Capital Market Reaction to Share Repurchase Announcements: An Empirical Test on Shanghai Stock Exchange (SSE)

BY

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Abstract

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This paper designs an event study to empirically test if there is an abnormal return aroused by share repurchase announcements in Chinese capital market. By using the Market Model, we get the data of abnormal returns, cumulative abnormal returns, which are used for 11-day and 21-day windows testing. After the t-tests and the bootstrap tests, the results indicate that there exists a positive relationship between the stock buybacks and the abnormal return surrounding the repurchase announcement date.

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Chapter 1

Introduction

1.1 Purpose of Study

A long-standing question in Finance is how capital-markets react to firms' share repurchase announcements. This paper focuses on the firms listed on the Shanghai Stock Exchange (SSE), and designs an event study to empirically test the research question. The test results are then compared with the findings from other stock markets. The results may be helpful for individual and institutional investors in making related decisions on their positions in SSE stocks.

1.2 Background

Share repurchase refers to an event that a firm buys back its own shares from existing shareholders in the open market using cash. This process involves accounting adjustments in a firm's balance sheet and cash flow statement. The methods to achieve repurchases include open market operation, direct negotiation, fixed price tender and Dutch auction.

Shanghai Stock Exchange (SSE) is one of two Chinese mainland stock exchanges, founded on Nov 26th, 1990. The other is Shenzhen Stock Exchange (SZSE). SSE is a membership institution directly governed by the China Securities Regulatory Commission (CSRC). By the end of 2012, there

were 954 listed stocks on SSE with a total market capitalization of RMB 15,869.844 billion, and free-float market capitalization of RMB 13,429.445 billion.

Share repurchase was introduced into China in 1990. However, it is still new to Chinese stock market. Between the period 2005 and 2012, less than 100 listed firms on the SSE have announced and completed stock repurchase agreements. For the laws and rules involved, *Companies Law of the People's Republic of China (2005)* cites the restrictions on share repurchases. The Article 143 allows a firm to reacquire its own stocks in four situations only, i.e. 1) reducing its registered capital, 2) merging with another company that holds its shares, 3) rewarding the staff and workers of the company with its shares, or 4) a shareholder requesting the company to purchase his shares because he holds objections to the resolution on the merger or division of the company adopted by the shareholders general assembly.

1.3 Need for Study

Numerous studies shed light on the rationales behind a firm's share repurchase activities. The motivations can be explained by many hypotheses including1) Undervaluation Signaling Hypothesis, i.e. managers use repurchase announcement as a signal that they are convinced the firm has a good prospect and its stocks are undervalued (Asquith and Mullins, 1986); 2) Leverage Ratio Hypothesis, i.e. a firm increases financial leverage through

share repurchases in order to optimize the capital structure (Bagwell and Shoven, 1988; Hovakimian, Opler and Titman, 2001); 3) Free Cash Flow Hypothesis, i.e. free cash flow hypothesis that excess cash flow increases a company's agency cost (Jensen, 1986); 4) Earnings Per Share (EPS) Hypothesis, i.e. a firm achieves the increase in earnings per share through share repurchases, so as to enhance the value of its stock price (Koretz and Mehring, 2004; and Dobbs and Rehm, 2005); 5) Takeover Deterrence Hypothesis, i.e. a company protects itself from a hostile takeover through share repurchases (Dann and DeAngelo, 1983; Bradley and Wakeman, 1983); 6) Management Incentive Hypothesis, i.e. when managers hold stock options, a firm can encourage managers by using stock buybacks to maintain or raise stock price (Fenn and Liang, 1998; Jolls, 1998; and Weisbenner, 1998).

Scholars have outlined four reasons for Chinese publicly traded companies' decision to repurchase stocks: 1) to reduce state-owned shares in order to optimize capital structure, 2) to be consistent with the share reform required by the authorities, 3) to maintain and enhance the company's stock value, 4) to achieve equity incentive plan inside a firm. For the first, third and the last reasons, they are in line with signaling hypothesis, leverage ratio hypothesis and management incentive hypothesis consistent separately.

According to Efficient Market Hypothesis (EMH), US market is semi-strong efficient; while Chinese market has been tested by many Chinese scholars as weak-form efficiency. Chinese stock market has lower degree on the speed of

prices adjustment to information and the accuracy with which prices adjust. Considered this, the time interval should be set appropriately for event and estimation window during the test.

1.4 Statement of problems

This paper examines whether an abnormal return exists around the share repurchase announcement date in Chinese stock market. The data used is available from SSE during the period of 2005 and the 1st half of 2013. The sample includes all observations available during the period above, with 37 firms and 40 repurchase events in total.

This paper is composed of six chapters organized as follows: 1) Chapter One makes a general introduction and brief discussions on share repurchase; 2) Chapter Two involves a literature review on the development of share repurchase theories; 3) Chapter Three explains the methodology used for testing; 4) Chapter Four displays and analyze the results of the test; 5) Finally, Chapter Five and Six contains the conclusions and recommendations for further study.

Chapter 2

Literature review

A firm may repurchase stocks for several reasons. It is therefore important to consider all the motives when investigating market reaction to a firm's stock buyback. This chapter will first cover the motivation hypotheses in detail, and then analyze the stock repurchase motives for Chinese firms.

2.1 Motivation hypotheses

Many academic researchers have studied the effects of stock repurchase based on one or several motivation hypotheses. With the development of capital market, the main reason for a firm's stock buyback has been changed. Stock repurchase hypothesis theory has also experienced a process of development. So far, six hypotheses have been documented and carried out for empirical research.

Undervaluation Signaling Hypothesis

Undervaluation Signaling Hypothesis asserts that managers use repurchase announcement as a signal that they are convinced the firm has a good prospect and its stocks are undervalued (Asquith and Mullins 1986). This hypothesis is based on the information asymmetry premise that insiders have more information about a firm's future prospects than shareholders. Asymmetric information makes it difficult for shareholders to make rational

decisions. When insiders believe that the firm is undervalued, they use stock buyback as a signal to the market and investors. Under this hypothesis, the market should react positively to stock repurchase announcements and the stock price adjustment accurately reflects the mispricing. (Dann, 1981; Vermaelen, 1981; and Comment and Jarrell, 1991).

Numerous researches have detected short-term abnormal return after announcements of stock repurchase. Dann (1980) and Vermaelen (1981) found that 1) the average buyback price of fixed price offers exceeded 23% of the stock price before the repurchase announcement. After the announcement, the company's share price rose 16% on average; 2) the abnormal return of ordinary bonds and preferred shares was 0; 3) convertible bonds had a significant positive return.

Comment and Jarrell (1991) studied fixed price tender, Dutch auction and open market operation, three ways of market repurchase. They found that 1) after the fixed price offer announcement, the company’s stock price had 11% abnormal return on average; while for Dutch auction and open market repurchase, the company’s stock price had an average abnormal return of 8% and 2% respectively; 2) after the open market buyback was announced, the abnormal return of the stock price had no relationship with the market return, while it was negatively correlated to the return of the stock price before repurchase announcement. Since managers face risks in different degrees (higher the premium paid, the greater the risk management), fixed price offer

had the strongest signaling effect while open market repurchase had the weakest. Therefore, the market reacted the strongest to the fixed price offer. Comment and Jarrell also cited that signaling hypothesis is not the only motive for share repurchases, because if the company tried to pass the undervaluation signal to the market, it would choose fixed price offer buyback. However, the majority of companies used open market and Dutch auction repurchase instead. The signal transmission capacity of the two buyback methods was the weakest.

Leverage Ratio Hypothesis

Leverage Ratio Hypothesis is developed on the premise that a firm increases financial leverage through share repurchases in order to optimize the capital structure. According to the traditional capital structure theory, within a certain range, the increase in the proportion of debt will reduce a company's cost of capital, thus resulting in an increase in the company's market value. The modified modern capital structure theory, also called Modigliani–Miller (MM) Theorem implies that a company can increase its market value by using financial leverage. To increase financial leverage by debt financing, a company can get the benefits of tax deduction and profitability improvement.

Masulis (1980) categorized the 138 buyback samples into two groups by debt ratio more than 50% or less than 50%. He found that the group with larger debt ratio had higher average return of 21.9% surrounding repurchase

announcement date, while the group with lower debt ratio had only 17.1% return on average. The results were consistent with the leverage ratio hypothesis.

Bagwell and Shoven (1988), Hovakimian, Opler and Titman (2001), Lie (2002) as well as Hovakimian (2004) empirically studied and all announced the positive relationship between stock repurchase profitability and leverage deficit. In their researches, companies tended to have debt ratios lower than the target level, so that they could achieve the optimization of capital structure by using stock repurchases.

Free Cash Flow Hypothesis

Jensen (1986) proposed free cash flow hypothesis that excess cash flow increases a company's agency cost. That is, managers tend to benefit themselves from investing these free cash in suboptimal investment projects or inefficient acquisition activities, so they will take less investment risk or control business in larger scope. To reduce the agency cost caused by free cash flow, managers should return excess cash to shareholders, and share buybacks is considered to be an effective way.

Consistent with Jensen, Vafeas and Joy (1995), Fenn and Liang (1997), and Nohel and Tarhen (1998) pointed out that open market share repurchases can reduce the agency costs generated by the free cash flow.

Evidences also show that if a firm has strong shareholder right, excess cash

is more likely to be sent out to shareholders by repurchases rather than be retained inside the firm by managers for own benefits; vice versa Jiraporn(2006).

Earnings Per Share Hypothesis

Earnings Per Share (EPS) Hypothesis is that a firm achieves the increase in earnings per share through share repurchases, so as to enhance the value of its stock price. Koretz and Mehring (2004), Dobbs and Rehm (2005) did empirical studies and announced that if profits remain unchanged, repurchase will push up earning per share by reducing the number of shares outstanding; if profits increase, earning per share will increase more.

However, there exist two drawbacks of EPS hypothesis: 1) although stock repurchase reduces outstanding shares, it causes the decrease in total assets of a company; 2) when EPS increases by stock repurchase, a company's financial leverage also Increases, so that the company's financial risk rises to a higher level.

Takeover Deterrence Hypothesis

Takeover Deterrence Hypothesis is that a company protects itself from a hostile takeover through share repurchases, which can reduce the equity and raise the stock price. In the Mid-1980s, the U.S. government loosed the market regulation. This led to the prevailing of hostile takeovers between companies. Dann and DeAngelo (1983), Bradley and Wakeman (1983)

analyzed the reason behind a company's private repurchase agreement, and found that reasons the company's share price fell by an average of 4% following repurchase announcement, that is, shareholders who did not participate the repurchase got the average loss of 4%. The higher premium a firm paid, the more the stock price declined after buyback declaration. In comparison, if a company repurchase stock by market price, there is no significant change of the price after buyback announcement.

Management Incentive Hypothesis

Management Incentive Hypothesis is that when managers hold stock options, a firm can encourage managers by using stock buybacks to maintain or raise stock price. Fenn and Liang (1998), Jolls (1998) and Weisbenner (1998) proposed the point to support the hypothesis that compared with dividend distribution, stock repurchase will not dilute the per-share value of a firm.

Khael (2002) studied the stock repurchases based on this hypothesis. He claimed that the wide use of employee stock option changed a firm's compensation system, and affected its stock buyback decisions. This is in line with the increase in stock repurchases in 1990s.

2.2 Chinese firms' stock buyback motives

Share repurchase was introduced into China in 1990s. The first successful case is that Da Yuyuan Inc. mergered Xiao Yuyuan Inc. by share repurchase in 1992. Besides, several cases before 1990 are involved with repurchase for

different purposes, for examples, Lujiazui signed the agreement of repurchasing state-owned shares for the purpose of issuing B shares, and Xiamen International Trade Inc. bought back part of its stocks to reduce its registered capital. Until 1999 when Yuntianhua and Shennenggufen successful repurchased some state-owned shares, shares repurchase firstly aroused widespread concern in the market. However, Chinese firms were lack of enthusiasm in stock repurchase, due to constraints in *Company Law*, capital shortage and long-term bear market at that time.

The milestone is that the share reform began to be implemented in 2005. Series of laws and rules were set up or modified in line with the reform. For an example, Article 143 in *Companies Law of the People's Republic of China (2005)* cites that a firm can reacquire its own stocks under four situations, i.e. 1) reducing its registered capital, 2) merging with another company that holds its shares, 3) rewarding the staff and workers of the company with its shares, or 4) a shareholder requesting the company to purchase his shares because he holds objections to the resolution on the merger or division of the company adopted by the shareholders general assembly. The policy of share reform boomed the stock repurchases between 2005 and 2007; among them, the main motivations are reducing state-owned shares and completing the share reform inside a firm.

In October2008, under the extremely inactive stock market background, China Securities Regulatory Commission issued the new stock repurchase

rules to remove the license constraints in stock repurchase so that open market operation can be executed. This further improved the country's stock buyback system, and effectively promoted the stock repurchase development. Since then, stock repurchases have increased significantly, and reached another peak. During this period, the main motivation tends to be multiple and diversified.

Scholars have outlined four reasons for Chinese publicly traded companies' decision to repurchase stocks: 1) to reduce state-owned shares in order to optimize capital structure, 2) to be consistent with the share reform required by the authorities, 3) to maintain and enhance the company's stock value, 4) to achieve equity incentive plan inside a firm. For the first, third and the last reasons, they are in line with signaling hypothesis, leverage ratio hypothesis and management incentive hypothesis consistent respectively. The motives of part of sample firms studied in this paper are displayed in the following table:

Table 1 Sample Firms Repurchase Motives

Motives	Firms
reduce state-owned shares	GACO(600523), SOPO(600746), GWE(600765), zhzj(600192), Shenma(600810), CHANGHONG(600839), Longjian(600853)

implement the share reform	GDB(600867), wwgf(600063), AGSW(600199), CFLD(600340), Wolong EC(600584), Furi(600203), LOBO(600876)
enhance stock value	CSEC(601088), CSCEC(601668), JINDA(600577), Yonyou(600588), Shenergy (600642), JAC(600418), KINGFA(600109), Joincare(600380)
achieve equity incentive plan	Qibin(601636), Jiumu(601566), KANION(600557), YiBai(600594), XY(601799), Baosteel(600019)

2.3 Summary

The six motivation hypotheses covered in this chapter are not mutually exclusive. Numerous cases indicate that companies may execute share repurchases for more than one purpose (Guffey and Schneider 2004, Bozanic 2010). Therefore, using only one hypothesis theory to explain the motivation of stock repurchases is almost impossible; in other words, single hypothesis cannot explain all the effects of buybacks.

In Chinese stock market, share repurchase is still new to the publicly traded firms and investors. Between the period 2005 and 2010, only 75 listed firms on SSE have announced stock repurchase, posted by China Securities Regulatory Commission. After the share reform achieved, it tends to be a

significant tool to improve capital structure. Now share repurchase is playing a more important role in the area of financial management and corporate governance.

Chapter 3

Methodology

3.1 Introduction to Research Design

An event study has been designed to empirically test whether share repurchase announcements are value enhancing or value destroying activities. If on average market reacts positively to repurchase announcements, then we can reasonably conclude that share repurchases are value enhancing activities; vice versa.

The most important assumption for this study is that Chinese stock market is weak-form efficient based on EMH, i.e., compared with US market, Chinese stock market has lower degree on the speed of prices adjustment to information and the accuracy with which prices adjust. As a result, a long period of time should be selected for estimation window. Except the market efficiency assumption, two more assumptions are set to simplify our study. One of them is only one event happening during announcement period. Since firms may make more than one announcement to complete one share repurchase event, we only focus on market reaction to the first announcement. The other assumption is that non-public materials are not available in advance, so that insiders would have no chance to take advantage of them.

3.2 Data and Sample

All the data for testing are collected from reliable sources - Shanghai Stock Exchange (SSE) statistics and Da Zhi Hui database. Da Zhi Hui, one of the most popular software to Chinese investors, maintains substantial historical transaction data.

For the sample, all the firms listed on SSE which announced stock repurchases during 2005 and 1st half of 2013 events are selected excluding four situations: 1) merger-related repurchases, 2) debts restructuring repurchases, 3) B shares repurchases, and 4) not-complete-yet repurchases. In total, 37 firms with 40 share repurchase announcements are identified and added in the sample. Each firm's historical returns surrounding announcements are downloaded from Da Zhi Hui database.

3.3 Measurement Procedure

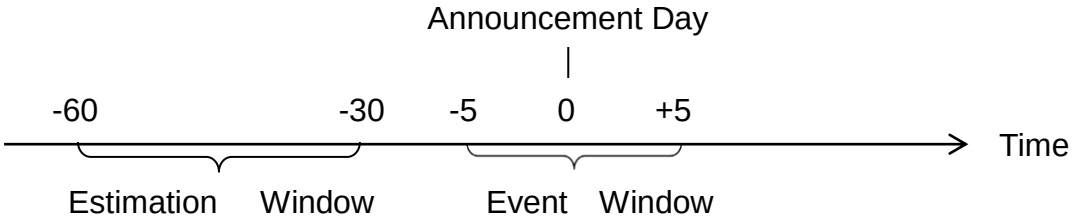
To do the study, steps listed below need to be followed.

Step 1: Preparing the data, estimation and event window.

Identifying events and involved event periods are the first step. As shown in the figure below, the repurchase announcement date is set as t=0; the days before t=0 are identified minus while the days after are identified positive. Daily returns of the sample are collected in two different periods. The first period is Event Window, from t=-5 to t=+5, totally 11 days surrounding the

share repurchase announcement. The second period is Estimation Window, from t=-60 to t=-30, used to forecast the normal performance in Event Window; Estimation Window is a clean period, where we assume that no relevant factors would affect the target event.

Figure 1 Time Period



Step 2: Estimating normal performance using a Market Model.

The daily stock return and the daily market return are prepared for the Market Model and calculated as follows:

$$R_{i,t} = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}}$$

$$R_{m,t} = \frac{P_{m,t} - P_{m,t-1}}{P_{m,t-1}}$$

Where:

$P_{i,t}$ is the close price of stock *i* at date *t.*

$P_{i,t-1}$ is the close price of stock *i* at date *t-1.*

$P_{m,t}$ is the close price of SSE Composite Index at date *t.*

$P_{m,t-1}$ is the close price of SSE Composite Index at date *t-1.*

Here, SSE Composite Index is used as the benchmark for the market return.

The Market Model establishes a linear relationship between a stock return and the market return. The *formula 3-1* is shown below:

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t} \qquad (3\text{-}1)$$

Where:

$R_{i,t}$ is the daily return of stock *i* at date *t.*

$R_{m,t}$ is the daily return of the market at date *t*; here, SSE Composite Index is used as the benchmark.

$\alpha_{i,t}$ is the interception of the regression model, or the constant term.

$\beta_{i,t}$ is the slope of the regression model.

$\varepsilon_{i,t}$ is the error term of stock *i* return at date *t.*

Step 3: Estimating the Abnormal and Cumulative Abnormal Returns.

The Abnormal Return (AR) is calculated by subtracting expected normal return from actual return. The *formula 3-2* is shown below:

$$AR_{i,t} = R_{i,t} - \widehat{R_{\iota,t}} \qquad (3\text{-}2)$$

where $\widehat{R_{\iota,t}}$ is the expected normal return estimated by the Market Model.

The Cumulative Abnormal Return (CAR) for a given period is the sum of the daily abnormal return. The *formula 3-3* is shown below:

$$CAR_i = \sum_{n=t}^{n} AR_{i,t} \qquad (3\text{-}3)$$

where n is the total number of the observed announcements in the sample;

here, n is 40.

The Average Abnormal Return (AAR) for a given period is the mean of the daily abnormal return. The *formula 3-4* is shown below:

$$AAR_i = \frac{1}{n} CAR_i = \frac{1}{n} \sum_{n=t}^{n} AR_{i,t} \qquad (3\text{-}4)$$

Step 4: Testing for significance.

T-test is used to detect the significance of the abnormal return caused by a stock repurchase announcement. To conduct a t-test, the null hypothesis and the alternative hypothesis are defined as follows:

1）The null hypothesis H_0 ： AAR_i= 0, the average abnormal return is equal to zero

2）The alternative hypothesis H_1 ： $AAR_i \neq 0$, the average abnormal return is not equal to zero

Step 5: Testing for significance of all events.

Bootstrap test is a z-test to see whether the abnormal return is significant for all events in the sample.

Chapter 4

Results and Analysis

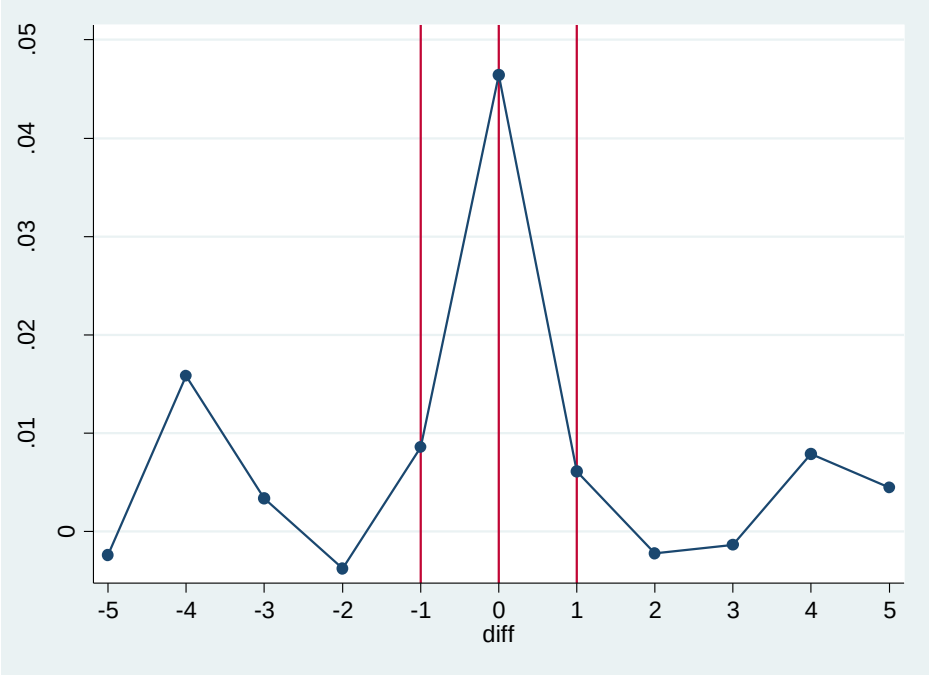
This chapter displays the regression results from STATA program. The results will answer the research question proposed at beginning, that how Chinese capital market reacts to share repurchase announcements.

As mentioned in Chapter 3, 37 firms listed on SSE with 40 stock buybacks events during 2005 and 1st half of 2013 are selected for the sample. The study focuses on the 11-day cumulative abnormal return surrounding the repurchase announcement. In comparison, this chapter will also show the 21-day cumulative abnormal return surrounding the event.

4.1 11-day Event Window

The Event Window chooses the daily returns during the period of 5 days before and after the target event (-5 to +5) for study. The average abnormal return (AAR) of each day is shown in *Graph1* below. We can find that AAR peeks at almost 0.05 on the announcement day, and its fluctuation range is from 0 to 0.05. This indicates that there is a positive abnormal return surrounding the announcement date.

Graph1 11-day AAR



The regression of the cumulative abnormal return (CAR) is run by STATA. The regression results and the t-test for the significance are as follows:

```
Linear regression                               Number of obs =        40
                                                F(  0,    39) =      0.00
                                                Prob > F      =         .
                                                R-squared     =    0.0000
                                                Root MSE      =    .18969
```

cumulative~n	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
_cons	.0831996	.0299923	2.77	0.008	.0225344	.1438648

As shown in the table above, the p-value is 0.008, much less than 5%. This indicates that at 5% significant level, we should reject the null hypothesis H_0 : AAR_i= 0; in other words, AAR is significant at 95% confidence level.

For the bootstrap test, the results are shown as below:

```
Bootstrap results                                 Number of obs      =        40
                                                  Replications       =      1000

      command:  bootcumret
     boottest:  r(cumret)
```

	Observed Coef.	Bootstrap Std. Err.	z	P>|z|	Normal-based [95% Conf.	Interval]
boottest	.0831996	.0304765	2.73	0.006	.0234667	.1429325

The bootstrap test is a z-test to see whether the abnormal return is significant for all events in this sample. Since the p-value from the table is only 0.006, the null hypothesis should be rejected. We can announce that at 5% significant level, the abnormal return for all events is significant in statistics.

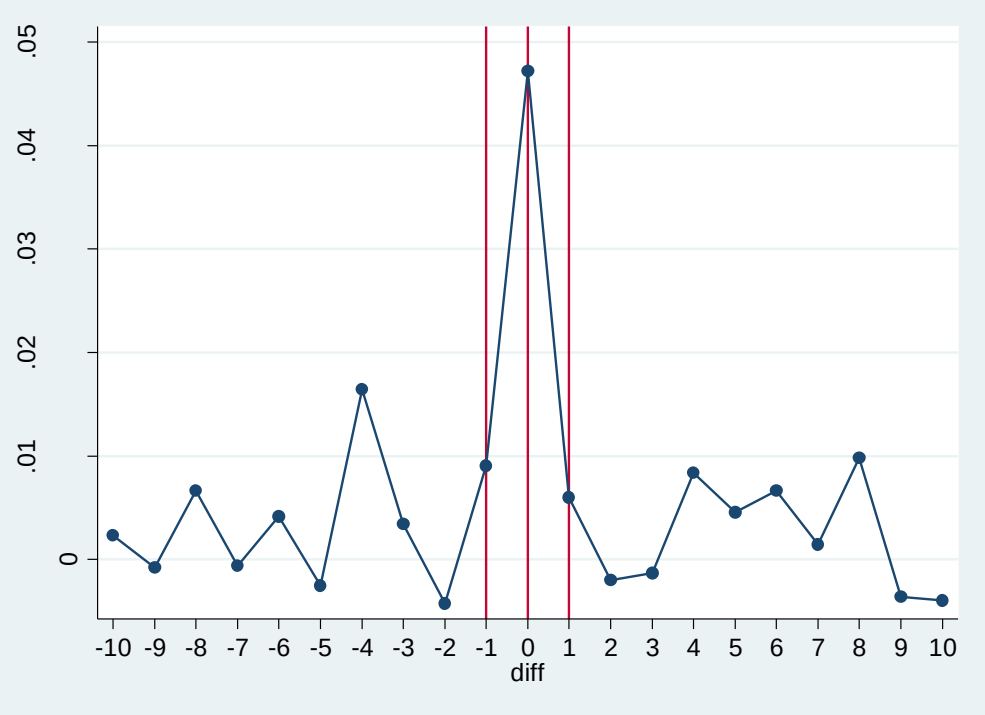
In conclusion, during the 11-day Event Window, there exists a positive abnormal return caused by the stock repurchase announcement.

4.1 21-day Event Window

Based on Efficient Market Hypotheses (EMH), Chinese stock market is weak-form efficient, i.e., it has low degree on the speed of prices adjustment to information and the accuracy with which prices adjust. To guarantee the accuracy of the results, a longer Event Window is chosen to make a comparison.

The 21-day Event Window is the period between 10 days before and 10 days after the repurchase announcement day (-10 to +10). The AAR is shown below in Graph 2:

Graph2 21-day AAR



Similar to the results from Graph1, AAR peeks at 0.05 on the announcement day. During the 3 days from -1 to +1, the AAR changes dramatically, while it fluctuates from 0 to 0.02 excluding the 3 days. A positive abnormal return is aroused by share repurchase announcements.

The results shown below from the CAR regression and the t-test for the 21-day Event Window strongly support the conclusions of the 11-day Event Window. It is obvious to see that p-value is only 0.014, which is much less than 0.05. As the result, we should reject the null hypothesis H_0 : AAR_i= 0; that is , the abnormal return is significant at 5% level. Note that here one stock missed some data for the 10 days' return after the announcement, and has been deleted during the regression process by STATA.

```
Linear regression                               Number of obs =      39
                                                F(  0,    38) =    0.00
                                                Prob > F      =       .
                                                R-squared     =  0.0000
                                                Root MSE      =  .26037
```

cumulative~n	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
_cons	.10688	.0416932	2.56	0.014	.0224766	.1912834

.

The bootstrap test below shows the same analysis conclusion as before:

```
Bootstrap results                               Number of obs      =        39
                                                Replications       =      1000

      command:  bootcumret
     boottest:  r(cumret)
```

	Observed Coef.	Bootstrap Std. Err.	z	P>|z|	Normal-based [95% Conf.	Interval]
boottest	.10688	.040616	2.63	0.009	.0272742	.1864858

We can see that the p-value from the table is 0.009, less than 0.05, so that the null hypothesis should be rejected. In conclusion, at 5% significant level, the abnormal return for all events in this sample is statistically significant.

In a brief, there exists a positive abnormal return caused by the stock repurchase announcement during the period of -10 day to +10 day.

The 21-day Event Window results prove the consistency with the conclusion from the 11-day Event Window results analysis.

Chapter 5

Conclusions

This paper designs an event study to empirically test if there is an abnormal return aroused by share repurchase announcements in Chinese capital market. It focuses on the performance of 40 stocks with buybacks during 2005-2013 through Shanghai Stock Exchange. The SSE composite index is used as the benchmark to judge the existence of abnormal return. To make a comparison, the event study sets two short-term event windows, i.e. 11-day window and 21-window.

During the testing process, we first calculate abnormal returns, cumulative abnormal returns and average abnormal returns by using the Market Model. These data present that there is a positive abnormal return surrounding stock buybacks announcements. Then, we need to test the significance of abnormal return by t-tests and bootstrap tests. The results show that the positive abnormal is statistically significant. Finally, we compare the testing results from 11-day window and 21-day window respectively. The conclusions are the same for these two short terms.

The test in this paper makes a contribution to the study on the effect of share repurchases. Unlike the most of formal studies which only focus on US market, this test select a new and developing market - Chinese market to make a comparison. What is more, the testing results provide another support for the

positive relationship between the stock buybacks and abnormal returns surrounding the repurchase announcement date. The conclusion is in line with the studies of Masulis (1980), Dann (1981), Vermaelen (1981, 1984), Lakonishok and Vermaelan (1990), Comment and Jarrell (1991), and Ikenberry , Lakonishok and Vermaelen (1995, 2000).

Chapter 6

Recommendations

With the further deregulation of open market operations after 2008 financial crisis, the occurrence of stock repurchases tends to meet another peek since the 1990. When doing the event study, we find an increasing number of Chinese companies have become familiar with the process of share buyback and tried to use it to achieve management targets. For examples, some firms used stock buyback in order to improve the financial leverage; some firms used this way to complete the equity incentive plan; and some firms used this way to signal the market that they are profitable in sequent years.

All of motivations mentioned above are to make a bright prospect for the companies themselves through stock buybacks. Thus, in theory, stock repurchases will benefit the market investors. Moreover, the testing results in this paper evidence that when firms buy back shares, there exists a positive abnormal return on the stock prices. The results recommend that investors in the market can get a short-term abnormal return by react positively to the stocks of firms which announce share repurchases.

Since share repurchase is still new to Chinese market, scholars and researchers need to collect more materials from the market, and keep further studies in the effects of share repurchase.

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Appendix A

Sample Companies and Related Share Repurchase Announcement Date

	Corporate Code	Corporate Name	Share Repurchase Announcement Date
1	600019	Baosteel	September 20, 2012
2	600039	SC	January 8, 2007
3	600063	wwgf	July 27, 2006
4	600121	ZCE	July 13, 2005
5	600143	JINGFA	July 29, 2013
6	600192	GWE	August 9, 2006
7	600199	AGSW	May 24, 2006
8	600203	Furi	August 23, 2006
9	600228	CJBL	May 11, 2006
10	600340	CFLD	June 12, 2006
11	600380	Joincare	February 17, 2011
12	600418	JAC	October 15, 2012
13	600521	huahai	January 6, 2006
14	600523	GACO	September 14, 2006
15	600557	KANION	May 17, 2012
16	600567	Shanying	August 26, 2005
17	600577	JINGDA	January 8, 2013
18	600580	WOLONG ELE	February 23, 2011
19	600588	Yonyou	December 21, 2012
20	600594	YiBai	August 22, 2012
21	600598	hacl	November 24, 2005
22	600605	huitong	August 3, 2006
23	600642	Shenergy	November 21, 2012
24	600727	lubei	July 21, 2006
25	600746	SOPO	June 22, 2006
26	600765	zhzj	June 20, 2006
27	600810	Shenma	March 13, 2006
28	600839	CHANGHONG	March 2, 2006
29	600853	LONGJIAN	October 13, 2006
30	600867	GDB	June 26, 2006
31	600869	S&P	March 24, 2009
32	600876	LOBO	March 16, 2007
33	601088	CSEC	June 8, 2009
34	601088	CSEC	June 21, 2010

35	601088	CSEC	May 30, 2011
36	601088	CSEC	June 24, 2013
37	601566	jiumu	May 20, 2013
38	601636	qibin	January 15, 2013
39	601668	CSCEC	June 3, 2013
40	601799	XY	November 27, 2012