

EARNINGS MANAGEMENT AND AUDITING: AN EMPIRICAL STUDY OF CHINESE COMPANIES

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ABSTRACT

This study sheds light on how various audit aspects influence/reflect China publicly listed firms' earnings management using CCER 2008-2012 data. State controlled firms' audit aspects are not associated with their earnings management behavior. For other firms, higher audit fee indicate lower earnings management. We believe high audit fee lead to extensive audit and thus lower earnings management. Extensive audit compensate for the young legal and accounting system in private sector of China. For state controlled firms, more than twice as many are switching to Big Four auditors than switching away from Big Four auditors. We can expect Big Four expand their market share among state controlled firms if the trend continues.

INTRODUCTION

Earnings management (EM) may be defined in various ways, such as: Purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain [23]; the active manipulation of earnings towards a predetermined target [19]; the use of managerial discretion over (within GAAP) accounting choices, earnings reporting choices, and real economic decisions to influence how underlying economic events are reflected in one or more measures of earnings [29]; the alteration of a firm's financial reports by insiders in order either to mislead some stakeholders or to influence contractual outcomes that are dependent on numbers in the financial reports [14]. Companies can manage their earnings by making discretionary accrual adjustments. These are allowed because the accrual basis of accounting allows and requires estimates in the financial reporting process. For example, current earnings can be adjusted up or down by underestimating or overestimating bad debt expense on credit sales.

Earnings management has been an important topic in the accounting literature for over 20 years. In a recent article, Walker [29] reviews the academic research literature on earnings management over the last 20 years using articles from 10 top accounting journals. He finds over 311 articles with 274 from North American journals and notes that interest in the topic has picked up since 2005. In this paper we investigate whether aspects of the company audit can shed light on the extent of earnings management engaged in by a company. This study is a great contribution to the audit aspect of earnings management in emerging market. Specifically, we shed light on how audit fee, audit opinion, switch of auditors and Big Four influence/reflect company earnings management behavior.

LITERATURE REVIEW

Earnings Management

Leuz, Nanda, & Wysocki [16] uses accounting data from 1990-1999 for over 8,000 firms from 31 countries to compare earnings management and investor protection internationally. They find that the degree of earnings management is less in economies with large stock markets, dispersed ownership, strong investor rights, and strong legal enforcement. We have adopted their earnings management measurement method, which is described in detail in the research methods section of this paper. Peek et al. [21] use accounting data from 9 different countries for the years 1989-2009 to examine the predictive accuracy of accruals models used to measure earnings management. They find considerable variation and that the variation is systematic. This finding calls into question the usefulness of simplistic comparisons of earnings management comparisons among countries. Walker [29] reviews the academic research literature on earnings management over the last 20 years using articles from 10 top accounting journals. He finds over 311 articles with 274 from North American journals. He provides examples of specific research themes, methods and methodological contributions and provides suggestions for future research.

Corporate Governance and Earnings Management

Extensive research has been done on the impact of outside directors on earnings management. Musteen, Datta, & Kemmerer [20] find that firms with a greater proportion of outside directors and those with larger boards of directors exhibited better reputations than those with smaller boards and a higher proportion of insiders. The study sample involved companies included in the 2000 Fortune List of America's Most Admired Corporations. Duchin, Matsusaka, & Ozbas [11] conclude that the effectiveness of outside directors depends on the cost of acquiring information about the firm. When the cost of information acquisition is low, performance increases when outsiders are added to the board. When the information acquisition cost is high, performance worsens when outsiders are added to the board. The data are from American firms over the period 2000-2005. Shen & Chen [25] examine the impacts of corporate governance on earnings management. They conclude that firms with good corporate governance tend to engage in less earnings management and large size firms are prone to do earnings smoothing. Wang & Campbell [30] use data from 1,329 Chinese publicly listed companies from 1998-2009 to investigate how IFRS, state ownership, and board of directors (BOD) influence earnings management. They conclude that state-ownership discourages earnings management. When state-ownership is not the case, increasing the number of independent members on the board of directors discourages earnings management, but increasing the number of non-independent board members has no affect. Can an independent board of directors improve corporate governance, and thus reduce earnings management? Bebcuk & Hamdani [1] point out that good corporate governance practices at a publicly held firm will not necessarily be good practices at a publicly traded firm in which there is a controlling shareholder.

Earnings Management and Audit

Boone and Khurana [3] conclude that concentration of auditors in a local area indeed render the auditors more tolerant of earnings management. They conclude that higher auditor concentration is associated with lower audit quality. Peng [22] studies listed Chinese companies to investigate the relationship between audit fees and earnings management. Peng finds that audit fees increase

because of perceived risk of earnings management regardless of the direction of the impact on net income. That is, both upward and downward earnings management increase audit fee. The results are limited since only the manufacturing industry was studied and the sample was relatively small. Memis & Cetenak [18] investigate the relationship between earnings management and audit quality/legal system quality. They use data from the Datastream Worldscope database from companies in 8 important emerging countries. They document that there is a significant negative correlation between the amount of earnings management and audit quality for companies in Brazil and Mexico but no significant relationship for companies in other countries. They also conclude that audit environment, which is directly related to the legal system, constrain earnings management in all countries. Ghosh [13] using data on Indian listed companies documents that firms having high discretionary accruals are less likely to be audited by domestic entities. The analysis also suggests that domestic auditors are less likely to be preferred by both foreign and Indian private corporations. In addition, audit fees are higher for firms with higher earnings opacity. Krishnan et al. [15] concludes that audit fees and resignations are positively associated with the risk of upward earnings management.

METHODOLOGY

Our data come from the China Center for Economic Research (CCER) database. We exclude the finance industry from our analysis because of its special regulation and structure. China switched to IFRS in 2007. Some variables we use in this research are calculated using both current and previous year data. In order to use IFRS data exclusively, we select only data from 2008-2012. We eliminate observations with missing values.

Earnings Management

Earnings management is generally understood to mean attempts by company insiders to protect their positions and benefits by manipulating the financial information provided to outsiders. This often takes the form of income smoothing or income manipulation. Earnings management has been the subject of extensive accounting research [14] [16]. Measuring the degree of earnings management has presented challenges, and researchers have devised various methods. In this study, we use the methods developed by Leuz, Nanda, & Wysocki [16], which were based on previous work by Dechow, Sloan, & Sweeney [8], Healy & Wahlen [14] and Dechow & Skinner [7]. We first introduce accruals and cash flow.

The operational definition of accruals is:

$$Accruals = (\Delta CA - \Delta Cash) - (\Delta CL - \Delta STD - \Delta TP) - Dep \quad \text{Equation (1)}$$

Where: ΔCA = change in total current asset; $\Delta Cash$ = change in cash/cash equivalents; ΔCL = change in total current liabilities; ΔSTD = change in short-term debt included in current liabilities; ΔTP = change in income taxes payable; Dep = depreciation and amortization expense.

We then calculate cash flow from operations:

$$\text{Cash flow from operations} = \text{Operating earnings} - \text{Accruals} \quad \text{Equation (2)}$$

$$EM = |\text{Accruals}| / |\text{Cash flow from operations}| \quad \text{Equation (3)}$$

Where: EM stands for earnings management.

The larger EM is indicative of large-scale use of discretion to manipulate reported accounting earnings. (Leuz, Nanda, & Wysocki [16] identifies other measures of earnings management. However, these other measures are not applicable for purposes of this paper.)

Independent Variables

Auditor choice. As Ghosh [13] concludes, firms having high discretionary accruals are less likely to be audited by domestic entities. Dehkordi & Makarem [10] document that governmental auditors provide superior audits. However, the size of non-governmental audit firms does not affect their audit quality. The conclusion is based on companies in Iran. This study will look at whether a company's decision to use Big Four auditors is related to its earnings management practices. DeAngelo [6] documents that larger audit firms have greater incentives to provide higher-quality audit service. DeFond, Wong, & Li [9] find strong evidence that larger Chinese auditors tend to issue modified audit reports more often than smaller auditors, indicating larger Chinese auditors are more independent. However, during the research process, we realize that deciding how to define larger Chinese auditors is rather difficult. Thus, we do not pursue impact on EM due to size of domestic audit firm.

Audit fee & audit opinion. Krishnan et al. [15] conclude that audit fees are positively associated with earnings management. Various studies also conclude that audit fees are positively associated with corporate failure [2] [24] [26]. We scale audit fee by sales. Abundant studies have been done on audit opinions and business risk [28] [4] [12].

Change of auditors. Krishnan et al. [15] document that auditors are more likely to charge higher audit fees if upward earnings management risk is high but within acceptable limits and then resign if the risk becomes more severe. We do not have auditor resignation information. However, we will use change of auditors as a proxy for auditor resignation. We acknowledge that change of auditors happens for various reasons and auditor resignation is only one.

State ownership. State ownership affects the interaction between auditors and earnings management [5]. Large/state shareholding is also an important governance mechanism [17] [25] [27]. CCER database reports the ultimate controller type. We assume the company has significant state ownership if their ultimate controller is the state. This might not be true. The state does not need to have significant ownership to be able to control a company. On the other hand, the state can have significant ownership (but still less than 50%) and still not control the company.

Board of directors. Musteen, Datta, & Kemmerer [20] study 324 firms featured in Fortune's list of most admired corporations in the US and conclude that firms with a greater proportion of outside directors and those with larger boards exhibited better reputations than those with smaller boards and a higher proportion of insiders. Duchin, Matsusaka, & Ozbas [11] conclude that the effectiveness of outside directors depends on the cost of acquiring information about the firm. We thus include independent BOD members and total BOD membership (scaled by size) in our analysis. We control for size, leverage, book to market ratio, suffer loss, lower profitability (ROA), industry, and year.

RESULTS

This study sheds light on how various audit aspects influence/reflect companies' earnings management. State controlled firms' audit aspects (audit opinion, audit fee, change of audit fee, switch of auditor and Big Four auditor) are not associated with their earnings management behavior. For other firms, higher audit fee indicate lower earnings management. We believe high audit fee lead to extensive audit and thus lower earnings management. Extensive audit compensate for the young legal and accounting system in private sector of China. Higher ROA indicates higher earnings management for private firms. Earnings management is higher for private firms that suffer loss. Private telecommunication industry also has higher earnings management. More state controlled public companies employ Big Four auditors (8.61%) than other firms (4.56%). For state controlled firms, more than twice as many are switching to Big Four auditors than switching away from Big Four auditors. For other firms, slightly fewer observations are switching to Big Four auditors than switching away from Big Four auditors. We can expect Big Four expand their market share among state controlled firms if the trend continues.

REFERENCES

- [1] Bebhuk, L. A., & Hamdani, A. (2009). The elusive quest for global governance standards. *University of Pennsylvania Law Review*, 157, 1263-1317.
- [2] Bell, T.B., Landsman, W.R., & Shackelford, D.A. (2001). Auditors perceived business risk and audit fees: analysis and evidence. *Journal of Accounting Research*, 39(1), 35-43.
- [3] Boone, Jeff P., Khurana, Inder K., Raman, K.K., *Contemporary Accounting Research* Vol. 29 No. 4 (Winter 2012) pp. 1171–1203 _ CAAA doi:10.1111/j.1911-3846.2011.01144.x
- [4] Carey, P., Kortum, S., & Moroney, R. (2012). Auditors' going-concern -modified opinions after 2001: measuring reporting accuracy. *Accounting & Finance*, 52(4), 1041-1059.
- [5] Chen, H., Chen, J. Z., Lobo, G. J., & Wang, Y. (2011). Effects of audit quality on earnings management and cost of equity capital: evidence from China. *Contemporary Accounting Research* 28(3), 892-925.
- [6] DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics* 3(3), 183-199.
- [7] Dechow, P., & Skinner, D. (2000). Earnings management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons*, 14, 235-250.
- [8] Dechow, P., Sloan, R. & Sweeney, A. (1995). Detecting earnings management. *The Accounting Review*, 70, 193-225.
- [9] DeFond, M.L., Wong, T.J. & Li, S. H. (2000). The impact of improved auditor independence on audit market concentration in China. *Journal of Accounting and Economics* 28(3), 269-305.
- [10] Dehkordi, H. F., & Makarem, N. (2011). The effect of size and type of auditor on audit quality. *International Research Journal of Finance and Economics*, 80, 121-137.
- [11] Duchin, R., Matsusaka, J. G., & Ozbas, O. (2010). When are outside directors effective? *Journal of Financial Economics*, 96, 195-214.
- [12] Gaeremynck, A., & Willekens, M. (2003). The endogenous relationship between audit-report type and business termination: evidence on private firms in a non-litigious environment. *Accounting and Business Research*, 33(1), 65-79.

- [13] Ghosh, S. (2011). Firm ownership type, earnings management and auditor relationships: evidence from India. *Managerial Auditing Journal*, 26(4), 350 – 369.
- [14] Healy, P., & Wahlen, J. (1999). A review of earnings management literature and its implications for standard setting. *Accounting Horizons*, 13, 365-383.
- [15] Krishnan, G. V., Sun, L., Wang, Q., & Yang, R. (2013). Client risk management: A pecking order analysis of auditor response to upward earnings management risk. *Auditing: A Journal of Practice & Theory*, 32(2), 147-169.
- [16] Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. *Journal of Financial Economics*, 69, 505-527.
- [17] Li, G. (2010). The pervasiveness and severity of tunneling by controlling shareholders in China. *China Economic Review*, 21, 310-323.
- [18] Memis, Mehmet Unsal and Cetenak, Emin Huseyin, Earnings Management, Audit Quality and Legal Environment: An International Comparison. *International Journal of Economics and Financial Issues* Vol. 2, No. 4, 2012, pp.460-469 ISSN: 2146-4138
- [19] Mulford, C. W., & Comisky, E. E. (2002). Playing the financial numbers game. *Corporate Board*, 23(134), 13-16.
- [20] Musteen, M., Datta, D. K., & Kemmerer, B. (2010). Corporate reputation: Do board characteristics matter? *British Journal of Management*, 21, 498-510.
- [21] Peek, E., Meuwissen, R., Moers, F., & Vanstraelen, A. (2013). Comparing abnormal accruals estimates across samples: an international test. *The European Accounting Review*, 22(3), 533-572.
- [22] Peng, Xin. (2009). Earnings management, audit risk and asymmetric audit fees - Evidence based on 2008 China Shanghai-listed manufacturing company. *Journal of Modern Accounting and Auditing* 5(12), 48-53.
- [23] Schipper, Katherine. (1989) Commentary on Earnings Management. *Accounting Horizons*. Dec89, Vol. 3 Issue 4, p91-102. 12p.
- [24] Seetharaman, A., Gul, F.A. & Lynn, S.G. (2002). Litigation risk and audit fees: evidence from UK firms cross-listed on US markets. *Journal of Accounting and Economics*, 33, 91-115.
- [25] Shen, W., & Chen, L. (2009). Firm profitability, state ownership, and top management turnover at the listed firms in China: A behavioral perspective. *Corporate Governance: An International Review*, 17, 443-456.
- [26] Stanley, J. D. (2011). Is the audit fee disclosure a leading indicator of clients' business risk? *Auditing: A Journal of Practice & Theory*, 30(3), 157-179.
- [27] Sueyoshi, T., Goto, M., & Omi, Y. (2010). Corporate governance and firm performance: Evidence from Japanese manufacturing industries after the lost decade. *European Journal of Operational Research*, 203, 724-736.
- [28] Sun, L. (2007). A re-evaluation of auditors' opinions versus statistical models in bankruptcy prediction. *Review of Quantitative Finance and Accounting*, 28, 55-78.
- [29] Walker, M. (2013). How far can we trust earnings numbers? What research tells us about earnings management. *Accounting & Business Research*, 43(4), 445-481.
- [30] Wang, Y., & Campbell, M. (2012). Corporate governance, earnings management, and IFRS-empirical evidence from Chinese domestically listed companies. *Advances in International Accounting*, 28(1), 189-192.
- [31] Wang, Y., Campbell, M., & Johnson, D. (2013). Accuracy of auditing information in predicting business risk of companies listed on Chinese stock exchanges. Working paper.