns 100 Days Before and After Director Discloses Trades in Own-Company Shares

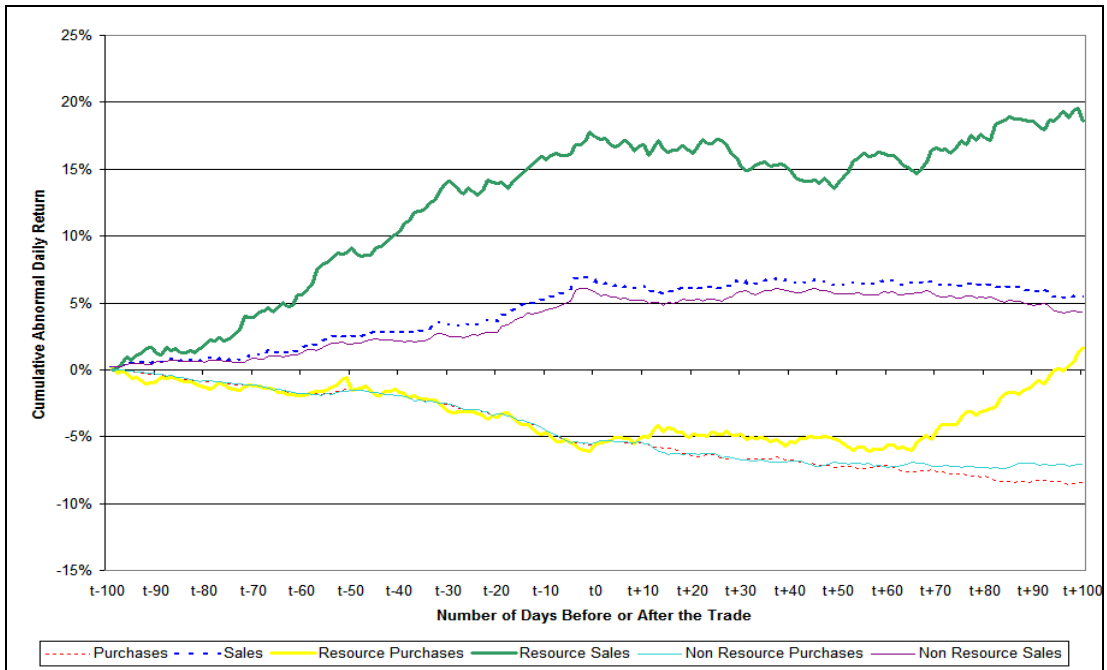


Table 1 - Summary Statistics

	All Trades	Purchases	Sales
All Companies			
Number of Trades	2932	2189	743
Length of Time to Report the Trade:			
Within 5 Business Days	2556	1926	630
Between 5 Business Days and 14 Days	164	119	45
More than 14 Days	212	144	68
Average Number of Days to Report	16	17	15
Median Number of Days to Report	3	3	4
Resource Companies			
Number of Trades	259	199	60
Length of Time to Report the Trade:			
Within 5 Business Days	237	182	55
Between 5 Business Days and 14 Days	10	7	3
More than 14 Days	12	10	2
Average Number of Days to Report	9	9	8
Median Number of Days to Report	3	3	2
Non-Resource Companies			
Number of Trades	2673	1990	683
Length of Time to Report the Trade:			
Within 5 Business Days	2321	1746	575
Between 5 Business Days and 14 Days	155	113	42
More than 14 Days	197	131	66
Average Number of Days to Report	17	18	15
Median Number of Days to Report	3	3	4

Table 2 – Abnormal Returns Before and After Director Trades in Own-Company Shares

	t-10	t-9	t-8	t-7	t-6	t-5	t-4	t-3	t-2	t-1	t0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
<i>Purchases</i>																					
Average Abnormal Return	-0.1%	-0.2%	-0.2%	-0.1%	-0.3%	-0.2%	-0.2%	-0.2%	-0.2%	-0.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Standard Deviation	2.7%	2.4%	2.5%	3.0%	2.7%	2.8%	2.9%	3.0%	3.1%	3.2%	3.5%	2.7%	2.4%	2.5%	2.5%	2.5%	2.3%	2.3%	2.3%	2.4%	2.3%
P Value	1%	0%	0%	9%	0%	0%	0%	0%	1%	0%	37%	27%	2%	6%	5%	44%	33%	29%	44%	29%	19%
Cumulative Abnormal Return	-0.1%	-0.3%	-0.5%	-0.6%	-0.8%	-1.0%	-1.2%	-1.4%	-1.6%	-1.9%	-1.9%	0.0%	0.1%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%
Standard Deviation	2.7%	3.5%	4.3%	5.2%	5.6%	6.4%	7.0%	7.6%	8.1%	8.7%	9.2%	2.7%	3.5%	4.3%	4.8%	5.1%	5.5%	5.9%	6.1%	6.5%	6.7%
P Value	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	27%	2%	1%	0%	0%	0%	1%	2%	4%	2%
<i>Sales</i>																					
Average Abnormal Return	0.0%	0.1%	0.0%	0.2%	0.1%	0.0%	0.2%	0.1%	0.8%	0.3%	0.1%	-0.1%	-0.1%	-0.1%	-0.2%	0.0%	-0.2%	0.0%	-0.2%	0.1%	0.1%
Standard Deviation	2.3%	2.5%	2.3%	2.1%	2.3%	2.0%	2.3%	2.1%	12.0%	2.4%	2.7%	2.4%	2.2%	2.0%	2.0%	2.2%	2.1%	2.0%	2.0%	2.3%	2.2%
P Value	34%	29%	44%	0%	19%	38%	0%	4%	4%	0%	14%	14%	18%	5%	1%	30%	1%	35%	1%	13%	15%
Cumulative Abnormal Return	0.0%	0.1%	0.1%	0.3%	0.4%	0.3%	0.6%	0.7%	1.5%	1.8%	1.9%	-0.1%	-0.2%	-0.3%	-0.5%	-0.5%	-0.7%	-0.7%	-0.9%	-0.8%	-0.7%
Standard Deviation	2.3%	3.4%	4.0%	4.5%	5.2%	5.5%	5.9%	6.3%	13.6%	13.7%	13.9%	2.4%	3.1%	3.7%	4.1%	4.7%	4.8%	4.9%	5.2%	5.7%	6.1%
P Value	34%	25%	31%	4%	3%	5%	0%	0%	0%	0%	0%	14%	7%	1%	0%	0%	0%	0%	0%	0%	0%
Average Abnormal Return is calculated as average return at time t less average return for the All Ordinaries return for time t																					
Analysis comprises 2189 purchases and 743 sales																					
Cumulative Abnormal Returns are calculated from t-10 to t-1 then from t1 to t10																					
P Value is for a two tailed test																					

Table 3 – Abnormal Returns Before and After Director Trades in Own-Company Shares: Resource and Non-resource Companies

Resources																					
	t-10	t-9	t-8	t-7	t-6	t-5	t-4	t-3	t-2	t-1	t0	t1	t2	t3	t4	t5	t6	t7	t8	t9	t10
Purchases																					
Average Abnormal Return	-0.1%	-0.1%	0.1%	-0.4%	-0.6%	0.2%	-0.3%	0.0%	-0.5%	-0.1%	-0.3%	0.3%	0.2%	0.2%	0.1%	-0.1%	0.1%	0.2%	-0.2%	0.2%	0.1%
Standard Deviation	3.0%	2.2%	2.9%	2.6%	2.5%	3.1%	2.8%	2.8%	2.9%	2.8%	3.8%	3.2%	3.1%	2.7%	2.4%	2.5%	2.6%	2.9%	2.8%	3.0%	3.1%
P Value	24%	19%	32%	1%	0%	14%	6%	49%	1%	32%	12%	8%	19%	20%	22%	33%	36%	17%	16%	21%	40%
Cumulative Abnormal Return																					
Average Abnormal Return	-0.1%	-0.3%	-0.2%	-0.6%	-1.2%	-1.0%	-1.3%	-1.3%	-1.8%	-1.9%	-2.2%	0.3%	0.5%	0.7%	0.8%	0.7%	0.8%	1.0%	0.8%	1.0%	1.0%
Standard Deviation	3.0%	3.6%	4.6%	5.1%	5.4%	5.5%	6.2%	6.5%	6.8%	6.8%	7.5%	3.2%	3.8%	4.7%	5.3%	5.6%	5.7%	6.3%	6.8%	7.0%	7.5%
P Value	24%	13%	28%	4%	0%	0%	0%	0%	0%	0%	0%	8%	3%	2%	2%	3%	3%	1%	5%	3%	3%
Sales																					
Average Abnormal Return	0.4%	0.0%	0.0%	0.1%	0.0%	-0.1%	0.4%	0.0%	0.2%	0.8%	0.6%	0.2%	-0.7%	-0.4%	-0.4%	0.1%	-0.4%	0.0%	-0.5%	0.3%	0.1%
Standard Deviation	1.9%	2.1%	1.6%	1.9%	1.8%	1.8%	1.7%	2.5%	2.5%	2.3%	3.5%	2.3%	1.9%	2.0%	2.4%	1.9%	1.7%	1.8%	2.2%	2.6%	2.3%
P Value	4%	50%	44%	37%	47%	36%	4%	48%	23%	0%	8%	21%	0%	8%	8%	36%	5%	48%	4%	15%	42%
Cumulative Abnormal Return																					
Average Abnormal Return	0.4%	0.4%	0.4%	0.5%	0.5%	0.4%	0.8%	0.8%	1.0%	1.9%	2.5%	0.2%	-0.4%	-0.8%	-1.2%	-1.1%	-1.5%	-1.5%	-2.0%	-1.6%	-1.6%
Standard Deviation	1.9%	3.1%	3.2%	3.6%	4.1%	4.6%	5.0%	5.3%	5.7%	6.4%	6.9%	2.3%	2.9%	3.6%	4.5%	5.1%	5.2%	5.6%	6.5%	6.9%	6.9%
P Value	4%	14%	17%	15%	18%	25%	11%	13%	8%	1%	0%	21%	13%	5%	2%	5%	1%	2%	1%	3%	4%
Non-Resources																					
	t-10	t-9	t-8	t-7	t-6	t-5	t-4	t-3	t-2	t-1	t0	t1	t2	t3	t4	t5	t6	t7	t8	t9	t10
Purchases																					
Average Abnormal Return	-0.1%	-0.2%	-0.2%	0.0%	-0.2%	-0.3%	-0.2%	-0.2%	-0.1%	-0.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Standard Deviation	2.6%	2.5%	2.5%	3.0%	2.7%	2.7%	2.9%	3.0%	3.1%	3.3%	3.4%	2.6%	2.4%	2.5%	2.5%	2.5%	2.3%	2.3%	2.2%	2.4%	2.3%
P Value	2%	0%	0%	23%	0%	0%	0%	0%	3%	0%	47%	45%	3%	8%	6%	38%	28%	16%	41%	18%	20%
Cumulative Abnormal Return																					
Average Abnormal Return	-0.1%	-0.3%	-0.5%	-0.6%	-0.8%	-1.0%	-1.2%	-1.4%	-1.6%	-1.9%	-1.8%	0.0%	0.1%	0.2%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%
Standard Deviation	2.6%	3.5%	4.3%	5.2%	5.7%	6.4%	7.1%	7.7%	8.2%	8.9%	9.4%	2.6%	3.4%	4.2%	4.7%	5.1%	5.5%	5.8%	6.0%	6.5%	6.7%
P Value	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	45%	8%	2%	0%	1%	2%	5%	5%	12%	7%
Sales																					
Average Abnormal Return	0.0%	0.1%	0.0%	0.2%	0.1%	0.0%	0.2%	0.2%	0.8%	0.2%	0.1%	-0.1%	0.0%	-0.1%	-0.2%	-0.1%	-0.2%	0.0%	-0.2%	0.1%	0.1%
Standard Deviation	2.4%	2.5%	2.3%	2.1%	2.3%	2.0%	2.4%	2.1%	12.5%	2.4%	2.7%	2.4%	2.2%	2.0%	1.9%	2.2%	2.1%	2.1%	2.0%	2.3%	2.1%
P Value	50%	28%	45%	0%	19%	41%	1%	3%	4%	1%	27%	9%	39%	9%	2%	26%	2%	34%	2%	20%	15%
Cumulative Abnormal Return																					
Average Abnormal Return	0.0%	0.1%	0.0%	0.3%	0.3%	0.3%	0.6%	0.7%	1.6%	1.8%	1.8%	-0.1%	-0.1%	-0.2%	-0.4%	-0.5%	-0.6%	-0.6%	-0.8%	-0.7%	-0.6%
Standard Deviation	2.4%	3.4%	4.1%	4.6%	5.2%	5.6%	6.0%	6.4%	14.1%	14.1%	14.3%	2.4%	3.1%	3.7%	4.1%	4.7%	4.7%	4.9%	5.1%	5.6%	6.0%
P Value	50%	34%	39%	6%	4%	6%	1%	0%	0%	0%	0%	9%	11%	4%	1%	1%	0%	0%	0%	0%	0%
Comparison of Resources and Non-Resources																					
	t-10	t-9	t-8	t-7	t-6	t-5	t-4	t-3	t-2	t-1	t0	t1	t2	t3	t4	t5	t6	t7	t8	t9	t10
Purchases																					
Average CAR Resources - Average CAR Non-Resources	0.0%	0.0%	0.3%	-0.1%	-0.5%	0.0%	-0.1%	0.1%	-0.3%	-0.1%	-0.4%	0.3%	0.4%	0.5%	0.4%	0.5%	0.8%	0.6%	0.8%	0.8%	
P Value	46%	50%	17%	42%	12%	47%	43%	42%	31%	46%	25%	10%	8%	8%	9%	15%	11%	5%	13%	6%	7%
Sales																					
Average CAR Resources - Average CAR Non-Resources	0.4%	0.4%	0.3%	0.2%	0.1%	0.1%	0.2%	0.1%	-0.5%	0.1%	0.7%	0.4%	-0.3%	-0.5%	-0.8%	-0.6%	-0.9%	-0.8%	-1.2%	-0.9%	-0.9%
P Value	5%	19%	21%	34%	40%	45%	37%	47%	27%	46%	26%	12%	24%	14%	10%	17%	10%	13%	9%	16%	16%
Average Abnormal Return is calculated as average return at time t less average return for the All Ordinaries return for time t																					
Analysis comprises 199 purchases and 60 sales for resource companies and 1990 purchases and 683 sales for non-resource companies																					
Cumulative Abnormal Returns are calculated from t-10 to t-1 then from t1 to t10																					
P Value is for a two tailed test																					

Table 4 – Abnormal Returns Before and After Director Discloses Trades in Own-Company Shares

	t-10	t-9	t-8	t-7	t-6	t-5	t-4	t-3	t-2	t-1	t0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
Purchases																					
Average Abnormal Return	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	0.0%	-0.1%	0.0%	-0.1%	0.2%	0.1%	0.0%	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
Standard Deviation	2.5%	2.5%	3.2%	2.7%	2.8%	2.8%	3.5%	3.2%	4.2%	3.0%	2.6%	2.5%	2.0%	2.1%	2.1%	2.1%	2.2%	2.5%	2.2%	2.3%	2.0%
P Value	0%	0%	0%	0%	0%	0%	33%	16%	37%	4%	0%	1%	46%	32%	8%	40%	3%	31%	46%	21%	46%
Cumulative Abnormal Return	-0.2%	-0.4%	-0.6%	-0.7%	-0.9%	-1.1%	-1.1%	-1.1%	-1.2%	-1.3%	-1.1%	0.1%	0.1%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Standard Deviation	2.5%	3.2%	4.7%	5.4%	6.0%	6.7%	7.2%	7.7%	8.9%	9.2%	9.6%	2.5%	3.1%	3.6%	4.0%	4.2%	4.7%	5.2%	5.4%	5.6%	5.8%
P Value	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	3%	10%	33%	39%	25%	20%	20%	31%	33%
Sales																					
Average Abnormal Return	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.8%	0.1%	0.0%	0.0%	-0.2%	-0.2%	0.0%	-0.2%	0.0%	-0.1%	0.1%	-0.1%	0.0%	0.0%	0.0%
Standard Deviation	2.2%	2.4%	2.3%	2.1%	2.3%	2.1%	12.0%	2.6%	2.3%	2.2%	2.2%	2.0%	2.0%	2.0%	2.1%	2.2%	2.2%	2.0%	2.0%	2.0%	2.1%
P Value	4%	14%	18%	9%	4%	1%	4%	9%	44%	34%	1%	0%	35%	2%	36%	10%	25%	11%	29%	41%	30%
Cumulative Abnormal Return	0.1%	0.2%	0.3%	0.4%	0.6%	0.7%	1.5%	1.6%	1.6%	1.6%	1.4%	-0.2%	-0.2%	-0.3%	-0.4%	-0.5%	-0.4%	-0.5%	-0.6%	-0.6%	-0.5%
Standard Deviation	2.2%	3.3%	4.0%	4.4%	5.0%	5.2%	13.2%	13.3%	13.4%	13.5%	13.6%	2.0%	2.8%	3.3%	3.6%	4.2%	4.4%	4.8%	5.3%	5.9%	6.0%
P Value	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	1%
Average Abnormal Return is calculated as average return at time t less average return for the All Ordinaries return for time t																					
Analysis comprises 2189 purchases and 743 sales																					
Cumulative Abnormal Returns are calculated from t-10 to t-1 then from t1 to t10																					
P Value is for a two tailed test																					

Table 5—Abnormal Returns Before and After Director Discloses Trades in Own-Company Shares: Resource and Non-resource Companies

Resources																					
	t-10	t-9	t-8	t-7	t-6	t-5	t-4	t-3	t-2	t-1	t0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
<i>Purchases</i>																					
Average Abnormal Return	0.2%	-0.4%	-0.4%	0.0%	0.2%	-0.3%	-0.2%	-0.3%	-0.1%	-0.1%	0.6%	0.1%	0.1%	0.1%	0.3%	0.0%	-0.1%	0.0%	-0.4%	0.4%	0.1%
Standard Deviation	3.0%	2.5%	2.7%	2.8%	3.1%	2.6%	2.7%	2.6%	3.3%	3.4%	3.3%	2.7%	2.9%	2.6%	2.6%	2.5%	2.9%	2.8%	2.8%	3.4%	3.0%
P Value	16%	1%	3%	41%	18%	5%	18%	4%	37%	36%	0%	36%	32%	36%	5%	41%	30%	49%	3%	3%	28%
<i>Cumulative Abnormal Return</i>																					
Average Abnormal Return	0.2%	-0.2%	-0.6%	-0.6%	-0.4%	-0.7%	-0.9%	-1.2%	-1.3%	-1.3%	-0.7%	0.1%	0.2%	0.2%	0.5%	0.5%	0.4%	0.4%	0.0%	0.4%	0.6%
Standard Deviation	3.0%	3.7%	4.5%	5.0%	5.4%	5.8%	5.8%	6.3%	6.3%	7.0%	7.7%	2.7%	3.8%	4.5%	5.3%	5.7%	6.2%	6.5%	7.0%	7.1%	7.1%
P Value	16%	24%	4%	5%	16%	5%	2%	0%	0%	0%	9%	36%	27%	23%	8%	11%	19%	20%	49%	19%	13%
<i>Sales</i>																					
Average Abnormal Return	-0.2%	0.3%	0.2%	-0.1%	0.0%	0.1%	0.6%	0.0%	0.2%	0.6%	-0.3%	-0.2%	0.1%	-0.4%	-0.2%	0.2%	0.3%	-0.2%	-0.5%	0.3%	0.1%
Standard Deviation	2.4%	2.0%	2.1%	1.8%	1.9%	2.1%	2.5%	2.3%	2.6%	3.3%	2.6%	1.8%	2.0%	1.8%	1.8%	1.8%	1.8%	2.6%	2.5%	2.2%	2.0%
P Value	24%	12%	28%	28%	46%	41%	2%	46%	26%	7%	17%	26%	38%	4%	22%	22%	14%	28%	6%	11%	41%
<i>Cumulative Abnormal Return</i>																					
Average Abnormal Return	-0.2%	0.1%	0.2%	0.1%	0.1%	0.1%	0.8%	0.8%	1.0%	1.6%	1.3%	-0.2%	-0.1%	-0.5%	-0.7%	-0.5%	-0.2%	-0.4%	-0.9%	-0.6%	-0.5%
Standard Deviation	2.4%	2.7%	3.5%	4.0%	4.1%	5.0%	4.9%	5.1%	6.2%	6.2%	6.3%	1.8%	2.9%	3.1%	3.7%	4.5%	4.4%	5.7%	5.3%	6.1%	6.2%
P Value	24%	40%	29%	42%	44%	11%	13%	11%	2%	6%	26%	42%	11%	8%	20%	34%	28%	9%	23%	9%	26%
Non-Resources																					
<i>Purchases</i>																					
Average Abnormal Return	-0.3%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	0.1%	0.0%	0.0%	-0.1%	0.2%	0.2%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.1%	-0.1%
Standard Deviation	2.5%	2.5%	3.3%	2.7%	2.7%	2.8%	3.6%	3.3%	4.2%	3.0%	2.6%	2.7%	2.3%	2.5%	2.4%	2.3%	2.2%	2.4%	2.3%	2.3%	2.2%
P Value	0%	0%	1%	0%	0%	0%	26%	28%	40%	4%	0%	0%	27%	39%	5%	45%	32%	4%	31%	5%	1%
<i>Cumulative Abnormal Return</i>																					
Average Abnormal Return	-0.3%	-0.4%	-0.6%	-0.8%	-1.0%	-1.2%	-1.1%	-1.2%	-1.2%	-1.3%	-1.2%	0.2%	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%	-0.1%	0.0%	-0.1%
Standard Deviation	2.5%	3.2%	4.7%	5.4%	6.1%	6.7%	7.4%	7.8%	9.1%	9.4%	9.8%	2.7%	3.4%	4.0%	4.5%	5.1%	5.2%	5.5%	5.8%	6.2%	6.4%
P Value	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	8%	36%	40%	33%	37%	30%	44%	26%
<i>Sales</i>																					
Average Abnormal Return	0.2%	0.1%	0.1%	0.1%	0.2%	0.2%	0.8%	0.1%	0.0%	-0.1%	-0.2%	-0.2%	0.0%	-0.1%	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%
Standard Deviation	2.1%	2.4%	2.3%	2.1%	2.4%	2.1%	12.5%	2.6%	2.3%	2.1%	2.1%	2.0%	2.0%	2.0%	2.1%	2.2%	2.3%	2.0%	2.0%	2.0%	2.1%
P Value	2%	21%	21%	6%	3%	1%	5%	8%	36%	13%	2%	0%	38%	4%	44%	6%	33%	14%	49%	26%	31%
<i>Cumulative Abnormal Return</i>																					
Average Abnormal Return	0.2%	0.2%	0.3%	0.4%	0.6%	0.8%	1.6%	1.7%	1.7%	1.6%	1.4%	-0.2%	-0.2%	-0.3%	-0.3%	-0.5%	-0.4%	-0.5%	-0.5%	-0.6%	-0.5%
Standard Deviation	2.1%	3.4%	4.0%	4.4%	5.0%	5.2%	13.6%	13.7%	13.9%	14.0%	14.1%	2.0%	2.8%	3.3%	3.6%	4.2%	4.4%	4.7%	5.3%	5.8%	6.0%
P Value	2%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	1%	0%	0%	0%	0%	1%	1%
Comparison of Resources and Non-Resources																					
<i>Purchases</i>																					
Average CAR Resources - Average CAR Non-Resources	0.5%	0.2%	0.1%	0.2%	0.6%	0.5%	0.3%	0.0%	-0.1%	0.0%	0.4%	-0.1%	0.0%	0.1%	0.5%	0.5%	0.3%	0.4%	0.1%	0.4%	0.7%
P Value	2%	20%	44%	31%	7%	13%	28%	49%	45%	48%	25%	30%	47%	37%	10%	13%	23%	18%	44%	21%	10%
<i>Sales</i>																					
Average CAR Resources - Average CAR Non-Resources	-0.4%	-0.2%	-0.1%	-0.3%	-0.5%	-0.6%	-0.8%	-1.0%	-0.7%	0.0%	-0.1%	0.1%	0.1%	-0.2%	-0.3%	0.0%	0.2%	0.1%	-0.4%	0.0%	0.0%
P Value	11%	34%	44%	27%	17%	17%	17%	13%	23%	49%	45%	38%	37%	36%	26%	50%	36%	45%	29%	50%	49%
Average Abnormal Return is calculated as average return at time t less average return for the All Ordinaries return for time t Analysis comprises 199 purchases and 60 sales for resource companies and 1990 purchases and 683 sales for resource companies Cumulative Abnormal Returns are calculated from t-10 to t-1 then from t1 to t10 P Value is for a two tailed test																					

Table 6 – Abnormal Returns After Director Trades in Own-Company Shares and Before Disclosure is Made

	t0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
Purchases											
Average Abnormal Return	0.0%	0.1%	0.1%	0.0%	-0.1%	0.0%	0.2%	0.0%	0.0%	-0.2%	0.1%
Number of Returns	1,914	1,377	950	632	403	263	214	187	172	155	144
Standard Deviation	3.5%	2.5%	1.8%	1.5%	1.5%	2.0%	2.2%	2.1%	1.7%	2.1%	1.8%
P Value	34%	21%	2%	28%	22%	38%	6%	47%	40%	11%	17%
Cumulative Abnormal Return	0.0%	0.1%	0.2%	0.2%	0.2%	0.2%	0.4%	0.4%	0.5%	0.3%	0.4%
Standard Deviation	3.5%	4.1%	4.5%	4.5%	5.2%	5.0%	5.4%	5.6%	5.8%	6.2%	6.6%
P Value	34%	31%	11%	12%	28%	27%	13%	14%	14%	30%	23%
Sales											
Average Abnormal Return	0.1%	0.1%	-0.1%	-0.3%	0.1%	0.1%	-0.2%	-0.3%	0.1%	-0.1%	-0.2%
Number of Returns	649	521	394	278	190	113	93	83	78	70	68
Standard Deviation	2.8%	2.2%	1.4%	1.8%	1.4%	2.2%	1.4%	1.4%	1.5%	1.3%	1.2%
P Value	23%	18%	10%	1%	29%	25%	5%	5%	24%	28%	7%
Cumulative Abnormal Return	0.1%	0.1%	0.0%	-0.3%	-0.2%	-0.1%	-0.3%	-0.6%	-0.4%	-0.5%	-0.8%
Standard Deviation	2.8%	3.5%	3.6%	3.8%	3.8%	4.9%	4.9%	5.0%	4.8%	4.5%	4.2%
P Value	23%	28%	49%	11%	21%	43%	27%	15%	20%	16%	7%
Average Abnormal Return is calculated as average return at time t less average return for the All Ordinaries return for time t											
P Value is for a two-tailed test											

Table 7 – Abnormal Returns After Director Trades in Own-Company Shares and Before Disclosure is Made: Resource and Non-resource Companies

Resources											
	t0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
Purchases											
Average Abnormal Return	-0.4%	0.1%	0.3%	0.4%	-0.2%	0.2%	0.1%	-0.5%	-0.7%	-0.4%	-0.3%
Number of Returns	174	120	72	38	24	17	15	13	11	10	10
Standard Deviation	3.9%	2.8%	2.2%	1.5%	1.5%	1.2%	2.4%	1.6%	1.4%	2.8%	2.9%
P Value	9%	39%	15%	3%	23%	27%	42%	11%	6%	31%	35%
Cumulative Abnormal Return											
Average Abnormal Return	-0.4%	0.1%	0.3%	0.8%	0.6%	0.7%	0.9%	0.3%	-0.3%	-0.8%	-1.1%
Standard Deviation	3.9%	4.1%	2.7%	2.7%	2.8%	3.3%	3.1%	3.5%	3.8%	4.4%	6.4%
P Value	9%	42%	15%	4%	17%	18%	14%	37%	39%	29%	29%
Sales											
Average Abnormal Return	0.4%	0.6%	-0.1%	-0.3%	0.0%	-1.6%	0.5%	-1.9%	-1.2%	0.7%	-0.8%
Number of Returns	50	30	22	15	11	5	4	4	3	3	2
Standard Deviation	3.4%	2.6%	1.3%	2.1%	2.6%	3.0%	1.2%	1.9%	1.3%	0.8%	1.1%
P Value	20%	10%	33%	29%	48%	12%	19%	3%	6%	5%	16%
Cumulative Abnormal Return											
Average Abnormal Return	0.4%	0.6%	0.5%	0.2%	0.1%	-1.4%	-0.9%	-2.8%	-3.9%	-3.2%	-4.0%
Standard Deviation	3.4%	2.6%	2.4%	2.3%	3.4%	7.0%	7.1%	6.5%	7.7%	8.0%	4.0%
P Value	20%	10%	17%	37%	44%	32%	40%	20%	19%	24%	8%
Non-Resources											
	t0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
Purchases											
Average Abnormal Return	0.0%	0.1%	0.1%	0.0%	-0.1%	0.0%	0.2%	0.0%	0.1%	-0.2%	0.2%
Number of Returns	1,739	1,256	877	593	377	244	197	172	159	142	131
Standard Deviation	3.5%	2.5%	1.8%	1.5%	1.5%	2.0%	2.2%	2.2%	1.8%	2.1%	1.7%
P Value	48%	22%	3%	46%	26%	45%	6%	40%	29%	13%	11%
Cumulative Abnormal Return											
Average Abnormal Return	0.0%	0.1%	0.2%	0.2%	0.1%	0.1%	0.4%	0.4%	0.5%	0.3%	0.5%
Standard Deviation	3.5%	2.5%	3.2%	3.6%	4.1%	4.3%	4.9%	5.4%	5.7%	6.1%	6.3%
P Value	48%	21%	6%	12%	28%	31%	13%	15%	13%	27%	18%
Sales											
Average Abnormal Return	0.1%	0.1%	-0.1%	-0.3%	0.1%	0.2%	-0.3%	-0.2%	0.2%	-0.1%	-0.2%
Number of Returns	599	491	372	263	179	108	89	79	75	67	66
Standard Deviation	2.7%	2.2%	1.4%	1.8%	1.3%	2.2%	1.4%	1.3%	1.4%	1.3%	1.2%
P Value	32%	28%	11%	1%	26%	15%	3%	13%	16%	21%	9%
Cumulative Abnormal Return											
Average Abnormal Return	0.1%	0.1%	0.0%	-0.3%	-0.2%	0.0%	-0.3%	-0.5%	-0.3%	-0.4%	-0.6%
Standard Deviation	2.7%	2.2%	2.4%	3.1%	3.1%	4.3%	4.4%	4.7%	4.5%	4.5%	4.5%
P Value	32%	28%	39%	5%	14%	48%	26%	19%	29%	23%	13%
Comparison of Resources and Non-Resources											
	t0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
Purchases											
Average CAR Resources - Average CAR Non-Resources	-0.4%	0.0%	0.2%	0.6%	0.4%	0.6%	0.5%	-0.1%	-0.8%	-1.1%	-1.6%
Z Score	-1.31	0.04	0.50	1.31	0.70	0.70	0.54	-0.11	-0.68	-0.74	-0.77
P Value	9%	48%	31%	10%	24%	24%	29%	46%	25%	23%	22%
Sales											
Average CAR Resources - Average CAR Non-Resources	0.4%	0.6%	0.5%	0.5%	0.4%	-1.4%	-0.6%	-2.3%	-3.6%	-2.8%	-3.4%
Z Score	0.71	1.15	1.01	0.80	0.37	-0.45	-0.18	-0.71	-0.81	-0.60	-1.18
P Value	24%	13%	16%	21%	36%	33%	43%	24%	21%	27%	12%

Average Abnormal Return is calculated as average return at time t less average return for the All Ordinaries return for time t
P Value is for a two-tailed test

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