# A Review of Insider Trading and Management Earnings Forecasts

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### Abstract

This paper reviews the literature about the management earnings forecasts (MEFs) under insider trading motivations. This review includes three parts: the motivations of earnings forecasts, the strategically choice of earnings forecasts attributes based on insider trading and the abnormal return of insider trading following selective choice of earnings forecasts attributes. This paper contributes to the literature about insider trading and MEFs disclosure. This study will help to improve the disclosure quality of management earnings forecasts, to enhance capital market information disclosure system and to protect the interests of minor shareholders.

Keywords: Insider trading, Management earnings forecasts, Strategy of MEFs disclosure

### 1. Introduction

Insider trading has been a major problem to protect investors' benefits in the capital markets. The so-called "insider" usually refers to a company's executives or major shareholders. They have the controlling right or the operating right of the company. According to the principal-agent theory and information asymmetry theory, insiders have a natural advantage of information, control right and decision-making right. When insiders are planning to trade their own company's stock, whether the management earnings forecasts will be released transparently, fairly and justly? This will put great impact on the funds allocation efficiency of the capital markets. In the companies which the stock right is scattered, the ownership and management rights separated highly, the controlling right centralized in the hands of corporate executives. In this situation, insiders generally refer to the executives. In modern-concentrated enterprises, the controlling shareholders or substantial shareholders have the control right, or they act as the company's executives. In this case, the major shareholders or controlling shareholders are insiders.

Insider trading specifically refers to the company's executives or major shareholders buying or selling stocks in the secondary capital markets. Insider trading has been the focus of the regulatory authorities both in the domestic market and in the international market. In the procession of China Securities Regulatory Commission to build a multi-level capital market information disclosure system, standardize the release of earning forecasts information to prevent the use of private information to increase the profit of insider trading is necessary. This can protect the interests of investors and improve the allocation efficiency of capital markets. This paper attempts to review the management earnings forecast literature under the motivation of insider trading thoroughly. This paper organizes a great number of studies about this topic. After reviewing the earnings motivation research based on insider trading, we summarize the studies of managers earnings forecast policy choice based on insider trading, including four aspects: the effects of insider trading to the frequency, the properties, the forms and accuracy of management earnings forecasts. Further, the paper summarizes the profit of insider trading through strategic choice of earnings forecast. Finally we make a discussion of all the literature reviewed. This paper makes contribution to the research about insider trading and MEFs disclosure.

### 2. The Motivation of MEFs Based on the Insider trading

King et al. (1990) make the first definition of management earnings forecast as voluntary disclosures predicting earnings prior to the expected quarterly or annual reporting date. Since MEFs transfer the information about companies' future performance to the market, that can effectively alleviate the information asymmetry problem (Coller and Yohn, 1997; Verrecchia, 2001), establish or alter investors' expectations of the future development of the company, thus affect the stock price (Patell, 1976; Penman, 1980; Nagar et al., 2003). Such forecasts represents one of the key voluntary disclosure mechanisms in the west more matured capital market, by which managers establish or alter market earnings expectations, preempt litigation concerns, and influence their reputation for transparent and accurate reporting (Hirst,2008). Because insiders usually have the controlling and operating right of the company, they have more private information compared with the outside investors. They can profit by the earnings information they have possessed through the strategically disclosure of MEFs and timing their transactions. Combing through the literature, the motivations of MEFs based on the insider trading can be roughly divided into two categories:

### 2.1 Self-Interested Motivation of MEFs

Managers release MEFs because of self-interested goal at times, such as: the incentives based on the stock price and insider trading. Penman (1980) is the first to find evidence of insider got excess returns based on the timing transactions of MEFs. He examines the relationship between performance forecasts and stock price changes and proves earnings forecasts have information content. Noe (1999) find that compared to other periods, the managers increase the trading frequency after the release of MEFs, indicating that the insiders using their information advantages to profit from insider trading. Aboody and Kasnik (2000) investigate 572 companys' MEFs and CEO stock-option incentive, and find that CEO inclined to disclose unfavorable MEFs before fixed exercise date, disclose favorable MEFs after fixed exercise date, so that they can maximize their option-granted benefits. All of these studies suggest that managers have incentives to take advantage of stock price and make more profit by using MEFs information disclosure. Thus, it also means that firm-level managerial motivations play an important role in the MEFs release decision procedure.

### 2.2 Major-Shareholders-Interested Motivation of MEFs

In the listed companies under the direct or indirect control of major shareholders, any managers' decision reflects more about the motivation of major shareholders. Therefore, the managers of listed companies release earnings forecasts is not solely for themselves, sometimes for trading profit of major shareholders. Lang and Lundholm (2000) examine the information disclosure of listed companies six months before seasoned equity offerings, the number of information disclosure of sample companies increases sharply; especially those managers have greater discretion. Ruland et al. (1990) and Marquardt and Wiedman (1998) documents that the quantity of management earnings forecasts increases significantly before or after equity offerings. Brockman et al.(2008) find that one month prior to share repurchase, managers increase the frequency and magnitude of the negative earnings forecast disclosure; and after stock repurchase, increase the frequency and magnitude of the positive earnings forecast disclosure, but its extent is smaller than the negative MEFs disclosed in advance. Ertimur et al (2014) examine the effect of lager shareholders' ex ante selling incentives on firms' voluntary disclosure choices in the setting of IPO lockup expiration and find evidence that managers delay disclosure of bad news not for their own benefit, but to enable influential pre-IPO shareholders to sell their shares at more favorable prices. In addition, some literature combine managers' trading incentives and other insiders' trading incentives together to study the influences to the the disclosure decisions of MEFs. For example: Irani (2003) analyze distressed companies' and non-distressed companies' managers and other insider trading behaviors and find that only non-managerial insiders of distressed companies selectively time their sales following MEFs that are ex post optimistic; non-distressed companies do not exhibit this tendency. Kraft et al. (2014) make a distinction of transactions motive between executives and other insiders (directors or major shareholders), examine the information asymmetry between these two types of insiders. Their results show that senior officers' exclusive sales and the company's future performance are negatively correlated, indicating that they take advantage of insider information when they sell the stocks.

## 3. The Disclosure Policy Choice of MEFs Based on the Insider trading

To some extent, MEFs have characteristics of voluntary disclosure and managers have discretion on when, what and how to disclosure (Hirst, 2008). We all know that managers often issue earnings forecasts to reducing the information asymmetry between insiders and outsiders.

However, at times, it has been proven that managers strategically select MEFs features (Skinner, 1994; Baginskid et al., 2002; Choi, 2010) to profit from insider trading.

### 3.1 Insider trading and the Frequency of MEFs

The self-interested motives of insider trading tend to affect the frequency of MEFs release. Nagar et al. (2003) examine the relationship of management incentives based on stock prices and the behavior of MEFs disclouse. They deem that managers with greater levels of equity-based incentives issue more frequent forecasts to avoid stock mispricing that could affect their wealth adversely. They also consider that equity-based compensation encourage not just favorable-news, but also unfavorable-news disclosures, because silence (no forecasts) is likely to be interpreted passively. Their study finds that the MEFs frequency is positively associated with the value and the proportion of CEO stock option. Cheng and Lo (2006) and Rogers and Stocken (2005) find that when managers plan to purchase company stocks, firms increase the number of negative earnings forecasts release, thereby reduce the stock prices.

### 3.2 Insider trading and the Properties of MEFs

MEFs provide relevant information about companies' future performance. According to the market reaction they can cause (or be expected to cause), MEFs are usually divided into favorable and unfavorable information. Cheng and Lo (2006) believe that with private information, insiders have more discretion on whether to release MEFs and they can strategically choose the type, the time and the content of earnings forecast. They find that when managers plan to buy shares, they increase the number of bad news forecasts to reduce the purchase price.

In addition, this relation is stronger for transactions initiated by chief executive officers than for those initiated by other executives. Noe (1999) find that insider's sale stocks after favorable earnings forecasts released; on the contrary, they buy stocks after unfavorable earnings forecasts' disclosure. Aboody and Kasnik (2000) examine the relationship between CEO stock option and MEFs, and find that around the fixed exercise date, managers disclose negative MEFs in advance, postpone the disclosure of favorable MEFs.

### **3.3 Insider trading and the forms of MEFs**

The forms of MEFs include point forecasts, closed interval forecasts, open-ended forecasts and qualitative forecasts. The specificity of MEFs decrease in order. Rogers (2008) examine the transaction based on personal motivation and find that executives strategically choose MEFs' disclosure quality and believe that the transaction incentive of insiders is associated with the quality of MEFs disclosure. His results show that compared with the other cases, executives enhance the quality of information disclosure before selling stocks, eg: the form of MEFs is more specific, the disclosure is more timely. Cheng et al. (2013) find that for self-interested motivation, the more positive (negative) MFEs are before insiders' sales, the more (less) precise comparing with the other MEFs. The opposite applies to MEFs disclosure decisions. They find that managers respond to an exogenous shock positively to short selling pressure and stock prices are sensitive to bad news by reducing the precision of bad news forecasts.

### 3.4 Insider trading and the Accuracy (or bias) of MEFs

Given that the accuracy (or bias) of MEFs can cause significant stock price reaction, many foreign scholars have studied whether the insider trading motives have an impact on the accuracy of MEFs. That is to say, they investigate to find out whether the managers strategically choose the accuracy of MEFs for the sake of insider trading. Irani (2003) investigates the association between MEFs bias released by managers of financially distressed companies and subsequent insider trading. He found that insiders of distressed companies tend to reduce the amount of stock they holding; the reduction amount of stock is positively related to the upward MEFs bias. Roger and Stocken (2005) believe that the managers will publish biased MEFs for insider trading incentive because that increase their trading profits. Beniluz (2006) study the influence of the management transaction to the earnings forecast error and find that when managers reduce their holdings of shares, the positive earnings forecast errors are larger. Brockman et al. (2008) show the MEFs disclosure bias is downward before shares repurchase. Cheng et al. (2013) find more positive (negative) earnings forecasts are more (less) precise than other management forecasts before insider sales; the opposite stands before insider purchases.

# 4. Strategic MEFs and Profit of Insider trading

Most of the early literature use event study to examine whether insider trading can get abnormal returns. The conclusions tend to an agreement until the 1970s that the insiders have information superiority to judge price movements and they can get profit by insider trading. Patell (1976) and Jaggi (1978) find that there is significant price adjustment phenomenon around the releasing date of MEFs. This suggests MEFs have information contents because the disclosure of earnings forecast can cause investors to revise their expectations. Then, in order to interest them self or to facilitate major shareholders transactions motive, manager carry out strategic earnings forecast. Whether have the insiders achieved their intended purpose? Whether have they acquired excess returns? Penman (1982) finds that the insiders have information superiority. They choose the time of trading by using the stock price revision phenomenon and get the excess return. He has estimated the size of these returns. Noe (1999) find positive association between the insider trading after MEFs release and the subsequent abnormal returns. His results show: Insiders' stock selling activities increase when MEFs caused positive stock price reaction; insiders' stock buying activities increase when MEFs caused negative stock price reaction. Roger and Stocken (2005) examine the market reaction of MEFs bias, and find the favorable MEFs are less credible than unfavorable MEFs. The more optimistic of the favorable MEFs bias are, the less positive are the market reactions; the more pessimism, the more positive. There are no obvious differences in market response to the unfavorable MEFs bias. Ertimur et al. (2014) discover by delaying the release of unfavorable MEFs until the earnings announcement, on the one hand managers postpone the decline of stock prices due to bad news, on the other hand avoid the adverse price impact of selling stock after the IPO lockup expiration. By this means, managers help pre-IPO shareholders get about 11% abnormal return.

### 5. Discussion

This is the summary of existing literature related to insider trading and MEFs. Western research about this issue has become relatively matured. But Chinese research about this topic is far more inadequate. According to the review above, insider trading behavior affects the management earnings forecast disclosure decisions, changes the characteristics of MEFs and increase insider trading profits. This problem will damage the interests of minority shareholders greatly, and will destroy the effectiveness of capital market at the same time. Because China's capital market started lately, the relevant rules and regulations are not perfect now. So, the insider trading in China is very common. Currently, under the weaker supervision of the capital market environment and the lower cost of default system background, the phenomena of executives disclose MEFs not timely, inaccurate, selectively for their own and major shareholders' interest must be more seriously. Therefore, we need to continue our research on the insider trading behavior and MEFs disclosure. We hope this study will provide a favorable research for regulators and investors. It will prevent insider use strategic disclosure of MEFs to increase trading profit artificially and protect the interests of minor shareholders.

### References

- Aboody, D., and R. Kasznik. 2000. CEO stock option awards and the timing of voluntary corporate disclosures. Journal of Accounting and Economics 29: 73–100.
- Baginski, S.P., Hassell, J.M., Kimbrough, M.D., 2002. The effect of legal environment on voluntary disclosure: Evidence from management earnings forecasts issued in U.S. and Canadian markets. The Accounting Review. 77 (1):25–50.
- Beniluz, Yoel. 2006. Management Earnings Forecast Bias and Managers' Decision to Issue Earnings Guidance: An Examination of Management Incentives, Ph. D Dissertation, University of Chicago.
- Brockman, P., Khurana, I. K., Martin, X. 2008. Voluntary disclosures around share repurchases. Journal of Financial Economics. 89(1):175–191
- Cheng, Q., and K. Lo. 2006. Insider trading and voluntary disclosures. Journal of Accounting Research. 44(5): 815–848.
- Cheng, Q., Luo, T., Yue, H. 2013. Managerial incentives and management forecast precision. The Accounting Review. 88(5): 1575–1602.
- Choi, J. L. A. Myers, Y. Zang, and D. A. Ziebart. 2010. The roles that forecast surprise and forecast error play in determining management forecast precision. Accounting Horizons24: 165–188.

- Coller, M., and T. L. Yohn. 1997. Management forecasts and information asymmetry: An examination of bid-ask spreads. Journal of Accounting Research. 35(2): 181–191.
- Ertimur Y., Sletten E. and Sunder J. 2014. Large shareholders and disclosure strategies: Evidence from IPO lockup expirations. Journal of Accounting and Economics, Vol 58: 79-95.
- Hirst, D. E., L. Koonce, and S. Venkataraman. 2008. Management earnings forecasts: A review and framework. Accounting Horizons. 22: 315–338.
- Irani, Afshad, J., 2003. Management Earnings Forecast Bias and Insider Trading: Comparison of Distressed and Non-distressed Firms, Journal of Business and Economic Study. 9:12-25.
- Jaggi, B., 1978. A Note on the Information Content of Corporate Annual Earnings Forecasts. The Accounting Review. 53(4): 961-967.
- King, R., Pownall, G., Waymire, G., 1990. Expectations adjustments via timely management forecasts: review, synthesis, and suggestions for future research. Journal of Accounting Literature 9:113–144.
- Kraft, A., Lee, B.S., Lopatta, K. 2014. Management earnings forecasts, insider trading, and information asymmetry. Journal of Corporate Finance. 26:96-123.
- Lang, M. H., and R. J. Lundholm. 2000. Voluntary disclosure and equity offerings: Reducing information asymmetry or hyping the stock? Contemporary Accounting Research17 (4): 623–662.
- Li, Y. H., Zhang, L. D. 2015. Short Selling Pressure, Stock Price Behavior, and Management Forecast Precision: Evidence from a Natural Experiment. Journal of accounting research. 53(1): 79–117.
- Marquardt, C., and C. Wiedman. 1998. Voluntary disclosure, information asymmetry, and insider selling through secondary equity offerings. Contemporary Accounting Research. 15(4): 505–537.
- Nagar, V., D. Nanda, and P. Wysocki. 2003. Discretionary disclosure and stock-based incentives. Journal of Accounting and Economics. 34: 283–309.
- Noe, C. 1999. Voluntary disclosures and insider transactions . Journal of Accounting and Economics, Vol. 27: 305-326.
- Patell, J. M. 1976. Corporate forecasts of earnings per share and stock price behavior: Empirical tests. Journal of Accounting Research 14(2): 246–276.
- Penman, S. H. 1980. An empirical investigation of the voluntary disclosure of corporate earnings forecasts. Journal of Accounting Research 18(1): 132–160.
- Penman, S. H. 1982. Insider Trading and the Dissemination of Firms' Forecast Information. Journal of Business. 1982. vol 55,(4):479-503.
- Rogers, J. L. 2008. Disclosure quality and management trading incentives. Journal of Accounting Research. 46: 1265–1296.
- Rogers, J. L., and P. C. Stocken. 2005. Credibility of management forecasts. The Accounting Review. 80(4): 1233–1260.
- Ruland, W., S. Tung, and N. E. George. 1990. Factors associated with the disclosure of managers' forecasts. The Accounting Review. 65(3): 710–721.
- Skinner, D., 1994. Why firms voluntarily disclose bad news. Journal of Accounting Research. 32 (1):38-60.

Verrecchia, R. Essays on disclosure. Journal of Accounting and Economics. 32: 97-180.