CORPORATE USAGE OF FINANCIAL DERIVATIVES AND INFORMATION ASYMMETRY

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Abstract

We investigate corporate usage of financial derivatives as a potential source of private information leading to information asymmetry in a sample of listed Australian firms. Corporate usage of financial derivatives has been reported to impact firm value, yet the reporting of derivative activities in Australia is currently somewhat inadequate. Our findings suggest that insiders in companies that employ financial derivatives make substantially larger gains than insiders in non-user companies. There is also some evidence that substantial insider gains can be made in companies that are highly geared in financial derivatives. Our findings indicate that corporate use of financial derivatives is a potential source of information asymmetry and as such further derivative reporting requirements are warranted.

Key words: Derivative usage, Insider gains, Information Asymmetry

1. Introduction

The extent to which corporate insiders have more information regarding the firm than outsiders, commonly known as information asymmetry, is well documented in finance. Corporate insiders can capitalize on their informational advantage and realize abnormal gains from trading in securities of the firm. Seyhun (1992) for example reports a 2.6% and 5.3% return in the 6 month period subsequent to insider purchase and sale transactions, respectively. Jeng, Metrick and Zeckhuser (1999) similarly suggest an abnormal return of 0.4% per month for insider purchases. Despite the existence of significant insider gains, the source of private information that leads to these gains has not been investigated in detail. Existing research on information asymmetry employed common measures of information asymmetry such as firm size and trading volume (Chari, Jagannathan and Ofer 1998), number and extent of analysts following a firm (Geczy, Strand and Minton 1997), analysts' earning forecast errors (Dadalt, Gay and Nam 2002) and the number of competing traders or insider's and institutional ownership (Stoll 1978). However, these measures are generally noisy and do not clearly identify the source of the asymmetry. It is desirable to identify major drivers of information asymmetry so a more precise and less noisy measure of information asymmetry can be developed. Aboody and Lev (2002) for example identified research and development (R&D) as a major source of information asymmetry. In particular, they reported that insider gains in firms that are R&D intensive are substantially larger than insider gains in firms that do not have R&D indicating that investors in firms that are more R&D intensive face a higher degree of information asymmetry.

Following Aboody and Lev (2000), in this paper we contribute to the body of knowledge by focusing on corporate use of financial derivatives as a potential driver of information asymmetry. Corporate hedging is believed to be a potential source of information asymmetry due to the firm specific nature of the hedging program which is not usually clearly communicated to market participants. First, each firm has a unique exposure profile which is a function of their underlying operating and financing activities, and second different hedging techniques are available to manage different types of risks. Information concerning the amount of timing of exposure are privileged to the firm in most cases. Additionally, information about one firm's hedging program has little informational value to investors in an attempt to evaluate another firm's hedging program. For example, knowledge regarding Coles Myer's usage of IRDs provides little insight into the risk management program of David Jones.[1] On the one hand, David Jones may choose to finance its business differently, hence exposes itself to a different type and degree of interest rate risk. On the other hand, it may choose techniques other than IRDs to hedge interest rate. Consequently, unless firms clearly communicate to market participants the nature and extent of their underlying exposures, the timing and magnitude of their derivative positions, investors are likely to face a certain degree of information asymmetry.

The current accounting requirements governing the reporting of financial derivatives further exacerbate the problems. As of June 2002, in Australia, there was no accounting standard dealing with the recognition of financial instruments including financial derivatives. The reporting of financial derivatives was governed by Australian

1. Coles Myer and David Jones are highly comparable. They are both in the retailing industry, are of similar size and have similar core businesses.

Accounting Standard Board (AASB) 1033 in which companies are required to report derivative activities in the Notes to the financial statement. Nevertheless, reported amounts are aggregated outstanding balance at the reporting date and this provides little information to investors with regard to the ongoing hedging activities of the company during the year. To overcome the limitation of AASB 1033, in 2004 the Australian Accounting Standard Board introduced AASB 139 which is an adaptation of IAS 139. The new accounting standard, effective in 2006, sets out a framework for financial instruments in general and financial derivatives in particular to be recognized and measured. Specifically, IAS 139 specified hedging instruments and guidelines the recognition of gains or losses resulting from these hedging instruments. From a policy making point of view, our research is valuable in providing a justification for further changes in reporting requirements. An understanding of the sources leading to insider gains also assists policy makers in implementing laws to mitigate the social consequences of such gains.

Given the preceding discussion, we hypothesize that the use of financial derivatives contributes to information asymmetry. As such, we expect to find that insiders in user firms can make larger gains than insiders in non-user firms. Consistent with our expectations, we found that for a sample of Australian firms during the 2002 – 2005 period, insiders in firms that make use of financial derivatives make a larger gain by a magnitude of 1.77% in purchase transactions. However, for sales transactions, there is no evidence that insiders in user companies make larger gains. This result suggests that while purchase transactions are motivated by the possession of superior information, sales transactions are not necessarily motivated by information but a means for insiders to

realize their compensations that can be in the form of company stocks. Nevertheless, when companies are partitioned according to their intensity of derivative usage, there is some evidence that insider gains in companies that have above median extents of usage are substantially larger for both buy and sell transactions. Therefore, it appears that financial derivative is a source of information asymmetry in the Australian financial market.

The remainder of the paper is organized as follows. In the next section, a brief review of the literature is provided. Data and methodology will be discussed in Section 3, Section 4 discusses the empirical findings. Finally, Section 5 concludes.

2. Financial Derivatives and Information Asymmetry

The hedging literature suggests that firms use financial derivatives to enhance firm value by reducing the costs associated with expected taxes, financial distress and underinvestment. Nevertheless, it is also argued that managers hedge to reduce the noise associated with fluctuations in exchange rate, interest rate and commodity price that are beyond the manager's control. To that effect, hedging can be used to reduce the asymmetric information relating to managerial ability and firm value. However, the extent to which hedging can reduce asymmetric information depends largely on the reporting regime. Dadalt, Gay and Nam (2002) for example note that under a less than full disclosure regime managers may choose full hedging as the equilibrium strategy while under a requirement of full hedging; this may not be the case.

In the only study that addresses the potential relationship between derivatives and information asymmetry, to the authors' knowledge, Dadalt, Gay and Nam (2002) find that, in a sample of US corporations, banks and other entities during 1992 and 1996,

firms that use foreign currency and interest rate derivatives are associated with a lower level of information asymmetry as proxied by the accuracy of earnings forecast and the extent of disagreement between analysts. They also report that there is less information asymmetry regarding a firm's interest rate exposure than there is regarding its currency risk exposure due to accounting and reporting conventions. This reported relationship between derivatives and information asymmetry is less than certain since their measures of information asymmetry are noisy and proxying for other firm and market characteristics apart from information asymmetry. To overcome this measurement limitation, in this paper, we test for the existence of information asymmetry associated with the use of financial derivatives by the ability of insiders to make larger gains in user firms as opposed to non user firms.

The literature also provides some anecdotal evidence on the relationship between derivatives and information asymmetry. Geczy, Minton and Schrand (1997), for example, show that there is a positive relationship between the use of foreign currency derivatives and the number of analysts following and the percentage of institutional investors suggesting that derivative users are associated with a lower level of information asymmetry. Nevertheless, given the imperfect measures of information asymmetry, the above set of results may suggest that firms that have a higher percentage of institutional investors and be followed by more analysts are under more pressure to use financial derivatives to hedge their short-term exposure more than anything else. In a case study, Brown (2001) also showed that information asymmetry is a factor that motivates the hedging decision at the firm level. More specifically, firms have a demand to smooth its earnings via derivative activities.

3. Data and Methodology

3.1 Data

Data on insiders' transactions utilized in this study is provided by Huntley's for the period between August 2002 and December 2005. An insider is defined as a company's director or manager whose transactions are required to report to the Australian Stock Exchange. Huntley's maintains a database that details all transactions undertaken by insiders as they are reported to the ASX. This database details the amount of securities changed hand, the reason for the transaction, the nature (buy/sell), size and price of the transaction. We focus on open market transactions as well as off market transactions as it is expected that these types of transactions are most likely result from the possession of privileged information. Other types of transactions such as participation in dividend reinvestment plan or bonus share issue are not consider as it is unclear to what extent these transactions are motivated by information asymmetry. In terms of the securities traded, we include in the sample transactions on direct shares and indirect shares. A share is classified as indirect if it is transacted by a person, a company or a trust that has a close affiliation with the company's insiders. Direct shares, on the other hand, are transacted in the name of the insiders themselves.

Data on corporate use of financial derivatives is further hand collected from the Notes to the financial statements in financial statements. A company is classified as either a user or non user. Additionally, an extent of usage is calculated for each company as the notional value of all derivative contracts outstanding scaled by total assets. A company is included in the sample if it has at least one insider transaction in the sample period and derivative data can be obtained for that particular company. As is shown in Table 2, the

final sample comprises of 2695 firm year observations, of which 27.76% are derivative users and the remainder are non derivative users.

Panel A of Table 1 further reports some descriptive statistics relating to our sample. In particular, there are 11980 buy and sell transactions undertaken by insiders and/or their affiliated parties in the sampling period. Notably, the number of buy transactions (8975) far outweighs the number of sell transactions (3005). This finding is in contrast to Aboody and Lev (2000) who report that for their US sample the number of sales transaction are twice as many as buy transactions which they attribute to the pervasiveness of stock options and awards that are included in sales transactions. This discrepancy highlights one of the institutional differences between the US and the Australian corporate markets where US senior managers and directors are more likely to have stocks and options as part of their compensation package than their Australian counterparts. Panel A of Table 1 further shows that the number of buy transactions increases linearly over time while the number of sell transaction tends to fluctuate. Also of interest is the fact that although insiders in non user firms transact more frequently, transactions in user firms are much larger in value reflecting the fact that user firms tend to be much larger than non user companies. It is well documented in the literature that firms experience economies of scale in derivative usage.[2] As such, larger firms are much more likely to make use of financial derivatives. Table 2 provides further information on the pattern of derivative usage for our sample firms. In terms of the underlying exposure, foreign exchange exposure is the source of risk that is hedged most heavily with financial derivatives followed by interest rate exposure and commodity price exposure (Panel B).

[2] See Nance, Smith and Smithson (1993) for US evidence and Nguyen and Faff (2002) for Australian evidence.

On the other hand, swap is the type of contract most heavily used in terms of the mean notional contracting amount followed by futures/forwards and options (Panel C).

Finally, Panel B in Table 1 provides some preliminary results in relation to the insider return for transactions undertaken. Aggregately, purchase transactions result in a 1 month return of 2.29% while the 6 month and 12 month returns are 18.07% and 32.11% respectively. Sales transactions on the other hand have an average 1 month return of 1.41%, 6 monthly return of 10.64% and 12 month return of 18.30%. When the sample is partitioned into derivative users and non users we find that the 1 month return for purchases (sales) for user firms is 2.04% (1.31%). On the other hand, the 1 month return for purchases (sales) for non user firms is 2.39% (1.44%). Further discussions are warranted for two main preliminary findings. First, in contrast to our expectations that sales transactions will result in negative returns, our findings suggest that share price increase subsequent to sale transaction although not by the same extent following purchase transactions. The explanation is two-fold. On the one hand, this result reflects the fact that the sampling period is a bull market where strong positive returns are observed. On the other hand, positive returns following sales transactions suggest that these transactions may not be motivated by the possession of private information, but rather by the need to realize part of the compensation package which is in the forms of stocks or stock related securities. Second, the one month returns show that insiders in non user firms make a larger gain suggesting a higher level of information asymmetry for these firms. Nevertheless, a closer examination of the median value suggests that the mean returns are affected by outliers. In terms of the median values, insiders in derivative

user firms realize a larger return in both buy (1.27% vs. 0.00%) and sell (0.43% vs. 2.84%) transactions

3.2 Methodology

We aim to test the hypothesis that insiders in derivative user firms can make statistically significant and substantially larger gains than insiders in non-derivative user firms. To achieve this objective, we following the Aboody and Lev's (2000) approach and construct 4 initial calendar month portfolios based on insider transactions in a particular month and whether a particular firm is a derivative user or not. The four portfolios are classified as follows:

- $User_P$: comprises of companies that make use of financial derivatives whose insiders are net purchasers of shares in a particular month.[3]
- $User_S$: comprises of companies that make use of financial derivatives whose insiders are net sellers of shares in a particular month
- Non-$User_P$: comprises of companies that do not make use of financial derivatives whose insiders are net purchasers of shares in a particular month.
- Non-$User_S$: comprises of companies that do not make use of financial derivatives whose insiders are net sellers of shares in a particular month

In the next step, we calculate the 28 day return for each of the portfolio. We focus on the 28 day return since this represents the average time between the date of the transaction and the reporting date to the ASX. Presumably, if an insider transaction is motivated by information asymmetry, this is the period of time during which information asymmetry is

[3] Net purchasers are defined as companies whose insiders have more purchase transactions than sale transactions in a particular month. Robustness tests are conducted for portfolios where net purchasers are determined based on the actual numbers of shares bought and sold and the essence of the results remains unchanged.

most evident. Aboody and Lev (2000) show that once the information is reported to the stock exchange and subsequently made public, information asymmetry is substantially reduced. For each calendar month from August 2002 to December 2005 (41 months), a 28 day return is calculated for each of the transaction in each portfolio. If the 28th day falls on a public holiday, the share price of the previous day is used. The portfolio return is then the average return of all the transactions where all companies and all transactions receive an equal weighting. This process results in 4 portfolios described above. Each portfolio subsequently has 41 monthly returns (calculated over the 28 day period). The same procedure is followed to calculate the 6 month and 12 month return for each portfolio.

To formally test for the difference between insider gains in derivative user firm and non user firm, we further employ the Fama and French's 3 factor model as suggested by Aboody and Lev (2000). In particular, the following regression is run:

$$User_{Pt} - NonUser_{Pt} = \alpha_P + \beta_P (R_m - R_f) + \delta_P SMB_t + \sigma_P HML_t + \omega_P \qquad [1]$$

where:

$User_{Pt} - NonUser_{Pt}$ is the 28 day return from going long on a portfolio of firms that use financial derivatives and short on a portfolio of firms that do not use financial derivatives in months where insiders were net purchasers of shares.

$R_m - R_f$ is the market premium in month t

SMB_t is the difference between month t return on a value weighted portfolio of small stocks and one of large stocks

HML_t is the difference between month t return on a value weighted portfolio of high book to market stocks and one of low book to market stocks[4]

[4] The construction of SMB and HML variables are described in Fama and French (1993). We would like to thank Phil Gharghori for providing us with these data

The coefficient of interest here is alpha. A positive and statistically significant alpha suggests that insiders in derivative user firms can make a substantially larger gain compared to insiders in non derivative firms after taking into account the market premium, SMB and HML factors.

Similarly a regression is run for portfolio of insider sales as follows:

$$User_{St} - NonUser_{St} = \alpha_S + \beta_S (R_m - R_f) + \delta_S SMB_t + \sigma_S HML_t + \omega_S \qquad [2]$$

4. Empirical Results

Our regression results are presented in Table 3. Specifically, in Panel A, the mean and median returns of each of the portfolio are reported. Consistent with the literature on insider trading, purchase transactions in both user firms and non user firms return positive results. In particular, the insider gain for derivative users is 2.72% over the 28 days period while for non-derivative users return an insider gain of 2.76%. A comparison between the mean value and the median value further suggest that the mean return for insiders in non derivative user firms may be affected by extreme values as the median return suggest that insider gain for derivative users are substantially larger than for non derivative users. With regard to sales transactions, both purchase and sale portfolios yield a positive return which is in contrast with the insider trading literature. As mentioned in the earlier section, this finding might be attributable to a bull market that Australia experience in the sampling period. Additionally, sales transactions may be motivated by factors other than information asymmetry. Despite the positive returns, it can be seen that insiders in derivative user firms fare better than their counterparts in non user firms.

Panel B of Table 3 presents the result of the intercept test as proposed by Fama and French (1993). As explained above, the estimated intercept indicates the difference in

return between firms with financial derivatives and firms without having controlled for the three systematic factors being the market premium, SMB and HML. As is evident from Panel B of Table 3, insiders in derivative user firms make a substantially larger gain in purchase transaction as opposed to insiders in non user firms. At 0.0177, the intercept is not only statistically significant but also of economic significance. Nevertheless, no such finding is evident for sale transactions. There is no evidence that the gains made by insiders in derivative user firms are statistically different from that of non user firms. The results relating to sale transactions are consistent throughout the investigation and suggest that sale transactions do not contain as much information content as purchase transactions.

As a robustness check we partition the sample into transactions in direct shares and those in indirect shares. As explained above, direct shares are those securities transacted in the names of the insiders while indirect shares are those securities transacted in the names of affiliated parties of the insiders. It is expected that both types of transaction have a certain degree of informational content. For example, when a director is in possession of some private information that can potentially provide an abnormal return, she can act on the information directly or via an associated trust. Accordingly, we apply the Fama French 3 factor's model to separate samples of portfolios comprising of direct shares and indirect shares. The results of these regressions are presented in Table 4. Interestingly, it is found that although insider gains in derivative user firms are statistically indistinguishable from insider gains in non user firms as far as direct securities are concerned (Panel A), insider gains for derivative user firms are substantially larger in indirect shares (Panel B). This result suggests that insiders in

generally are hesitant to act on some privileged information on their own account but prefer to do it via an associated party. This finding has further implication for policy makers as regulations on insider trading should also be extended to cover transactions undertaken by parties that have a relationship with the insider, not just by the insiders themselves. Results relating to sale transactions continue to yield no statistically significant results.

To further understand the role of financial derivatives in creating information asymmetry, further regressions are run for portfolios constructed based on the intensity of usage rather than on the incidence of usage. Specifically, 6 portfolios are constructed based on their buy/sell position and the extent to which the firm uses financial derivatives. A high derivative user is defined as a company with an extent of usage greater than the median value while a low derivative user is a company with an extent of usage less than the median value. Finally, non derivative users are classified as no users. 28 day returns for these portfolios are calculated using the procedure described in Section 3. The results of these regressions are reported in Table 5. Overall, it can be seen that the higher the degree of derivative usage, the more severe the degree of information asymmetry as the difference in returns for purchase transactions mostly stem from High Usage companies. In particular, insiders in companies that are heavily employer of derivative instruments can obtain a 28 day return which is 1.72% higher compared to insider gains in a non user company. This result lends support to the conclusion that the higher the extent of derivative usage, the higher the degree of information asymmetry. The results in relation to sell transactions are somewhat perplexing. There is some evidence that high usage firms face a higher degree of information asymmetry than low

usage firms. Nevertheless, low usage firms appear to have a lower degree of information asymmetry than firms that do not use derivatives. This conflicting relationship is perhaps responsible for the lack of significant result for sale transactions when the incidence of derivative usage is considered (Table 3).

5. Conclusion

In this paper we contribute to the body of knowledge by addressing a novel issue of whether the use of financial derivative is a source of private information leading to information asymmetry. Using a methodology that is believed to provide a more precise measure of information asymmetry than previously used measures we find that insider gains in companies that make use of financial derivatives are substantially larger than insider gains in companies that do not use financial derivatives particularly in purchase transactions. This result is indicative of the fact that the use of financial derivative is a contributor to information asymmetry. We also document that the degree of information asymmetry is a function of the extent of derivative usage. The more heavily derivatives are used in a company, the higher the degree of information asymmetry. We also provide evidence that transactions in indirect shares convey more information asymmetry than transactions in direct shares.

Our results provide important implication for policy makers as well as future research. First, our results support the notion that derivative usage causes information asymmetry and as such further derivative reporting requirements are warranted. Second, the conflicting results that we obtain as opposed to previous US findings suggest that there are significant institutional differences between the US and Australian financial

markets. It is also possible that previous measures of information asymmetry are noisy and better measures can be developed in the future.

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Table 1
Descriptive Statistics for Insider Transaction August 2002 to December 2005

Panel A: Transaction Data

	2002		2003		2004		2005		2002 - 2005		
	User	Non-User	User	Non-User	User	Non-User	User	Non-User	User	Non-User	Total
Number of transactions											
Purchases	275	228	622	1678	811	2128	896	2337	2604	6371	8975
Sales	89	89	313	720	282	748	195	566	879	2126	3005
Total	363	318	934	2397	1092	2877	1090	2904	3482	8498	11980
Number of shares (in mil)											
Purchases	284.82	162.92	340.49	860.54	433.62	1129.14	138.97	1088.60	1181.35	3249.06	4430.41
Sales	34.97	33.42	261.87	966.74	499.58	1566.42	185.54	830.14	981.75	3405.91	4387.66
Total	319.79	196.34	602.36	1827.28	933.20	2695.56	324.51	1918.74	2163.10	6654.97	8818.08
Value of transactions (in mil)											
Purchases	384.33	24.84	130.26	158.67	348.63	222.69	224.92	554.00	1088.14	960.20	2048.34
Sales	125.80	22.78	323.49	353.86	894.24	717.37	470.46	442.24	1813.99	1536.26	3350.25
Total	510.13	47.63	453.75	512.53	1242.87	940.06	695.38	996.24	2902.13	2496.46	5398.59

Panel B: Return Data

	Derivative Users				Non-derivative Users				All firms			
	Purchases		Sales		Purchases		Sales		Purchases		Sales	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
1 month return	0.0204	0.0127	0.0131	0.0043	0.0239	0.0000	0.0144	0.0284	0.0229	0.0019	0.0141	0.0000
6 month return	0.1514	0.1239	0.1164	0.0806	0.1925	0.0694	0.1025	0.1025	0.1807	0.0881	0.1064	0.0326
12 month return	0.2493	0.2083	0.2118	0.1531	0.3513	0.1328	0.1713	0.0768	0.3211	0.1667	0.1830	0.1148

Table 2
Derivative Usage of Sample Firms

Panel A: Derivative Users vs. Non Users			
	n	User (%)	Non User (%)
2002	234	55.56	44.44
2003	724	25.28	74.72
2004	834	26.26	73.74
2005	903	23.92	76.08
Total	2695	27.76	72.24

Panel B: Derivative Usage by Underlying Exposure			
	Mean	Median	SD
FCD	758,811.43	132,000.00	2574977.48
IRD	617,166.27	69,600.00	1,860,360.42
CD	279,750.81	60,000.00	809,917.54
Total	914,031.75	120,420.07	3,176,304.98

Panel C: Derivative Usage by Type of Instruments			
	Mean	Median	SD
Swaps	986,092	158,541.50	3,066,846.07
Futures/Forwards	354,860	36,073.37	1,001,686.62
Options	370,169	71,760.00	1,201,594.00
Total	914,031.75	120,420.07	3,176,304.98

Table 3
Insider Returns for Derivative Users and Non Users

Panel A presents mean and median returns earned on portfolios formed as follows: For each month between Aug 02 and Dec 05 we calculate for each sample firm the mean 28 day return of all insider transactions in a particular month. Mean returns are calculated separately for 4 portfolios formed based on whether a firm uses financial derivatives or not and on whether a firm is a net purchaser or net seller of shares in a particular month. In Panel B, the intercept of the Fama French's 3 factor model in Equations [1] and [2] is presented.

Panel A: Univariate Returns

	Insider Purchases		Insider Sales	
	Mean	Median	Mean	Median
Derivative Users	2.72%	3.03%	1.22%	0.75%
Non Derivative Users	2.76%	2.45%	1.25%	1.04%
Users - Non Users	-0.04%	0.57%	-0.02%	-0.28%

Panel B: Fama French's 3 factor model

	Alpha	RMt - Rft	SMB	HML
Insider Purchases				
Users - Non Users	0.0177	-0.0455	-0.5008	-0.2998
t-stat	(2.55)	(-0.20)	(-4.69)	(-1.65)
R-squared	0.3782			
Insider Sales				
Users - Non Users	0.0079	-0.295	-0.1369	-0.3375
t-stat	(0.75)	(-0.85)	(-0.84)	(-1.21)
R-squared	0.0542			

Table 4
Direct Shares vs. Indirect Shares: Fama French 3 factor model

Panel A: Direct Shares				
	Alpha	RMt - Rft	SMB	HML
Insider Purchases				
Users - Non Users	0.0128	-0.362	-0.7202	-0.5416
t-stat	1.2247	-1.0625	-4.4759	-1.9763
R-squared	0.3769			
Insider Sales				
Users - Non Users	-0.0182	-0.3543	-0.0946	-0.2266
t-stat	-1.5926	-0.9493	0.1763	0.3002
R-squared	0.0366			
Panel B: Indirect Shares				
	Alpha	RMt - Rft	SMB	HML
Insider Purchases				
Users - Non Users	0.0145	-0.0116	-0.4631	-0.2575
t-stat	2.0399	-0.0502	-4.2394	-1.3844
R-squared	0.3304			
Insider Sales				
Users - Non Users	-0.1082	0.3591	0.1645	0.4063
t-stat	-0.6119	0.6225	0.6038	0.8758
R-squared	0.0293			

Table 5
Insider Gains: Intensity of Derivative Usage

Panel A: Buy Transactions		
	Coeff	t-value
Low Usage - No Usage	0.0081	1.0275
High Usage - No Usage	0.0172	1.9328
High Usage - Low Usage	0.0091	0.8866
Panel B: Sell Transactions		
	Coeff	t-value
Low Usage - No Usage	0.0222	2.5297
High Usage - No Usage	-0.0027	-0.2047
High Usage - Low Usage	-0.0249	-2.7476