Terms of Use

IS THE PROVISION OF MORE TIMELY EARNINGS INFORMATION GOOD FOR THE CHINESE STOCK MARKET?
EVIDENCE FROM INVESTOR REACTIONS TO MANAGEMENT EARNINGS FORECASTS

ZHAO SHUNAN

MPHIL

LINGNAN UNIVERSITY

2012

IS THE PROVISION OF MORE TIMELY EARNINGS INFORMATION GOOD FOR THE CHINESE STOCK MARKET?
EVIDENCE FROM INVESTOR REACTIONS TO MANAGEMENT EARNINGS FORECASTS

by

ZHAO Shunan

A thesis submitted in partial fulfillment

of the requirements of the Degree of

Master of Philosophy in Business

(Finance & Insurance)

Lingnan University

2012

ABSTRACT

Is the Provision of More Timely Earnings Information Good for the Chinese Stock Market?
Evidence from Investor Reactions to Management Earnings Forecasts

by

ZHAO Shunan

Master of Philosophy

Since 2001, publicly listed companies in China have been required by the Chinese Securities and Regulatory Commission (CSRC), the Shanghai Exchange and the Shenzhen Exchange to issue management earnings forecasts when they anticipate that earnings will be negative or change substantially from the previous period. This study examines the consequences and implications of this disclosure regulation. I find that the earnings forecasts are associated with an earlier incorporation of relevant earnings information into stock prices. However, I also find evidence that is consistent with the presence of overreactions to forecasts of extreme earnings changes. My study offers a cautionary note about the policy of mandating listed firms to issue earnings forecasts in a stock market that is dominated by individual investors.

DECLARATION

I declare that this is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.

(ZHAO Shunan)

May 3, 2012

CERTIFICATE OF APPROVAL OF THESIS

IS THE PROVISION OF MORE TIMELY EARNINGS INFORMATION GOOD FOR THE CHINESE STOCK MARKET?
EVIDENCE FROM INVESTOR REACTIONS TO MANAGEMENT EARNINGS FORECASTS

by

ZHAO SHUNAN

Master of Philosophy

Panel of Examiners:

Prof. Michael FIRTH (Chairman)

Dr. Hong ZOU (External Member)

Dr. Man-lai WONG (Internal Member)

Dr. Yuanyuan ZHANG (Internal Member)

Supervisor:

Dr. Man-lai WONG

Approved for the Senate:

Prof. Jesús SEADE
Chairman, Postgraduate Studies Committee

19 SEP 2012
Date

TABLE OF CONTENTS

ACKNOWLEDGEMENT

I sincerely acknowledge my supervisor, Dr. Man-lai (Sonia) Wong and Prof. Michael Firth, who provide me inspiring ideas and valuable advices with extraordinary patience and consistent encouragement during all the stages of my MPhil studies. Without their strong support, my thesis cannot have been the present form. I would like to also express my gratitude to Dr. Yuanyuan Zhang, Prof. Dean Tjosvold, Dr. Joseph Cheng, and Dr. Jin Gao for all the help they provided to me during the last two years. Furthermore, I wish to extend my appreciation to all the seminar participants at Lingnan University for their valuable comments on my research. Finally, I want to thank the staff at the Finance and Insurance Department, especially Ms Clara Hui, and all my dear friends and my family for your support all the time.

Is the Provision of More Timely Earnings Information Good for the Chinese Stock Market?
Evidence from Investor Reactions to Management Earnings Forecasts

Chapter 1. Introduction

My thesis examines the reactions of investors to the issuance of management earnings forecasts in the Chinese stock market. A management earnings forecast is a managerial disclosure that estimates the forthcoming earnings information of a specific firm. If an earnings forecast contains information about a firm's future earnings and market participants are able to trade on this information without suffering from cognitive biases, an earnings forecast is able to reduce information asymmetry between insiders and outsiders and improve stock market efficiency by allowing inside information to be incorporated into stock prices earlier (Hirst et al. 2008; Healy and Palepu 2001). However, recent studies on corporate disclosures suggests that more timely disclosure of corporate information can also lead to increased fluctuations in stock prices due to the presence of speculative activities and cognitive biases on the part of investors (Botosan and Plumlee 2002; Smith 2010).

While investor reactions to management earnings forecasts in mature markets have been the focus of intensive scholarly investigation (Waymire 1984; Pownall et al. 1993; Kasznik and Lev 1995; Tawatnuntachai and Yaman 2007), there is very little evidence that pertains to emerging stock markets. My study helps fill this gap in the literature by empirically examining how investors react to management earnings forecasts in the biggest emerging market -- China. The research is motivated by the

fact that there are significant differences between China and more mature markets in terms of the information environment and investor clienteles. The information environment of the Chinese stock market is weak despite the adoption of the US-style and European-style accounting, auditing, and governance standards (Piotroski and Wong 2011; Gul, Kim, and Qin 2010). The weak information environment is the result of a poor legal framework that offers little protection to minority investors (Jiang et al. 2010; Liu and Lu 2007), the presence of an underdeveloped financial intermediary sector, and the absence of a free and independent public media (Bushman et al. 2004; Piotroski and Wong, 2011).

Consistent with a weak information environment, Piotroski, Wong, and Zhang (2010) found that the negative skewness in daily excess return is significantly greater than the global average due to the insufficient release of information about bad outcomes. Furthermore, stock prices in China exhibit strong momentum effects because of the delayed impounding of firm-specific information or stock price manipulation (Kang, Liu, and Ni 2002; Naughton, Truong, and Veeraraghavan 2008; He and Su 2009).

Both the Shanghai Exchange and the Shenzhen Exchange require Chinese listed companies to issue earnings forecasts if managers believe there is likely to be a loss or a big change in profits. However, previous studies from behavioral finance suggest that the provision of management earnings forecasts may not necessarily be able to reduce information asymmetry and promote the efficiency of the stock market. In a weak information environment where firm-specific information is scarce, the issuance of management earnings forecasts can easily capture the attention of investors. To the extent that the earnings forecasts dominate shareholders' attention spans due to the scarcity of competing and alternative information, the provision of

earnings forecasts can lead to excessive trading and misvaluations of the companies that issued the forecasts (Barber and Odean 2008; Da et al. 2011).

In addition to the information environment, the investor clienteles of the Chinese stock market is also different from those in mature markets. Compared with the US stock market where institutions control 80 percent or more of the outstanding shares, the Chinese stock market is dominated by individual investors who have limited investment experience (Ng and Wu 2006). Although inexperienced individual investors are more susceptible to cognitive biases and are prone to the optimism that fuels stock price bubbles (Vissing-Jorgensen 2003; Greenwood and Negal 2009; Nelson et al. 2011), recent studies on individual investor behaviors also suggest that they do pay significant attention to earnings information and trade on this information (Lerman 2010, Cohen et al. 2010; Lawrence 2011). Thus, I expect that the provision of earnings forecasts may capture the attention of individual investors and create an investor sentiment around firms that have issued the earnings forecasts. This can lead to mispricings of the disclosing firms.

In light of the above two considerations, the findings from management earnings forecast research in mature markets are unlikely to automatically translate to the China setting and investor reactions to a firm's disclosures in China may display some unique behavioral characteristics. To investigate this issue, I examine whether management earnings forecasts contain earnings-relevant information and, more importantly, whether investors in China underreact or overreact to earnings forecasts. If management forecasts provide relevant earnings information to investors, we should observe significant market reactions around the forecast disclosure period and weaker market returns during the earnings announcement period for the firms that have issued management earnings forecasts (hereafter I refer to firms that have

issued management earnings forecasts as disclosing firms) than for the firms that have not issued such earnings forecasts (hereafter I refer to firms that have not issued management earnings forecasts as non-disclosing firms). The weaker reactions to earnings announcements are caused by the earlier incorporation of at least part of the earnings information into stock prices through management earnings forecasts. In addition, I also compare the stock returns of disclosing firms and non-disclosing firms over various event windows that cover the events of the earnings forecasts as well as earnings announcements, with the objective of investigating whether the provision of earnings forecasts are associated with stronger reactions from investors than would otherwise be the case.

Based on a sample of 9,419 firm-quarter observations that provide management earnings forecasts before large earnings surprises during the period from the end of 2001 to the third quarter of 2010, I find significant cumulative abnormal returns (CARs) around management earnings forecasts announcements, with the signs being consistent with the direction of the earnings forecasts. Furthermore, I also find a weaker reaction to the earnings announcements made by disclosing firms than those of non-disclosing firms. These findings are consistent with those reported by Penman (1980), Waymire (1984), and Skinner (1994) for US markets, and suggest that the management earnings forecasts in China contain price relevant information.

To investigate whether investors in China overreact to earnings forecasts, I first employ propensity score matching to address the possible self-selection problems inherent in the decision to make a forecast, and then conduct my investigation based on a comparison of the treatment group (disclosing firms) and its matched group (matched non-disclosing firms). I find, as did Kasznik and Lev (1995) for the US market, that the CARs of disclosing firms with extremely bad news are significantly

lower than those of matched non-disclosing firms within a 10-day combined window that includes both the management earnings forecast and the earnings announcement. However, different from the results reported by Kasznik and Lev (1995) for the US market, I also find that the CARs of disclosing firms with extremely good news are significantly larger than those of matched non-disclosing firms within the same combined short window. Furthermore, the stronger reactions to disclosing firms with extremely good earnings news remain significant over a 120-day event window, while the stronger market reactions for disclosing firms with extremely bad earnings news vanishes.

Tawatnuntachai and Yaman (2007) suggest that the difference between disclosing firms and non-disclosing firms may be due to investors' anticipation of the long-term performance of the firms. I therefore also control for the future long-run operating performance and stock return performance to capture investors' expectations of the firms' future performances in the regression models for detecting for the possible presence of shareholder overreaction. My results show that there is a significant positive relation between investors' reactions to earnings announcements and the firms' future operating performances. However, the differences in CARs between disclosing firms and the matched non-disclosing firms remain significant. Furthermore, I also find a negative association between the CARs and the stock return performance of the following year for the disclosing firms. The negative relation is consistent with the presence of a price reversal, which in turn suggests that investors might have overreacted to the earnings forecast within both the 10-day combined window and the 120-day long window.

In order to provide more evidence about the return reversal in the short term, I further examine the post-earnings-announcement drifts of the disclosing and matched

non-disclosing firms. The average CARs of non-disclosing firms in the 20 days following the earnings announcement tend to be indifferent from 0. The average CARs of disclosing firms within the same window are, however, significant with signs that are opposite to the directions of earnings surprises. More specifically, for disclosing firms with extremely negative earnings surprises, the average CAR [2, 20] is significantly positive; for disclosing firms with extremely positive earnings surprises, the average CAR [2, 20] is significantly negative. Such a price movement is again consistent with the hypothesis that investors in China overreact to management earnings forecasts within the short combined window and the overreaction is partially reversed after the earnings announcements.

I attribute the investor overreaction to investors' excessive attention to disclosing firms in the Chinese stock market. Similar to Hirshleifer, Lim, and Teoh (2009) and DellaVigna and Pollet (2009), I find significant associations between stock returns and whether these management earnings forecasts are made on a Friday, as well as the number of competing news on the forecast issue day. The stronger reactions to disclosing firms are also related to the bull-or-bear market conditions and the proportion of institutional ownership.

My study offers systematic evidence on the consequences and implications of the policy of mandating publicly listed firms to issue management earnings forecasts in China. In addition to enhancing our understanding of the Chinese stock market, this thesis also resonates with the long-standing debates on whether more disclosures can actually benefit the functioning of a capital market (Benston 1973; Coffee 1984; Depoers 2000). In particular, my study adds a dose of caution to the policy of mandating publicly listed firms to issue management earnings forecasts in a stock

market that is dominated by inexperienced minority shareholders and operates under a weak information environment and severe short-sale constraints.

The rest of the thesis is organized as follows. In Chapter 2, I give a brief summary of the requirements to make earnings forecasts in China and discuss relevant previous studies. The data and variables are described in Chapter 3. Chapter 4 examines the information content of management earnings forecasts and Chapter 5 examines investor overreactions for disclosing firms. The conclusions are presented in Chapter 6.

Chapter 2. Research Background

2.1 Management earnings forecast regulation in China

Unlike the US stock market, management earnings forecasts in China are rarely disclosed voluntarily by the publicly listed firms. Instead, firms make forecasts when they are mandated to do so under the regulations of the China Securities Regulation Commission (CSRC) and the Shanghai and Shenzhen Exchanges. At the end of 2001, the Shanghai Exchange and the Shenzhen Exchange introduced rules that require management to make earnings forecasts if they expect to report a financial loss or expect gross profit to change dramatically (where managers expect a change in earnings of greater than absolute 50%)[1]. One year later in 2002, the Shanghai Exchange and the Shenzhen Exchange further required that listed firms not only disclose management earnings forecasts for the annual earnings but also for the interim and third quarter earnings. This regulation also specified the period for which a firm is required to forecast. In addition, the criteria changed from gross profit to net profit. In 2006, the regulators further required that if a firm believes it may turn from loss-making to profit-making it should make a forecast. This regulation recommended that listed firms extend their forecast period to 12 months in advance of their earnings announcements if they have such forecasting capability. Table 1 gives a brief summary of the evolution process of the management earnings forecast regulations in the Chinese stock market since 2001.

[Insert Table 1]

[1] A firm with relatively low earnings per share last year (smaller than RMB 0.05 per share for annual earnings, RMB 0.03 per share for interim earnings and RMB 0.04 per share for the third quarter earnings) can be exempted from this requirement after obtaining special approval from the relevant stock exchanges.

With respect to management earnings forecast characteristics, and according to the introductory form of the management earnings forecast for listed firms given by the Shenzhen Exchange, an earnings forecast should include four parts: a forecast of future earnings, the net profit and earning per share of the corresponding report of last year, the attribution for earnings changes, and additional relevant information. In the part of a forecast of future earnings, a firm has to provide a general statement indicating a short description of the forecast. The database on management earnings forecasts is provided by CSMAR. Based on the short general descriptions of the forecasts provided by the listed firms, the database classifies the earnings forecasts into ten types: uncertainty, slight decrease (less than 50%), slight increase (less than 50%), stop loss making, loss for the first time, loss again, profit again, substantial decrease (greater than 50%), substantial increase (greater than 50%), and others in the sample period. Among them, stop loss making, loss for the first time, loss again, substantial decrease and increase are the conditions under which firms are required by regulators to issue management earnings forecasts.

If a firm reports a loss (for the first time or a subsequent time) or reports ceasing loss making, it is required to disclose the estimated loss number or profit number. If a firm expects a substantial decrease or increase, it is required to disclose the estimated extent of the earnings change. However, most of the sample firms only estimate a range for their future earnings rather than provide an exact estimated value. Furthermore, many firms just issued a short description of the earnings forecast without providing any other information. Some studies have found that the investors' reactions to earnings forecasts can be influenced by the characteristics of forecasts (such as range vs. exact estimate). In this study, I classify an earnings forecast according to its short description (that is the type of forecasts as provided by

CSMAR). Due to data availability, I am not able to further classify the forecasts according to their other characteristics.

2.2 Related Literature

According to Hirst et al. (2008), management earnings forecasts are voluntary managerial disclosures predicting earnings prior to the expected reporting data. Some researchers use the term "earnings guidance" synonymously with "earnings forecasts". In China, management earnings forecasts are typically not a voluntary disclosure. Instead, they are mandatory disclosures as required by regulators. In the studies that focus on the US market, forecasts that are provided after the end of accounting period but before the announcement of earnings are typically referred to as earnings preannouncements. I do not distinguish between management earnings forecasts and earnings preannouncements in this study. Another concept which is closely related to this study is earnings warnings (Kazsnik and Lev 1995) or profit warnings (Bulkley and Herrerias 2005). This is a description that analysts or journalists give to an unscheduled corporate announcement that earnings for a specified future quarter will fall short of current expectations.

In many countries, management earnings forecasts are voluntary disclosures issued by publicly listed firms. According to Milgrom (1981) and Grossman (1981), publicly listed firms have an incentive to disclose their private information to outsiders as a lack of disclosure is taken as bad news by the less informed party. However, empirically, a host of factors associated with the costs and benefits of earnings forecasts can influence the disclosure decisions of a manager. Healy and Palepu (2001), for example, argue that the demand for financial reports and disclosures arises from information asymmetry and the agency problem between

managers and outsiders. Specifically, they summarize that there are at least 6 factors that can affect managers' disclosure decisions. They are capital markets transactions (Lang and Lundholm 1993; Healy et al. 1999), corporate control contest (Brennan 1999), stock compensation (Aboody and Kasznik 2000), litigation cost (Skinner 1994, 1997), and management talent signaling (Trueman 1986), proprietary cost (Newman and Sansing 1993; Gigler 1994).

The Chinese stock market has a less litigious environment than that of the US market. Based on a comparison between the Canadian stock market, which also has a less litigious environment, and the US stock market, Baginski et al. (2002) have shown that Canadian listed firms have a higher tendency to disclose management earnings forecasts. Furthermore, the proportion of good news forecasts is higher in Canada than in the US. Zhang and Zhang (2011) examine the determinants of the disclosure decision in China. They found that the most pronounced factors affecting firms' disclosure decisions in China are external financing needs, management talent signaling, and stock compensation, but there is no concern for litigation risk.

In addition to examining the motives of disclosure, scholars are also interested in investigating how investors react to the issuance of management earnings forecasts. Management earnings forecasts were not always considered to be value relevant even in mature stock markets (Hirst et al. 2008). Early research questioned whether investors rely on management earnings forecasts when making their decisions since they are subjective and unaudited. However, from the 1970s and the early 1980s, more and more studies provide evidence that management earnings forecasts do have information content. The abnormal stock returns around the forecast disclosure day are significantly positive (negative) for good (bad) news management forecasts (Waymire 1984). Investors' reactions to management earnings forecasts are similar

to their reactions to earnings announcements (Ball and Brown 1968; Foster 1977). For example, Ball and Brown (1968) found that good news (bad news) annual earnings announcements are associated with positive (negative) abnormal returns around time of the annual earnings announcement.

However, Kasznik and Lev (1995) argue that investors may not incorporate the information in earnings forecasts without bias. When they examine how investors in the US stock market react to earnings warnings (one type of earnings forecasts) prior to a large earnings surprise, they found that, for the firms with extremely negative earnings surprises, the combined market return over the 5-day warning window and the 5-day earnings announcement window is significantly lower for warning firms than for non-warning firms. They argued that, as one of the explanations, investors may have overreacted to the earnings warnings.

Several researchers have also examined the anomaly identified by Kasznik and Lev (1995) but they offer evidence that is inconsistent with the presence of overreaction. If the stronger reaction proposed by Kasznik and Lev (1995) indicates overreaction, then there should be a long-term price reversal after earnings announcements. Tawatnuntachai and Yaman (2007) find no significant stock returns for the disclosing firms in the 1 and 3 years after the earnings announcements, which is inconsistent with overreaction. They also find that the short-term stock return is positively related with the firms' long-run operating performance. As a result, they tend to attribute the stronger reactions identified by Kasznik and Lev (1995) to investors' anticipation of firms' long-term performance. From a different angle, Tucker (2007) investigates whether the stronger reactions documented by Kasznik and Lev (1995) are driven by a self-selection problem. He finds that after controlling for firms' self-selection, disclosing firms' returns remain lower than the non-

disclosing firm in a combined short-term window. However, there is no difference between these two types of firms in a longer window of 3 months.

With the above studies as a background, this study examines how investors react to the provision of earnings forecasts in China, a country which is dominated by inexperienced investors who are investing in a weak information environment. Inexperienced investors are believed to base their trading decisions on personal beliefs and sentiment rather than financial disclosure. While there is abundant evidence on how inexperienced investors are plagued by cognitive biases and investor sentiment (Smith 2010; Stambaugh et al. 2012), recent studies also indicate that they do pay attention to firms' financial disclosures (Lawrence 2011; Lerman 2010). For example, Lerman (2010) finds that discussion activity in online message boards increased significantly around earnings release dates. In this study, I offer additional insights into the reactions of individual investors to financial disclosure by examining whether and how they respond to management earnings forecasts.

Odean (1999) proposes that investors limit their investment decisions to stocks that have recently caught their attention and this hypothesis was tested by Barber and Odean (2008). These authors find that individual investors indeed demonstrate attention-driven buying behaviors as they tend to buy stocks that are mentioned in the news, on high-volume days, and on the day after both extremely negative and extremely positive one-day returns. In a recent paper, Koester et al. (2011) propose that managers may intentionally hold up good information about their companies and create "positive extreme earnings surprises" artificially so as to attract investors' attention. They offer evidence that the firms that produce positive extreme surprises tend to be those with "neglected" firm characteristics, which is consistent with the attention-grabbing hypothesis. Similarly, Smith (2010) also finds that inexperienced

investors tend to respond aggressively to additional firm-related disclosures. This also suggests that firm-related disclosure is able to capture their attention.

I expect that the firms disclosing management earnings forecasts, such as extremely good (bad) earnings changes, may also capture the attention of investors and this influences their trading decisions. Barber and Odean (2008) suggest that the attention effect will be stronger if investors have fewer information resources. Thus, I expect the attention effects to be relatively stronger in China than in more mature markets because of its relatively weak information environment.

Previous studies find stronger reactions only for the disclosing firms with extremely bad news but not good news (Kasznik and Lev 1995). Miller (1977) argues that overpricing should be more prevalent than underpricing since pessimistic investors do not take adequate short positions due to institutional or behavioral reasons. Thus, overpricing is more significant under the existence of short-sale constraints (Berkman and Koch 2008). Stambaugh et al. (2012) further show that such overpricing tendency will be intensified in the presence of market-wide sentiment. The Chinese stock market is characterized by the presence of severe short-sale constraints. Therefore, I expect that the stock market reactions in China, if they exist, will be stronger for the disclosing firms with extremely good news rather than bad news.

Chapter 3. Data, Sample and variable description

All the data used in this paper are from China Stock Market and Accounting Research (CSMAR) database. The sample period is from the end of 2001 to the third quarter of 2010. To ensure the accuracy of the forecast and earnings announcement dates, I follow DellaVigna and Pollet (2009) and use the databases provided by another data supplier – WIND to conduct cross-checking. I drop the observations whose announcement dates are different across the two databases (1,305 observations) or the observations that only appeared in the CSMAR database but not the database provided by WIND (this results in 1,263 observations being excluded). To distinguish between the market reactions to different earnings announcements, firm-quarter observations are deleted if a firm makes multiple earnings announcements on the same day (for example, a firm may announce its first quarter report and the annual report on the same day. This results in 4,102 observations being deleted). I also truncate sample outliers (top and bottom 1%). The whole sample consists of 40,022 firm-quarter observations.

I follow Kasznik and Lev (1995) and focus on management earnings forecasts that disclose extremely positive or negative earnings surprises. We can expect that forecasts of large earnings surprises are more necessary for investors than other kinds of forecasts. Consistent with this expectation, there are disproportionately more management forecasts disclosing extreme earnings surprises[2]. Besides, relatively larger earnings surprises provide more information to investors, so the corresponding market reactions are stronger and more likely to be statistically significant than that

[2] If I use all available management earnings forecasts, they share similar distribution and other statistical characteristics as extreme earnings surprise sample presenting in Table 2, 4, and 5 below. The same conclusion in the next chapter can be drawn.

of smaller earnings surprises. To compare market reactions between disclosing firms and non-disclosing firms, the extreme earnings surprise sample may be better serve my purpose. I divide the whole sample into 10 equal subsamples (SURs) according to their earnings surprises, and define observations with extremely negative (positive) earnings surprises if they fall into earnings surprise groups where SUR=1 or 2 (SUR=9 or 10). This yields a sample of 9419 management earnings forecasts.

To estimate the unexpected earning surprise, most studies investigating the US stock market use the measure of the deflated difference between actual earnings and the consensus of analysts' earnings forecasts. However, there are several reasons why this measure is unsuitable for the Chinese stock market. First, in the Chinese stock market, the accuracy of analysts' earnings forecasts is low. Chang et al. (2000) provide evidence on analyst activity and performance in 47 countries around the world, including 15 emerging market economies. They find that analyst forecast error is significantly lower when a country has an English legal code, a large analyst community, and when stock return variation is low. Moreover, the forecast dispersion is significantly lower when a country has a large analyst community and an English legal code. Unfortunately, the Chinese stock market meets none of the above conditions. Chang et al. (2000) find that China is ranked in the top 5 countries in terms of forecast error and dispersion. Ang and Ma (1999) find that the aggregate analyst forecast errors for the Chinese firms are around twice that of the Hong Kong companies. Possible reasons for the low accuracy of analyst forecasts are several folds: insufficient information, lack of analysis skills, conflict of interest, and so on (Guo and Hong 2009; Hu and Wong 2011). Recently, Lin (2010) and Yue and Lin (2008) find that analysts' forecasts in China are more accurate than statistical models based on historical annual data, but they are less accurate than statistical models

based on historical quarterly data. This suggests that analysts are not particularly good in forecasting earnings.

Second, analysts and financial institutions are relatively fewer in the Chinese stock market because of the short history of the market. According to the available forecast data in CSMAR database, analysts typically forecast earnings only for big firms and for annual reports. If I use analysts' forecasts to estimate earnings surprises, I will be forced to substantially reduce the sample size for my investigation.

Last but not the least, a seasonal random walk hypothesis about earnings process may better fit the stock pricing in China. As I mentioned above, the Chinese stock market is dominated by individual investors. Compared to investors from more mature markets such as NYSE or NASDQ, individual investors in China are more inexperienced and less sophisticated. Walther (1997) finds that for firms with more sophisticated investors, the earnings-announcement-related returns are more closely associated with analyst forecasts. However, the earnings-announcement-related returns are more closely associated with time-series model forecasts for firms with less sophisticated investors. Bartov et al. (2000) investigate the relationship between the stock returns after earnings announcements and the institutional ownership, which is a proxy for the sophistication of investors. Following Bernard and Thomas (1990) and others, they assume unsophisticated investors fail to observe the true process that underlies earnings and misperceive it as a seasonal random walk. Their empirical findings are consistent with their hypothesis – a negative association between institutional ownership and post-announcement abnormal returns. The seasonal random walk model of the earnings process is widely used in studies of the Chinese stock market (Chen et al. 2002; Su 2003; Haw et al. 2000).

In light of the above evidence, I follow Hou et al. (2008) and use the standardized earnings' change to measure earnings surprise. Specifically, the earning surprise for stock i in quarter t is

$$SUE_{i,t} = \frac{e_{i,t} - e_{i,t-4}}{\sigma_{i,t}}$$

Where $e_{i,t}$ is the earnings per share of this quarter, $e_{i,t-4}$ is the earnings per share from the same quarter of last year, and $\sigma_{i,t}$ is the standard deviation of earnings changes over the last eight quarters.

I capture investors' reactions by using the abnormal return surrounding the event date. I define abnormal return as the difference between the return of the announcing firm and that of a size and book-to-market matched portfolio:

$$AR_{i,t} = R_{i,t} - R_{p,t}$$

where $R_{i,t}$ is the raw return of stock i on date t, and $R_{p,t}$ is the return on the portfolio to which stock i belongs on date t. Following Hirshleifer et al. (2009), I form 25 portfolios according to firms' size and book-to-market values. Firm size is defined as the market capitalization at the end of June every year, while the book-to-market value is calculated based on the book value of equity and market capitalization at the end of the previous year. I divide the whole sample into 5 portfolios according to firm size and book-to-market value, separately. So there are 25 equal sized portfolios in the whole sample. Each observation is matched to one of these 25 portfolios. I use the portfolio average returns as the expected return for a particular stock. The cumulative abnormal return of each stock is calculated by the sum of abnormal returns over the event windows.

Table 2 provides a summary of the frequency of different types of management earnings forecasts. For convenience, each of them is given a type code ranging from 1 to 10.

[Insert Table 2]

Types 6 to 10 correspond to the forecast conditions under which listed firms are mandated by the regulators to disclose management forecasts, and they account for more than 92% of all the management earnings forecasts. I define Types 3, 4, 9, 10 as good news and Types 2, 6, 7, 8 as bad news. We can see from Table 2 that there are relatively more observations of good news than of bad news (5,433 versus 3,886). This is quite different from recent findings based on the US stock market where management forecast disclosures are more likely to disclose bad news (Kasznik and Lev 1995). However, the proportion of good to bad news in China is consistent with early US studies based on samples before the 1980s (Hirst et al. 2008). The relatively lower proportion of bad news forecasts are probably due to the fact that China's stock market is operating in a less litigious environment and managers are therefore less conservative in their disclosures. Baginski et al. (2002) also find fewer bad news forecasts in Canada, which is also less litigious than the US.

Table 3 shows the percentage of observations with management earnings forecasts in the groups of extremely negative and extremely positive earnings surprises. The percentage of forecast observations is a little higher than that of non-disclosing observations (58.83% versus 41.17%). As expected, the disclosing percentage is higher in the groups with the most extreme negative and positive earnings (SUR=1 and 10) than that in the other groups (SUR=2 and 9).

[Insert Table 3]

Table 4 shows the consistency of earnings surprises and management earnings forecasts. Here I only report the results for the forecast types mandated by the regulators (that is Types 6 - 10). I am less interested in Types 1 to 5 since each of them has very few observations and the main objective of this thesis is to offer evidence on the effects of the policy of mandating publicly listed firms to provide management forecasts.

[Insert Table 4]

The directions of the management earnings forecast and the earnings surprise are the same in most cases. This means that if the management forecast provides good (bad) news, then the following earnings change is more likely to be positive (negative). "loss again" forecasts can be consistent with both positive and negative SUE depending on the relative size of loss[3]. Although "loss again" forecasts may be taken as bad news literally, investors may compare this term's loss with previous one to determine whether the operating performance has been improved.

Table 5 shows the descriptive statistics of the time interval between the management earnings forecasts and earnings announcements in my sample. For the whole sample, the mean value of the time interval is 66.74 calendar days while the median is 63 calendar days. So the average time interval is around two months. I find that about 73.1% of the management earnings forecasts are disclosed within 3 months before the actual earnings announcements.

[Insert Table 5]

Thus, when I examine the 120-day cumulative abnormal returns starting from 60 days before the earnings announcements, they cover an almost 3-month stock price

[3] If I drop the observations that belong to the type of "loss again" to avoid confusion, the results do not have major changes to alter my conclusion.

movement prior to the earnings announcement and about 73% of all management earnings forecasts fall into this event window in my sample.

[Insert Figure 1]

In order to more fully incorporate the market reactions to earnings forecasts, I control for the time interval between the management earnings forecasts and earnings announcements, and I only keep the disclosing observations in which the time interval is fewer than 75 calendar days or 60 calendar days when calculating CARs [-60, 60] (as shown in Figure 1). The time period of CAR [-60, 60] starts from 60 trading days before earnings announcements. Approximately, 60 trading days corresponds to 3 months while 75 calendar days corresponds to 2 months and a half and 60 calendar days corresponds to 2 months. Thus, for a firm who discloses an earnings forecast 75 calendar days in advance of its earnings announcement, the CAR [-60, 60] should incorporate about one-half-month stock returns before the forecast, and for a firm who discloses an earnings forecast 60 calendar days in advance of its earnings announcement, the CAR [-60, 60] should incorporate about one-month stock returns before the forecast.

In the Chinese stock market, management earnings forecasts are regulated by the CSRC and the Shanghai and Shenzhen Exchanges. If we take the forecast Types 6 to 10 as mandatory disclosures, we have already seen in Table 2 that over 92% of forecasts are mandated. However, the self-selection problem may still be a challenge in my sample because a manager does not have complete information about future earnings. Managers have to estimate whether the actual earnings for the period (which has not yet ended) will be substantially different from the prior period. This involves a lot of subjectivity and there is a lot of room for a manager to decide whether to issue a forecast or not. Moreover, a manager may opportunistically decide

to make a forecast in order to move the stock price up or down in the short term. There are various reasons why management might engage in opportunistic behavior. Because of this self-selection concern, I use the propensity score matching method to reduce the possible biases on the estimates when I compare the market returns of disclosing firms and non-disclosing firms. In the probit model that here uses to estimate the propensity score, I include variables that can simultaneously influence the disclosure decision and the stock return (Caliendo and Kopeinig 2008). Thus, I include earnings surprise (SUE), firm size (LNCAP), book-to-market value (B2M), government control (GOV), profit volatility (PROVAR), leverage (LEV), and return on equity (ROE) as the explanatory variables in the probit model. I define firm size as the log of total market value of the firm, and the book-to-market value is calculated based on the book value to the market capitalization of equity at the end of the previous year. GOV is a dummy variable which takes the value of 1 if a firm is controlled by a state-owned entity and takes the value of 0 otherwise. Profit volatility is measured by the standard deviation of earnings over the last 8 quarters, and leverage is calculated by total debt divided by total assets. ROE is the ratio of net income to shareholders' equity. Firm size and book-to-market value are widely employed factors to control for risk and transparency. Earnings surprise and profit volatility indicate the uncertainty of firm's performance, and they measure the necessity of earnings forecasts. Leverage is taken as an indirect measure of firm's outside financing demand, and ROE provides a proxy for a CEO's ability. Piotroski et al (2010) also show that the incentive of political forces influence the issuance of financial information. So I add the state ownership dummy to control this impact. All of these variables are related with market reactions in the Chinese stock market (Gul et al. 2010; Firth et al. 2007). I also add the second order of the above variables and

their interaction terms in order to balance the covariates. For each forecast disclosing firm I perform a one-to-one matching from the non-disclosing firms with replacement. Table 6 presents the differences in firm characteristics between disclosing firms and their matched non-disclosing firms after the matching procedure for the extreme earnings surprise samples[4].

[Insert Table 6]

As shown in Table 6, the differences in firm characteristics between disclosing firms and their matched non-disclosing firms are quite small, and there is no statistical difference between the disclosing group and the matched non-disclosing group for all the firm characteristics at the 10% significance level. It means that the disclosing firms and their matched firms share similar characteristics and the disclosing firms have been well matched. Following analysis on the differences in market reactions between disclosing and non-disclosing firms in the next two chapters are based on the disclosing firms and their matched non-disclosing firms.

[4] The probit models in the propensity score matching are reported in the Appendix.

Chapter 4. Information Content of Management Earnings Forecasts

The information content of management earnings forecasts can be reflected in the market reactions around the management forecast disclosure period and the earnings announcement period. During the management forecast disclosure period, if the management earnings forecasts are informative, we should observe significant market reactions with the signs being consistent with those of the forecasts. During the earnings announcement period, if the management earnings forecasts are informative, we should observe weaker market reactions for disclosing firms than for non-disclosing firms. This is because at least part of earnings information has been incorporated into the stock price at the time of the management earnings forecasts. Thus, the market reactions before the earnings announcements should be stronger for the forecast disclosing firms.

4.1 Market Reactions around Management Earnings Forecasts

This section examines the stock price reactions to management earnings forecasts within three different windows before, during, and after the disclosure day. In order to isolate the effects of a single management earnings forecast, I drop an observation if a firm issued multiple management forecasts on the same day. I also drop

observations in which the management earnings forecast is bundled with an actual earnings announcement.

Table 7 reports the results. As I have explained before, this thesis only focuses on the forecasts that are mandated by the regulators (Types 6-10). The 'Sign' column gives the expected signs of the cumulative abnormal returns for the different types of earnings forecast. First, we see that stock prices react significantly to earnings forecasts and the prices move in the expected directions. Significant positive cumulative abnormal returns follow forecasts of an earnings increase and significant negative cumulative abnormal returns follow forecasts of an earnings decrease. This is consistent with previous studies indicating earnings forecasts are price informative (Penman 1980; Waymire 1984; Pownall et al. 1993). In un-tabulated results I find that the cumulative abnormal returns for Types 1 to 5 are not as significant as those for Types 6 to 10. In other words, management earnings forecasts which correspond to the situations listed in the regulation provision are more informative than those disclosed on a voluntary basis.

[Insert Table 7]

Second, stock price reactions after earnings forecasts are weaker than the price reactions before and during the earnings forecast period. Compared with CAR [-60, -2] and CAR [-1, 1], CAR [2, 60] tends to be less significant. For example, for the Type 8 management forecast, a substantial earnings decrease, the average CARs before and during the earnings forecast period are statistically significant at -3.1%

and -2.4%, respectively. But the average CARs after the earnings forecasts is not significantly different from zero. This result contrasts with the US findings of Jackson and Madura (2003). They find negative valuation effects for profit warnings of bad news continue beyond the day on which the warnings are announced. The contrast may reflect that in China the stock prices react to earnings earlier and the entire life cycle of information moves forward due to serious information leakage.

I find that before the formal disclosure of the earnings forecasts, market prices have already reacted to the forthcoming information as the CARs [-60, -2] are significant. In contrast with the dates of earnings announcements, which are scheduled (or can be reasonably predicted based on historical observations), investors don't know when or if management will make an earnings forecast. It is difficult to predict when a forecast will be made. Thus, the early market reactions imply that some investors may be trading on the inside information.

To measure whether the pre-forecast price reactions matter in magnitude, I compare the average CARs [-60, -2] with the whole 120-day average CARs around the earnings forecast CARs [-60, 60]. The results are presented in the last column of Table 7. As we can see, the ratios between average CARs [-60, -2] and average CARs [-60, 60] vary from 32.37% to 60.37%. This means that a relatively large part of market response occurs prior to the earnings forecast disclosure.

4.2 Market Reactions around Earnings Announcements

Similar to other studies that investigate market reactions to earnings announcements, Table 8 presents the cumulative abnormal returns for 60-days before, 3-days around, and 60-days after the earnings announcement day for disclosing firms and their matched non-disclosing firms. I compare the CARs of disclosing firms with those of matched non-disclosing firms within the extremely negative or extremely positive earnings surprise groups (SURs) in order to examine the impact of management earnings forecasts.

[Insert Table 8]

Three major patterns emerge from Table 8, all of which suggest that earnings forecasts provide relevant earnings information to investors. First, compared with their matched non-disclosing firms, the average CARs [-60,-2] of disclosing firms are significantly more negative if they have bad earnings news, and significantly more positive if they have good earnings news. Second, during the 3-day window around the earnings announcement, the stock price reactions of disclosing firms are weaker than those of the matched firms. While the corresponding CARs of the matched non-disclosing firms show significant market reactions, the average CARs [-1, 1] of the disclosing firms are statistically non-different from zero except for the group SUR=1. The differences in CARs between the disclosing and the matched non-disclosing firms are statistically significant. This is consistent with the preemption effect of management earnings forecasts noted by Skinner (1994). As for

the market returns after the earnings announcements, the average CARs [2, 60] of matched non-disclosing firms are significant with signs that are consistent with the earnings surprises. However, for the group SUR=1, SUR=9, or SUR=10, the average CARs [2, 60] of the disclosing firms are statistically indistinguishable from zero at conventional significance levels. The difference between the disclosing firms and the matched non-disclosing firms is statistically significant for the group SUR=2.

The above results suggest that the earnings announcements of the matched non-disclosing firms are more informative than those of disclosing firms due to the absence of earnings preannouncements for these firms. They indicate that management earnings forecasts advance the time of stock price reactions and allow investors to incorporate firms' earnings information into prices earlier.

In order to control for the possible sources of variation in the relationship between management earnings forecasts and the stock price movements around earnings announcements, I run regressions of the CARs within the above three windows on the forecast dummy (DUMMY), earnings surprise (SUE), and relevant control variables which are known to be critical in explaining market reactions to earnings surprises in China (Gul et al. 2010; Firth et al. 2007). The model specification is as follows:

$$CAR_i = \alpha + \beta_1 DUMMY_i + \beta_2 SUE_i + \sum \gamma_i X_i + \varepsilon$$

where CAR_i is the cumulative abnormal return within an event window of firm i; $DUMMY_i$ is the forecast dummy which takes 1 for observations with management

earnings forecasts, and takes 0 otherwise; SUE_i is the measure of the earnings surprise for firm i; X_i refers to a vector of control variables including firm size (LNCAP), book-to-market value (B2M), momentum (MOM), profit volatility (PROVAR), leverage (LEV), return on equity (ROE) and state ownership (GOV). Firm size, book-to-market value, profit volatility, leverage, return on equity, and state ownership are defined earlier, while forecast dummy is set equal to 1 for observations with management earnings forecasts and is set equal to 0 otherwise. Momentum is measured by the stock return over the previous 12 months. I also control for year and industry effects by adding year and industry dummies. Table 9 shows the regression results.

[Insert Table 9]

Here I am interested in the coefficient on the forecast dummy (DUMMY). In all of the regressions, I find that the coefficient on the forecast dummy is significant and its sign is consistent with my previous findings. For example, the coefficient on the dummy is 1.670 in regression 1 and is -1.208 in regression 2. This suggests that for disclosing firms with good news, the average CAR [-60, -2] will be larger than that of matched non-disclosing firms by 1.670%, while the average CAR [-1, 1] will be smaller than that of matched non-disclosing firms by 1.208%. These results are consistent with my earlier findings as reported in Table 8.

To sum up, according to the results reported in Table 7, Table 8, and Table 9, I can draw the conclusion that management earnings forecasts do provide value relevant information to investors in the Chinese stock market.

Chapter 5. Overreactions Associated with Management Earnings Forecasts

5.1 The Short Window and the Long Window Returns

In this section, I investigate market returns over three different windows: a 10-day combined short window, a 120-day long window, and a 20-day short window right after the earnings announcements. This will allow me to examine short-term and long-term overreactions.

As for the combined short window, I follow Kasznik and Lev (1995) and calculate the CARs over the 5 days around the release of a management earnings forecast plus the CARs for the 5 days around the ensuing earnings announcement. For non-disclosing firms, because there is no release day of management earnings forecasts, I use the average 5-day abnormal returns during the event window [-60,-2] before earnings announcements to substitute for the 5-day returns around management forecasts. Table 10 shows the market returns in the 10-day combined window for the disclosing firms and for the matched non-disclosing firms. In my sample, the absolute values of the CARs of disclosing firms are significantly larger than those of matched firms, even that they have similar earnings surprises. The absolute value of the difference between the disclosing firms and the matched firms of the 10-day cumulative abnormal returns vary from 2.44% to 4.28%, which is large in such a short window.

[Insert Table 10]

It should be noted that I find a stronger reaction for disclosing firms with extremely negative earnings surprises, which is similar to the findings reported in the US by Kasznik and Lev (1995). I, however, also find a stronger reaction for disclosing firms with extremely positive earnings surprises.

A problem with above combined short window is that it may not be able to cover all the market reactions to earnings forecasts and earnings announcements. A longer window may serve that function better. Here, I calculate the cumulative abnormal return of the 120-day event window centered on the earnings announcement day. We have already seen from Table 5, that some firms have a very long forecast period so that even a 120-day event window is not long enough to capture the reactions covering both the events of forecasts and earnings announcements. Thus, in order to examine a more complete stock price reaction to management forecasts, I drop firm-quarter observations whose time interval between the earnings forecast and the earnings announcement is larger than 75 calendar days or 60 calendar days. Table 11 shows the CARs within the 120-day event window for disclosing firms and the matched non-disclosing firms, respectively.

[Insert Table 11]

For firms with extremely negative earnings surprises, the stronger market reactions to disclosing firms disappear at the conventional significance levels. However, there are still strong market returns associated with disclosing firms when

they have extremely positive news. The magnitude of this difference is around 4% to 5%.

Table 12 tests whether the above results are driven by a lack of critical controls through regression analysis. The dependent variable is the cumulative abnormal return within the 10-day combined window in regressions 1 and 2, and is the cumulative abnormal return of the 120-day long window in regressions 3 to 6.

[Insert Table 12]

For the 10-day combined window, the coefficient on the forecast dummy is significantly positive for firms with good news and significantly negative for firms with bad news, which means the 10-day market reaction of the disclosing firms is significantly stronger than that of the matched non-disclosing firms. The magnitude of the average return difference between the disclosing firms and matched non-disclosing firms is still very large – around 4%. For the long window, the coefficient on the forecast dummy is only significant in regression 3 and regression 5, which means there is only a stronger market reaction for disclosing firms with extremely positive earnings surprises. The average 120-day CARs of the disclosing firms will be larger than that of the matched non-disclosing firms by about 3% if other factors are the same.

Until now, my findings differ from those in previous studies conducted in mature stock markets in two main respects. First, the overreaction effect observed by Kasznik and Lev (1995) is only significant in the combined short window. However,

in my study, the stronger market reaction also exists in a 120-day long window. This means if the stronger reaction reflects investor overreaction to management earnings forecasts, then investors take a longer time to revise the overreaction in the China stock market. 120 days are not enough. Second, in the combined short window, the stronger stock price reaction occurs not only for disclosing firms with negative news but also for firms with positive earnings news. And the positive stronger price reaction is more prevalent – it still exists in the long window while the short-term negative stronger price reaction disappears. This is consistent with the arguments of Miller (1977) and Berkman and Koch (2008) that overpricing should be more prevalent than underpricing, especially under a short-sale constraint.

Tawatnuntachai and Yaman (2007) and Xu (2008) show that the difference in the market returns between disclosing firms and non-disclosing firms may be driven by investors' anticipation of the long-term performance of the firms. To examine this issue, I follow Tawatnuntachai and Yaman (2007) and add three proxies for a firm's future long-term performance in the regression models. The three proxies are long-run stock return (LR-RET), long-run operating performance measured by the future change in earnings (OPER_EPS), and long-run operating performance measured by the future change in net income (OPER_NI). The long-run stock return is defined as the 1-year holding-period abnormal return. It starts from the month after the earnings announcements when I use CAR of the 10-day combined window as the dependent variable, and starts from the fourth month after the earnings announcements when I

use CAR of the 120-day long window as the dependent variable to reduce the overlap between the dependent variable and the independent variable LR-RET. The long-run operating performance is defined as the change in earnings per share between year 0 and year +1 relative to the earnings forecast year standardized by the stock price and the change in net income between year 0 and year +1 standardized by total assets. In the regression, I also control for all the variables in the above tables as well as time and industry dummies. To conserve space, Table 13 only reports the experimental variables of interest. Panel A shows the regression results for the firms with extremely good news and bad news in the 10-day combined short window, while Panel B only shows the regression results for firms with extremely good news since I only find positive stronger market reactions for these firms in the 120-day long window (as shown in Tables 11 and 12).

[Insert Table 13]

For both the 10-day combined window and the 120-day long window, the coefficients on the long-run operating performance proxies are significantly positive, which means a positive association between investor reactions to earnings forecasts and earnings announcements and the firm's long-run operating performance. This finding is similar to Tawatnuntachai and Yaman's (2007) results. The evidence is consistent with investors (correctly) estimating firms' future performances and taking this into consideration when they react to current earnings information. However, the coefficient on the long-term stock return is significantly negative. The negative

association between the current returns and the future returns of the disclosing firms is consistent with the overreaction hypothesis and there is a long-term price reversal after a short term overreaction within the 10-days combined window and the 120-day long window. Finally, after I control for the proxies of firms' long-run performances, the forecast dummy is still significant. This indicates that the stronger reactions cannot be totally attributed to firms' future performances.

In order to further illustrate investors' responses to the earnings information of disclosing and non-disclosing firms, Figure 2 presents the average cumulative abnormal return within the event window [-60, 60] around the earnings announcement date for four extremely negative or positive earnings surprise groups.

[Insert Figure 2]

For the non-disclosing firms, the graphs of cumulative abnormal returns around earnings announcements are similar to those reported by Bernard and Thomas (1989). However, after earnings announcements, the stock prices of disclosing firms move in an opposite direction to the earnings surprises suggested. As we can see in Table 14, the average CARs [2, 20] are significantly positive for disclosing firms with extremely negative earnings surprises and significantly negative for disclosing firms with extremely positive earnings surprises. Similar results are found if I use CAR [-1, 20] to capture the price movement nearly one month after the earnings announcement.

[Insert Table 14]

Table 15 presents the regression estimates when using CAR [2, 20] or CAR [-1, 20] as the dependent variable. For firms with extremely good news, the coefficient on the forecast dummy is significantly negative, and for firms with extremely bad news, the coefficient on the forecast dummy is significantly positive. This is consistent with the results in Table 14.

[Insert Table 15]

The 20-day price movements after earnings announcements are also consistent with the presence of investor overreaction to management earnings forecasts within the short combined window, in which the overreaction is reversed after the earnings announcements.

5.2 More Evidence about the Stronger Market Reactions

One explanation for the overreactions documented above is that in the Chinese stock market, where the information environment is weak and reliable firm-specific information is scarce, management earnings forecasts can easily capture investors' attention. Extensive attention would bring out intensified buying (selling) pressure, which could lead to excessive trading and incorrect valuations of stocks. In addition, the individual investors who dominate the Chinese stock market are more susceptible to cognitive biases and market sentiment. Their irrational trading strategies such as momentum chasing will exacerbate the mispricing.

To provide more evidence on the possible causes of the overreaction, I conduct a series of additional regression analyses to examine whether the overreactions in both the combined short window and the long window are related to a set of proxies that have been used in prior studies to capture shareholder attention.

The first proxy for capturing attention is D_NO. It is a dummy variable, which takes the value one if a management earnings forecast is disclosed on a high information day, and takes the value 0 otherwise. Following the same idea as that in Hirshleifer, Lim, and Teoh (2009), I divide all the management earnings forecasts into three groups according to the number of forecasts on the forecast day. I define high information days as those days that have the largest number of earnings forecasts.

Following DellaVigna and Pollet (2009), who show that corporate information disclosures on Fridays receive less attention from shareholders, I also create a dummy variable (D_FRI) to indicate whether a management earnings forecast is disclosed on a Friday. It takes the value 1 if the forecast is disclosed on a Friday and 0 otherwise.

As the overreactions to bad and good news may be affected by investor sentiments, I create a dummy variable D_BULL to capture the overall market sentiment. D_BULL is set equal 1 if a management earnings forecast is disclosed in a bull month, and is set equal 0 otherwise[5]. If the news provided by a management

[5] Following Fabozzi and Francis (1977), I define months in which the return of composite index was non-negative (negative) as bull (bear) months.

earnings forecast is against the overall market sentiment (such as a bad news forecast in a bull market), then investors may not believe this news deserves much attention. However, if the news is consistent with overall market sentiment (such as a good news forecast in a bull market) then investors may exaggerate such information.

Institutional investors are usually considered to be more sophisticated investors who are less likely to overreact to information than individual investors. In order to examine how the overreactions relate to investor sophistication, I generate a dummy variable relating to institutional ownership (INST). INST is set equal to 1 if a firm-quarter observation has high institutional ownership, and is set equal to 0 otherwise. I define a firm as having high institutional ownership when it is in the top one third of all the observations in terms of the institutional shareholding percentage. D_INST is the interaction term between DUMMY and INST. I add all these variables as controls into the regression models of Table 13 to examine whether they have significant impacts on the short-term and long-term overreactions.

Table 16 reports the results of the additional analyses. To conserve space, I only report the variables of interest. The first four columns add D_NO, D_FRI, D_BULL, and D_INST, one by one, and the last column includes all the variables. Panel A reports the results in the combined short window, while Panel B reports the results in the long window.

[Insert Table 16]

According to Hirshleifer, Lim, and Teoh (2009) and DellaVigna and Pollet (2009), D_NO and D_FRI should serve as good proxies of investor inattention. In my study, the coefficients on both of them have the opposite signs to the forecast dummy. For the combined short window (Panel A), D_NO is significantly negative for firms with good news (as shown in regression 1 of Panel A) and D_FRI is significantly positive for firms with bad news (as shown in regressions 7 and 10 of Panel A); for the long window (Panel B), D_NO is significantly negative for firms with good news (as shown in regressions 1, 5, 6, and 10 of Panel B). This means that if management earnings forecasts are disclosed on the days when there is low investor attention, the stronger market reactions associated with the forecasts will be weaker. According to the Wald test, if an earnings forecast is disclosed on a high information day (D_NO=1), then the CAR [-60, 60] of disclosing firms is not statistically different from that of the matched non-disclosing firms. The results are consistent with the assumption that investor attention is at least part of the reason for the overreactions.

The coefficient on D_BULL is significantly positive for both the combined short window and the long window. This indicates that bull markets will weaken (exaggerate) the negative (positive) overreaction of disclosing firms with bad (good) news. The coefficient on DUMMY is not significantly different from 0 in Panel B, which means that for firms with extremely good news there is no difference in the 120-day market returns between the disclosing firms and the matched non-disclosing

firms if the forecasts are disclosed in a bear market. This is consistent with the sentiment of investors who are more optimistic in a bull market and pessimistic in a bear market.

In the long window, the interaction term D_INST is significant and the sign of its coefficient is also opposite to that of the forecast dummy (as shown in regressions 9 and 10). The Wald test shows that the joint coefficient on DUMMY plus D_INST is not significantly different from 0. This result implies that even though there is an overreaction in the short term, such overreaction will be reversed in the 120-day window if the firm has relatively high institutional ownership. This finding implies more sophisticated investors are helpful in correcting mispricing. It may help explain why prior studies have not found long-term overreactions in the US stock market because it is dominated by institutional investors.

Chapter 6. Conclusion

In this paper, I investigate the market reactions associated with management earnings forecasts in the context of China. By using data on Chinese listed firms, my study should be less contaminated by the self-selection problem since management earnings forecasts are regulated under the Shanghai Exchange and the Shenzhen Exchange. However, I do control for the possible self-selection concern using the propensity score matching method.

I find that management earnings forecasts do provide price-relevant information to investors. There are significant market returns around the forecast release day. Furthermore, compared with the matched non-disclosing firms, the market reactions of the disclosing firms are stronger before the earnings announcements but weaker during the 3-days around and after the earnings announcements.

I also find evidence that is consistent with the presence of overreactions associated with management earnings forecasts. Unlike Kasznik and Lev (1995), I find stronger market reactions not only for the disclosing firms with extremely negative earnings surprises but also for firms with extremely positive surprises over a 10-day combined short window. As I extend the event window to 120 days, which covers the market reactions to earnings forecasts and earnings announcements, I only observe a stronger market reaction for disclosing firms with extremely positive earnings surprises. The existence and greater prevalence of stronger reactions to

good news are consistent with the presence of short-sale constraints in China. When further examining such overreactions in both a combined short window and a long window, I find that they are significantly related with investor attention, bear or bull market status, and institutional ownership of the stock.

My results suggest that requiring publicly listed firms to issue earnings forecasts tend to have mixed effects on the quality of the Chinese stock market. Management earnings forecasts tend to improve the efficiency of the market by allowing earlier incorporation of relevant earnings information into stock prices. However, by comparing the market reactions of disclosing firms and non-disclosing firms, I find evidence which shows that management earnings forecasts generate overreaction and increase the fluctuations in stock prices, which is less documented in the West. Thus, my study offers a cautionary note about the policy of mandating listed firms to issue earnings forecasts in a stock market that is dominated by individual investors.

My study also has implications for future studies on investor reactions to earnings announcements in China. Given the differences in the market reactions between management forecast disclosing firms and non-disclosing firms, my findings should be taken into consideration when future studies analyze the market reactions around the earnings announcement period in the Chinese stock market.

Appendix

Table 1. The Probit Model in the Propensity Score Matching

	(1) SUR=1				(2) SUR=2			
	Coef.	z			Coef.	z		
SUE	-0.601	-12.05	***		SUE	-1.056	-5.74	***
LNCAP	-0.181	-5.51	***		LNCAP	-0.056	-1.59	
GOV	0.019	0.30			GOV	-0.147	-2.05	**
B2M	-0.099	-1.05			B2M	-0.427	-4.05	***
PROVAR	0.183	3.34	***		PROVAR	0.175	2.18	**
LEVERAGE	-0.062	-0.38			LEVERAGE	-0.540	-3.17	***
ROE	-0.931	-2.54	***		ROE	-1.331	-2.19	**
ROE*GOV	-0.480	-1.03			ROE*GOV	-8.143	-8.09	***
CONS	3.263	4.57	***		CONS	0.655	0.85	
NO	2242				NO	2061		
Pseudo R2	11.98%				Pseudo R2	11.39%		

	(3) SUR=9				(4) SUR=10			
	Coef.	z			Coef.	z		
SUE	0.983	7.40	***		SUE	0.223	5.04	***
LNCAP	-0.008	-0.29			LNCAP	-0.073	-0.06	
GOV	-0.253	-3.97	***		GOV	-0.200	-2.48	***
B2M	0.043	0.47			B2M	0.123	1.17	
PROVAR	-0.060	-2.62	***		PROVAR	0.105	0.62	
LEVERAGE	0.534	3.47	***		LEVERAGE	0.173	0.93	
ROE	-0.135	-0.66			ROE	28.033	2.55	***
CONS	-0.832	-1.32			LNCAP^2	0.002	0.09	
NO	2058				PROVAR^2	-0.004	-0.52	
Pseudo R2	3.17%				ROE^2	2.616	1.02	
					LNCAP*ROE	-1.178	-2.32	**
					CONS	0.667	0.05	
					NO	2067		
					Pseudo R2	4.15%		

The probit model shows the incentive of issuance of management earnings forecasts for listed firms. The model specification about the second terms and interaction terms is decided by whether variables are well matched. From above table we can see that the coefficients on SUE are significantly negative for firms with bad news (as shown in model (1) and (2)) and significantly positive for firms with good news (as shown in model (3) and (4)). It means that the more negative (positive) the earnings surprise

is, the more likely a firm discloses a management earnings forecast. GOV is significantly negative in model (2) to (4), which shows that state-owned firms have less incentive to issue forecasts. PROVAR is significantly positive in model (1) and (2). However, it is significantly negative in model (3). So firms are more careful and conservative when they have big profit volatility – to disclose forecasts of the bad news and not issue forecasts of the good news. Inconsistent with our expectation, ROE is significantly negative in model (1) and (2). This may be because that besides being a proxy of CEO's ability, ROE is also related with firm's operating performance. Worse performance is associated with a stronger incentive of management forecasts.

Tables

Table 1. The Evolution of Management Earnings Forecast Provision

Year	Forecast Period	Firms have to make earnings forecasts under the following circumstances:
2001	Annual report	1. make losses; 2. gross profit changes by greater than |50%|; 3. small earnings per share last year (smaller than 0.05) can be exempt.
2002	Annual report, the half-year report, and the third quarter report	1. make losses; 2. net profit changes by greater than |50%|; 3. small earnings per share last year (0.05 for annual, 0.03 for half-year, 0.04 for the third quarterly reports) can be exempt.
2006	Annual report, the half-year report, and the third quarter report	1. make losses; 2. net profit changes by greater than |50%|; 3. small earnings per share last year (0.05 for annual, 0.03 for half-year, 0.04 for the third quarterly reports) can be exempt; 4. turn from losses to profit.

Table 2. Frequency of the Different Types of Management Earnings Forecasts

Type	Type code	Freq.	Percent%	Cum%.
Uncertainty	1	51	0.54	0.54
Decrease (slightly)	2	243	2.58	3.12
Increase (slightly)	3	293	3.11	6.23
Profit again	4	116	1.23	7.46
Others	5	49	0.52	7.98
Loss (the first time)	6	1,548	16.43	24.41
Loss again	7	569	6.04	30.45
Decrease (substantially)	8	1,526	16.2	46.65
Loss turning to profit	9	1,418	15.05	61.71
Increase (substantially)	10	3,606	38.28	100
Total		9,419	100	

Table 3. The Percentage of Earnings Forecasts in Extreme Change Groups

SUR	total	disclosing		non-disclosing	
1	4,003	2,676	66.85%	1,327	33.15%
2	4,002	1,314	32.83%	2,688	67.17%
9	4,002	2,130	53.22%	1,872	46.78%
10	4,003	3,299	82.41%	704	17.59%
Total	16,010	9,419	58.83%	6,591	41.17%

SUR represents the earnings surprise group. SUR=1 represents the group with lowest average earnings surprise while SUR=10 represents the group with largest average earnings surprise. The column of "total" presents the number of observations in each SUR group, which can be divided into the disclosing sub-group and the non-disclosing sub-group according to whether there is a management earnings forecast before an earnings announcement.

Table 4. Consistency of Earnings Forecasts and Earnings Surprise

Type	SUE>0		SUE<=0		Total
Loss (the first time)	0	0.00%	1,548	100.00%	1,548
Loss again	238	41.83%	331	58.17%	569
Decrease(Substantially)	0	0.00%	1,526	100.00%	1,526
Loss turning to profit	1,415	99.79%	3	0.21%	1,418
Increase(Substantially)	3,544	98.28%	62	1.72%	3,606
Total	5,197	59.96%	3,470	40.04%	8,667

SUE is the measure of earnings surprise, defined as the difference between the earnings per share this quarter minus the earnings per share of the same quarter of the previous year, deflated by the standard deviation of earnings per share changes over the last eight quarters. The column of "Total" presents the number of observations in each forecast type.

Table 5. The Time Interval between the Earnings Forecasts and the Subsequent Earnings Announcements

Whole Sample						
	MIN	MAX	MEAN	25%	50%	75%
Calendar Days	0	239	66.74	28	63	95
Annual Earnings						
	MIN	MAX	MEAN	25%	50%	75%
Calendar Days	0	239	93.16	54	83	145
Interim and Quarterly Earnings						
	MIN	MAX	MEAN	25%	50%	75%
Calendar Days	1	136	52.99	19	50	75

Table 6. Mean Test of the Difference of Firm Characteristics

Covariate	SUE	LNCAP	B2M	GOV	PROVAR	LEV	ROE
				SUR=1			
Disclosing	-2.189	21.549	0.487	0.684	0.175	0.513	-0.046
Matched	-2.206	21.554	0.485	0.674	0.156	0.507	-0.046
				SUR=2			
Disclosing	-0.894	21.534	0.459	0.521	0.085	0.468	0.025
Matched	-0.907	21.606	0.434	0.495	0.092	0.460	0.023
				SUR=9			
Disclosing	1.076	21.899	0.682	0.489	0.147	0.523	0.080
Matched	1.085	21.918	0.699	0.501	0.167	0.517	0.077
				SUR=10			
Disclosing	2.457	21.905	0.720	0.520	0.127	0.515	0.105
Matched	2.438	21.863	0.705	0.524	0.138	0.514	0.103

SUR represents the earnings surprise group. SUR=1 represents the group with lowest average earnings surprise while SUR=10 represents the group with largest average earnings surprise. SUE represents the earnings surprise defined by the current earnings change deflated by last 8 quarters' standard deviation; LNCAP represents the firm size which is defined as the log of total market value of the firm; B2M represents the book-to-market value which is calculated based on the book value to the market capitalization of equity at the end of the previous year; GOV represents the state ownership which takes the value of 1 if a firm is controlled by a state-owned entity and takes the value of 0 otherwise; PROVAR represents the profit volatility which is measured by the standard deviation of earnings over the last 8 quarters; LEV represents the firm's leverage calculated by total debt divided by total assets; ROE represents return on equity which is the ratio of net income to shareholders' equity. For each forecast disclosing observation, a one-to-one propensity score matching is performed and the matched one is chosen from non-disclosing firms with replacement.

Table 7. Market Reaction to Management Earnings Forecasts

Type	Code	Sign	CAR[-60,-2]		CAR[-1,1]		CAR[2,60]		CAR[-60,-2]/ CAR[-60,60]
Loss (the first time)	6	-	-3.23%	***	-2.34%	***	-0.07%		57.27%
Loss again	7	-	-3.29%	***	-2.43%	***	-0.21%		55.48%
Decrease(Substantially)	8	-	-3.26%	***	-2.45%	***	0.31%		60.37%
Loss turning to profit	9	+	2.23%	***	2.00%	***	2.66%	***	32.37%
Increase(Substantially)	10	+	4.65%	***	2.77%	***	2.14%	***	48.64%

CAR indicates the cumulative abnormal return in a given event window. Here Date 0 is the management earnings forecast day. All the days before and after date 0 are trading days. The column of "Sign" gives the expected direction of CARs. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 8. Cumulative Abnormal Returns around Extreme Earnings Announcements

CAR[-60,-2]						
SUR	Matched Non-disclosing		Disclosing		Diff	
1	-1.80%	***	-4.26%	***	2.47%	**
2	-0.41%		-3.57%	***	3.16%	***
9	0.29%		3.11%	***	-2.82%	***
10	3.35%	***	4.27%	***	-0.92%	
CAR[-1,1]						
SUR	Matched Non-disclosing		Disclosing		Diff	
1	-1.84%	***	-0.39%	***	-1.45%	***
2	-0.85%	***	-0.27%		-0.59%	*
9	1.25%	***	-0.15%		1.39%	***
10	1.33%	***	-0.10%		1.43%	***
CAR[2,60]						
SUR	Matched Non-disclosing		Disclosing		Diff	
1	-1.01%	**	-0.24%		-0.77%	
2	-1.47%	**	1.33%	**	-2.80%	**
9	1.13%	**	0.44%		0.69%	
10	1.99%	***	-0.40%		2.38%	*

CAR indicates the cumulative abnormal return in a given event window. Here Date 0 is the earnings announcement day. All the days before and after date 0 are trading days. SUR represents the earnings surprise group. SUR=1 represents the group with lowest average earnings surprise while SUR=10 represents the group with largest average earnings surprise. For each forecast disclosing observation, a one-to-one propensity score matching is performed and the matched one is chosen from non-disclosing firms with replacement. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 9. Regression Estimates of Market Reactions to Earnings Announcements

	Good News								
	(1)			(2)			(3)		
	CAR[-60,-2]			CAR[-1,1]			CAR[2,60]		
	Coeff	t		Coeff	t		Coeff	t	
DUMMY	1.670	2.35	**	-1.208	-5.80	***	-0.502	-0.77	
SUE	-0.200	-0.58		0.054	0.53		0.313	0.96	
LNCAP	-3.009	-7.77	***	0.185	1.77	*	-0.530	-1.47	
B2M	1.671	1.54		0.167	0.50		-0.784	-0.74	
MOM	0.038	8.46	***	-0.002	-1.57		-0.017	-4.89	***
GOV	0.558	0.81		-0.191	-0.94		0.068	0.11	
PROVAR	0.509	1.38		-0.004	-0.06		-0.466	-1.21	
LEV	-1.545	-0.91		-0.382	-0.78		3.640	2.21	**
ROE	12.908	2.47	**	3.520	2.53	**	-5.863	-1.18	
CON	60.480	6.86	***	-2.232	-0.94		13.861	1.72	
N	3679			3679			3679		
R square	6.54%			2.55%			3.80%		
	Bad News								
	(4)			(5)			(6)		
	CAR[-60,-2]			CAR[-1,1]			CAR[2,60]		
	Coeff	t		Coeff	t		Coeff	t	
DUMMY	-2.990	-4.39	***	0.980	4.77	***	1.877	2.87	***
SUE	0.278	0.75		0.361	3.37	***	0.858	2.59	***
LNCAP	-0.968	-2.37	**	-0.020	-0.18		-1.000	-2.66	***
B2M	0.819	0.64		0.138	0.40		0.293	0.26	
MOM	0.031	3.97	***	0.002	1.03		-0.017	-2.76	***
GOV	1.093	1.66	*	-0.552	-2.86	***	-0.427	-0.68	
PROVAR	0.596	1.31		-0.019	-0.16		-0.308	-1.07	
LEV	-1.666	-0.99		0.074	0.14		0.318	0.20	
ROE	0.035	0.02		-0.100	-0.17		-0.540	-0.28	
CON	17.824	1.84	*	-1.822	-0.68		17.269	1.98	**
N	3087			3087			3087		
R square	3.24%			2.48%			2.40%		

The regressions are based on the disclosing firm-quarter observations and their propensity score matched observations. All these models use the White estimator of variance. The dependent variables, CARs, are cumulative abnormal returns around earnings announcements within the given event windows. Date 0 is the earnings announcement day. All the days before and after date 0 are trading days. Good news means SUE>0, and bad news means SUE<=0. For independent variables, DUMMY is the forecast dummy which takes value 1 for observations with management earnings forecasts and takes the value 0 otherwise; SUE represents the earnings surprise defined by the current earnings change deflated by last 8 quarters' standard deviation; LNCAP represents the firm size which is defined as the log of total market value of the firm; B2M represents the book-to-market value which is calculated based on the book value to the market capitalization of equity at the end of the previous year; MOM refers to stock return momentum calculated by the stock return over the previous 12 months; GOV represents the state ownership which takes the value of 1 if a firm is controlled by a state-owned entity and takes the value of 0 otherwise; PROVAR represents the earnings volatility which is measured by the standard deviation of profit over the last 8 quarters; LEV represents the firm's leverage calculated by total debt divided by total assets; ROE represents return on equity which is the ratio of net income to shareholders' equity; CON refers to the constant term. It includes year dummies and industry dummies in the regressions to control for temporal fixed effects and industry effects; the results are not tabulated. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 10. CARs of the 10-day Combined Window

SUR	Matched Non-disclosing		Disclosing		Diff	
1	-4.13%	***	-8.41%	***	4.28%	***
2	-4.98%	***	-8.01%	***	3.03%	*
9	4.20%	***	7.59%	***	-3.39%	**
10	6.26%	***	8.70%	***	-2.44%	

SUR represents the earnings surprise group. SUR=1 represents the group with lowest average earnings surprise while SUR=10 represents the group with largest average earnings surprise. For each forecast disclosing observation, a one-to-one propensity score matching is performed and the matched one is chosen from non-disclosing firms with replacement. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 11. CARs of the 120-day Event Windows

	Interval<=75 calendar days						Interval<=60 calendar days					
SUR	Matched Non-disclosing		Disclosing		diff		Matched Non-disclosing		Disclosing		diff	
1	-4.46%	***	-6.30%	***	1.84%		-4.39%	***	-7.29%	***	2.90%	
2	-2.58%	***	-3.05%	***	0.46%		-3.83%	***	-4.51%	***	0.67%	
9	1.44%		5.55%	***	-4.12%	***	1.31%		6.02%	***	-4.71%	***
10	5.48%	***	5.62%	***	-0.14%		4.76%	***	6.51%	***	-1.76%	

Here Date 0 is the earnings announcement day. SUR represents the earnings surprise group. SUR=1 represents the group with lowest average earnings surprise while SUR=10 represents the group with largest average earnings surprise. “Interval” means the days between the management earnings forecast day and its corresponding earnings announcement day. For each forecast disclosing observation, a one-to-one propensity score matching is performed and the matched one is chosen from non-disclosing firms with replacement. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 12. Regression Analysis for Short Window and Long Window CARs – Part One

	Panel A. Combined Short Window					
	(1) Good News			(2) Bad News		
	Coeff	t		Coeff	t	
DUMMY	3.961	4.21	***	-3.697	-3.70	***
SUE	0.113	0.22		0.925	1.64	*
LNCAP	-2.830	-5.15	***	-0.719	-1.19	
B2M	1.947	1.14		1.521	0.83	
MOM	0.032	4.97	***	0.021	2.05	**
GOV	-0.619	-0.63		-0.561	-0.57	
PROVAR	0.000	0.11		0.000	0.01	
LEV	-4.770	-2.05	**	0.788	0.30	
ROE	21.524	2.28	**	1.602	0.90	
CON	56.097	4.80	***	5.007	0.39	
N	3033			2212		
R square	5.05%			3.51%		

The regressions are based on the disclosing firm-quarter observations and their propensity score matched observations. All these models use the White estimator of variance. The dependent variable is the cumulative abnormal return within the 10-day combined short window. Good news means SUE>0, and bad news means SUE<=0. For independent variables, DUMMY is the forecast dummy which takes the value 1 for observations with management earnings forecasts and takes the value 0 otherwise; SUE represents the earnings surprise defined by the current earnings change deflated by last 8 quarters' standard deviation; LNCAP represents the firm size which is defined as the log of total market value of the firm; B2M represents the book-to-market value which is calculated based on the book value to the market capitalization of equity at the end of the previous year; MOM refers to stock return momentum calculated by the stock return over the previous 12 months; GOV represents the state ownership which takes the value of 1 if a firm is controlled by a state-owned entity and takes the value of 0 otherwise; PROVAR represents the earnings volatility which is measured by the standard deviation of profit over the last 8 quarters; LEV represents the firm's leverage calculated by total debt divided by total assets; ROE represents return on equity which is the ratio of net income to shareholders' equity; CON refers to the constant term. It includes year dummies and industry dummies in the regressions to control for temporal fixed effects and industry effects; the results are not tabulated. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 12. Regression Analysis for Short Window and Long Window CARs – Part Two

Panel B. Long Window												
	Interval<=75 calendar days						Interval<=60 calendar days					
	(3) Good News			(4) Bad News			(5) Good News			(6) Bad News		
	Coeff	t		Coeff	t		Coeff	t		Coeff	t	
DUMMY	2.571	2.41	**	-1.587	-1.53		3.492	3.01	***	-1.986	-1.57	
SUE	0.271	0.46		1.610	2.97	***	0.140	0.21		1.833	2.92	***
LNCAP	-3.790	-6.11	***	-1.996	-3.25	***	-3.533	-5.12	***	-1.733	-2.26	**
B2M	1.477	0.85		0.399	0.22		2.124	0.96		3.384	1.59	
MOM	0.022	3.04	***	0.022	2.15	**	0.030	3.50	***	0.019	1.44	
GOV	-0.461	-0.40		0.530	0.52		0.059	0.05		0.072	0.06	
PROVAR	0.162	0.29		0.349	0.68		0.170	0.28		0.761	1.10	
LEV	-1.042	-0.39		-0.588	-0.23		-1.659	-0.52		5.235	1.63	
ROE	26.644	3.02	***	-1.151	-0.55		28.997	2.69	***	2.683	1.50	
CON	73.313	5.56	***	36.691	2.67	***	67.186	4.58	***	27.522	1.58	
N	2590			2171			2072			1553		
R square	5.69%			3.01%			6.52%			2.77%		

The regressions are based on the disclosing firm-quarter observations and their propensity score matched observations. All these models use the White estimator of variance. The dependent variable is the cumulative abnormal return of the 120-day event window centered on the earnings announcement day. “Interval” means the days between the management earnings forecast day and its corresponding earnings announcement day. Good news means SUE>0, and bad news means SUE<=0. For independent variables, DUMMY is the forecast dummy which takes the value 1 for observations with management earnings forecasts and takes the value 0 otherwise; SUE represents the earnings surprise defined by the current earnings change deflated by last 8 quarters’ standard deviation; LNCAP represents the firm size which is defined as the log of total market value of the firm; B2M represents the book-to-market value which is calculated based on the book value to the market capitalization of equity at the end of the previous year; MOM refers to stock return momentum calculated by the stock return over the previous 12 months; GOV represents the state ownership which takes the value of 1 if a firm is controlled by a state-owned entity and takes the value of 0 otherwise; PROVAR represents the earnings volatility which is measured by the standard deviation of profit over the last 8 quarters; LEV represents the firm’s leverage calculated by total debt divided by total assets; ROE represents return on equity which is the ratio of net income to shareholders’ equity; CON refers to the constant term. It includes year dummies and industry dummies in the regressions to control for temporal fixed effects and industry effects; the results are not tabulated. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 13. Regression Analysis of Firms' Long-Run Performance

Panel A. Combined Short Window												
	Good News						Bad News					
	(1)			(2)			(3)			(4)		
	Coeff	t		Coeff	t		Coeff	t		Coeff	t	
DUMMY	4.074	4.34	***	4.164	4.42	***	-3.728	-3.74	***	-3.867	-3.90	***
SUE	0.300	0.58		0.280	0.54		1.079	1.93	*	1.259	2.26	**
LR_RET1	-1.951	-2.75	***	-1.802	-2.52	**	-2.126	-2.92	***	-3.048	-4.80	***
OPER_EPS1	67.540	4.24	***				21.645	2.61	***			
OPER_NI1				36.003	2.67	***				65.119	5.43	***
N	3032			3032			2209			2209		
R square	5.86%			5.87%			4.21%			5.77%		

Panel B. Long Window												
	Interval<=75 calendar days						Interval<=60 calendar days					
	(1)			(2)			(3)			(4)		
	Coeff	t		Coeff	t		Coeff	t		Coeff	t	
DUMMY	2.530	2.42	**	2.431	2.33	**	3.579	3.12	***	3.773	3.32	***
SUE	0.618	1.04		0.455	0.77		0.354	0.54		0.607	0.94	
LR_RET1	-5.069	-6.45	***	-5.256	-6.49	***	-4.833	-4.91	***	-5.501	-5.79	***
OPER_EPS1	125.633	6.54	***				131.515	5.56	***			
OPER_NI1				95.235	5.00	***				124.680	7.72	***
N	2589			2589			2071			2071		
R square	9.00%			9.77%			8.84%			10.98%		

The regressions are based on the disclosing firm-quarter observations and their propensity score matched observations. All these models use the White estimator of variance. In panel A, the dependent variable is the cumulative abnormal return within the 10-day combined short window, while in panel B, the dependent variable is the cumulative abnormal return of the 120-day event window centered on the earnings announcement day. "Interval" means the days between the management earnings forecast day and its corresponding earnings announcement day. Good news means SUE>0, and bad news means SUE<=0. For independent variables, DUMMY is the forecast dummy which takes the value 1 for observations with management earnings forecasts and takes the value 0 otherwise; SUE represents the earnings surprise defined by the current earnings change deflated by last 8 quarters' standard deviation; LR-RET is the long-run stock return performance; OPER_EPS is the long-run operating performance measured by the future change in earnings; OPER_NI is the long-run operating performance measured by the future change in net income. It controls for all the variables that appeared in the previous regressions and it also includes year dummies and industry dummies in the regressions to control for temporal fixed effects and industry effects; the results are not tabulated. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 14. CARs of the Event Windows [-1, 20] and [2, 20]

CAR[-1,20]							
	Matched Non-disclosing			Disclosing		diff	
1	-1.45%	***		0.37%		-1.82%	**
2	-1.21%	***		1.08%	**	-2.29%	***
9	1.96%	***		-1.06%	***	3.02%	***
10	1.05%	***		-1.25%	***	2.31%	***
CAR[2,20]							
	Matched Non-disclosing			Disclosing		diff	
1	0.39%			0.76%	***	-0.37%	
2	-0.36%			1.34%	***	-1.71%	***
9	0.71%	**		-0.91%	***	1.63%	***
10	-0.28%			-1.15%	***	0.87%	

CAR indicates the cumulative abnormal return in a given event window. Here Date 0 is the earnings announcement day. All the days before and after date 0 are trading days. SUR represents the earnings surprise group. SUR=1 represents the subsample with lowest average earnings surprise while SUR=10 represents the subsample with largest average earnings surprise. For each forecast disclosing observation, a one-to-one propensity score matching is performed and the matched one is chosen from non-disclosing firms with replacement. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 15. Regression Analysis for the Event Windows [-1, 20] and [2, 20]

	Good News						Bad News					
	CAR[2,20]			CAR[-1,20]			CAR[2,20]			CAR[-1,20]		
	Coeff	t		Coeff	t		Coeff	t		Coeff	t	
DUMMY	-0.859	-2.13	**	-2.067	-4.50	***	1.325	3.38	***	2.305	5.24	***
SUE	0.072	0.37		0.126	0.57		0.137	0.63		0.497	2.07	**
LNCAP	-0.069	-0.31		0.117	0.48		-0.471	-2.19	**	-0.491	-2.07	**
B2M	0.735	1.15		0.902	1.19		0.745	1.01		0.883	1.11	
MOM	-0.012	-5.66	***	-0.014	-5.66	***	-0.004	-1.15		-0.003	-0.62	
GOV	-0.195	-0.50		-0.386	-0.87		-0.125	-0.32		-0.677	-1.56	
PROVAR	-0.238	-1.19		-0.242	-1.09		0.106	0.64		0.087	0.38	
LEV	1.367	1.41		0.985	0.91		0.343	0.34		0.417	0.38	
ROE	0.903	0.28		4.423	1.23		-1.528	-1.36		-1.628	-1.32	
CON	4.228	0.84		1.996	0.36		7.928	1.54		6.106	1.06	
N	3679			3679			3087			3087		
R square	2.52%			2.99%			2.16%			3.28%		

The regressions are based on the disclosing firm-quarter observations and their propensity score matched observations. All these models use the White estimator of variance. The dependent variables, CARs, are cumulative abnormal returns around the earnings announcement within the given event windows. Date 0 is the earnings announcement day. All the days before and after date 0 are trading days. Good news means SUE>0, and bad news means SUE<=0. For independent variables, DUMMY is the forecast dummy which takes the value 1 for observations with management earnings forecasts and takes the value 0 otherwise; SUE represents the earnings surprise defined by the current earnings change deflated by last 8 quarters' standard deviation; LNCAP represents the firm size which is defined as the log of total market value of the firm; B2M represents the book-to-market value which is calculated based on the book value to the market capitalization of equity at the end of the previous year; MOM refers to stock return momentum calculated by the stock return over the previous 12 months; GOV represents the state ownership which takes the value of 1 if a firm is controlled by a state-owned entity and takes the value of 0 otherwise; PROVAR represents the earnings volatility which is measured by the standard deviation of profit over the last 8 quarters; LEV represents the firm's leverage calculated by total debt divided by total assets; ROE represents return on equity which is the ratio of net income to shareholders' equity; CON refers to the constant term. It includes year dummies and industry dummies in the regressions to control for temporal fixed effects and industry effects; the results are not tabulated. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 16. Regression Analysis for the Additional Evidence – Part One

Panel A															
	Good News														
	(1)			(2)			(3)			(4)			(5)		
	Coeff	t		Coeff	t		Coeff	t		Coeff	t		Coeff	t	
DUMMY	4.882	4.94	***	4.380	4.61	***	2.025	1.87	*	3.448	2.86	***	2.454	1.80	*
D_NO.	-2.768	-2.61	***										-2.388	-2.22	**
D_FRI				-1.811	-1.38								-2.220	-1.66	*
D_BULL							4.102	3.78	***				4.155	3.75	***
INST										0.915	0.50		1.093	0.60	
D_INST										1.695	0.86		1.562	0.79	
N	3032			3032			3032			2869			2869		
R square	6.07%			5.93%			6.35 %			6.47%			7.26%		

The regressions are based on the disclosing firm-quarter observations and their propensity score matched observations. All these models use the White estimator of variance. The dependent variable is the cumulative abnormal return within the 10-day combined short window. Good news means SUE>0. For independent variables, DUMMY is the forecast dummy which takes the value 1 for observations with management earnings forecasts and takes the value 0 otherwise; D_NO is a dummy variable which takes the value 1 if a management earnings forecast is disclosed on the high information day, and takes the value 0 otherwise; D_FRI is a dummy variable which takes the value 1 if a management earnings forecast is disclosed on Friday, and takes the value 0 otherwise; D_BULL is a dummy variable which is set equal 1 if a management earnings forecast is disclosed in an up month and is set equal 0 otherwise; INST is dummy variable which is set equal 1 if a firm-quarter observation has high institutional ownership, and is set equal 0 otherwise; D_INST is the interaction term between DUMMY and INST. It controls for all the variables that appeared in the previous regressions including proxies of firms' long-run performance. It also includes year dummies and industry dummies in the regressions to control for temporal fixed effects and industry effects; the results are not tabulated. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 16. Regression Analysis for the Additional Evidence – Part Two

	Bad News														
	(6)			(7)			(8)			(9)			(10)		
	Coeff	t		Coeff	t		Coeff	t		Coeff	t		Coeff	t	
DUMMY	-4.330	-3.87	***	-4.542	-4.47	***	-5.649	-4.58	***	-4.574	-3.76	***	-8.021	-5.20	***
D_NO.	1.787	1.57											1.777	1.50	
D_FRI				4.424	2.70	***							4.881	2.94	***
D_BULL							3.297	2.49	**				3.600	2.59	***
INST										0.774	0.41		1.256	0.66	
D_INST										2.199	0.99		1.348	0.60	
N	2209			2209			2209			2056			2056		
R square	4.31%			4.61%			4.51%			4.67%			5.56%		

The regressions are based on the disclosing firm-quarter observations and their propensity score matched observations. All these models use the White estimator of variance. The dependent variable is the cumulative abnormal return within the 10-day combined short window. Bad news means SUE<=0. For independent variables, DUMMY is the forecast dummy which takes the value 1 for observations with management earnings forecasts and takes the value 0 otherwise; D_NO is a dummy variable which takes the value 1 if a management earnings forecast is disclosed on the high information day, and takes the value 0 otherwise; D_FRI is a dummy variable which takes the value 1 if a management earnings forecast is disclosed on Friday, and takes the value 0 otherwise; D_BULL is a dummy variable which is set equal 1 if a management earnings forecast is disclosed in an up month and is set equal 0 otherwise; INST is dummy variable which is set equal 1 if a firm-quarter observation has high institutional ownership, and is set equal 0 otherwise; D_INST is the interaction term between DUMMY and INST. It controls for all the variables that appeared in the previous regressions including proxies of firms' long-run performance. It also includes year dummies and industry dummies in the regressions to control for temporal fixed effects and industry effects; the results are not tabulated. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 16. Regression Analysis for the Additional Evidence – Part Three

	Panel B														
	Interval <=75														
	(1)			(2)			(3)			(4)			(5)		
	Coeff	t		Coeff	t		Coeff	t		Coeff	t		Coeff	t	
DUMMY	3.831	3.41	***	2.693	2.51	**	0.047	0.04		3.903	2.99	***	2.364	1.55	
D_NO.	-4.568	-3.78	***										-2.928	-2.30	**
D_FRI				-0.996	-0.64								-1.143	-0.71	
D_BULL							5.249	4.04	***				5.265	3.89	***
INST										4.784	2.42	**	4.691	2.38	**
D_INST										-1.826	-0.82		-1.589	-0.72	
N	2589			2589			2135			2439			2439		
R square	9.47%			9.02%			9.60%			9.89%			10.81%		

The regressions are based on the disclosing firm-quarter observations and their propensity score matched observations. All these models use the White estimator of variance. The dependent variable is the cumulative abnormal return of the 120-day event window centered on the earnings announcement day. “Interval” means the days between the management earnings forecast day and its corresponding earnings announcement day. For independent variables, DUMMY is the forecast dummy which takes the value 1 for observations with management earnings forecasts and takes the value 0 otherwise; D_NO is a dummy variable which takes the value 1 if a management earnings forecast is disclosed on the high information day, and takes the value 0 otherwise; D_FRI is a dummy variable which takes the value 1 if a management earnings forecast is disclosed on Friday, and takes the value 0 otherwise; D_BULL is a dummy variable which is set equal 1 if a management earnings forecast is disclosed in an up month and is set equal 0 otherwise; INST is dummy variable which is set equal 1 if a firm-quarter observation has high institutional ownership, and is set equal 0 otherwise; D_INST is the interaction term between DUMMY and INST. It controls for all the variables that appeared in the previous regressions including proxies of firms’ long-run performance. It also includes year dummies and industry dummies in the regressions to control for temporal fixed effects and industry effects; the results are not tabulated. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Table 16. Regression Analysis for the Additional Evidence – Part Four

	Interval <=60														
	(6)			(7)			(8)			(9)			(10)		
	Coeff	t		Coeff	t		Coeff	t		Coeff	t		Coeff	t	
DUMMY	4.900	3.96	***	3.771	3.21	***	1.130	0.84		5.887	4.17	***	4.926	2.92	***
D_NO.	-4.412	-3.15	***										-3.863	-2.66	***
D_FRI				-1.182	-0.65								-1.419	-0.76	
D_BULL							4.963	3.19	***				4.923	3.03	***
INST										6.579	2.94	***	6.614	2.96	***
D_INST										-4.917	-1.96	**	-5.101	-2.04	**
N	2071			2071			2071			1967			1967		
R square	9.27%			8.86%			9.32 %			9.81%			10.76%		

The regressions are based on the disclosing firm-quarter observations and their propensity score matched observations. All these models use the White estimator of variance. The dependent variable is the cumulative abnormal return of the 120-day event window centered on the earnings announcement day. “Interval” means the days between the management earnings forecast day and its corresponding earnings announcement day. For independent variables, DUMMY is the forecast dummy which takes the value 1 for observations with management earnings forecasts and takes the value 0 otherwise; D_NO is a dummy variable which takes the value 1 if a management earnings forecast is disclosed on the high information day, and takes the value 0 otherwise; D_FRI is a dummy variable which takes the value 1 if a management earnings forecast is disclosed on Friday, and takes the value 0 otherwise; D_BULL is a dummy variable which is set equal 1 if a management earnings forecast is disclosed in an up month and is set equal 0 otherwise; INST is dummy variable which is set equal 1 if a firm-quarter observation has high institutional ownership, and is set equal 0 otherwise; D_INST is the interaction term between DUMMY and INST. It controls for all the variables that appeared in the previous regressions including proxies of firms’ long-run performance. It also includes year dummies and industry dummies in the regressions to control for temporal fixed effects and industry effects; the results are not tabulated. ***, **, * indicates statistical significance at the 1 percent, 5 percent, or 10 percent level in two-tailed tests, respectively.

Figure 1. Time Interval between the Management Earnings Forecasts and the Earnings Announcements

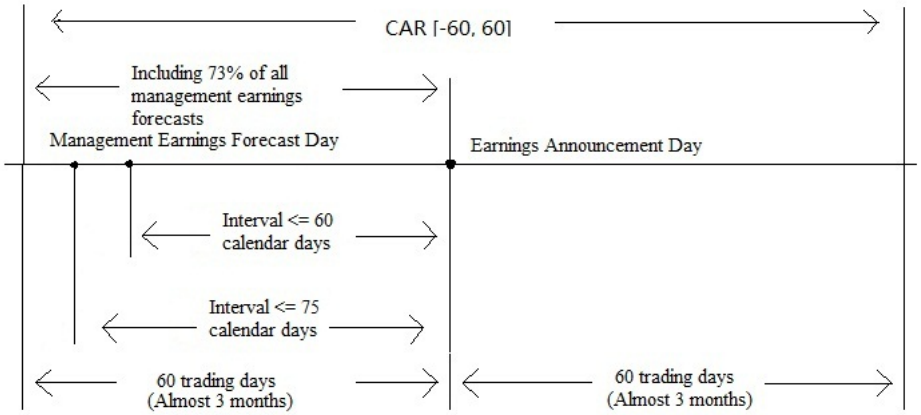
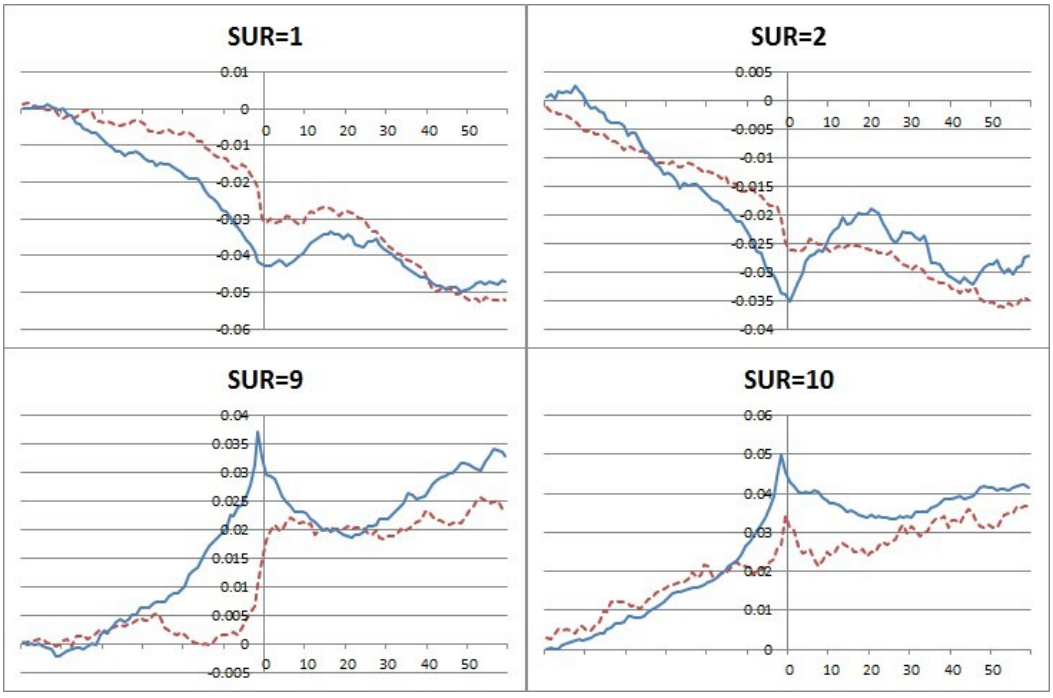


Figure 2. Cumulative Abnormal Returns in the Event Window [-60, 60]



The time 0 is the earnings announcement day. The X axis represents how many trading days before and after announcement and the Y axis represents cumulative abnormal return. The real line denotes the CAR of forecast disclosing firms and the dot line denotes the CAR of the non-disclosing firms.

References

Aboody, D., and R. Kasznik. “CEO stock option awards and the timing of corporate voluntary disclosures”. Journal of Accounting and Economics 29, no. 1 (2000): 73–100.

Ang, J. S., and Y. Ma. “Transparency in Chinese stocks: A study of earnings forecasts by professional analysts”. Pacific-Basin Finance Journal 7, no. 2 (1999): 129–155.

Baginski, S. P., J. M. Hassell, and M. D. Kimbrough. “The effect of legal environment on voluntary disclosure: Evidence from management earnings forecasts issued in US and Canadian markets”. Accounting Review 77, no. 1 (2002): 25–50.

Ball, R., and P. Brown. “An empirical evaluation of accounting income numbers”. Journal of Accounting Research 6, no. 2 (1968): 159–178.

Barber, B. M., and T. Odean. “All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors”. Review of Financial Studies 21, no. 2 (2008): 785–818.

Bartov, E., S. Radhakrishnan, and I. Krinsky. “Investor sophistication and patterns in stock returns after earnings announcements”. Accounting Review 75, no. 1 (2000): 43–63.

Benston, G. J. “Required disclosure and the stock market: An evaluation of the Securities Exchange Act of 1934”. The American Economic Review 63, no. 1 (1973): 132–155.

Berkman, H., and P. Koch. “Disagreement, short sale constraints, and speculative trading before earnings announcements”. Working Paper (2008).

Bernard, V. L., and J. K. Thomas. “Evidence that stock prices do not fully reflect the implications of current earnings for future earnings”. Journal of Accounting and Economics 13, no. 4 (1990): 305–340.

———. “Post-earnings-announcement drift: Delayed price response or risk premium?” Journal of Accounting Research 27 (1989): 1–36.

Botosan, C. A., and M. A. Plumlee. “A re-examination of disclosure level and the expected cost of equity capital”. Journal of Accounting Research 40, no. 1 (2002): 21–40.

Brennan, N. “Voluntary disclosure of profit forecasts by target companies in takeover bids”. Journal of Business Finance & Accounting 26, no. 7 (1999): 883–917.

Bulkley, G., and R. Herrerias. “Does the precision of news affect market underreaction? Evidence from returns following two classes of profit warnings”. European Financial Management 11, no. 5 (2005): 603–624.

Bushman, R. M., J. D. Piotroski, and A. J. Smith. “What determines corporate transparency?”. Journal of Accounting Research 42, no. 2 (2004): 207–252.

Caliendo, M., and S. Kopeinig. “Some practical guidance for the implementation of propensity score matching”. Journal of Economic Surveys 22, no. 1 (2008): 31–72.

Chang, J., T. Khanna, and K. Palepu. “Analyst activity around the world”. Working Paper (2000).

Chen, G., M. Firth, and N. Gao. “The information content of concurrently announced earnings, cash dividends, and stock dividends: An investigation of the Chinese stock market”. Journal of International Financial Management & Accounting 13, no. 2 (2002): 101–124.

Coffee, J. C. Jr. “Market Failure and the Economic Case for a Mandatory Disclosure System”. Virginia Law Review 70, no. 4 (1984): 717–753.

Cohen, J., L. Holder-Webb, D. Wood, and L. Nath. “Retail investors’ perceptions of the decision usefulness of economic performance, governance and corporate social responsibility disclosures”. Behavioral Research in Accounting, Forthcoming (2010).

Da, Z., J. Engelberg, and P. Gao. “In search of attention”. The Journal of Finance 66, no. 5 (2011): 1461–1499.

DellaVigna, S., and J. M. Pollet. “Investor inattention and Friday earnings announcements”. The Journal of Finance 64, no. 2 (2009): 709–749.

Depoers, F. “A cost benefit study of voluntary disclosure: Some empirical evidence from French listed companies”. European Accounting Review 9, no. 2 (2000): 245–263.

Firth, M., P. M. Y. Fung, and O. M. Rui. “Ownership, two-tier board structure, and the informativeness of earnings – Evidence from China”. Journal of Accounting and Public Policy 26, no. 4 (2007): 463–496.

Foster, G. “Quarterly accounting data: Time-series properties and predictive-ability results”. Accounting Review 52, no. 1 (1977): 1–21.

Gigler, F. “Self-enforcing voluntary disclosures”. Journal of Accounting Research 32, no. 2 (1994): 224–240.

Greenwood, R., and S. Nagel. “Inexperienced investors and bubbles”. Journal of Financial Economics 93, no. 2 (2009): 239–258.

Grossman, S. J. “An introduction to the theory of rational expectations under asymmetric information”. The Review of Economic Studies 48, no. 4 (1981): 541–559.

Gul, F. A., J. B. Kim, and A. A. Qiu. “Ownership concentration, foreign shareholding, audit quality, and stock price synchronicity: Evidence from China”. Journal of Financial Economics 95, no. 3 (2010): 425–442.

Guo, J., and J. Y. Hong. “A Study on the Effectiveness of Chinese Security Analysts Earnings Forecasting Behavior”. Economic Research Journal, no. 11 (2009): 55–81.

Haw, I. M., D. Qi, and W. Wu. “Timeliness of annual report releases and market reaction to earnings announcements in an emerging capital market: The case of China”. Journal of International Financial Management & Accounting 11, no. 2 (2000): 108–131.

He, Z. L., and D. Su. “Price Manipulation and Industry Momentum: Evidence from the Chinese Stock Market”. Working Paper (2009).

Healy, P. M., and K. G. Palepu. “Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature”. Journal of Accounting and Economics 31, no. 1 (2001): 405–440.

Healy, P. M., A. P. Hutton, and K. G. Palepu. “Stock performance and intermediation changes surrounding sustained increases in disclosure”. Contemporary Accounting Research 16, no. 3 (1999): 485–520.

Hirshleifer, D., S. S. Lim, and S. H. Teoh. “Driven to distraction: Extraneous events and underreaction to earnings news”. The Journal of Finance 64, no. 5 (2009): 2289–2325.

Hirst, D. E., L. Koonce, and S. Venkataraman. “Management Earnings Forecasts: A Review and Framework”. Accounting Horizons 22, no. 3 (2008): 315–338.

Hou, K., L. Peng, and W. Xiong. “A tale of two anomalies: The implications of investor attention for price and earnings momentum”. Working Paper (2008).

Hu, P., and Y. Wong. “The Research on Predicting Effectiveness of China’s Security Analysts”. Science Technology and Industry 11, no. 8 (2011): 125–130.

Jackson, D., and J. Madura. “Profit warnings and timing”. Financial Review 38, no. 4 (2003): 497–513.

Jiang, Z. Q., W. X. Zhou, D. Sornette, R. Woodard, K. Bastiaensen, and P. Cauwels. “Bubble diagnosis and prediction of the 2005–2007 and 2008–2009 Chinese stock

market bubbles". Journal of Economic Behavior & Organization 74, no. 3 (2010): 149–162.

Kang, J., M. H. Liu, and S. X. Ni. "Contrarian and momentum strategies in the China stock market: 1993-2000". Pacific-Basin Finance Journal 10, no. 3 (2002): 243–265.

Kasznik, R., and B. Lev. "To warn or not to warn: Management disclosures in the face of an earnings surprise". Accounting Review 70, no. 1 (1995): 113–134.

Koester, A., R. Lundholm, and M. Soliman. "Attracting attention in a limited world: An exploration of the forces behind positive extreme earnings surprises". Working Paper (2011).

Lang, M., R. Lundholm. "Cross-sectional determinants of analysts ratings of corporate disclosures". Journal of Accounting Research 31, no. 2 (1993): 246–271.

Lawrence, A. "Individual Investors and Financial Disclosure". Working Paper (2011).

Lerman, A. "Individual investors' attention to accounting information: Message board discussions". Working Paper (2010).

Liu, Q., and Z. Lu. "Corporate governance and earnings management in the Chinese listed companies: A tunneling perspective". Journal of Corporate Finance 13, no. 5 (2007): 881–906.

Lin, M. "The relative accuracy of analyst forecasts from financial analyst and statistical model and their improvement". Finance & Economy, no. 11 (2010): 94–96.

Milgrom, P. R. "Good news and bad news: Representation theorems and applications". The Bell Journal of Economics 12, no. 2 (1981): 380–391.

Miller, E. M. "Risk, uncertainty, and divergence of opinion". Journal of Finance 32, no. 4 (1977): 1151–1168.

Naughton, T., C. Truong, and M. Veeraraghavan. "Momentum strategies and stock returns: Chinese evidence". Pacific-Basin Finance Journal 16, no. 4 (2008): 476–492.

Nelson, K. K., R. A. Price, and B. R. Rountree. "Are Individual Investors Influenced by the Optimism and Credibility of Stock Spam Recommendations". Working Paper (2011).

Newman, P., and R. Sansing. "Disclosure policies with multiple users". Journal of Accounting Research 31, no. 1 (1993): 92–112.

Ng, L., and F. Wu. “Revealed stock preferences of individual investors: Evidence from Chinese equity markets”. Pacific-Basin Finance Journal 14, no. 2 (2006): 175–192.

Odean, T. “Do investors trade too much?” The American Economic Review 89, no. 5 (1999): 1279–1298.

Penman, S. H. “An empirical investigation of the voluntary disclosure of corporate earnings forecasts”. Journal of Accounting Research 18, no. 1 (1980): 132–160.

Piotroski, J. D., and T. J. Wong. Institutions and information environment of Chinese listed firms. University of Chicago Press, 2011.

Piotroski, J. D., T. J. Wong, and T. Zhang. “Political incentives to suppress negative financial information: evidence from state-controlled Chinese firms”. Working Paper (2010).

Pownall, G., C. Wasley, and G. Waymire. “The stock price effects of alternative types of management earnings forecasts”. Accounting Review 68, no. 4 (1993): 896–912.

Skinner, D. J. “Earnings disclosures and stockholder lawsuits”. Journal of Accounting and Economics 23, no. 3 (1997): 249–282.

———. “Why firms voluntarily disclose bad news”. Journal of Accounting Research 32, no. 1 (1994): 38–60.

Smith, S. D. “Confidence and trading aggressiveness of naïve investors: Effects of information quantity and consistency”. Review of Accounting Studies 15, no. 2 (2010): 295–316.

Stambaugh, R. F., J. Yu, and Y. Yuan. “The short of it: investor sentiment and anomalies”. Journal of Financial Economics 104, no. 2 (2012): 288–302.

Su, D. “Stock price reactions to earnings announcements: Evidence from Chinese markets”. Review of Financial Economics 12, no. 3 (2003): 271–286.

Tawatnuntachai, O., and D. Yaman. “Do investors overreact to earnings warnings?” Review of Financial Economics 16, no. 2 (2007): 177–201.

Trueman, B. “Why do managers voluntarily release earnings forecasts?” Journal of Accounting and Economics 8, no. 1 (1986): 53–71.

Tucker, J. W. “Is openness penalized? Stock returns around earnings warnings”. Accounting Review 82, no. 4 (2007): 1055–1087.

Vissing-Jorgensen, A. “Perspectives on Behavioral Finance: Does ‘Irrationality’ Disappear with Wealth? Evidence from Expectations and Actions”. NBER Macroeconomics Annual 18 (2003): 139–208.

Walther, B. R. “Investor sophistication and market earnings expectations”. Working Paper (1997).

Waymire, G. “Additional evidence on the information content of management earnings forecasts”. Journal of Accounting Research 22, no. 2 (1984): 703–718.

Xu, W. “Market reactions to warnings of negative earnings surprises: Further evidence”. Journal of Business Finance & Accounting 35, no. 7–8 (2008): 818–836.

Yue, H., and X. C. Lin. “Financial Analyst vs. Statistical Model: The Relative Accuracy of Analyst Forecasts and Its Determinants”. Accounting Research, no. 8 (2008): 40–49.

Zhang, R., and P. Zhang. “The management earnings forecast incentives in China”. China Accounting Review 9, no. 1 (2011): 3–20.