Legal Insider Trading in Vietnam: Market Reactions to Pre-Trade Announcements

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ABSTRACT

In this paper, we investigate legal insider trading announcements on stock returns in Vietnam. Unlike most other countries in the world, in Vietnam company directors and board members must announce their intention of trading in their own company's stock before the trade is executed. The paper thus compares the information content of Vietnamese insiders' trades with markets such as the US or Europe, in which the regulation imposes announcements of insider trades after the actual trade. Using the event study methodology, we find that the abnormal returns are both large and significant following the pre-trade announcement, showing that the market takes into consideration the information content of the insiders' intention to trade. The Vietnamese regulation further stipulates that insiders must announce the completion of their trade or the cancellation in case they do not wish to trade anymore. We find that when insiders announce their purchase completion stocks do not react, suggesting that the full inside information is revealed to the market by the pre-trade announcement. We argue that such a regulation could be beneficial in US and Europe because it increases fairness of markets.

Keywords: Financial market regulation, law and economics, legal insider trading, event study

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1. INTRODUCTION

Starting from 1990s, regulations and laws against trading on private information (or insider trading) has been put into practice in most of countries around the world. Frameworks and principles intend to prevent market manipulation and market abuse, with the basic idea that corporate insiders have to register their trades to a public registry of insider trading. There is a long-standing empirical literature on legal insider trading, beginning by Lorie and Niederhoffer (1968). Thereon, the literature focused on various aspects of insider trading, such as information content of insiders' trades (e.g. Lakonishok and Lee (2001)); market efficiency and insider trading (e.g. Aktas, de Bodt, and Van Oppens (2008)); corporate governance issues (Fidrmuc, Goergen, and Renneboog (2006), Betzer and Theissen (2009) among others). Researchers use various methodologies to study market reactions around legal insider trading announcements or around trades themselves.

This paper adds to the empirical literature by analyzing the insider trading regulation in Vietnam. Contrary to most other countries in the world where insider must disclose their purchases or sales of own company's stock to the regulator once the trade is complete, the Vietnamese regulation stipulates that insiders must publicly announce their trade intentions prior to trading. To the best of our knowledge, this paper is the first to analyze empirically such a regulation that enforces pre-trade announcements. The motivation for such an analysis is based on calls from legal scholars to implement such a regulation framework in the US (see for instance Fried (2006) and Bebchuk and Fried (2010)).

Legal insider trading is defined as trading by managers and directors of listed companies in compliance with existing regulation, which prohibits the use of material and price-sensitive information. However, insiders have a better view of the prospects of their companies, so that the profitability of their trades might be higher than that of outsiders. Due to the unfair access to corporate information, the regulation in almost all countries stipulates that insiders have to announce their trades in a public registry of insider trading hosted either by the stock markets or by the regulatory body. In the developed stock markets such as US, UK, or Europe, insiders have to publicly announce their trades without delays and no later than 3 or 5 trading days following their trade completion.

In Vietnam, the Ministry of Finance (MOF) conducts and issues the insider trading laws and regulations. Starting from June 2006, Security Laws 2006 define three categories of insiders: major shareholders, top executives and their family members. The law prohibits these insiders

to trade on private or price-sensitive information and to provide such information to third party, or make the trades through other individuals and organizations. Circular 2007, along with its amendments Circular 2010 and Circular 2012 provides the regulations for insider trading disclosures. All legal insider trading activities are registered in the national registry of insider trading and presented in the website of State Securities Committee (SSC). Unlike the developed stock markets, insiders in Vietnam have to publicly announce their intention to trade at least three days prior to the actual trade executions. Then, after the trade request announcements, Vietnamese insiders are allowed to execute the trades in one and a half month period, or they can choose to cancel the trade. Vietnamese insiders have to publicly announce their trade completions within three trading days after they complete the executions or, if the trade intent is cancelled, at the end of time period. Therefore, in this paper, due to the unique characteristics of insider trading laws and regulations in Vietnam, we study market reactions around three groups of insider trading events: initial trade request announcements, trade completion announcements and trade cancelation announcements.

To answer the research question, we use the standard event study methodology and cross-sectional regression in a similar manner as in Fidrmuc, Goergen, and Renneboog (2006). The insider trading data are collected from cafef.vn, a popular website that provides free data related to finance and the economy in Vietnam. The databases at cafef.vn (secondary sources) are instantly streamed from national registry of insider trading activities (primary sources) from SSC. In the period from January 2009 to December 2015, we observe a total of 1,301 insider trade announcements including 452 purchase and 849 sales, of which 79% are actually executed and 21% are cancelled. We calculate the abnormal returns around three groups of insider trading announcements in a short-term period with the aim to investigate the market impacts around these announcements. Moreover, in a cross-sectional regression framework, we analyze the determinants of the abnormal returns of insider trading activities.

In the recent literature, investigations using event study methodology about insider trading announcements almost focus on the developed stock markets such as US, UK, the Netherland, Germany, etc. However, we observe that there is no empirical paper about insider trading activities using event study methodology that are conducted in Vietnam. In addition, there is a very limited number of empirical papers in emerging and frontier stock markets, with the exception of Cheuk, Fan, and So (2006) and He and Rui (2016) for the Chinese market. Fernandes and Ferreira (2009), who study a sample of 48 countries comprising both developed and emerging stock markets, argue that different level of market transparency and efficiency

have impacts on the profitability of insiders. The Vietnam stock market is categorized as a frontier stock market according to MSCI annual market classification.[3]

We find that the market reaction following sale requests is more dramatic than for purchase requests, amounted at -2.39% versus 1.50% over 30-trading day post-event, both figures are significant with 1% level. Insider sale completion announcements deliver an additional significant negative abnormal returns. However, the purchase confirmations and all trade cancelations deliver insignificant or no abnormal returns in the following 30-trading day period. Overall, insider trade requests convey the majority of the information content of insider trading. When analyzing the drivers of the abnormal returns, we find that trade requests from more informed deliver more abnormal returns than less informed insiders, which is consistent with the theory of information hierarchy. Furthermore, the holding of insiders prior to their purchase announcements is positively associated with abnormal returns.

The remaining of the paper is organized as follows. In section 2 we review the empirical literature related to legal insider trading. Section 3 provides an overview of the institutional and regulatory setting of the Vietnamese stock market. Section 4 highlights key theoretical elements are well as the main hypotheses that will be tested against the data. Section 5 describes the data sources, the sample, and describes the event study methodology. In Section 6, we present and interpret the results. Section 7 concludes and makes policy recommendations.

2. LITERATURE REVIEW

We review previous literature about legal insider trading; the major contents are divided into two parts. The first part reviews insider trading effects and their corresponding stock market reactions, and the relevant determinants of abnormal profits from insider trading. The second part reviews these effects using event study methodology in some specific countries with both developed and emerging stock markets.

In previous studies, most of authors conclude that insiders can earn abnormal returns from insider trading, because insiders are the most informed market participants about their owned listed companies and thus they can use this power of monopolistic information to value the stock price or even predict the future movement of stock price.

[3] MSCI, Market classification, https://www.msci.com/market-classification. Page accessed on Sept. 1, 2016.

Lorie and Niederhoffer (1968) are the first to document these issues. The authors use standard measures of insiders' returns over 6 months after the trade disclosures and conclude that insiders can outperform the Dow Jones Industrials (DJI) with probability of 60% and 64% for intensive purchases and sales respectively. Jaffe (1974) and Finnerty (1976) share the same findings by using the market model in order to calculate abnormal returns from insider trading. Jaffe (1974) notes the cumulated abnormal returns (CARs) approximately 2% and 5% over 2 months and 8 months respectively after the disclosures while Finnerty (1976) finds the figures from 4.8% to 8.3% over 11 months after the disclosures. They also conclude that the profitability of insiders are more significant in short-term than in long-term event window.

Seyhun (1986) examines 59,148 insiders' transactions from 1975 to 1981 of the U.S market with slightly adjusted market model used by Jaffe (1974) and Finnerty (1976). In addition, he analyses a cross-sectional regression model to discover the determinants of abnormal returns from insider trading related to types of insiders, firm size and trade volume. The author uses various event windows, with overall results showing that average cumulated abnormal returns (CAARs) are both statistically and economically significant, so insiders can earn abnormal profits in both short run and long run. Moreover, CAARs are more dramatic from purchases than sales in all event windows. For example, for 21 day event window, CAARs are 1.1% for purchases and -0.9% for sales, and for 51 day event window, the figures are 1.9% and -1.5%, respectively. When considering types of insiders as dummy explanatory variables, the author notes that members of Board of Director (BOD) outperform other types of insiders, which implies that BOD have access to more significant and material information. He also finds a significant positive relation between the net number of insiders trading the stock on a given day with CARs, meaning that when many insiders trade at once, the profits they obtain is higher. Besides, he concludes a significant negative relation of the CARs with firm size, and significant positive relation with trade volume (dollar-value of trade volume and proportion of firms traded). As it is explained in his subsequent paper, Seyhun (1988a) states that when insiders purchase or sell with large volume, they strongly believe that the stocks are mispricing based on their own private information.

Moreover, Seyhun (1986, 1988a, 1988b) discover the phenomenon that insiders usually buy after observing a significant decrease in stock price and then earn abnormal profits. And vice versa, insiders sell after a significant increase in stock price. This is the so-called market timing ability of insiders.

Using the same methodology with databases in 1970s and 1980s, other empirical papers also confirm that insiders can earn abnormal returns over the market, for example, Baesel and Stein (1979) with Canadian stock market, Givoly and Palmon (1985) with US stock market, Pope, Morris, and Peel (1990) with United Kingdom stock market. All these authors agree on the prediction power of insiders about future movement of stock price. They note numerous reasons behind abnormal returns from insider trading. Insiders have better knowledge for their own stock valuation so they are able to justify whether the stock is mispriced. Another reason is that market participants are more involved in the trading of stocks when insider trading news are released which temporarily change demand-supply curve of the stocks, stock price therefore rise or decline in response to insider purchases or sales.

Jeng, Metrick, and Zeckhauser (2003) apply a different approach; they mimic the trades of insiders in the form of specific portfolios and then compare the returns of these portfolios versus the market return benchmark. The authors use portfolio performance evaluation methods, in which they mimic a purchase portfolio composed of intensive insider's purchases, and similarly, a sale portfolio composed of intensive insider's sales. Using data from 1975-1996 periods and assuming a 6 month holding period following each trade, they note that the purchase portfolio earns significant abnormal returns while sale portfolio's return is not different from the benchmark.

The portfolio imitation approach is also used in the studies of Rozeff and Zaman (1988), Eckbo and Smith (1998), Chang and Suk (1998), and Biesta, Doeswijk, and Donker (2004). However, on the contrary to other papers, Eckbo and Smith (1998) with mimicking insider trading portfolios on the Oslo stock exchange, only find zero or negative monthly abnormal returns for insider trading.

The above literatures provided the foundations and encouraged the booming of the subsequent research on insider trading using standard event study methodology. The majority of papers concentrate on countries with developed stock market and use a short-term post-event window less than 30 days.

Numerous papers examine the insider trading activities in US stock market with event study methodology. Lakonishok and Lee (2001) examine insider trading activities during the 1975-1995 periods. By using a short event window of 5 days, the authors conclude that insiders earn abnormal returns over the market return for both purchase and sale transactions. They confirm that top managers and large shareholders earns more than family members for purchase

transaction, for details, the abnormal returns are 0.59%, 0.53% and 0.12% for top managers, large shareholders and family members respectively. This hierarchy of information hypothesis is not corroborated for sales. Regarding the firm size, the small firms seem to deliver higher abnormal returns for insiders than large firms. The authors also consider the book-to-market as a determinant, and they find that abnormal returns are positively correlated with book-to-market in the case of top managers' purchases.

Aktas, de Bodt, and Van Oppens (2008) investigate insider trading in US market during the 1995-1999 period using event study with a very short 2 day and 5 day event window including the transaction day. The authors find abnormal returns from both purchase and sale transactions of insiders. For net purchases, CAARs are about 0.14% and 0.42% corresponding to 2 day and 5 day event window while for net sales; the figures are 0.28% and 0.23% respectively. Similarly to previous studies, the authors conclude that higher trade size result in higher abnormal returns for both net purchases and net sales.

Fidrmuc, Goergen, and Renneboog (2006) examine the United Kingdom stock market during 1991-1998 periods with 58,363 insider trading records. With the same event window as Aktas, de Bodt, and Van Oppens (2008), the authors conclude that insiders outperform the market, they state that the CAARs are around 1.16%-1.65% for purchase transactions and around 0.26%-0.49% for sale transactions. The authors categorize large transactions as trade volume exceeds 0.1% of the firm's capitalization, the remaining are small transactions. Larger purchase volume result in significant higher abnormal returns with the results that the CAARs with 2 day and 5 day event window for large purchases are 3.12% and 4.62% while for small purchases are only 0.79% and 1.07%. However, the difference between large sales and small sales for CAARs with 5 day event window is only 0.02%, the CAARs are not significant correlated to sales volume. Besides, they conclude that major shareholders and top managers earn more profits than any other group of insiders.

Betzer and Theissen (2009) examine 2,051 insider trades from July 2002 to June 2004 for the German stock market. The authors note that insiders earn significant abnormal returns with CAARs of 3.6% for purchases and -3.54% for sales in 20 days after the trades, far more than abnormal returns in the UK. They explain that insiders in Germany can execute the trade prior to the earning announcements to take benefits of their private information, while this manner is forbidden in the UK. So, it is clearly implied that strong legal infrastructure may reduce the profitability of insider trading.

Bajo and Petracci (2006) study insider trading activities of the Italian stock market over 1998-2002 periods. Authors find that abnormal returns of insider trades in 10 days after the trades are 3.18% for purchases and -3.67% for sales. This is in contrast to the Spanish market that is studied by Del Brio, Miguel, and Perote (2002): for the period from 1992 to 1996, the one day abnormal return CAAR (0, 1) is 0.128% for purchases and 0.373% for sales. And for sales activities, CAAR (1, 15) is -0.576% while CAAR (1, 60) is 0.995%, these results are hard to explain according to the consistency of previous empirical papers.

The study of Degryse, de Jong, and Lefebvre (2014) provides a recent analysis of the Dutch stock market. From April 1999 to June 2008, 3,612 insider trading days are analyzed. In the event study, authors conclude that insiders are able to time the market and earn abnormal returns from their trades. The CAARs form a V shape for insider purchases and an inverted V shaped for insider sales, which means that insiders buy after a sharp stock price decline and then earn abnormal profit, and similarly sell after a sharp stock price rise and then escape from abnormal loss. They observe as well that that top executives earn more abnormal returns than other insiders for both purchases and sales. However, high volume related to insider trades leads to lower profits. Trade clustering is an important characteristic of the Dutch insider trading, meaning that insiders complete several trades with short time periods. However, results show that this behavior is not associated with larger information content.

Although there are numerous studies on insider trading and market reaction for countries with developed stock markets, very few papers focus on Asian or emerging stock markets. To apply the previous empirical results from developed stock market may not be correct, due to the difference in legal infrastructure, market efficiency, liquidity, and information transparency. Ownership structure is also very different, major shareholders are usually family-owners. Miller et al. (2008) only examines the insider trades prior to international strategic alliance in China stock market during 1991-2001 periods. The authors find that insiders can earn abnormal profits based on non-public information, but their study just cover a small portion of insider trading activities.

The study of Cheuk, Fan, and So (2006) in Hong Kong stock market provides a comprehensive analysis with the standard event study approach. The authors examine 23,675 insider trades over 1993-1998 periods. They confirm the prediction ability and abnormal returns of insiders, consistently with developed markets, with high significance levels. However, CAARs from sales are more dramatic than from purchases, for example, in 20 day event window after the

trade, CAARs are -4.14% for insider sales and 0.58% for insider purchases. These figures are in contrast with developed stock market where CAARs from sales are mostly less than from purchases, even zero or negative in several cases. Furthermore, insiders earn significant CAARs from high-volume sales and no significant CAARs from high-volume purchases. These results are also very different with empirical studies in developed stock market. Breaking down into firm industries, authors find that insiders from consolidated enterprises, properties and industrials earn significant CAARs from their sales, and insiders from finance and industrial earn significant CAARs from their purchases.

To summarize, all of papers excluding the study of Eckbo and Smith (1998) note that insiders can earn abnormal returns. The methodology concentrates in two approaches: portfolio imitation strategy and event study methodology. In the portfolio imitation strategy, researchers mimic the insider transaction and evaluate the performance of the overall portfolio. The event study methodology approach is generally used in recent papers. We are inspired to choose the standard event study methodology and cross-sectional regression. In addition, we note that the results of previous event studies are very different. Most of the studies prove that insiders earn more abnormal returns from their purchases than sales, due to the fact that insiders are motivated to earn profits when they buy stocks but it could be for liquidity or diversification purposes when they sell stocks. However, in Italy and Hong Kong where majority of listed companies are family-owned, the abnormal returns from sales are more significant than purchases. The abnormal returns varies from countries with different legal enforcement in insider trading activities: the literature shows that insiders from US and UK earn less than in European and Asia in the month following the insider trades. Most papers also note that top executives of the companies earn more than other insiders because they have access to more material information. Moreover, the firm size, book-to-market ratio and trade volume are also considered as strong determinants to CARs, although the significance levels are very different among countries.

The next section introduces the laws and regulations of insider trading in Vietnam.

3. REGULATIONS OF INSIDER TRADING IN VIETNAM

3.1. The Securities Laws

Vietnam stock market starts to operate since July 2000 with the opening of Ho Chi Minh Stock Exchange (HSX) but it takes six years later to have the Securities Laws No. 70/2006/QH11

dated 29 June 2006 (Security Laws 2006). The Securities Laws 2006 regulate participants and activities related to the stock market. Ministry of Finance (MOF) is responsible to conduct securities laws and regulations, then submit to the Government for approval. State Securities Committee (SSC) supervises financial institutions and market participants in practicing the securities laws and regulations. Moreover, SSC is empowered to inspect, monitor and execute violations in securities activities including insider trading. The Securities Laws 2006 state that insiders are forbidden to trade on private or price-sensitive information which might affect materially the stock price as well as to counsel or to provide information to any other people or institutions to trade. The purpose of the Securities Laws 2006 is to ensure a fair environment for all market participants. Insiders include major shareholders, top executives and other insiders.

Major shareholders are defined in Article 9 as the shareholders who directly or indirectly hold more than 5% ownership or voting rights of the listed company. Major shareholders are required to submit major holding reports to SSC and Stock Exchange (SE) according to Article 29. When the ownership of a shareholder and their relatives exceeds 5% of the listed company, they are considered as a major shareholder and have to report to SSC and SE within 7 days after their transactions. Conversely, when their ownership reduces below 5% of the listed company, they must also report to SSC and SE within 7 days after their transactions about no longer being a major shareholder. Besides, major shareholders must report to SSC and SE within 7 days after their transactions when their holding increases or decreases 1% level of listed company's total outstanding shares.

Top executives are defined in Article 33 including Chairman, member of Board of Management (BOM), member of BOD, member of supervisory board, chief finance officer, chief accountant, and company's representatives. Other insiders are defined in Article 34 as the family members of major shareholders and top executives. We denote other insiders as "family members" to distinguish them from other types of insiders. The listed companies are required to disclosure of the ownership, voting rights of top executives. However the Securities Laws 2006 do not mention about insider trading disclosures. The Circular 38/2007/TT-BTC (Circular 2007) issued later in 2007 by MOF regulates more details about this activity.

3.2. The Circulars on insider trading disclosures

Circular 2007 provides the first foundation for insider trading disclosures. Insiders must notify to SSC and SE at least 1 trading day prior to their transaction and must report to SSC and SE

about the results of the transaction within 3 trading days from the trades. Circular 2007 expires in 2010 with the issuance of Circular No. 09/2010/TT-BTC (Circular 2010). According to Circular 2010, some modifications concerning insider trading process help to improve the standard and transparency of insider activities. Circular No. 52/2012/TT-BTC (Circular 2012) is issued in 2012 to replace Circular 2010, the most major modification is to reduce the requested trading time frame from 2 months to 1.5 month approximately 30 trading days. This insider trading process remains until present as following:

(i) Insiders request their expected trading time frame and expected trading size with SSC and SE at least 3 trading days prior to the beginning of trading time frame. The expected trading time frame does not exceed 30 trading days.

(ii) Insiders are allowed to trade in 24 hours after the public announcements from SSC, SE and relevant media.

(iii) Insiders make purchase/ sale transactions in the requested trading time frame. Within 3 trading days after the trade executions, insiders report the trade results to SSC, SE and their own company about the results of their trades.

(iv) If insiders do not make transactions, they must report the reasons to SSC and the Stock Exchange within 3 trading days after the end of the requested time frame.

(v) Insiders are not allowed to trade more than their requested trade volume. They have to complete the initial request in order to propose a new trade request.

We illustrate the legal insider trading process in **Figure 1**.

[Figure 1 about here]

3.3. Criminal Laws on illegal insider trading

With the aims to prevent violations and encourage the stable and sustainable development of the stock market, Act 181 of Criminal Laws No. 37/2009/QH12 (Criminal Laws) issued in 2009 regulates the penalties for illegal insider trading on private information. The insiders who violates the Criminal Laws may be prohibited from their current positions of the company from one to five years, required to return abnormal profits from their trades, are liable for a fine of VND 100 million - VND 500 million (about $ 5,000 -$ 25,000) and a term of imprisonment from 6 months to 3 years. Insiders might be judged a term of imprisonment from 2 years to 7 years if insider trading activities make severe consequences.

Table 1 summarizes the major insider trading regulations.

[Table 1 about here]

3.4. Comparison with the developed stock markets

We note that insider trading laws in Vietnam is very different compared with the developed stock markets in the literature. Unlike the developed stock markets, in Vietnam, insiders must announce the trade requests to the public at least 3 trading days prior to their actual trades. Then, they are allowed to execute the trades in a period of one and a half month and announce their trade completions within 3 trading days following the trade executions. And if the trades are not executed, they must announce their trade cancelations within 3 trading days after the end of the requested period. So there are three groups of insider trading activities: initial insider trade requests, trade completions and trade cancelations that may have impacts on the stock price.

To compare, in developed stock markets such as UK, Netherlands, Germany, Hong Kong, etc., insiders only announce their trades after they complete the trades. For example, in UK and in Hong Kong, insiders announce within 3 and 5 trading days, respectively after their trade completion, in Germany and Netherlands, insiders announce their trades without delays and no later than 5 trading days or 10 trading days after the end of month in which they trades. Therefore, the market reactions regarding insider trading activities in Vietnam could be different from the developed markets in the literature review.

The next section describes the conceptual framework and hypothesis used in this paper.

4. THEORETICAL CONSIDERATIONS AND HYPOTHESES

Starting from the 1980s, several theoretical papers have addressed the problem of asymmetry of information between trader types, spawning a vast literature on market microstructure and liquidity.[4] However, very few theoretical models analyze specifically the effect of pre-disclosure of insiders' trades. To our knowledge, only two articles address this issue: Lenkey (2014) and Huddart, Hughes, and Williams (2004). Although the two papers use different theoretical approaches, they share the fact that they are based on rational expectations equilibrium models. The empirical implications are that upon disclosure of their trade

[4] Seminal papers are, among others, Grossman and Stiglitz (1980), Kyle (1985) and Glosten and Milgrom (1985).

intentions, insiders reveal to the market their private information about the stock. The only uncertainly for outside investors is the extent of their liquidity trade needs but this should not have any impact on market because it is not based on information. The first hypothesis is thus:

Hypothesis 1:

The market reaction following insiders' purchase (resp. sale) pre-trade announcements is positive (resp. negative).

Hypothesis 2:

The market reaction following insider's purchase and sale completion announcements is zero on average.

The two above cited theoretical papers do not consider institutions where insiders can cancel their trade orders after announcing their intention to trade. So no empirical implication can be taken out of the models. But our intuition is that if a trade is cancelled, it is because the stock price moved following the pre-trading disclosure sufficiently adversely that the insider has no gain to trade anymore. According to this intuition, we conjecture that market reaction following announcements of trade cancellations, be it purchase or sales, is zero.

Hypothesis 3:

The market reaction following announcements or purchase or sales cancellations is zero on average.

The next section describes our insider trading dataset and the sample of firms.

5. DATA AND METHODOLOGY

Firstly, we collect the insider trades from the listed companies of VN30 – top 30 market capitalization companies in Vietnam as of 31/12/2015. We choose VN30 for the data collection mainly because the market capitalization of HSX at the research time is around VND 1.700.000 billion (about USD 75 billion). Vietnam stock market is defined as a frontier market (not yet an emerging market) according to MSCI market classification, and the market capitalization is far smaller than the studied markets in the literature review. We exclude the small-capitalized companies of HSX to avoid probable extreme abnormal returns due to small size and illiquidity.

The insider trading database is collected from cafef.vn, a popular website that provides free data related to finance and economy in Vietnam. Starting from 10 April 2008, cafef.vn is officially online, their financial databases are highly appreciated and examined by market traders. Unlike the primary sources of SSC about insider trading activities which are simply presented in sentence posts in SSC website, the databases of cafef.vn is well organized and presented in excel column including the following information: the company name, the insider name, insider position, request amount, trading time frame, trade completion date, actual trade amount, trade cancelation date, note. We check the primary databases to have inputs of insider trade request announcements. We observe that the insider trading announcements appear in cafef.vn databases within one hour after the posts of SSC. Upon several tests and checks, we find no data omission or error between the SSC and cafef.vn. The quality of the secondary databases thus seems to be suitable for the empirical analysis.

We divide the insider trading database into three groups: Insider trade requests, insider trade completions and insider trade cancelations. The number of insider trade requests is equal to the number of insider trade completions plus insider trade cancelations.

Each insider trading record is categorized into three groups relative to the position of the insider in the firm: “major shareholders”, “top executives” and “family members”, which are based on the guidance and regulations of Security Laws 2006 and Circular 2007. “Major shareholders” are investors that own directly or indirectly at least 5% of voting rights of a company. “Top executives” include Chairman, member of Board of Management (BOM), member of BOD, member of supervisory board, chief finance officer, chief accountant, and companies’ representatives. In case the top executives are also major shareholders, we group the trades of them as of top executives. “Family members” are family members of top executives and major shareholders.

Finally, we match insider trading records with market and corporate information relative to the firm. The financial data is taken from Bloomberg. We obtain market capitalization, price to book ratio, and the firms' industries. The firm industry grouping is based on GICS standards.

We use the concept “company-day”. It is the date at which insider trading activities occur for a given firm (trade requests or trade completions or trade cancelations). That is, if there are several events during a specific day relative to a company, we aggregate all stock purchases and sales of that particular stock into one trade. The net aggregated value classifies the trade type as purchase or sale corresponding with positive sign or negative sign.

When there are more than two insiders submitting their trades in a single day, we aggregate the trade volume, and we tag the insider type of the transactions with higher position priority according to the following order: top executives, major shareholders, and family members. In doing that, we assume that higher positions have access to more material information and make material decisions of the companies. So the trade requests of higher positions are more meaningful with the market participants than lower positions.

According to the insider trading database of cafef.vn, we have access to insider trading activities from 2007 when Circular 2007 was issued. However, this paper only focuses on insider trading databases from January 2009 to December 2015 with six-year periods. We avoid the period from 2007 to 2008, when the stock market bubble starts and ends with financial crisis in 2008. The Vietnam stock market from 2007 to 2008 was dramatically affected by the sub-prime crisis with high volatility and large outflow of funds. This would bring noise to the estimation of market reactions to insider trading.

Table 2 describes descriptive statistics of the observations.

[Table 2 about here]

Firstly, considering Group A – Insider trade requests, in this sample period, there are 565 insiders who publicly announce their trade intentions legally, insiders from all VN30 companies request to trade. We have 1,301 trade requests and corresponding 1,133 company-days which mean there are numerous days that two or more insiders announce their trade requests. We use these 1,133 company-days as observations to study the market reactions before and after insider trade request announcements.

We note that there are 453 insiders purchase requests and 849 insiders sale requests, so that the number of sale requests is twice more than the purchase requests. However, the average number of shares per transaction of purchase requests is 16% higher than of sale requests. It means that insiders on average break up sales into smaller transactions.

When breaking down into insider types, we note that major shareholders announce their trade requests the most frequently when compared with top executives and family members. Although all types of insiders submit more sale requests than purchases requests, the major shareholders are more interested to buy shares than other types of insiders. Top executives and family members are supposed to submit sale requests more frequently to support their diversification and/ or financial needs.

Concerning the firm size, we note that insiders in small-cap firms submit the purchase requests more frequently than in mid-cap and big-cap firms. It is suitable with the research of Seyhun (1988a) that insiders in small firms who earn more profits trade more frequently on firm-specific information and insiders in large firms who earn fewer profits trade more frequently on economy-wide information. Apparently, the firm-specific news is more than the economy-wide news.

Secondly, regarding Group B – Insider trade completions, we note that 79% of the trade requests are actually executed. In the period, there are 370 insider purchases and 652 insider sales that have been announced. Besides, we also note that insider make purchases as their initial intentions more than to sell the stock, 82% of insider purchase requests are actually executed while there are only 77% of insider sale requests are actually executed. Aggregating the transactions we have 334 company-days for purchases and 585 company-days for sales. On the contrary to Group A, we note that average number of shares for insider purchases are 12% less than insider sales. It means that insiders actually concentrate to sell shares than to buy shares on average.

Finally, concerning Group C – Insider trade cancelations, 21% of the trade requests are not executed as expected. According to Vietnam insider trading laws and regulations, insiders do not have to make transactions as they announce before, they usually publicly explain the reasons for trade cancelations because the stock prices are not in their expected price range.

The methodology of this paper is based on event study and cross-sectional regression. In the first part, we use event study in order to illustrate the abnormal returns from insider trade activities around the announcement date and to study whether the impact on market reaction is statistically significant.

In the event study, we propose an estimation window of 250 observations and an event window of 51 observations (including the event date), from 20 days prior the event date to 30 days after the event date. **Figure 2** illustrates the estimation and event window.

[Figure 2 about here]

For each observation in the estimation window we run the following regression:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

Where R_{it} is the return of the stock i at time t, $\alpha_i$and β_i are parameters, R_{mt} is the return of the market, in this case VNIndex corresponding to stock i at time t, and ε_{it} is the error term. We can compute the estimated rate of stock return of the event window based on the expected of the stock return regarding to the market return and parameter estimates of estimation window:

$$E\left(R_{it}|R_{mt},\hat{\alpha}_j,\hat{\beta}_j\right)=\hat{\alpha}_j+\hat{\beta}_j\,R_{mt}$$

During the event window, we compute the abnormal return (denoted AR) as the difference between actual return and estimated return.

$$AR_{it}=R_{it}-(\hat{\alpha}_i+\hat{\beta}_i\,R_{mt})$$

To sum up all the AR from time T_1 to T_2, we can compute the cumulated abnormal return (denoted CAR) computed as follow:

$$CAR_i(T_1;T_2)=\sum_{j=T_1}^{T_2}AR_{ij}$$

We then compute the cumulated average abnormal return (denoted CAAR) by calculate the average of all $CAR_i(T_1;T_2)$

$$CAAR(T_1;T_2)=\frac{1}{N}\sum_{i=1}^{N}CAR_i(T_1;T_2)$$

Where N is the number of observations in the event study.

Finally, we test the hypothesis whether the $CAAR(T_1;T_2)$ is different from zero. Due to the long estimation window (n=250 trading day), we assume the test of CAAR is approximately normal distributed, and compare the test of CAAR to the critical value.

$$\text{t}=\frac{\overline{CA}\overline{R}(T_1,T_2)}{\sqrt{\frac{(T_2-T_1+1)\sum_{i=1}^{N}\hat{\sigma}_{it}^2}{N^2}}}\approx N(0,1)$$

where $\hat{\sigma}_{it}^2$ is the standard error of the estimated market model in the estimation window.

In this paper, we use the critical value at 10%, 5% and 1% of a normal distribution with two-sided test, t-stat values are 1.645, 1.96, and 2.576 correspondingly.

In the second part, we run a cross-sectional regression of *CAR* (T_1; T_2) of each company-day with a set of explanatory variables. The regression equation is calculated as follow:

$$CAR_i(T_1;T_2) = \alpha + \sum_{k=1}^{K} \beta_k X_{ki} + \varepsilon_i \quad [1]$$

where:

α	is the intercept,
K	is the number of independent variables (including firm size, Price to book ratio, industry, top executives, holding, etc.)
X_{ik}	is the value of explanatory variable *k*.
β_k	is the coefficient of explanatory variable *k*
ε_i	is the error term.

White heteroskedasticity-consistent standard errors are used.

6. RESULTS

6.1. Event Study Results

According to Hypothesis 1, purchase requests should be followed by positive abnormal returns, and sale requests by negative abnormal returns. **Figure 3** show CAAR from 20 trading days prior to 30 trading days after the announcement date of purchase (full line) and sale requests (dashed line). The horizontal axis represents the event window around the announcement date *t* = 0. The vertical axis represents the cumulative average abnormal return, CAAR, from both trade date before and after the announcement date. We normalize the two curves to be zero at = -1 to see the market reaction at the announcement date. Also, the graph markers – circles, squares and triangles - denote the significance level of 1%, 5% and 10%, respectively.

[Figure 3 about here]

We see from **Figure 3** that purchase requests are followed by strong and significantly positive abnormal returns of almost 2%, 30 trading days after the request announcement. Similarly for sale requests, we observe negative abnormal returns of almost 2.5%. In both cases, the abnormal returns before highly statistically significant after just a few days. This finding validates Hypothesis 1; we conclude that insiders reveal their private information by announcing their trade intentions. The regulation reaches its objective of making the markets fairer to outside investors.

Another feature of the results shown in **Figure 3** is that the purchase curve does not form a "V" shape; the curve illustrates a flat trend prior to the announcement date and then lifts up after the announcement date. Thus, firstly it means the corporate insiders do not wait for the stock price drop to make purchase decisions; it is in strong contrast with results from the literature, which documents that insider buy after a significant stock decline. This is a distinctive characteristic of insiders in Vietnam. It seems that insiders do not time their trades.

Also from **Figure 3**, CAAR of purchase requests start to be statistically significant right after the outsiders receive the insider purchase intention news. Because insiders are allowed to execute the trades after 3 trading days following their trade request announcements, CAAR (0, 3) represents the pure outsider reactions with no involvement of insider trades and CAAR (4, 30) probably represents the market reactions to the combination of both outsider reactions and insider trades. We observe that CAAR (0, 3) is 0.86% with significance level of 1% and larger than CAAR (4, 30), which amount to 0.64%. It means that on average, the pure market reaction contribute substantially to the abnormal returns in the first 3 trading days while from trading day 4 to trading day 30 when insiders are allowed to buy, the abnormal returns are relatively small.

When taking into account all insider sale request announcements, the sale curve (the dashed line) forms an inverted "V" shape. It means that on average, insiders want to sell after an abnormal stock price increase and after a price decline. This shows an ability of market timing from the insiders, which was not the case for purchase requests. The stock price run-up prior to the sale request is of 1.95%. Our results are consistent with findings from the literature.

However, we note that insider sale request announcements do not quickly have impacts on outsiders as it is the case for purchase request announcements. The market participants cannot recognize whether insiders believe stock price is overvalued or they have liquidity and/or diversification needs. CAAR starts to be statistically significant from the trading day 4 after the sale request announcements. Total CAAR over 30 trading days is amounted to -2.39% with significance level of 1%, so that insider sale request announcements are informative in association with the sharp and steady stock price decline. We observe that CAAR (0, 3) is -0.26% with 10% significance level which is lower than CAAR (4, 30) amounted to -2.31% with 1% significance level. It means that on average, the pure outsider trades contribute small abnormal returns in the first 3 trading days while from trading day 4 to trading day 30 when insiders are allowed to sell, the abnormal returns are substantial.

Overall, with insider sale requests, our results are similar to previous literatures.

When comparing CAAR in 30 trading days after the announcements between purchase requests and sale requests, we note that abnormal returns from insider sale requests are more dramatic than purchase requests. This result strongly contradicts the findings from the literatures on Western countries. However, we note that the majority of listed companies in our sample are family-owned, which shares the similar ownership characteristic with Italy and Hong Kong stock market in the paper of Del Brio, Miguel, and Perote (2002) and Cheuk, Fan, and So (2006). These authors find that insider sales are more informative than purchases.

In the sample period, we observe that there are 370 purchases and 652 sales of insiders that are actually executed as expected with their initial trade requests. In **Figure 4**, we note the following concerns about the abnormal returns from insider trades and insider trading behaviors.

[Figure 4 about here]

Firstly, CAAR is closed to zero with low volatility during 20 trading days prior to insider trade completion announcements. Thus, on average, insiders execute their purchases and sales when there are insignificant or even no abnormal stock price changes. It is rational that insiders do not buy on a stock price run-up or sell on a stock price decline to minimize their transaction costs and maximize their profits.

Secondly, following the insider purchases, within a 20-trading day and 30-trading day period, CAARs are both economically and statistically insignificant. It is consistent with Hypothesis 2, because the information content of insider purchases has been communicated to the market through insider purchase intentions before. Thus, there should be insignificant abnormal returns following insider purchase completion announcements.

Finally, on contrary to insider purchases, following the insider sales, the 10-trading day, 20-trading day and 30-trading day CAARs are both large and significantly negative, at -0.53%, -1.39%, and -2.43%, respectively. Surprisingly, this result is not consistent with Hypothesis 2. We predict that outsiders are sensitive with insider sales as well as probable corporate bad news under insider sales, they massively continue to sell the stocks when insiders complete their stock sales.

In the sample period, we observe that there are 82 purchases and 197 sales of insiders that are not executed as expected with their initial trade intentions. In **Figure 5**, we note the following concerns about the abnormal returns from insider trades and insider trading behaviors.

[Figure 5 about here]

We note no consistency and significant in abnormal returns around insider trade cancellation announcements. This is in line with Hypothesis 3: trade cancellation might be triggered simply by adverse price movements, and thus the cancellation per se does not bring new information to the market.

Overall, we note that initial trade requests of insiders convey the majority of information contents that explain the market reactions because of its surprising impacts and relative significant abnormal returns. The other insider trading events are less informative. Hence, from here on we choose to investigate further the abnormal returns following trade requests only.

Breaking down into insider types, we note following concerns related to firm sizes of purchase requests according to **Table 3** as following.

[Table 3 about here]

In 3-trading day post-event, in small-cap and mid-cap firms, the market reacts stronger with major shareholders purchase intentions than top executives while in big-cap firms, top executives purchase intentions are more informative. From trading day 4 to trading day 30, abnormal returns are both small and insignificant regardless of firm sizes.

Over 30 trading days, only purchase request announcements from top executives of small-cap firms are informative. On average, in 30 trading days following their purchase request announcements, CAAR is substantially high at 2.73% with significance level of 10%. However, they decide to buy after a slight stock increase. As explained in previous part, we assume that they decide to buy upon the positive news of their companies. Although CAARs from top executives of mid-cap firms and big-cap firms are also considerably high at 1.44% and 2.39%, respectively, but the figures are not statistically different from zero. Besides, CAARs from major shareholders regardless of firm size are also insignificant.

Concerning the insider sale requests, according to the results in **Figure 5**, we observe that insiders regardless of firm sizes, on average, request to sell after a sharp stock price increase.

CAAR of 20 trading days prior to insider sale request announcement date is statistical significant.

Besides, we note that over 30 trading days following the insider sale request announcements, CAAR of small-cap firms forms a sideways pattern. It is strong contrast to the previous literature and the hypothesis 4 that CAAR of small-cap firms should be more statistical negative than CAAR of mid-cap and big-cap firms. On the contrary, following insider sale request announcements, CAAR of mid-cap and big-cap firms both form steady and sharp declines. CAAR (0, 30) of mid-cap firms is -4.53% which is higher than of big-cap firms amounted to -2.19%. Both figures are statistically significant with 1% level. The results that CAAR of mid-cap firms is higher than of big-cap firms are consistent with the hypothesis 4.

Breaking down into insider types, we note following concerns related to firm sizes of sale requests according to **Table 4** as following.

[Table 4 about here]

On the contrary to our expectation, on average, the stock price increases after the sale request announcements of top executives in small-cap firms. We do not have proper answers to this phenomenon. We observe that on average, cumulated abnormal returns in 30 trading days following the sale request announcements of top executives in mid-cap and big-cap firms are statistically amounted to -6.21% and -4.49%, respectively.

Following the sale request announcements of major shareholders, we also find that CAAR of small-cap firms are both economically and significantly higher than CAAR of mid-cap and big-cap firms in the same order. This is consistent with the hypothesis 4. In the case of sale request announcements of family members, we find the figures noised and insignificant.

Overall, according to the results, we note that the purchase requests of top executives and sale requests of major shareholders are informative and consistent with information hierarchy theory. Purchase requests of top executives and sale requests of major shareholders in small firms deliver significantly larger abnormal returns than in big firms. This is consistent with the hypothesis 4.

6.2 Regression results

We now move to regression results of Equation 1. We run a cross-sectional regression to see the cumulated abnormal returns (dependent variables) from insider requests in consideration

of different independent variables. We use CAR (0, 30) representing the cumulated abnormal returns in 30 trading days following the trade request date, because according to regulation insiders may execute the trades in 30 trading day following their initial trade requests. As discussed in the previous sections, the company-days is used to evaluate CAAR of insiders around the event date.

We present the definitions and descriptive statistics of the explanatory variables in **Table 5** and **Table 6**.

[Table 5 about here]

[Table 6 about here]

To avoid the dummy variable traps, we exclude dummy variable of the trade requests before 25/03/2010 (phase 1) from the regression. We also exclude utility industry (4% to total observations).

The cross-sectional regression results for CAR (0, 30) are presented in **Table 7**. We note that firm size is a strong determinant to explain the abnormal returns of insider trade requests. According to the results, the coefficient is significantly negative with both purchase and sale requests (significance level of 10% and 1% respectively). In other words, the higher the firm size the lower the cumulated abnormal returns of insider trade requests and this is consistent with the previous literature.

[Table 7 about here]

We see that the coefficients of Price to Book ratio are negative with significance level of 1% with both purchase and sale requests. We can conclude that insider purchase requests from value firms deliver more abnormal returns than growth firms and insider sale requests from growth firms deliver more abnormal returns than value firms. These results are consistent with an interpretation of the price to book ratio as a measure of mispricing.

Concerning the holdings of insiders prior to their purchase requests, we observe that the coefficient is positive with purchase requests with significance level of 10% but insignificant with sale requests. In other words, large holdings prior to the purchases are informative. By contrast, insiders with large holdings prior to sale requests seems be motivated by liquidity or diversification purposes, and thus are less informed.

Regarding the trade size, the results are quite surprising. CAR for purchase requests is significant negative with the trade size, which contradicts our initial hypothesis. This might be explained by the fact that before announcing the large purchases, insiders usually complete the agreement contracts with other major shareholders or partners to trade outside the floor, which reduces the influences on stock price. Because it is a general practice for large trade size in Vietnam as well as in developed stock markets, outsiders are aware of this transaction method and reduce their expectation of significant price changes.

Taking into accounting the first dummy variable group – insider types, we note that CAR of purchase requests is only significant with major shareholders. It can be explain that major shareholders are the insiders who make majority of significant decisions of the company. So their purchase announcement reflects a higher profitable future of the company than other types of insiders in the long-term period. So the market participants regard the purchase requests of major shareholders as good news. For sales requests, CAR is significant with top executives and insignificant with major shareholders. In this case, we assume that major shareholders who have a large stakes at the company may not sell their shares just for bad news; they may want to keep their stakes at the company for the voting rights and controls of the company. Conversely, top executives who have fewer stakes at the company than major shareholders are willing to sell upon bad news. The abnormal returns from the trade requests of members of supervisory board are both small and insignificant. They are less profitable than top executives and major shareholders because in several listed companies, members of supervisory board have right to obtain corporate information only when shareholders requires them to do, so they are less informed than major shareholders and top executives. This result is consistent with the information hierarchy theory.

According to the results of the second dummy variable group - cluster, there is no significant correlation between CAR and cluster for both purchase and sale requests. So when more than two insiders submit their trade requests, it does not mean higher abnormal returns.

Concerning the third dummy variable group, we investigate the changes of market reactions to insider trade requests over three regulation regime phases. In the regression, we exclude the dummy variable for phase 1 - from 01 Jan 2009 to 14 Mar 2010 when the Circular 2007 is effective – to avoid the dummy variable trap. We only consider phase 2 (from 15 Mar 2010 to 18 Jul 2012) and phase 3 (from 19 Jul 2012 to 31 Dec 2015) dummy variables for the regression. Phase 2 and phase 3 represent the regulation regime periods when Circular 2010 and Circular

2012, respectively are issued to tighten insider trading disclosure activities. Thus, the coefficients of phase 2 and phase 3 represents the difference of abnormal returns in corresponding with phase 1.

We note that for purchase requests, the coefficients of both regulation phases are negative, amounted to -0.036 in phase 2 and -0.058 in phase 3, although not statistically significant. This means that there are very few changes of market reactions following insider sale requests over regulation regime phases. We can conclude that the enforcements of insider trading disclosure activities make insignificantly changes to market reactions.

6.3. Summary of findings

The most prominent findings of this study are that we validate our three hypotheses. First, we validate Hypothesis 1 according to which insiders convey their information to the market by the pre-trade announcement. We have seen that the market positively reacts to purchase requests and negatively reacts to sale requests. Results are statistically and economically significant: in the order of magnitude of 2% abnormal return for the 1.5 month period following the announcement.

Second, we verify Hypothesis 2 as well but this time just for purchases: completion announcements do not convey more information to the market compared to the trade request, in average. This is true for purchases, but not for sales. It turns out that sale completions are followed by large and significant negative abnormal returns. But these negative returns happen quite late in the even window, mostly from 20 to 30 trading days after the completion announcement.

Finally, Hypothesis 3 is validated as we have seen that trade cancellations are not informative: no significant abnormal returns follow purchase or sale cancellations. This is consistent with cancellation being motivated by market conditions that might have changed in the time span between trade request and trade cancellation, and not by information.

The other results are mostly in line with the empirical literature on legal insider trading.

8. CONCLUSION

In Vietnam, Security Laws 2006, Circular 2007 along with its amendments Circular 2010 and Circular 2012 regulate the insider trading activities. The specificity of Vietnamese regulation

is that insiders have to announce in advance their intention to buy or sell the stocks of their company.

The main results of the study show that most information asymmetry between insiders and outsiders is resolved by this pre-trade disclosure: this announcement makes stock prices move even before the actual trade day. The regulation reaches its objectives in reducing the undue profits that insiders would otherwise make if this regulation was not implemented. There are, however, some small drawbacks. For instance, insider sales are followed by large negative price declines several days or weeks after the trade completion, as if the pre-trade announcement did not convey the full information to the market. This finding warrants further investigation to better understand the reasons behind it.

Our findings shows as well that despite the change in regulation regime in 2010 and in 2012 did not change the information environment around legal insider trading. The laws and regulations related to insider trading activities do not change much from 2007 until today. We note that the modification in the regulation pertains to administrative procedures such as the modifications of insider trading report, trading time frame requests, etc. On the other hand, the criminal laws keep the penalty level for illegal insider trading since 2009 until present. The maximum penalty for insider trading is VND 500 million (about USD 20,000) which is lower than the probable abnormal returns of insiders. In US, insiders may be fined USD 1,000,000 or triple their illegal trading profits. According to the study of Degryse, de Jong, and Lefebvre (2014), abnormal returns from insider sales reduce substantially and significantly after implementing the Market Abuse Directive of the European Union with the major aim to raise the penalty level for illegal insider trading. We argue that by raising the penalty level for illegal insider trading should increase the market integrity, transparent and efficiency. We suggest that the Ministry of Finance of Vietnam should refer to Market Abuse Directive to raise the penalty level and combine both fixed penalty and variable penalty based on the profits of illegal insider trading deals.

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FIGURES AND TABLES

Figure 1. The legal insider trading process in Vietnam until present

This figure illustrates the legal insider trading process in Vietnam according to the most recent Circular 2012.

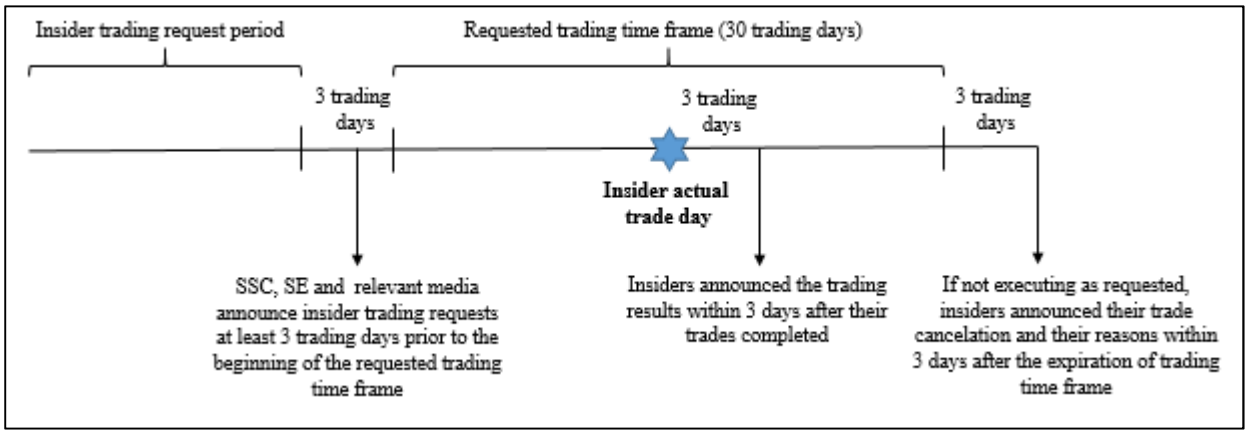

Figure 2. Estimation and event windows

This figure illustrates the estimation and event window for the event study methodology. The event date is at $t = 0$. The estimation window is composed of 250 observations from the date $t = -270$ to the date $t = -20$ prior to the event date. Event window is composed of 51 observations (including the event date), from 20 days prior the event date to 30 days after the event date. We use estimation of market model from estimation window to calculate the

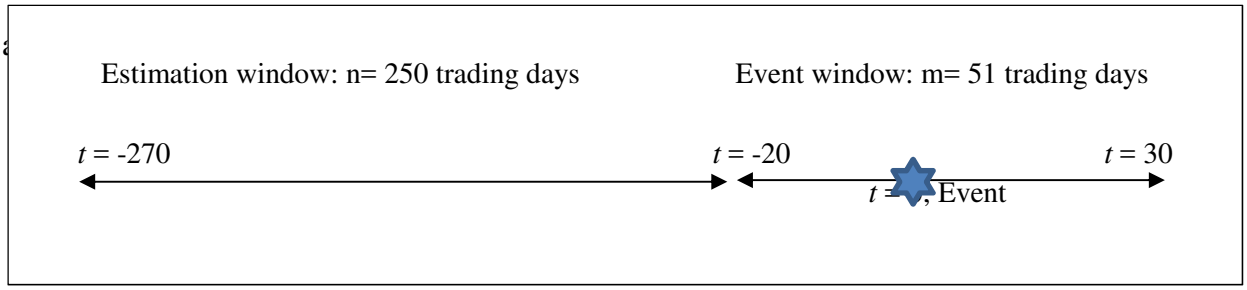

Figure 3. CAAR around all insider purchase and sale request announcements

This graph illustrates CAAR around all insider purchase and sale request announcements. The x axis represents the event window around the request announcement date t=0. The y axis represents CAAR from the trade day to insider request announcement date. We normalize the two curves to be zero at t= -1. The circles, squares and triangles represent the significance of 1%, 5% and 10%, respectively.

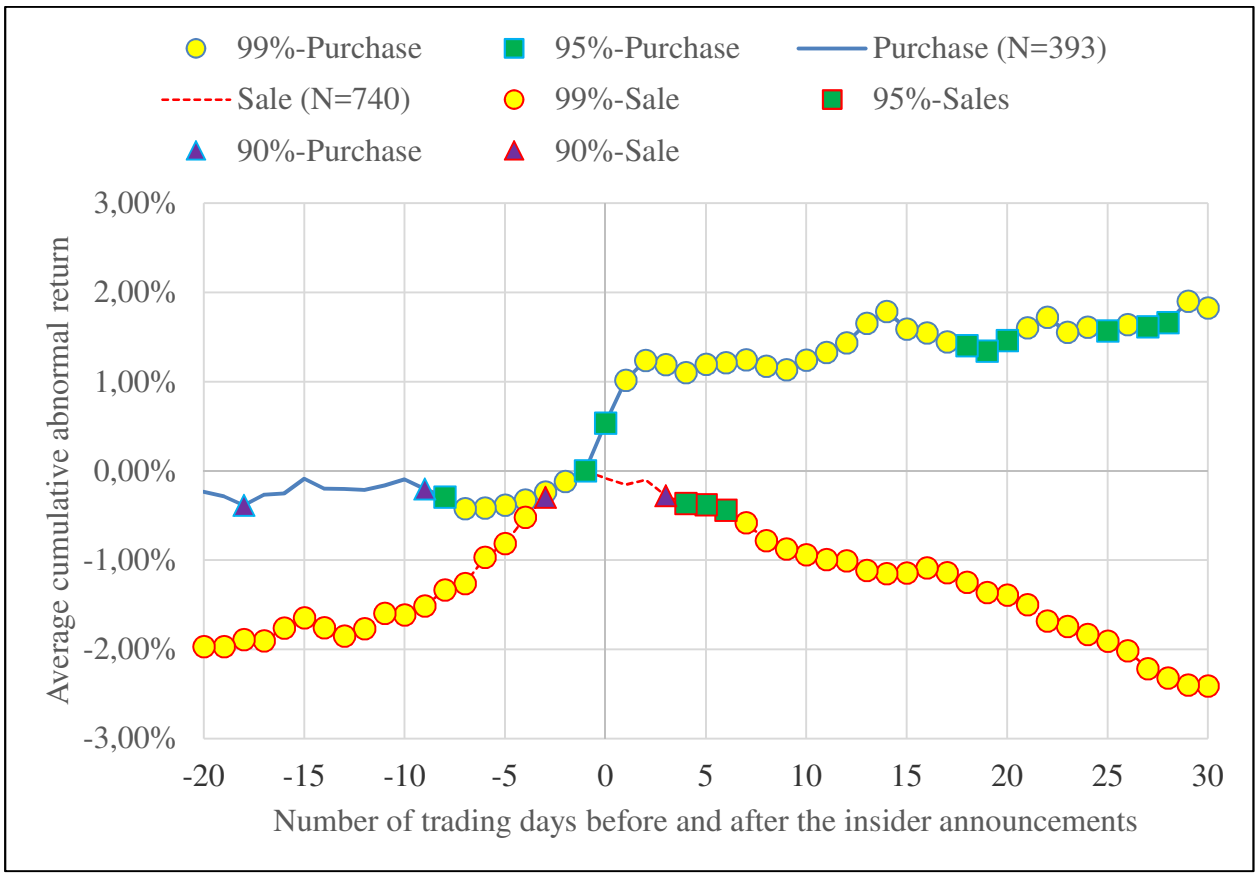

Figure 4. CAAR around all insider trade completion announcements

These graphs illustrate CAAR around all insider purchase and sale completion announcements. In the sample period, there are 370 purchases and 652 sales of insiders that are actually executed as expected with insider initial trade requests. The x axis represents the event window around the trade completion announcement date t=0. The y axis represents CAAR from the trade day to announcement date. We normalize the two curves to be zero at t= -1. The circles, squares and triangles represent the significance of 1%, 5% and 10%, respectively.

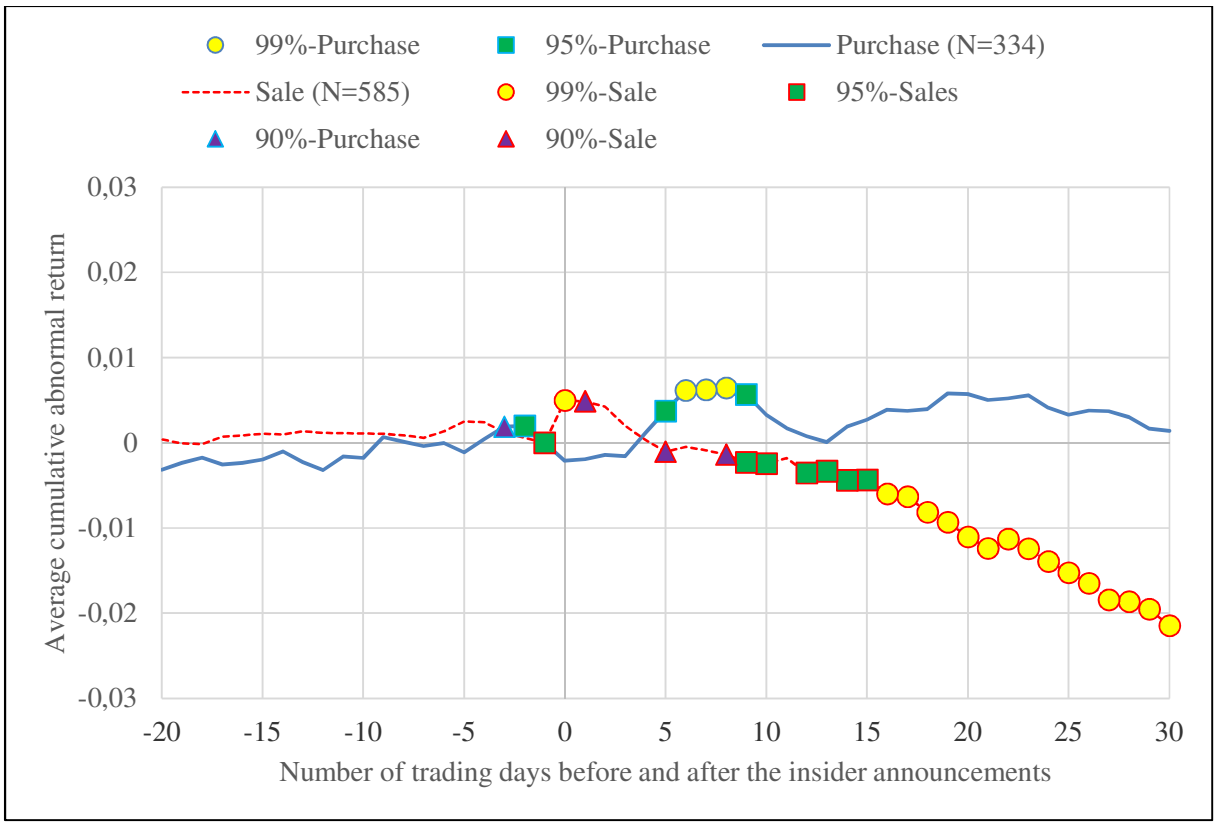

Figure 5. CAAR around all insider trade cancelation announcements

These graphs illustrate CAAR around all insider purchase and sale cancelation announcements. In the sample period, there are 82 purchases and 197 sales of insiders that are not executed as expected with insider initial trade requests. Insiders announce the trade cancelations at the end of the requested trading timeframe. The x axis represents the event window around the trade cancelation announcement date t=0. The y axis represents the CAAR from the trade day to announcement date. We normalize the two curves to be zero at t= -1. The circles, squares and triangles represent the significance of 1%, 5% and 10%, respectively.

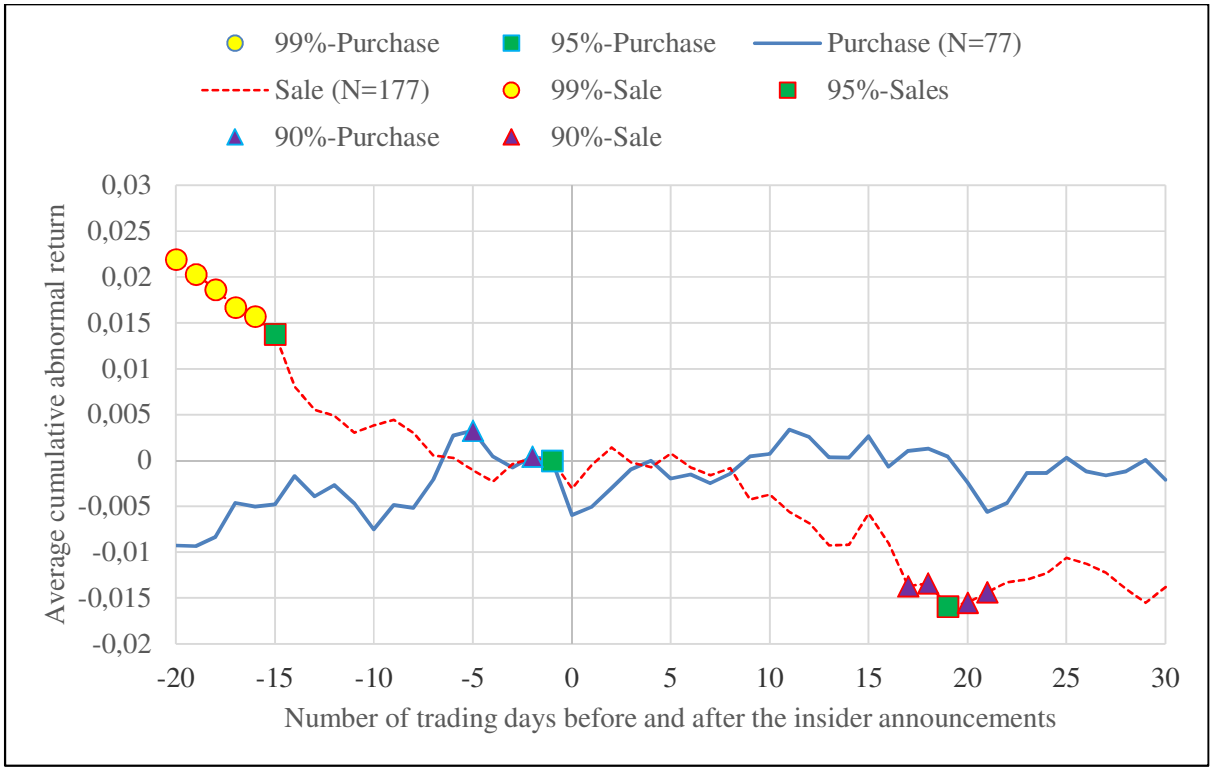

Table 1. Summary of major insider trading regulations in Vietnam

This table represents the overall keynotes of insider trading regulation in Vietnam

Major shareholders			
Date	**Act**	**Article**	**Content**
Jun. 2006	Securities Laws 2006	No. 6	Definition of major shareholders: directly or indirectly hold more than 5% ownership of the companies.
		No. 29	- Major holding reports within 7 days after becoming/ no longer being major shareholder; - Report on 1% change threshold in ownership within 7 days after trade executions
Apr. 2007	Circular 2007		Manual guidance of major holding reports
Top executives and other insiders			
Date	**Act - Articles**		**Content**
Jun. 2006	Securities Laws 2006	No. 33	Definition of top executives
		No. 34	Definition of other insiders
All insiders			
Date	**Act - Articles**		**Content**
Apr. 2007	Circular 2007		- First foundation of insider trading disclosures.
	(22/10/2007)		- Notify to SSC, SE in 1 trading days prior to the trades;
Jan. 2010	Circular 2010		- Modifications of insider trading process.
	(25/03/2010)		- Notify to SSC, SE in 3 trading days prior to the trades; - Report the trade results within 3 days; - Request trading time frame not exceeding 2 month period; - Public announcement of insider trading requests; - Report the reasons of not executing the trades within 3 trading days after the expiration of requested trading time frame
Apr. 2012	Circular 2012		- Modifications of insider trading process.
	(20/07/2012)		- Reduce the requested trading time frame to 30 trading days
Jun. 2009	Criminal Laws 2009 (19/06/2009)	No. 181	Penalties for illegal insider trading

Table 2. Descriptive statistics of observations

This table presents the descriptive statistics of insider trading in the sample period. At the beginning of each year, the firm size is computed and assigned to corresponding groups: Lowest 1/3, middle 1/3 and highest 1/3.

Items	**Purchases**	**Sales**	**All transactions**	**Purchases to sales ratio**
Group A. All trade requests				
Number of trade requests	452	849	1,301	53%
Number of company-days	393	740	1,133	53%
Average number of shares per transaction	2,718,838	2,338,163		116%
Breakdown to Insiders type				
Major shareholders	270	316	586	85%
Top executives	149	358	507	42%
Other insiders	33	175	208	19%
Breakdown to Firm size				
Small cap (Lowest 1/3)	186	261	447	71%
Mid cap (Middle 1/3)	133	307	440	43%
Big cap (Highest 1/3)	133	281	414	47%
Group B. All actual trades				
Actual trades	370	652	1022	57%
Actual trades to trade requests	82%	77%	79%	
Average number of shares per transaction	2,059,172	2,330,667		88%
Number of company-days	334	585	919	57%
Group C. All actual non-trades				
Actual non-trades	82	197	279	42%
Actual non-trades to trade requests	18%	23%	21%	
Number of company-days	77	177	254	44%

Table 3. CAAR around insider purchase request announcements with different firm sizes

This table shows CAAR around insider purchase request announcements by firm size on different event windows: pre-event window of 20 trading days, at the event date, post-event window of 3, 20 and 30 trading days, post-event from trading day 3 to trading day 30. Firm size represents the market capitalization of the stock. Firm sizes are calculated at the beginning of each year and assigned to each insider requests based on the year occurring. We categorize the firm sizes as small-cap, mid-cap, and big-cap firms corresponding to lowest 1/3, middle 1/3 and highest 1/3 of market size quantiles. (*), (**) and (***) denote significance level of 10%, 5% and 1% respectively.

Firm size	**Event window**	**Purchase requests**					
		Top executives			**Major shareholders**		
		CAAR	**t-stat**	**N**	**CAAR**	**t-stat**	**N**
Small cap	Post-event (0,30)	2.73%	1.859*	74	0.95%	0.727	75
	Post-event (0,20)	1.66%	1.371		1.21%	1.127	
	Post-event (4, 30)	1.57%	1.147		-0.47%	-0.387	
	Post-event (0, 3)	1.16%	2.198**		1.42%	3.031***	
	Event date	0.28%	1.050		0.16%	0.667	
	Pre-event (-20,-1)	0.90%	0.759		2.18%	2.076**	
Mid cap	Post-event (0,30)	1.44%	0.769	29	1.96%	1.611	76
	Post-event (0,20)	-0.54%	-0.348		1.83%	1.824*	
	Post-event (4, 30)	1.46%	0.832		1.10%	0.964	
	Post-event (0, 3)	-0.02%	-0.022		0.87%	1.979**	
	Event date	0.74%	2.206**		-0.03%	-0.137	
	Pre-event (-20,-1)	-1.40%	-0.928		0.76%	0.777	
Big cap	Post-event (0,30)	2.39%	1.276	22	0.96%	1.086	87
	Post-event (0,20)	1.62%	1.051		0.55%	0.755	
	Post-event (4, 30)	0.77%	0.438		0.42%	0.506	
	Post-event (0, 3)	1.62%	2.414**		0.54%	1.71*	
	Event date	0.04%	0.111		0.23%	1.418	
	Pre-event (-20,-1)	-3.21%	-2.133***		-0.26%	-0.366	
All	Post-event (0,30)	2.37%	2.31**	125	1.28%	1.959**	238
	Post-event (0,20)	1.14%	1.351		1.17%	2.174**	
	Post-event (4, 30)	1.40%	1.465*		0.35%	0.582	
	Post-event (0, 3)	0.97%	2.627***		0.92%	3.94***	
	Event date	0.34%	1.86*		0.12%	1.044	
	Pre-event (-20,-1)	-0.36%	-0.435		0.96%	1.78*	

Table 4. CAAR around insider sale request announcements with different firm sizes

This table shows CAAR around insider sale request announcements by firm size on different event windows: pre-event window of 20 trading days, at the event date, post-event window of 3, 20 and 30 trading days, post-event from trading day 3 to trading day 30. The firm sizes represent market capitalization of the companies. Firm sizes are calculated at the beginning of each year and assigned to each insider requests based on the year occurring. We categorize the firm sizes as small-cap, mid-cap, and big-cap firms corresponding to lowest 1/3, middle 1/3 and highest 1/3 of market size quantiles. (*), (**) and (***) denote significance level of 10%, 5% and 1% respectively.

Firm size	**Event window**	**Sale requests**					
		Top executives			**Major shareholders**		
		CAAR	**t-stat**	**N**	**CAAR**	**t-stat**	**N**
Small cap	Post-event (0,30)	1.60%	1.276	106	-3.70%	-2.803***	83
	Post-event (0,20)	1.37%	1.327		-1.84%	-1.693*	
	Post-event (4, 30)	1.41%	1.209		-3.90%	-3.17***	
	Post-event (0, 3)	0.18%	0.411		0.21%	0.433	
	Event date	0.34%	1.496		-0.20%	-0.850	
	Pre-event (-20,-1)	3.14%	3.124***		2.23%	2.107**	
Mid cap	Post-event (0,30)	-6.21%	-6.45***	124	-2.66%	-2.232**	82
	Post-event (0,20)	-4.43%	-5.592***		-1.65%	-1.681*	
	Post-event (4, 30)	-5.76%	-6.413***		-1.97%	-1.774*	
	Post-event (0, 3)	-0.45%	-1.293		-0.68%	-1.603*	
	Event date	-0.06%	-0.371		-0.01%	-0.031	
	Pre-event (-20,-1)	2.09%	2.696***		0.34%	0.359	
Big cap	Post-event (0,30)	-4.49%	-4.189***	80	-0.79%	-0.859	102
	Post-event (0,20)	-2.45%	-2.78***		-0.19%	-0.246	
	Post-event (4, 30)	-3.86%	-3.859***		-0.57%	-0.662	
	Post-event (0, 3)	-0.63%	-1.638		-0.22%	-0.671	
	Event date	-0.05%	-0.285		-0.24%	-1.450	
	Pre-event (-20,-1)	1.25%	1.455		2.29%	3.112***	
All	Post-event (0,30)	-3.10%	-4.846***	310	-2.27%	-3.478***	267
	Post-event (0,20)	-1.94%	-3.686***		-1.15%	-2.141**	
	Post-event (4, 30)	-2.82%	-4.726***		-2.03%	-3.347***	
	Post-event (0, 3)	-0.28%	-1.213		-0.23%	-0.987	
	Event date	0.08%	0.656		-0.16%	-1.331	
	Pre-event (-20,-1)	2.23%	4.349***		1.67%	3.2***	

Table 5. Variables definition

This table defines the variables used in the cross-sectional regression. We exclude the insider trade requests from utility industry (*, 4% of total observations) to avoid perfect multi-collinearity.

Variable	Definition
Dependent variables	
CAR (0,30)	CAAR from the announcement date of trade requests to day 30 (one and a half month)
Explanatory variables - Dummy variables	
Insider positions	
Major Shareholders	Equal 1 if the trade requests are from major shareholders
Top executives	Equal 1 if the trade requests are from BOD
Supervisory Board	Equal 1 if the trade requests are from supervisory board
Law enforcement phases	
Phase 1: Before 25/3/10	Equal 1 if the trade requests are before 25-Mar-2010
Phase 2: 25/3/10-19/7/12	Equal 1 if the trade requests are from 25-Mar-2010 to 19-Jul-2012
Phase 3: After 19/7/2012	Equal 1 if the trade requests are from 19-Jul-2012 to 30-12-2015
Industry types (*)	Equal 1 corresponding to the firm industries of the trade. There are 7 industry dummy variables including consumer discretionary, consumer staples, financials, industrials, materials, energy, and information technology.
Other dummies	
Cluster	Equal 1 if insiders of the same companies submit the trade requests within the same week
Explanatory variables - Continuous variables	
Firm Size	Firm size is equal to log of market capitalization of the stock at the announcement date
Price to book ratio	Price to book ratio is equal to price to book ratio of the stock at the announcement date. The book values are collected at the beginning of each year.
Holding	Represents the stake of insiders prior to the trade requests. This variable is only available for top executives and major shareholders. Holding is equal to number of shares holding to total number of share outstanding.
Volume	Volume is equal to the volume of trade requests to total number of share outstanding.

Table 6. Descriptive statistic of the variables in the cross-sectional regression

Descriptive statistic of the variables					
Variable	**Mean**	**St.dev**	**Min**	**Median**	**Max**
Log Firm Size	6.57033	0.56469	4.84323	6.52980	8.14627
Price to Book	3.89842	3.59106	0.10523	2.84572	24.53284
Holding	0.03820	0.10153	0	0.00135	1.96983
Volume	0.01171	0.02792	1.43607E-06	0.00151	0.30353
	Prop.				
Cluster	0.25				

Correlation matrix				
	Firm Size	**Price to Book**	**Holding**	**Volume**
Firm Size	1			
Price to Book	0.50637	1		
Holding	-0.11769	-0.02401	1	
Volume	-0.16493	0.00519	0.35278	1

Table 7. Cross-sectional regression results with CAR in 30 trading days following the trade requests

This table represents the heteroskedasticity-consistent cross-sectional regression results with as dependent variables CAR in 30 trading days following the trade requests. *, ** and *** denote the significance level of 10%, 5% and 1% respectively.

Dependent variable: CAR (0,30)						
Independent variables	**Purchase requests**			**Sale requests**		
	Coefficient	**t-stat**	**N**	**Coefficient**	**t-stat**	**N**
Intercept	0.218	2.135**		0.194	2.669**	
I. Continuous variables						
Firm size	-0.027	-1.783*		-0.034	-3.171***	
Price to book ratio	-0.034	-2.748***		-0.019	-2.554***	
Holding	0.094	1.542*		-0.020	-0.334	
Volume	-0.387	-1.629*		0.252	1.177	
II. Dummy variables						
1. Insider types						
Major Shareholders	0.043	1.617*	238	-0.006	-0.454	267
Top executives	0.029	1.062	118	-0.021	-1.693*	244
2. Cluster	0.002	0.111	64	-0.004	-0.404	215
3. Regulation regimes						
Mar 15,2010 - Jul 18, 2012	-0.036	-0.965	170	0.008	0.455	266
Jul 19, 2012 - Dec 31, 2015	-0.058	-1.512	210	-0.006	-0.324	415
4. Industry						
Consumer Discretionary	0.064	1.597*	28	0.039	1.211	59
Consumer Staples	0.001	0.039	90	0.016	0.541	171
Financials	0.030	0.940	96	0.067	2.326*	175
Industrials	0.022	0.700	79	0.004	0.136	149
Materials	0.039	1.185	46	0.067	2.276*	77
Energy	-0.007	-0.138	10	0.024	0.779	60
Information Technology	0.004	0.107	21	0.028	0.764	26
N	393			740		
Adjusted R square	0.045026			0.046433		
F statistic	2.087***			3.117***		