

Meeting Dividend Thresholds through Real Earnings Management of Listed Banks in China: the Perspective of Manipulate Real Activities

Zhenjia Liu

School of Accounting and Finance, Tan Kah Kee College, Xiamen University, Xiamen, China

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Abstract: Dividend distribution influences corporate operating decisions, and the prior year's dividends represent an earnings threshold. The purpose of this study was to clarify perceptions regarding the manipulation of income toward a desired earnings goal (i.e., dividend threshold). In this study, data from 2009 to 2020 were collected from the CSMAR database. A regression model was adopted to analyze the manipulation of income toward a dividend threshold (i.e., desired earnings goal) among China's listed banks. The empirical results show that managers of listed China banks not tend to meet or exceed dividend thresholds through manipulating operating cash flows, cost of goods sold, discretionary expenditures.

1. Introduction

Managers appear willing to expend considerable effort in avoiding dividend cuts [1] because dividends are of primary importance to investors [2] and negative stock price reactions have been observed following the announcement of dividend reductions [3]. In addition, [4] also developed alternative dividend stickiness measures as a proxy for managerial reluctance to cut dividends and found that firms with stickier dividend payout have greater earnings persistence, earnings growth, and pricing multiples on earnings. On the other hands, they also showed that the signaling effect of dividend stickiness on future earnings is more pronounced for firms with less catering incentives to avoid dividend cuts.

According to the truth, the accounting earnings are one of the important factors that determine the level of dividend payouts and existing research also showed that the earnings of a firm are not only relevant to its survival, but also affect manager performance and stock investor' decision. Earnings management is subjective because managers can adjust financial reports and structure transactions to mislead stakeholders about the economic performance of a company or influence contractual outcomes that depend on reported accounting numbers [5]. Prior research has suggested that firm managers may manipulate earnings to meet earnings levels as references to evaluate firm performance, furthermore they have strong incentives to manage their earnings to meet or expected investor's expected dividends such as meet dividend thresholds [3, 6-14]. Cross-country differences in firms' propensity to pay dividends and level of dividend payments are also likely to be influenced excessive earnings retention or payment as dividends [15-19].

Since international literature the inference about earnings management of results to meet or exceed dividend thresholds, and that in earnings management studies to assess the earnings management results have indicated this practice for listed firms. Banks have relatively enterprises operate in unique systems and environments; therefore, these empirical results may not be considered equivalent. International investors paid closer attention to China after the 2008 financial tsunami because they were growing. Therefore, China banks not only play an important role in China or world economy and the related accounting policy also affect funds obtaining and performance, especially in earnings or how to pay dividends for stockholders.

Besides it, managers may manage earnings by altering the timing and scale of operating decisions (referred to as real activities based earnings management, REM). The main contribution of this study to the literature is that, based on our research, it is the study to predict the association between earnings management and the meet dividend thresholds through real activities based earnings management with China listed banks. This study adds to the limited research on earnings management in China. This article tries to answer the following research question: Do China banks use real earnings management in their earnings results to meet expected dividend levels from its external or potential stockholders as return for the invest while they making invest decisions. In this study, data from 2009 to 2020 were collected from the CSMAR database. A regression model was adopted to analyze the manipulation of income toward a dividend threshold (i.e., desired earnings goal) among China's listed banks industry. The empirical results show that managers of listed China banks not tend to meet or exceed dividend thresholds through manipulating operating cash flows, cost of goods sold and discretionary expenditures. The remainder of the paper is organized as follows. Section 2 presents a brief review of the related literature. Section 3 details the research design, sample selection procedure, and model development. Section 4 presents our empirical findings. Section 5 contains a summary and conclusion.

2. Literature Review

2.1 Motivations and Earnings Management

Prior literature has shown that managers have incentives for manipulating earnings. [20] investigated the effect of shareholder activism (as expressed by the proxy proposals sponsored by shareholders), and monitored by the largest institutional owner on earnings management. They indicated that the number of shareholder proposals received by firms is positively related to subsequent earnings management, yet concurrently, monitoring by the largest institutional owners is negatively related to earnings management. investigate: whether the borrowers accrual-based earnings management behavior is more negatively associated with the magnitude of their bank loans after the government strengthens the monitoring on banks, and whether the enhanced supervision is more effective for firms controlled by the state, the major economic player in most emerging markets[21]. They found that borrowers earnings management behavior becomes more negatively associated with loan size after the reform. The association is more significant for state-owned borrowers and lenders. Overall, the findings suggest that such reform is effective in enhancing banks role in corporate governance in a transition economy. Investigate the effect of shareholder activism on earnings management [22]. Using a US sample of shareholder pay-for-performance proposals sponsored by institutional investors and find that when compared to control firms, firms targeted by shareholder proposals have a greater magnitude of discretionary accruals (DA) in their reported earnings. In addition, they also find that the likelihood of meeting or beating earnings benchmarks through the use of DA is higher for targeted firms whose managers have job security concerns due to the firms' inferior stock performance in the past or have plans to sell company stock. Their results are consistent with the notion that pay-for-performance proposals have unintended consequences by introducing or exacerbating incentives to

manage earnings for short-term gains. [23] showed that before the Sarbanes Oxley Act of 2002 (SOX), companies of overconfident CEOs were more likely than other CEOs to engage in managing earnings through accelerating the timing of cash flow from operations and achieving analyst forecast benchmarks. After SOX, they find that overconfident CEOs are more likely to have income-increasing discretionary accruals and remain more likely to engage in real activities management through abnormally high cash flows, and also have abnormally low discretionary expenses. These results are consistent with overconfident CEOs feeling less constrained by SOX, and suggest that this individual characteristic works against regulators' attempts to constrain earnings management by corporate executives.

[24] found that there are no significant differences between male and female professional accountants when they make an ethical evaluation involving earnings management by shipping product early to meet a quarterly bonus and male and female professional accountants made similar moral intensity evaluations when product is shipped early to meet a quarterly bonus. [25] evaluated the role board structure plays in curtailing earnings management practices in Nigerian companies. In addition, earnings management was measured using the magnitude of the discretionary accruals as estimated by the performance matched modified Jones model. They showed that there is a negative significant relationship between board size, gender, and board composition with earnings management; a positive significant relationship between board meeting and earnings management practices and a positive non-significant relationship between the presence of a remuneration committee and the dualization of CEO and chairman positions with earnings management practices. [26] used a sample of 1180 firm-year observations of financially distressed companies, over the investigation period 2001-2011 and suggest that the degree of real earnings management is not associated with ownership by management or institutional investors. Conversely, the evidence indicates that foreign shareholders are able to constrain upwards real earnings management related to discretionary expenditure but not the operating cycle. A contribute to the importance of diversity of ownership structures in monitoring income manipulation among firms. [27]) tested exploit U.S. state courts' staggered recognition of the inevitable disclosure doctrine (IDD), which reduces employees' ability to switch employers and found a significant decrease in upward earnings management for firms headquartered in states that recognize the IDD, relative to firms headquartered elsewhere. The effect of the IDD is stronger for firms relying more on human capital and for firms whose employees have higher ex-ante turnover likelihood, confirming the employee retention channel. Overall, their results support the view that retaining employees is an important motive for corporate earnings management. [28] investigates the role of foreign institutional investors (FIIs) in restraining earnings management activities of firms under varying levels of investor protection. Their results find firms manage their earnings less when independent FIIs are among their shareholders, especially for firms in which monitoring is more valuable - firms in weak investor protection countries and when firms have greater growth opportunities. [29]) found that when overall earnings management motives are held fixed, firms in which long-term investors hold large stakes are more likely to manage earnings by adjusting operational decisions than by manipulating accruals. The preference for real earnings management is more pronounced when long-term investors face performance pressures and when they have a strong influence on managers. Overall, their evidence suggests that firms choose earnings management methods to meet the earnings expectations of institutional investors, who have different earnings target windows. [30] examine the mechanisms through which block holders engage with the managers to manipulate corporate earnings and show that powerful family blockholders develop a coalition to manipulate the board strategic decision making in their favour which leads to a higher level of REM. They also investigate the extent to which country-level institutional and regulatory arrangements influence the block holders ability to mitigate REM and find that the higher quality institutional and regulatory arrangements endogenously determine the better corporate financial

reporting which effectively mitigates the REM.

2.2 Dividend and Earnings Management (Earnings Quality)

[31] examined whether dividend paying status is associated with the quality of earnings and found that dividend paying status is associated with (1) lower absolute values of discretionary accruals; (2) lower standard deviation and absolute magnitude of the errors associated with the mapping of accruals into cash flows; and (3) more value relevant earnings. In addition, their results also revealed that the positive association between dividend paying status and earnings quality is stronger (weaker) when the size of dividend pay-outs is larger (smaller). Overall, their results suggest dividend paying status is indicative of firms' earnings quality. [14] examined earnings management by dividend-paying firms in cases where pre-managed earnings would fall below the expected dividend, and by non-dividend paying firms aiming to avoid reporting losses. They found that within the large firms are less likely to upwardly manage earnings to reach dividend thresholds because the ability of the largest firms to avoid restrictive debt covenants and earnings management is more clearly observable through examining working capital discretionary accruals than through examining total discretionary accruals.

[10] followed [8], and adopted the 6145 companies that listed in Taiwan Stock Exchange and OTC market, from 2005 to 2010, to examine the association between dividend threshold and earnings management. They found that when accounting earnings are lower than expected dividend levels, managers will have the incentive for an upward earnings management to prevent decreases in dividends and the accrual basis of accounting provides managers the discretion of financial statements. [6] examined the earnings-smoothing behavior of dividend-paying firms and showed that dividend-paying firms engage in more earnings smoothing than nonpayers through both real activities and accrual choices. Furthermore, dividend paying firms with positive (negative) pre-managed earnings changes engage in more downward (upward) earnings management than non-payers. [32] examined the relationship between dividend payment and earnings quality and analyzed four dividend features: dividend-paying status, dividend size, dividend changes, and dividend persistence. The samples consist of 90 firms from the manufacturing industry in the years 2005-2009. Their results show that dividend-paying status, dividend increase, and persistence in dividend payment have significant positive association with earnings quality. Overall, the results show that dividend-paying status, increase in dividend size, and persistence in dividend payment are indicators or signals of higher earnings quality (i.e., lower earnings management)

[33] aimed to examine earnings management of 51 small and medium enterprises listed in Market for Alternative Investment of Thailand during 2005- 2012 and earnings management is measured by discretionary accruals. They analyzed that the influence of earnings management on dividend policy of these companies which are measured by dividend payout ratio and dividend yield and revealed that listed companies in Market for Alternative Investment had high earnings management due to high average discretionary accruals in absolute term which equalled 11.91 percent of total assets based on Kasznik Model and 12.55 percent of total assets based on Kothari Model. Furthermore, earnings management is found to have the positive influence on dividend yield of listed companies in MAI. That is, one percent increase in discretionary accruals in absolute term as percentage of total assets will lead to about 0.2 percent increase in dividend yield, however, earnings management is found to have no influence on dividend payout ratio.

[34] investigated the association between dividend payouts and earnings quality for Chinese listed firms and showed that dividend payouts are associated with more persistent earnings, higher accrual quality, and greater earnings informativeness, confirming the hypothesis on information content of dividends for Chinese firms. They also found that relationship between dividends and earnings could change with factors influencing the incentives to pay dividends and the positive impact of dividend

payouts on earnings quality is reduced for firms conducting equity refinancing. More importantly, they showed that the state ownership can reduce the information-conveying role of dividends. [35] examined whether dividend policy is associated with earnings management and whether the relationship varies across countries with wide-ranging degrees of institutional strength and transparency and used a sample of 23,429 corporations from 29 countries. They showed that dividend payers manage earnings less than dividend non-payers, and that this evidence is stronger in countries with weak investor protection and high opacity and dividend payers manage earnings less when they issue equity following dividend payments, and that this result is more pronounced in countries with weak institutions and low transparency. Overall, their evidence suggests that firms may employ dividend policies associated with less earnings manipulation to mitigate agency concerns and to establish credible reputation, thereby facilitating access to external funds. [36] found that this evidence is not robust when controlling for firms' tendency to manage earnings upward to avoid reporting earnings declines; only firms with high leverage exhibit a statistically weak tendency to manage earnings to close deficits of pre-managed earnings relative to dividends and further report that the decision to cut dividends depends on whether reported earnings fall short of past dividends, but not on earnings management that eliminates a shortfall in pre-managed earnings relative to dividend payments. Overall, their evidence suggests that firms that face dividend constraints are more likely to cut dividends than to manage earnings to avoid dividend cuts.

[37] used the relationship between price earning ratio as a proxy of earning management and dividend payout proportion and used utilizes multivariate analysis using 10 years annual data from 2006 to 2016. They demonstrated that when the return on equity is more prominent than the required rate of return, the P/E ratio and dividend payout ratio shows a negative relationship and positive convexity or vice versa. [38]) used that a sample of the Middle East and North Africa region during the period between 2003 and 2014 and showed that that higher dividends reduce agency conflicts lead firms to disclose information more truthfully, thereby improving credibility of reported earnings(i.e., lower earnings management). [39] used firms listed on Vietnam stock exchange during the period between 2010 and 2016 and earnings management are measured by the annual firm-specific absolute value of residuals. They showed that that dividend payers have higher earnings quality (i.e., lower earnings management) than dividend non-payers. [40]) used a sample covering practically all dividend-paying small and medium-sized private companies in Finland during 2006–2010 and documented that earnings management in these companies is driven by two concurrent forces: the willingness to pay (tax-exempt) dividends and avoiding unnecessary company income tax. In addition, they also showed that the need for income-increasing earnings management enabling current dividend distribution is mitigated by the amount of retained earnings from prior years. [41] determined the association between dividend payment and earnings quality and used 107 companies listed on S&P BSE200 from, 2004 to 2015. They found that dividends convey information about a firm's earning quality, payment of dividends, changes in dividends and dividend persistence communicate information about quality of earnings, but size of dividend does not have a significant relation with earnings quality. [42] determined whether companies with surpluses are more capable of maintaining their dividend rate if they issue cash dividends from capital reserves and considers whether such issuance would suppress their earnings management. They showed that (1) when the company pays cash dividends with capital reserves, the cash dividends can be maintained at a certain level, and (2) when the ratio of capital reserves to cash dividends is high, the accrual-based earnings management is low from Taiwan.

2.3 Dividend Thresholds and Earnings Management through Real Activities Based Earnings Management

[1] first study of dividend policy revealed that managers are reluctant to cut dividends and willing to increase them only gradually after they are convinced that this increase will result in a higher level of dividends by increasing future earnings. [43] suggested that firms are reluctant to reduce dividend, the dividend-cover earnings threshold is economically important and examined earnings distributions for the dividend-cover earnings threshold for a sample. They found that find an asymmetry in the distribution of earnings associated with the dividend-cover earnings threshold. and dividend cover as a threshold because firms are likely to manage earnings to avoid cutting dividends (i.e., maintaining dividend value from the prior year). [8] also found that dividend-paying firms tend to manage earnings when pre-managed earnings are below expected dividend levels (prior year's dividends) because firms tend to cut dividends when reported earnings fall below the level of prior dividends. [44]) showed that the behavior of managers of listed firms tended to meet or exceed dividend thresholds by manipulating earnings, which is consistent with signal theory, prospect theory and agency theory. Overall, past dividends potentially serve as a useful heuristic proxy for an earnings threshold ([6]: [14]). Consequently, managers tend to frequently manage earnings, possibly enabling them to meet or exceed earnings thresholds (i.e., dividend thresholds).

Second, managers can manage earnings by altering the timing and scale of operating decisions (referred to as real activities based earnings management, REM). The method measures discretionary items using some firm-specific characteristics. Other researchers argue that to change reported earnings, managers do not necessarily resort to playing around with accounting methods and estimations, rather they or could change real operation decisions, such as cash flow from operations, production costs, and discretionary expenditures ([45]), capitalize R&D expenditure([46]), sales manipulation ([47]; [48]). We propose the following hypothesis:

H1: firms are likely to meet/beat dividend thresholds through manipulate cash flow from operations

H2: firms are likely to meet/beat dividend thresholds through manipulate cost of goods sold

H3: firms are likely to meet/beat dividend thresholds through manipulate discretionary expenditures

3. Methodology

Data from 2009 to 2020 were collected from the CSMAR database (samples=220). A regression model was adopted to analyze the data. The variables and research model of this study are as follows.

3.1 Earning Management

3.1.1 Adjusting Timing the Revenue Recognition through Cash Flow from Operations

[45] demonstrated that real activities earnings management can be measured by cash flows from operations. This research model is as follows:

$$\frac{CFO_{it}}{TA_{it-1}} = a_1 + a_2 \frac{1}{TA_{it-1}} + a_3 \frac{SALES_{it}}{TA_{it-1}} + a_4 \frac{\Delta SALES_t}{TA_{it-1}} + \varepsilon_{it} \quad (1)$$

Where CFO_{it} is the cash flow from operations for year t; TA_{it-1} is the assets for year t-1; is the sales for year t; $SALES_{it}$ is the sales for year t; $\Delta SALES_{it}$ is the change in sales for year t. The absolute value of ε_{it} originates from the following model that measures real activities earnings

management through cash flows from operations (i.e., the abnormal level). In addition, we used the absolute value of ε_{it} multiplied by the assets for the year $t - 1$ to reflect the real numbers, correctly.

3.1.2 Adjusting Timing the Recognition of Cost of Goods Sold

[45] demonstrated that real activities earnings management can be measured by cost of goods sold. This research model is as follows:

$$\frac{PROD_{it}}{TA_{it-1}} = a_1 + a_2 \frac{1}{TA_{it-1}} + a_3 \frac{SALES_{it}}{TA_{it-1}} + a_4 \frac{\Delta SALES_{it}}{TA_{it-1}} + a_4 \frac{\Delta SALES_{it-1}}{TA_{it-1}} + \varepsilon_{it} \quad (2)$$

Where $PROD_{it}$ is the sum of the cost of goods for sales and the change in inventory for year t ; TA_{it-1} is the assets for year $t-1$; $SALES_{it}$ is the sales for year t ; $\Delta SALES_{it}$ is the change in sales for year t ; $\Delta SALES_{it-1}$ is the change in sales for year $t-1$. The absolute value of ε originates from the following model that measures real activities earnings management through cost of goods sold (i.e., the abnormal level). In addition, we used the absolute value of ε_{it} multiplied by the assets for the year $t - 1$ to reflect the real numbers

3.1.3 Adjusting Discretionary Expenditures

[45] demonstrated that real activities earnings management can be measured by discretionary expenditure. We followed their model and a version of the discretionary expenditure manipulation model as follow as

$$\frac{DISP_{it}}{TA_{it-1}} = a_1 + a_2 \frac{1}{TA_{it-1}} + a_3 \frac{\Delta SALES_{it}}{TA_{it-1}} + a_4 \frac{SALES_{it}}{TA_{it-1}} + \varepsilon_{it} \quad (3)$$

Where $DISP_{it}$ represents discretionary expenses according to the sum of advertising, general and administrative expenses for year t ; TA_{it-1} is the assets for year $t-1$; $\Delta SALES_{it}$ is the change in sales for year t ; $SALES_{it}$ is the sales for year t . The absolute value of ε originates from the following model that measures real activities earnings management through discretionary expenditures (i.e., the abnormal level). In addition, we used the absolute value of ε_{it} multiplied by the assets for the year $t - 1$ to reflect the real numbers.

3.2 Dividend Thresholds

[8] (2008) found that “expected dividends” represent an earnings threshold. They defined a firm’s expected dividend as the prior year’s dividend (the term “dividend” refers to regular cash dividend payments by firms) and pre-managed earnings as the net income plus non-discretionary items minus preferred dividends. We defined dividend thresholds as being exceeded when managed earnings (pre-managed earnings plus discretionary items) are higher than expected dividend payments.

3.3 Model

We examined the frequency distribution of earnings by using the approach of [49], who established the importance of earnings thresholds by examining the frequency distribution of earnings near a relevant threshold. This approach involves testing for earnings management by observing the outcome of earnings management rather than seeking direct evidence of earnings management by analyzing it. In this approach, expected earnings represent critical earnings thresholds, and an abnormally high number of firms report earnings marginally above the threshold.

3.4 Robustness Test

The samples in this study include only data from the 5th to 95th percentiles as measures for the robustness test to avoid possible bias from extreme values [50].

4. Empirical Results

Table 1, 2 and 3 showed that the descriptive statistics models of [45]). Table 4 showed that the descriptive statistics of and the estimated cross-section of the discretionary cash flow from operations, cost of goods sold and discretionary expenditure. In addition, Table 4 also suggested that the mean of discretionary cash flow from operations, cost of goods sold and discretionary expenses are negative, indicating that listed banks in China have adopted discretionary cash flow from operations to earnings management to decrease their adjusted income; cost of goods sold to earnings management to increase their adjusted income; discretionary expenses to earnings management to increase their adjusted income, thus the earnings management behavior regarding real activities in these enterprises.

We divided scaled earnings from 0 to +0.35 into intervals with a 0.05 width (consistent with the study by [49]). This is illustrated in Fig. 1 2 and 3, which indicates not a standardization difference between the negative value to the left of zero and the positive value to the right of zero, and this result is not consistent with that of [51]. Fig. 1 shows that managers in china banks not tend to meet or exceed dividend thresholds (they pass the normal distribution test) with pre-managed earnings through cash flow from operations, and all of samples are above the dividend thresholds; this is not consistent with H1. Fig. 2 also shows that managers not tend to meet or exceed dividend thresholds (they pass the normal distribution test) with managed earnings through cost of goods sold, , and all of samples are above the dividend thresholds; this is not consistent with H2. In addition, Fig. 3 also shows that managers not tend to meet or exceed dividend thresholds (they pass the normal distribution test) with managed earnings through discretionary expenditures, and all of samples are above the dividend thresholds; this is not consistent with H3.

Dividends are also not likely a benchmark for investors because they in-signify enterprise performance. Therefore, managers not tend to manage earnings more frequently to enhance their achieve goals in China listed banks. This causes managers not to engage in earnings management in order to avoid cutting dividends by distorting accounting numbers to achieve the desired image. On the other hands, we use only samples containing data from the 5th to the 95th percentiles as measures for the robustness test to avoid possible bias from extreme values, and the results show that most of them are consistent. To shorten the tables, we omit the solution.

Overall, numerous managers of listed firms not meet or exceed dividend thresholds through manipulating earnings by using real activities earnings model. Moreover, [52] presented prospect theory and reported that managers making decisions focus on the value from gains or losses with a certain reference point rather than the levels of wealth. Therefore, our study not supports the notion that expected dividend levels is a measure of earnings benchmarks. Furthermore, empirical solutions may be considered to be not consistent with this specific theory.

Table 1: Regressions of cash flow from operations model (samples=220)

Dependent variable	$\frac{CFO_{it}}{TA_{it-1}}$
intercept	-0.05457**
$\frac{1}{TA_{it-1}}$	4.7E+09***

$\frac{SALES_{it}}{TA_{it-1}}$	4.698915***
$\frac{\Delta SALES_{it}}{TA_{it-1}}$	2.442809*
R ²	0.126468
F value	11.52048

Where CFO_{it} is the cash flow from operations for year t; TA_{it-1} is the assets for year t-1; is the sales for year t; $SALES_{it}$ is the sales for year t; $\Delta SALES_{it}$ is the change in sales for year t.

Table 2: Regressions of cost of goods sold model (samples=220)

Dependent variable	$\frac{PRDO_{it}}{TA_{it-1}}$
intercept	-0.00668***
$\frac{1}{TA_{it-1}}$	-1.1E+08
$\frac{SALES_{it}}{TA_{it-1}}$	0.764988***
$\frac{\Delta SALES_{it}}{TA_{it-1}}$	3.61E-15**
$\frac{\Delta SALES_{it-1}}{TA_{it-1}}$	0.065778
R ²	0.499392
F value	55.36761***

Where $PROD_{it}$ is the sum of the cost of goods for sales and the change in inventory for year t; TA_{it-1} is the assets for year t-1; is the sales for year t; $SALES_{it}$ is the sales for year t; $\Delta SALES_{it}$ is the change in sales for year t; $\Delta SALES_{it-1}$ is the change in sales for year t-1.

Table 3: Regressions of discretionary expenditures (samples=220)

Dependent variable	$\frac{DISP_{it}}{TA_{it-1}}$
intercept	-0.00285***
$\frac{1}{TA_{it-1}}$	1.75E+08***
$\frac{\Delta SALES_{it}}{TA_{it-1}}$	0.403234***
$\frac{SALES_{it}}{TA_{it-1}}$	0.015641
R ²	0.660089
F value	142.1147***

Where $DISP_{it}$ represents discretionary expenses according to the sum of advertising, general and administrative expenses for year t; TA_{it-1} is the assets for year t-1; $\Delta SALES_{it}$ is the change in sales for year t; $SALES_{it}$ is the sales for year t.

Table 4: Descriptive statistics (2009-2020, N=220; million RMB dollars)

	Max	Min	Avg
ε_{it} of equation 1	1.14E+06	-6.91E+05	-8079.790415
ε_{it} of equation 2	9.64E+04	-2.48E+05	-216.866508
ε_{it} of equation 3	2.98E+04	-6.01E+04	-1790.660718

Where ε_{it} of equation 1 represents the earnings management through cash flow from operations; ε_{it} of equation 2 represents the earnings management through recognition of cost of goods sold; ε_{it} of equation 3 represents the earnings management through discretionary expenditure

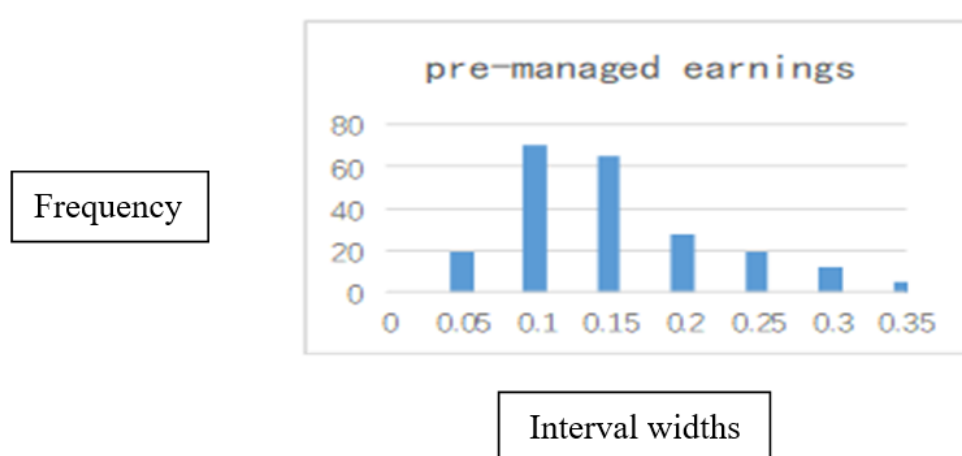


Figure 1: Distribution of meeting dividend thresholds through pre-managed earnings through cash flow from operations

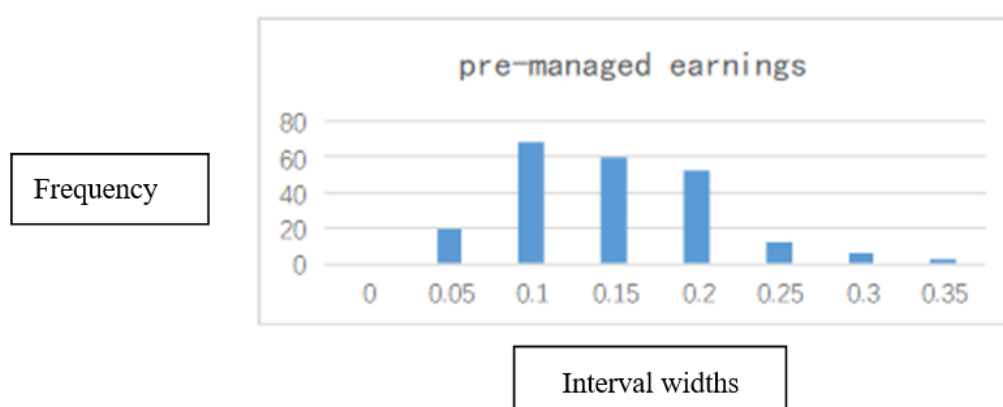


Figure 2: Distribution of meeting dividend thresholds through pre-managed earnings through cost of goods sold



Figure 3: Distribution of meeting dividend thresholds through pre-managed earnings through discretionary expenditures

5. Conclusion

The presented results of our analysis proved the hypothesis that firms are not likely to meet/beat dividend thresholds through earnings management in China listed banks. Valuable empirical results are also achieved. Managers of listed firms not tend to meet or exceed dividend thresholds through manipulate cash flow from operations, cost of goods sold and discretionary expenditures. Dividend distribution may influences corporate operating decisions, but and the prior year's dividends may not represent an earnings threshold in China listed banks. In addition, this result is also robust test after controlling for extreme values. Our findings imply that managers treat expected dividend levels as not an important earnings threshold. These findings contribute to the growing literature on international differences in earnings management practices and emphasize the strong and direct effect of banks on meeting or exceeding dividend thresholds through earnings management over multiple years. This is worth the attention of stakeholders and researchers. The results are also expected to help other banks managers to consider making better use of capital reserves.

However, this study has limitations. We included only portions of China banks in our samples; thus, although the final sample was heterogeneous with respect to economic development, geographical location, and culture. Further study based on different banks and /or different emerging markets is needed before generalizing results. Dividends are almost always issued as cash dividends (i.e., repurchases and stock dividends may also be issued). Therefore, cash dividends may not represent the overall dividend threshold, and researchers could stress the importance of firms' payout components. Additionally, we used a real activities to measure earnings management, there are tradeoff tools should be used to examine earnings management among managers to ensure the robustness of our results.

For the future research, the following directions can be stated: the impact of national act and its implementation on the optimal dividends level should be taken into consideration; the data of banks should be collected to conduct the empirical analysis to find the influencing factors of the dividend thresholds. Another important line of international accounting research is the comparative dividend-driven earnings management. An implication of research is using international data ought to consider country-specific institutional settings when considering earnings thresholds. In addition, our empirical results suggest that investors evaluate firm performance (i.e., earnings) before dividends are paid, which should be noted by financial market participants and regulators when assessing financial statements and the reliability of financial reporting among multiple countries.

References

- [1] Lintner, J. (1956) *Distribution of Incomes of Corporations among Dividends, Retained Earnings, and Taxes*. *American Economic Review*, 46(2), 97-113.
- [2] Deangelo, H. and Deangelo, L. (2006a) *The Irrelevance of the MM Dividend Irrelevance Theorem*. *Journal of Financial Economics*, 79(2), 293-315.
- [3] Grullon, G., Michaely, R. and Swaminathan, B. (2002) *Are Dividend Changes a Sign of Firm Maturity?* *Journal of Business*, 75(3), 387-424.
- [4] Lin, J. J. and Lee, C.F. (2021) *Does Managerial Reluctance of Dividend Cuts Signal Future Earnings*. *Review of Quantitative Finance & Accounting*, 56(2), p453-478
- [5] Healy, P.M. and Wahlen, J.M.(1999) *A Review of the Earnings Management Literature and Its Implications for Standard Setting*. *Accounting Horizons*, 13(4), 365-383.
- [6] Liu, N. and Espahbodi.R.(2014) *Does Dividend Policy Drive Earnings Smoothing?* *Accounting Horizons*, 28(3), 501-528.
- [7] Koren, J. and Valentincic. A.(2013) *Shareholders's Pay-Out-Related Thresholds and Earnings Management*. *Economic and Business Review*, 15(2), 151-173.
- [8] Daniel, N., Denis, D. and Naveen, L.(2008) *Do Firms Manage Earnings to Meet Dividend Thresholds?* *Journal of Accounting and Economics*, 45(1), 2-26.
- [9] Dechow, P., Ge, W. and Schrand, C. (2010b) *Understanding Earnings Quality: A Review of the Proxies, Their Determinants, and Their Consequences*. *Journal of Accounting and Economics*, 50(2-3), 344-401
- [10] Lin, S.H., Lin, L.H., Lai, H.H. and Tu, C.C. (2014) *Expected Dividend and Earnings Management: Evidence from Taiwan*. *The International Journal of Organizational Innovation*, 7(1), 202-213.
- [11] Lie, E. (2005a) *Financial Flexibility, Performance, and the Corporate Payout Choice*. *Journal of Business*, 78(6), 2179-2202.
- [12] Lie, E. (2005b) *Operating Performance Following Dividend Decreases and Omissions*. *Journal of Corporate Finance*, 12(1), 27-53.
- [13] Chetty, R. and Saez E. (2005) *Dividend Taxes and Corporate Behavior: Evidence from the 2003 Dividend Tax*. *Quarterly Journal of Economics*, 120(3), 791-833.
- [14] Atieh, A. & Hussain, S. (2012) *Do UK Firms Manage Earnings to Meet Dividend Thresholds?* *Accounting and Business Research*, 42(1), 77-94.
- [15] Zheng, C. and Ashraf, B.N. (2014) *National Culture and Dividend Policy: International Evidence from Banking*. *Journal of Behavioral and Experimental Finance*, 3, 22-40.
- [16] Bae, S.C., Chang, K.Y. and Kang, E. (2012) *Culture, Corporate Governance, and Dividend Policy: International Evidence*. *Journal of Financial Research*, 35(2), 289-316.
- [17] Khambata, D. and Liu, W.W.(2005) *Cultural Dimensions, Risk Aversion and Corporate Dividend Policy*. *Journal of Asia-Pacific Business* 6(4), 31-43.
- [18] Shao, L., Kwok, C.C.Y. and Guedhami, O.(2009) *National Culture and Dividend Policy*. *Journal of International Business Studies*, 41(8), 1391-1414.
- [19] Fidrmuc, J.P. and Jacob, M. (2010) *Culture, Agency Costs, and Dividends*. *Journal of Comparative Economics*, 38(3), 321-339.
- [20] Hadani, M., Goranova, M. and Khan, R.(2011) *Institutional Investors, Shareholder Activism, and Earnings Management*. *Journal of Business Research*, 64(12), 1352-1360.
- [21] Hsieh, C.C. and Wu, S.J.(2012) *Monitoring the Monitors: The Effect of Banking Industry Reform on Earnings Management Behavior in an Emerging Market*. *Corporate Governance-An International Review*, 20(5), 451-473.
- [22] Sun, Y., Wang, W.M., Wang, X. and Zhang, W. (2013) *Shareholder Activism and Earnings Management Incentives: An Empirical Examination of Shareholder Proposals in the United States*. *Journal of International Financial Management & Accounting*, 24(3), 234-260.
- [23] Hsieh, T.S., Bedard, J.C. and Johnstone, K.M.(2014). *CEO Overconfidence and Earnings Management during Shifting Regulatory Regimes*. *Journal of Business Finance & Accounting*, 41(9-10), 1243-1268.
- [24] Shawver, T.J. and Clements, L.H.(2015) *Are There Gender Differences When Professional Accountants Evaluate Moral Intensity for Earnings Management?* *Journal of Business Ethics*, 131(3), 557-566.
- [25] Obigbemi, I.F., Omolehinwa, E.O., Mukoro. D.O., Ben-Caleb, E. and Olusanmi, O.A. (2016). *Earnings Management and Board Structure: Evidence from Nigeria*, *SAGE OPEN*, 6(3).
- [26] Shayan-Nia, M., Sinnadurai, P., Mohd-Sanusi, Z. and Hermawan, A. A. (2017) *How Efficient Ownership Structure Monitors Income Manipulation? Evidence of Real Earnings Management among Malaysian firms*. *Research in International Business and Finance*, 41, 54-66.
- [27] Gao, H.S., Zhang, H. and Zhang, J. (2018) *Employee Turnover Likelihood and Earnings Management: Evidence*

- from the Inevitable Disclosure Doctrine. *Review of Accounting Studies*, 23(4), 1424-1470.
- [28] Lel, U.(2019) *The Role of Foreign Institutional Investors in Restraining Earnings Management Activities Across Countries*. *Journal of International Business Studies*, 50(6), 895-922.
- [29] Jang, Y.J. and Lee, K.Y. (2020) *Taking a long View: Investor Trading Horizon and Earnings Management Strategy*. *International Review of Finance*, forthcoming
- [30] Amin, Q.A. and Cumming, D. (2021) *Blockholders and Real earnings management – the Emerging Markets Context*. *Journal of International Financial Markets Institutions & Money*, 75.
- [31] Tong, Y.H. and Miao, B.(2011) *Are Dividends Associated with the Quality of Earnings*. *Accounting Horizons*, 25(1), 183-205.
- [32] Sirait.F. and Siregar. S.V. (2014) *Dividend Payment and Earnings Quality: evidence from Indonesia*. *International Journal of Accounting and Information Management*, 22(2), 103-117.
- [33] Chansarn, S. and Chansarn, T.(2016) *Earnings Management and Dividend Policy of Small and Medium Enterprises in Thailand*. *International Journal of Business and Society*, 17(2), 307-328.
- [34] Deng, L., Li, S.F. and Liao, M.Q.(2017) *Dividends and Earnings Quality: Evidence from China*. *International Review of Economics & Finance*, 48, 255-268.
- [35] He, W., Ng, L., Zaiats, N. and Zhang, B. (2017) *Dividend Policy and Earnings Management across Countries*. *Journal of Corporate Finance*, 42,267-286.
- [36] Kim, J.W, Lee, K.H. and Lie E. (2017) *Dividend Stickiness, Debt Covenants, and Earnings Management*. *Contemporary Accounting Research*, 34(4), 2022-2050.
- [37] Ahmed, F., Advani, N. and Kanwal, S. (2018) *Earnings Management and Dividend Policy: Empirical Evidence from Major Sectors of Pakistan*. *International Journal of Economics and Financial Issues*, 8(3), 182–190.
- [38] Farooq, O., Shehata N. and Nathan S. (2018) *Dividend Policy and Informativeness of Reported Earnings: Evidence from the MENA Region*. *International Review of Finance, International Review of Finance*, 18(1), 113-121.
- [39] Nguyen, T.T.N. and Bui,P.K. (2019) *Dividend Policy and Earnings Quality in Vietnam*. *Journal of Asian Business and Economic Studies*. 26(2), 301-312.
- [40] Karjalainen, J., Kasanen, E., Kinnunen, J. and Niskanen, J. (2020) *Dividends and Tax Avoidance as Drivers of Earnings Management: Evidence from Dividend-Paying Private SMEs in Finland*. *Journal of Small Business Management*, forthcoming.
- [41] Mulchandani, K., Mulchandani. K. and Wasan, P.(2020) *Dividends and Earnings Quality: Evidence from India*. *IIMB Management Review*, 32(2), 166-176
- [42] Liu Y.Y., Yang C.H. and Lee M.H. (2021) *Relationship among Capital Reserves Cash Dividends, Dividend Maintenance, and Earnings Management*, *Applied Economics Letters*, forthcoming
- [43] Bennet, B. and Bradbury, M.E.(2007) *Earnings Thresholds Related to Dividend Cover*. *Journal of international accounting and research*, 6(1), 1-17.
- [44] Li, X.Y. and Chen, P.W.(2020) *Meeting Dividend Thresholds Through Earnings Management of Listed Companies in South Africa*. *Advances in Management and Applied Economics*, 10(6), 77-95.
- [45] Roychowdhury, S. (2006) *Earnings Management through Real Activities Manipulation*. *Journal of Accounting and Economics*, 42(3), 335-370.
- [46] Seybert, N. (2010) *R&D Capitalization and Reputation-Driven Real Earnings Management*. *The Accounting Review* 85(2), 671-693.
- [47] Ge,W.X. and Kim, J.B. (2014) *Real Earnings Management and the Cost of New Corporate Bonds*. *Journal of Business Research*, 67(4), 641–647.
- [48] Stubben, S. R. (2010) *Discretionary Revenues as a Measure of Earnings Management*. *Accounting Review*, 85(2), 695-717.
- [49] Burgstahler, D. and Dichev, I.(1997) *Earnings Management to Avoid Earnings Decreases and Losses*. *Journal of Accounting and Economics*, 24(1), 99-126.
- [50] Huang, D.T. and Liu, Z.C.(2011) *The Relationships among Governance and Earnings Management: An Empirical Study on Non-Profit Hospitals in Taiwan*. *African Journal of Business Management*, 5(14), 5468-5476.
- [51] El-Sayed Ebaid, I. (2012) *Earnings Management to Meet or Beat Earnings thresholds Evidence from the Merging Capital Market of Egypt*. *African Journal of Economic and Management Studies*, 3(2), 240-257.
- [52] Kahneman, D. and Tversky, A.(1979) *Prospect Theory: An Analysis of Decision Under Risk*. *Econometrica*, 47(2), 263-291.