

Do insiders get abnormal returns?: Event studies on the trades of insiders of the firms with differentiated corporate governance of the São Paulo Stock Exchange

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Key words

Insider trading, Brazil, Corporate Governance

November 2006

Abstract: The subject insider trading is controversial. This paper presents series of event studies carried through on the trades with stocks of the firm carried by insiders with the objective to detect abnormal returns, based on the access to privileged information. The sample is composed by trades performed by insiders of the companies with stocks negotiated in the São Paulo Stock Exchange, that are classified as firms with differentiated corporate governance. Indication that trades performed by insiders resulted in abnormal returns compared to the statistically significant expected ones, as in the purchases of common shares; or for selling of preferred stocks.

1. Introduction

The use of privileged information for stock trading is subject of great interest by academics and practitioners, mainly in result of frauds and scandals that question the models of corporate governance and incentives as in the case firms like Enron in 2001 (Palepu and Healy, 2003), and of the TV presenter Martha Stewart that was taken the arrest due her stock trades of the firm ImClone in 2001, by means of information received directly from the CEO of the firm Samuel Waksal (Heminway, 2004). With the development of the Brazilian capital market, the inquiries on the use of privileged information also grew as in the case of the Ambev under inquiry of the CVM – the Brazilian Securities Exchange Commission – (Proença, 2005) regarding the trades carried through by the control block shareholders and executive direction of the firm, before the merger of the firm with the Belgian brewery Interbrew in 2004. Many definitions exist of insider, here we will consider insider in relation to the certain firm all the person who have access relative the privileged information to the businesses and situation of the firm. It is understood as privileged information those that can influence in way in the prices of the securities of the firm, affecting the decision of the investors to sell, buy or to keep these securities. Thus being, insider trading is all trades carried through by insider with securities of the firm to achieve a personal advantage. The practice of insider trading is not illicit. In this paper we presented a set of event studies carried through on the trades with stocks of the firm performed by these agents (insiders) with the objective to detect excess returns (abnormal) to the expected ones, due to access to privileged information. The definition of insider in this paper will be the same used by instruction 358 from 2002 of the CVM, that it will be presented later. The work is structured on the following way: section 2 shows the related literature with the subject of insider trading, section 3 presents the Brazilian law on the subject, section 4 describes the sample, section 5 presents the methodology of event studies, section 6 shows the results, section 7 has conclusions and final comments, section 8 lists the references.

2. Related Literature

Beny (2004) argues that there is two main categories of theories that approach the use of privileged information (to insider trading):

- Theories of Agency, as of Jensen and Meckling (1976), that analyze the effect of insider trading in the conflict of interests between shareholders and executive direction, if this type of operation improves or worsening this conflict, and as the efficiency of the firm is affected. Following this line of thinking Manne (1966) argues that insider trading could improve the entrepreneurship and innovation.

• Theories of Market, as of Bhattacharya and Daouk (2002), evaluate the implications of the insider trading in the efficiency and integrity of the market as a whole, and its consequences in the prices and liquidity of the securities. In the same work, Beny (2004) examines empirically the related laws and punishments of insider trading in a sample of 36 countries, amongst them Brazil, and concludes that countries with more severe laws on insider trading possess a bigger dispersion of the stock ownership, the markets has more liquid stocks, and the stock prices are more informative, thus confirming the theories of agency and market. Some authors, as Georgakopoulos (1993), acts as a lawyer that the prohibition of insider trading reduces the operation costs, while others, as Haddock and Macey (1986) argue that if the trades of insiders harmed the liquidity, the firms would forbid such practice. Fishman and Hagerty (1992) demonstrate that insider trading cause a small number of investors informed in the market, and a different distribution of the information in the market. Coast (2002) analyzes the model of regulation of the trades with privileged information in the Brazilian market, through the analysis of the impact law 7.913 from 1989 on the returns of the trades registered in the CVM in the period of 1989 the 1991. The paper, that was carried through before instruction 358/02 of the CVM, concluded that the corporative investors had not gotten statistically significant excess returns based on the monopoly of the privileged information. Mellone (2003) develops a model on the interaction between insiders and outsiders regarding the determination of the structure of control of a firm, and the spreading of information on investment projects. Medeiros and Matsumoto (2004) had performed an event study to examine the related to stock returns of IPOs for firms listed in the São Paulo Stock Exchange, in the period from 1992 to 2003. The authors had inferred that there is presence of investors with privileged information.

3. Brazilian Law

The information of relevant facts of the firm and the use of privileged information appeared in laws 6.404 and 6.385 from 1976 in the Brazilian market. With the new law 10.303 of the capital markets from 2001, the use of privileged information passed to be considered crime with the following punishment: "... reclusion, of 1 (one) the 5 (five) years, and fine of up to 3 (three) times the sum of the illicit advantage in result of the crime." Concern with transparency in trades and fairness of rights made CVM to issue the instruction 358 in 2002, that forces the communication of the trades made by the management of the firm that possess or have access to the privileged information, as described in article 11 to follow:

"Art.11, ... directors, the members of the board, the audit committee and any advisors are obliged to communicate to the CVM, the firm and, it will be the case, to the stock exchange and the over-the-counter market the trades, the amount, the characteristics of the purchase or selling of securities ... the communication will have to contain, at the very least, the following information: I - name and qualification of the trader; II - amount and stock class; III - price and date of the trade ... The directors, the members of the board, the audit committee, advisors, and their family members will have to communicate this information."

It must be noticed that instruction 358 of the CVM enforces that family of the management and the board also are obliged to disclose the trades performed with securities of the firm, thus contributing for the increase of the transparency of the firm, and improvement of its corporate governance. The regulating agencies of the Brazilian stock market try to restrain and to punish the use of privileged information by insiders.

4. Sample

The initial sample is composed by firms with stocks negotiated in the São Paulo Stock Exchange, and that they are classified as of differentiated corporate governance according to levels 1, 2, and the new market. The regulation and detailing of the characteristics and requirements of these levels of corporate governance of the São Paulo Stock Exchange can be found in the internet site of the São Paulo Stock Exchange (<http://www.bovespa.com.br>). The period of analysis starts in 2002 (with the release of instruction 358) until December of 2004. The data on the trades with securities carried through by the members of the board, committees, executives, control block shareholders, and family of all these agents were raised from the monthly forms of trades, as prescribed by article 11 of instruction CVM 358 from 2002. The companies that composed the initial sample, classified according to level of differentiated corporate governance of the São Paulo Stock Exchange, are:

- Level 1: Aracruz, Bradesco, Banco Itaú, Bradespar, Brasil Telecom Participações, Brasil Telecom, Braskem, Pão de Açúcar (CBD), Cemig, Cedro Cachoeira, Hering, Cia. Transmissão Energia Elétrica Paulista, Vale do Rio Doce, Confab, Gerdaul, Itausa, Klabin, Mangels, Metalúrgica Gerdaul, Perdigão, Randon, Ripasa, Rossi Residencial, Vigor, Sadia, Alpargatas, Suzano Bahia Sul, Unibanco Holding, Unibanco, Votorantim Celulose e Papel (VCP), Weg;
- Level 2: All Logística, Celesc, Gol, Marcopolo, Net, Eletropaulo, Eternit, Suzano Petroquímica;
- New Market: CCR Rodovias, Sabesp, Natura, CPFL Energia, Dasa, Grendene, Porto Seguro, Submarino, Renar Maçãs

After surveying the reports of trades of the securities the following companies had been removed from the sample because the insiders have not performed trades in the period of analysis, or because have opened its capital in 2005:

- Braskem, Eternit, Submarino, Renar Maçãs e Vigor.

Sectorially the companies in the sample are distributed almost uniformly, with concentration in the sectors of services, metallurgist, and automotive in the following way:

Sector	# of Firms
Food and commerce	3
Banking	3
Textile and shoes	4
Energy	5
Holdings	4
Transporta and logistics	2
Metallurgist, automotive	9
Pulp and paper	5
Chemical and Petroleum	2
Services	7
Total	44

Table 1. Number of companies in the sample by sector

The data base raised for this work has the following data: level of differentiated corporate governance of the firm, name of the firm, insider code, name of the insider, qualification of insider, traded security, type of trade, date of the trade, number of securities, unit price, financial volume, and business sector.

5. Event Studies

The technique of event study has the hypothesis that one determined fact, or event, affects the value of the firm, and that this change in the value is reflected through an abnormal return in the stocks of the firm. In this way, the concept of abnormal return is one of most important in the study of the event. Considering that at each moment the stock price of the firm and the market are influenced by a great variety of factors, we need to choose an appropriated benchmark to control the effect of the facts not related to the event in study. We can define the empirical model of the returns of the stock of the firm, for periods where the event did not occur by the following form:

$$R_{it} = B_t \cdot \beta_i + \varepsilon_t$$

where

R_{it} = return of stock i on date t;

B_t = vector of independent variables, for instance the return of the market portfolio on date t;

β_i = vector of parameters, for instance, beta of stock i;

ε_t = random error with zero mean.

For periods where the event did occur the empirical model of the returns of the stock of the firm is represented by the following way:

$$R_{it} = B_t \cdot \beta_i + FG + \varepsilon_t$$

where

F = vector of firm characteristics;

G = vector of parameters measuring the influence of F in the occurrence of the event.

To capture the change of the empirical models of returns, we use the procedure developed by Campbell, Lo and MacKinlay (1997), that describe the main steps of the process of the study of the impact of the event in the returns of the stock of the firm as: definition of the event, selection of the sample, measurement of the return, empirical test procedure, interpretation of the results and conclusions. In this work we define as event the date of trades of purchase or selling of common or preferred shares of the firm, by insiders of the organization. The period of the sample starts in 2002 until the end of 2004. Inside of the period of the sample and considering the companies with differentiated corporate governance according to the São Paulo Stock Exchange, we find 44 companies in the Brazilian market who are affected by the definition of the event. However, we limit the study to those companies with insiders that have performed the biggest number of trades, and their stocks have liquidity in the period of the sample. Thus the final sample of this work is formed by the 10 following companies, negotiated in the São Paulo Stock Exchange, and its respective common share (ON) or preferred share (PN): Gerdau (ON and PN), Itau Bank Holding (ON and PN), Bradesco Bank (ON and PN), Metalurgica Gerdau (ON and PN), Itaúsa (ON and PN), Healthy (ON and PN), Ccr Highways (ON), Randon (ON and PN), Ripasa (ON), Weg (ON and PN). These 10 firms in the period of the sample had been totalized 5,683 insider trades, which correspond to 81.5% of the total of trades carried through by insiders of the 44 companies with differentiated corporate governance of the São Paulo Stock Exchange. The source of data of

rights distribution and revenues of the firms, facts, mergers, etc.; quotations of closing prices of the common and preferred shares, as well as of the stock indexes Ibovespa and IBrX-100 were the Economatica system. The events of purchases and selling of the stocks by insiders have been extracted on the monthly reports in internet site of the CVM - <http://www.cvm.gov.br>. In an event study we need to define a period of time, where the data is used to estimate parameters to the chosen models, which we call estimation window. Beyond this, we define a period for test around the event, that we call event window. We adopt an estimation window of 70 daily observations of stock returns. To the event window we adopted a window with 10 previous daily observations, and 60 subsequent daily observations from the event date as illustrated in the figure below:

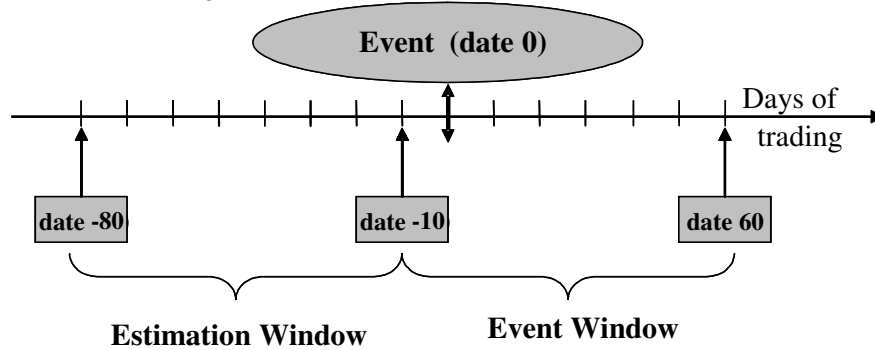


Figure 1. Estimation and event windows.

It is desired to test the significance of the abnormal returns in a window around the date of the event, or to test the null hypothesis that the expected value of the cumulative abnormal returns in the window of the event is equal the zero. First we estimate the abnormal, ex-post returns, that can be obtained through the difference between the observed stock returns of the firm in the window of the event, and the expected stock returns of the firm supplied by a reference model. The models of estimation of the abnormal returns can be divided in two categories: statistical models, that do not depend on economic theories; and economic models. Brown and Warner (1980, 1985) cite the main statistical models of estimation of abnormal returns: models adjusted to the average; models adjusted to the market; e models adjusted to the risk and market. Kloeckner (1995) shows that the three statistical models present similar results in the estimation of the abnormal returns. Campbell, Lo and MacKinlay (1997) present the main financial economic models, that are based on models like the CAPM (Capital Asset Pricing Model) or APT (Arbitrage Pricing Theory). In this work we will estimate the abnormal returns using the model adjusted to the market, and the model adjusted to the risk and the market, that we will call model adjusted to the risk. The Brazilian stock market in this study will be represented by two market indexes: (a) Index of the São Paulo Stock Exchange (Ibovespa); and (b) Index Brazil (IBrX-100), calculated by the São Paulo Stock Exchange, and composed by the 100 most liquid stocks of the market. In the model of returns adjusted to the market, the abnormal returns are estimated by the difference between the stock return and the market return in the same period. Thus, the abnormal stock return of firm "i" in a date "t" is given by:

$$AR_{it} = R_{it} - R_{mt}$$

where

AR_{it} = abnormal stock return of firm i on date t;

R_{it} = stock return of firm i on date t;

R_{mt} = market return on date t.

The daily log-returns are obtained through the daily stock closing prices, and calculated as shown below:

$$R_{it} = \ln(P_{it}) - \ln(P_{it-1})$$

where

R_{it} = stock return of firm i on date t;;

P_{it} = stock closing price of firm i on date t.

The model of returns adjusted to the risk and the market has the assumption that the abnormal returns of the stocks are observed by the difference between the observed individual stock returns, and the returns estimated through a simple factor model. This model is estimated using the data in the estimation window, and a linear regression (ordinary least squares). The abnormal returns are given by:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$$

where

AR_{it} = abnormal stock return of firm i on date t;

R_{it} = stock return of firm i on date t;

α_i = linear coefficient of the OLS regression;

β_i = angular coefficient of the OLS regression;

R_{mt} = market return on date t.

The excess returns, or abnormal returns, then are cumulative in the event window, in the cumulative average abnormal return (CAR) in the following way:

$$CAR_{t_1 \text{ a } t_2} = \frac{\sum_{t=t_1}^{t_2} \left(\frac{\sum_{i=1}^N AR_{it}}{N} \right)}{t_2 - t_1 + 1}$$

where

AR_{it} = abnormal stock return of firm i on date t;

N = number of stocks in the sample;

t_1 = initial window date;

t_2 = final window date.

To test the average abnormal return we use the following statistics:

$$\text{Test} = \frac{\sum_{i=1}^N \frac{AR_{it}}{N}}{\sqrt{\frac{1}{N_t} \sum_{i=1}^{N_t} \hat{\sigma}_i^2}} = \frac{AR_t}{\sqrt{\frac{1}{N_t} \sum_{i=1}^{N_t} \hat{\sigma}_i^2}}$$

where

AR_{it} = abnormal stock return of firm i on date t;

AR_t = average abnormal stock return on date t;

N = number of stocks in the sample;

N_t = number of events for each date t in the event period;

$\hat{\sigma}_i^2$ = estimated variance of the residuals of each firm inside the estimation period.

To test the cumulative abnormal the return we use the following statistics:

$$\text{Test} = \frac{CAR_{t_1 \text{ a } t_2}}{\sqrt{\frac{1}{N_t^2} \sum_{i=1}^{N_t} \tilde{\sigma}_i^2}}$$

where

CAR = average cumulative abnormal return;

AR_t = average abnormal stock return on date t;

N = number of stocks in the sample;

N_t = number of events for each date t in the event period;

$\tilde{\sigma}_i^2$ = estimated variance of the residuals of each firm inside the period from t_1 to t_2 .

The tests are performed with the sample of 10 companies and the trades of insiders in the years of 2002, 2003, and 2004, and the following trades and conditions are tested according to the table below using the Ibovespa (analysis 1a, 2a, 3a, etc.) and the IBrX-100 (analysis 1b, 2b, 3b, etc.):

Analysis	Buy ON	Sell ON	Buy PN	Sell PN	More than one trade a day	Directors, board members, and Advisors	Controllers, Family, and Investment Clubs	Dates that do not match with rights distribution	Dates that do not match with events in the firm	Exclusion of trades with a period of at least 66 days between each other
1	X	X	X	X						
2	X	X								
3			X	X						
4	X									
5		X								
6			X							
7				X						
8	X				X					
9		X			X					
10			X		X					
11				X	X					
12	X					X				
13		X				X				
14			X			X				
15				X		X				
16	X						X			
17		X					X			
18			X				X			
19				X			X			
20	X							X		
21		X						X		
22			X					X		
23				X				X		
24	X								X	
25		X							X	
26			X						X	
27				X					X	
28	X							X	X	
29		X						X	X	
30			X					X	X	
31				X				X	X	
32	X							X	X	X
33		X						X	X	X
34			X					X	X	X
35				X				X	X	X

Table 2. Event studies and analysis performed.

Through these tests we try to identify if the event of purchase or selling of stocks by insiders generate excess or abnormal return in the companies of the sample. The analysis 20 to 31 exclude from the sample revenues and rights distribution on the stocks of the firm, or the announcement of relevant facts, shareholders' meetings, mergers and acquisitions, partnerships, change of management that can affect the results of the event studies of trades of insiders. The analyses 32 to 35 exclude from the sample revenues and rights distribution on the stocks of the firm, the announcement of relevant facts, and also the trades that did not have 66 days (approximately 3 months) of distance between each other. This exclusion is necessary to isolate the studied event, and to reduce the impact of events that can confuse ones with the others, as noted by Foster (1980).

6. Results

The analysis made with the Ibovespa as market index had not generated different results from the one performed with the IBrX-100, therefore in some cases, as in Table 3, we will only show to the results of the analysis considering the IBrX-100 as market index. The results proceeding from the abnormal returns of the model adjusted to the risk had revealed more robust than the ones from the model adjusted to the market, therefore we focused the results based on the model adjusted to the risk. Also we show in the following tables and graphs the tests that had a p-value lower than 25%. The table below summarizes the results from the tests:

Analyses	Buy ON	Sell ON	Buy PN	Sell PN	More than one trade a day	Directors, board members, and Advisors	Controllers, Family, and Investment Clubs	Dates that do not match with rights distribution	Dates that do not match with events in the firm	Exclusion of trades with a period of at least 66 days between each other	Results	
											Abnormal returns found in the dates (% significance)	Cumulative abnormal return
1	X	X	X	X							-2 (10%), -1 (5%)	insignificant
2	X	X									+1 (15%), +6 (15%)	period 0 to +1 (15%)
3			X	X							-1 (5%)	insignificant
4	X										+1 (15%)	period 0 to +1 (15%)
5		X									+2 (5%), +6 (10%)	insignificant
6			X								insignificant	insignificant
7				X							-2, -1 (1%), 0 (5%)	period -10 to -1 (15%)
8	X				X						0 (20%), +1 (10%)	period 0 to +1 (5%)
9		X			X						+1 (5%), +2, +6 (10%)	insignificant
10			X		X						+7 (15%)	insignificant
11				X	X						-2, -1 (1%), 0 (5%)	insignificant
12	X					X					insignificant	insignificant
13		X				X					+2, +1 (15%), +6 (1%)	insignificant
14			X			X					insignificant	insignificant
15				X		X					-2, -1, 0 (1%)	period -10 to -1 (15%)
16	X						X				+1 (20%), +2 (10%)	period -10 to -1 (25%)
17		X					X				+2 (10%)	insignificant
18			X				X				insignificant	insignificant
19				X			X				-1 (5%)	insignificant
20	X							X			insignificant	insignificant
21		X						X			+2 (5%)	insignificant
22			X					X			insignificant	insignificant
23				X				X			-2, -1 (1%), 0 (5%)	insignificant
24	X								X		+1 (15%)	period 0 to +1 (15%)
25		X							X		+2 (5%)	insignificant
26			X						X		insignificant	insignificant
27				X					X		-2, -1 (1%), 0 (5%)	period -10 to -1 (20%)
28	X							X	X		-2 (20%), +9 (10%)	period 0 to +1 (25%)
29		X						X	X		+2 (5%)	insignificant
30			X					X	X		insignificant	insignificant
31				X				X	X		-2, -1 (1%), 0 (5%)	insignificant
32	X							X	X	X	-2 (20%)	insignificant
33		X						X	X	X	+2 (5%), +3 (10%)	insignificant
34			X					X	X	X	0 (25%)	insignificant
35				X				X	X	X	-3(15%), +2(15%)	insignificant

Table 3. Summary of the event studies results.

We notice in Table 3, that the trades of purchase of common shares performed by insiders had an average abnormal return significant in the date of the event and in the following day to the event of purchasing the stock, as evidenced in analysis 4, 8, 24 and 28. In these analyses, the average cumulative abnormal return between date 0 and +1 is due to a large extent to the average abnormal return in date +1 that it is statistically significant. This average cumulative abnormal return may have been caused by the increase of the liquidity provided to the common shares by the purchasing trades, or the coincidence of the purchases with revenues or rights distribution to the shareholders, therefore when we exclude the trades whose dates coincide with the revenues or rights distribution the average cumulative abnormal return becomes insignificant, as evidenced by analysis number 20. In the purchases of common shares by Controllers, Family, and Investments Clubs (form of stock trading chosen for some control block stockholder) we have abnormal return average significant in the 10 previous days of the trades (analysis 16), and significant average abnormal return in the 2 following days of the purchases, indicating that in the first moment these insiders had purchased the stock based of a good past performance. The significance of the purchases of common shares for the Controllers, Family, and Investments Clubs indicate an optimism of the part of who control the firm, or the possibility of the use of privileged information, due to the significant average abnormal return in the 2 following days the purchase. In this analysis the preference for purchases of common shares for the Controllers, Family, and Investments Clubs may be related to the possibility of increasing their share in the control of the firm by performing cheaper trades. We notice in Table 3, that the selling trades of preferred stocks carried through by insiders have an abnormal return average significant in the 10 previous days of the date of the event, as evidenced in the analyses 7, 15 and 27. In these analyses, the average cumulative abnormal return between dates -10 and -1 is due to the average abnormal return in dates -2 and -1 that are significant. This average cumulative abnormal return can have been caused by a great valuation of the stocks, or the coincidence of selling trades with the revenues and rights distribution to the shareholders, therefore when we exclude the trades whose dates coincide with the distribution the average abnormal return cumulative is not significant anymore, as evidenced by analysis 23, on the other hand a significant average abnormal return persists in the date of the selling event. In the selling of preferred stocks by the Directors, members of the board, and Advisors we had an average abnormal return significant in the 10 previous days of the trades (analysis 15), and a significant average abnormal return in the 2 previous days and in the date of selling, indicating that these insiders have sold their stock because the prices were high, or they knew some privileged information or some revenues or rights distribution that would affect stock price. This can be evidenced by the significant average abnormal return in days -2, -1 and 0 in relation to the selling

date, as we can see in analyses 23, 27 and 31. The selling trades of preferred stocks by Directors, members of the board, and Advisors have its preference due the biggest liquidity of this type of stock in Brazil, and the fact that they do not possess right to the vote and thus not to affect the control of the firm that these insiders possess. The trades of purchase of preferred stocks and selling of common shares have not presented any significant average abnormal return. However, some of these trades had presented significant average abnormal return in the next day of the event. As we see in Table 4 and Table 5, around the dates of revenues or rights distribution, and announcement of relevant facts on the firm there is a big amount of stock trades. Particularly in the dates of revenues or rights distribution the average of purchasing trades is bigger than the average of the other dates. The big amount of trades around the dates of revenues or rights distribution, and announcement of relevant facts of the firm, can contaminate the event studies as analyzed by Foster (1980). Thus being, to isolate the events related to the trades from other events of the firm, and the interference of trades among themselves, the analyses from number 32 to 35 had been carried through only with trades that had at least 66 days between themselves. These analyses have not presented significant average abnormal return for the trades with common and preferred shares, indicating that the previous results may have suffered influences from news or distributions of the firm, as well as other trades performed by the insiders.

Date related to the rights and revenues distribution	Daily average of purchase trades of stock	Daily average of selling trades of stock
-22	5,56	3,50
-21	4,11	2,22
-20	4,67	2,06
-19	3,06	0,72
-18	4,61	1,44
-17	3,89	3,94
-16	3,61	2,72
-15	1,89	1,78
-14	4,61	1,50
-13	4,44	1,50
-12	4,72	3,33
-11	2,94	2,17
-10	1,56	4,06
-9	2,56	4,11
-8	2,78	0,94
-7	3,33	2,56
-6	3,39	2,44
-5	2,72	3,50
-4	2,78	1,28
-3	5,17	1,22
-2	3,56	0,44
-1	2,44	0,56
0	3,94	1,33
1	8,61	1,44
2	5,39	3,61
3	4,44	4,89
4	3,28	2,56
5	2,39	5,00
6	3,78	1,22
7	5,33	1,56
8	4,28	5,11
9	3,94	5,67
10	3,33	7,22
11	2,06	4,83
12	2,00	2,22
13	2,50	5,50
14	2,56	3,22
15	3,67	2,50
16	3,94	2,28
17	3,50	2,56
18	2,72	3,33
19	3,00	1,33
20	5,56	0,67
21	4,94	2,28
22	6,22	2,78
Average	3,77	2,69
Standard Deviation	1,33	1,56
Highest daily average	8,61	7,22

Table 4. Average stock trading around the revenues or rights distribution

Date related to the announcement of relevant facts	Daily average of purchase trades of stock	Daily average of selling trades of stock
-22	2,00	2,72
-21	4,56	3,17
-20	4,83	2,44
-19	4,17	5,00
-18	5,78	4,50
-17	5,39	5,22
-16	7,00	8,06
-15	6,89	3,00
-14	5,17	2,11
-13	3,50	2,89
-12	6,67	3,17
-11	3,72	1,22
-10	4,94	1,11
-9	5,67	0,72
-8	6,50	1,39
-7	9,72	2,89
-6	5,50	0,94
-5	3,67	0,94
-4	4,28	3,89
-3	3,11	2,28
-2	3,83	0,67
-1	4,89	2,17
0	2,78	5,56
1	2,83	2,33
2	2,78	4,44
3	2,50	2,61
4	2,83	2,50
5	3,00	0,94
6	2,56	2,11
7	2,39	3,89
8	3,72	4,67
9	4,89	2,61
10	4,78	3,56
11	3,06	2,39
12	4,22	4,11
13	2,56	2,72
14	4,94	4,06
15	4,06	4,28
16	4,67	3,50
17	5,67	3,44
18	6,44	2,22
19	2,83	1,83
20	1,94	1,67
21	2,89	2,11
22	8,50	1,94
Average	4,41	2,89
Standard Deviation	1,72	1,48
Highest daily average	9,72	8,06

Table 5. Average stock trading around the date of relevant fact announcements

In Table 6 we evidence that when there is revenues or rights distribution the average of trades of purchases is superior to the average of trades of selling by a significance level of 1% (t-statistics is 3,53), indicating higher benefits or perspectives to the businesses of the firm. The same result also occurs in the announcement of some relevant fact of the firm by a significance level of 1% (t-statistics is 4,49). The average amount of trades of purchase when there is an announcement of a relevant fact is greater than the average based on revenues or rights distribution by a significance level of 5% (t-statistics is 1,97), indicating that the news of relevant facts tend to be more positive than the rights distribution of the stock. Regarding the stock selling trades, the averages are not significantly different in the cases of relevant facts announcements or the revenues or rights distribution.

Comparison of daily averages of stock trades (t-estatística)		Date related to the rights and revenues distribution		Date related to the announcement of relevant facts	
		Daily average of purchase trades of stock	Daily average of selling trades of stock	Daily average of purchase trades of stock	Daily average of selling trades of stock
Date related to the rights and revenues distribution	Daily average of purchase trades of stock		average of purchases greater than selling (t=3,53)	average of facts greater than the distribution (t=1,97)	average of distribution greater than the facts (t=2,97)
	Daily average of selling trades of stock	average of purchases greater than selling (t=3,53)		average of facts greater than the distribution (t=4,97)	averages not significantly different (t=0,61)
Date related to the announcement of relevant facts	Daily average of purchase trades of stock	average of facts greater than the distribution (t=1,97)	average of facts greater than the distribution (t=4,97)		average of purchases greater than selling (t=4,49)
	Daily average of selling trades of stock	average of distribution greater than the facts (t=2,97)	averages not significantly different (t=0,61)	average of purchases greater than selling (t=4,49)	

Table 6. Comparison of the daily average trades performed around the rights distribution and news announcements

Pratt and DeVere (1970), Nunn et al. (1983), and Rozeff and Zaman (1988) conclude that the trades of purchases of insiders possess greater informational content than that of selling. While the research of Lin and Howe (1990), Eckbo and Smith (1998), and Bel Brio et al. (2001) arrive at contrary results. In this paper we see that the purchases of common shares of insiders related to the controllers possess more informational content, as well as the trades of selling of preferred stocks of the executives of the firm.

7. Conclusion

The subject to insider trading is very controversial and it is present nowadays with cases as of the Ambev and the Martha Stewart in 2004. This paper presents a series of event studies on the trades performed by insiders of the firms with stocks negotiated in the São Paulo Stock Exchange, that are classified as of differentiated corporate governance. The data presented here show that insiders, as defined by the instruction CVM 358 from 2002, are active agents in the Brazilian stock market. The profile of the trades with securities made by the insiders infers that the directors sell more securities than purchase, in contrast with the controllers and board members; that insiders of the companies that belong to the level 1 of differentiated corporate governance, that have less governance requirements and restrictions, are more active in trades in the market than firms in higher levels of differentiated corporate governance. We also show that the trades of purchase of common shares, and of selling of preferred stocks, carried through by insiders have presented significant average abnormal return, thus providing indication that the trades may have used privileged information. That is seen by the significant average abnormal return in the first day following the dates of the trades of purchases of common shares by the Controllers, Family, and Investments Clubs; or for selling of preferred stocks by the Directors, board members, and Advisors that had significant average abnormal return in the 10 previous days of the trades. As consequence of these results we can refute the strong hypothesis of market efficiency.

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