

CORPORATE GOVERNANCE AND EARNINGS MANAGEMENT: THE ROLE OF THE BOARD OF DIRECTORS

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Abstract. *This study investigates the association between earnings management and corporate governance characteristics in the Chinese context. Chinese corporate governance system has got improved in the past two decades after deciding to move open market economy. The data for this study is collected from the Chinese A-listed firms for the period of 2008 to 2016 to investigate the impact of board characteristics on earnings management. The results reveal that board size has effects on earnings management, while board independence role is negligible due to monitoring of the top management. Similarly, board meetings are ineffective and not contributing to earnings management. CEO duality is not a big issue in developed countries. Furthermore, when segregating the sample on the basis of ownership type, we find that, a board meeting is affective in SOE as compare to Non-SOE. Furthermore, board size substitutes the weak external governance mechanism and constrains Earnings management. Board meeting plays a complementary effect when external governance mechanism is strong. The findings are significant for all stakeholders to analyze and to improve the board effectiveness and the financial reporting quality before making any decision.*

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Introduction

Corporate governance comprises a set of mechanisms that aim to protect the rights of all stakeholders particularly minority shareholders against exploitation by the insiders (Shleifer, 1997). One of the desirable functions of efficient

corporate governance is to ensure the credibility of financial statements. Agency theory lays the foundation for linking corporate governance mechanisms and information quality. Agency theory presumes that conflicts arise between shareholders and managers due to control and separation of ownership (Jensen, 1976). To minimize this conflict, agency theory suggests that each party should be compensated for mutual benefits that will lead to the positive performance of the organization in the long run.

The application of agency theory to explain the quest for corporate governance is an important question in the emerging markets such as China, where the nature of conflict shifts from principle-agent (P/A) to principle-principle (P/P) (Jebran, Chen, & Tauni, 2019; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). China presents an interesting situation for determining the role of corporate governance in financial reporting quality due to the reason that China has its own distinctive culture and historical backdrop. In China, there is a dominance of state-control over the listed firms. Regarding the corporate governance in China, it also differs concerning the functioning of the independent directors. According to Chinese Securities and Regulatory Commission (CSRC) guidelines, the independent directors are mandatory in the corporate board for listed firms. Also, CSRC made it compulsory for the listed companies that independent directors should publically disclose their opinions about the significant decisions made by the board, and unlike practice than the rest of the world.

This paper explores the relationship between earnings management and numerous corporate board characteristics. The responsibility of the board members is to monitor, guide and control the affairs of the corporation. The board performs three vital decisions such as financial, strategic and operational decisions. Also, the board assures the needs of the stakeholders. Furthermore, well-governed corporate board directors enhance financial reporting system (Liao, Lin, & Zhang, 2018)). This study focuses on a sample of all A-listed non-financial companies over the period 2009-2016 with firm-year observations 13,472.

The present paper contributes to the existing body of literature in the realm of earning management and corporate governance in multiple aspects. The study provides evidence that board structure is a very important aspect of the governance mechanism and they play a crucial role in the monitoring of the management. Board decision will enhance firm value if the board structure are effective .earnings management will also be reduced if the board members are skillful and professionals.

The remainder of the manuscript is structured as follows: Section 1 briefly introduces the topic. Section 2 provides prior research on the issue. Section 3

elucidates data and methodology. Empirical results are presented in section 4. Whereas, section 5 concludes the manuscript.

Institutional background and corporate boards in China

China started gradually its reforms after 1978 and focused on transition from planned economy to free-market economy and from relationship-based to rule-based economy opened its capital market in the early 1990 for potential investors (Jiang & Kim, 2015). Initially, they inaugurated the two stock exchanges (Shanghai & Shenzhen Stock Exchanges) in December 1990 and July 1991 respectively. After starting formal operation they also expedite the other regulation to promote the governance system in China, so that foreign investors are attracted to come to China and play their role in promoting the business environment. Therefore, Chinese Securities Regulatory Commission (CSRC) issued the first Code of Corporate Governance for Listed Companies in China in 2002, and later on, it was also announced that to enhance the monitoring of the firm there should be Independent Directors on the firm's board of governance. Although, initially it was at least one independent director but later on the ratio of these directors increased from one director to one-third of total directors in 2003.

To encourage the investors the government initiated the split shares reforms in April 2005, and announced that the formalities should be completed till the end of 2007. Furthermore, it was decided that non-tradable shareholders (NTS) will compensate the Tradable shareholders (TS) for any loss from this policy (Jiang & Kim, 2015). CSRC also issued other Regulations on Information Disclosure for the listed companies in 2007 to protect the interest of the minority shareholders. It was a demand for the demand from the investor's group that, they should be protected from the concentrated owners because the Chinese ownership structure is based on family-owned business, and mostly the controlling shareholders manage their business by themselves or through their family members or friends. Therefore, the responsibilities of the directors were fixed and it was also mandatory that independent directors will report their dissent in case they don't agree with the other board members (Liao et al., 2018). In 2003 the qualified foreign institutional investors (QFII) were allowed to participate in buying A-share and to play an active role in the firms monitoring. These regulations enhance the business environment of the Chinese capital market and also adopted the IFRS in 2007 to encourage foreign investors.

Literature Review and Hypothesis Development

Earning management (hereafter EM) is defined as the alteration of firms' reported economic performance by insiders either to mislead some stakeholders by attaining desired level of profits or to influence contractual outcomes (García-Meca & Sánchez-Ballesta, 2009; Gull, Nekhili, Nagati, & Chtioui, 2018). Managers have free choices of some accounting rules and principles to manage the earnings of a company and to report that for the different stakeholders in the form of financial statements. Managers can misuse their power because they have more information about the company as compare to the board members. Therefore, they can use that hidden information for their benefits. Normally audit firms try to give a clear picture of the financial statements of a firm and managers should be compensated on the bases of net profit from operations of the company or stock options not on fabricated information (Chung, Firth, & Kim, 2002). Different stakeholders are taking their investment decisions based on accounting information; therefore, the quality of information is more important for these investors and decision-makers. Although after the big scandals in the near past, for example, Xerox, Enron or WorldCom the quality of information is not as trustworthy as before the mentioned scandals. Therefore, it was a call of the day to introduce such a strong governance mechanism to minimize the agency cost and to enhance the overall value of the firm.

In the recent past, several empirical studies investigated the relationship between corporate governance mechanism and earning management (Arun, Almahrog, & Ali Aribi, 2015; García-Meca & Sánchez-Ballesta, 2009; Gull et al., 2018; Klein, 2002; Pucheta-Martínez, Bel-Oms, & Olcina-Sempere, 2018; Srinidhi, Gul, & Tsui, 2011; B Xie, III, Finance, & 2003).

Research to date on the different determinants of earnings management is investigated concerning corporate governance mechanism especially board characteristics and ownership structure. In this study, our focus is only on the board characteristics that affect earnings management for the year 2009 to 2016.

Board structure and earnings management

Board structure is very important components of corporate governance mechanism. The Chinese corporate governance system is little bit different from the other world, because of the uniqueness of Chinese code of corporate governance. For example the board members as well as the CEO are nominated by the government for state owned firms, and by majority shareholders in case of non-state owned firms. In china the ownership structure is concentrated, therefore controlling shareholders play key role in strategic decision making.

These controlling shareholders also nominate outside directors on the basis of personal likes and dislikes ,therefore they are not so much skillful and professional to dissent on the board (Haider & Fang, 2016).

Board of directors is the main body in an organization which consists of expert people in their field who are nominated by the shareholders to protect their interest in the form of monitoring the behavior of the managers (García Lara, García Osma, Mora, & Scapin, 2017; Hsu, Lai, & Yen, 2019) These directors are nominated based on their relevant expertise, reputations, skills, and knowledge (Haynes & Hillman, 2010; Hillman & Dalziel, 2003). Shareholders expect that these people will play a vital role in setting the strategies for the organizations as well as they will perform the monitoring role. On the other side managers also expect that board members will not be a potential threat for the smooth running of the organizations and they will interfere in the managerial decisions. Therefore, they are performing a key role in the organization to enhance the performance of the organizations and to reduce any type of conflict between managers and shareholders or between controlling and minority shareholders (Jensen & Meckling, 1976). The previous literature on the CG with different dependent variables has considered the following board characteristics for their studies. Therefore we are also interested to take them in our study.

Board size

Board size is considering one of the important factors for monitoring and controlling the manager's opportunistic behavior. According to Yeung & Lento (2018) there is a positive relationship between board size and firm performance. Agency theory is in favor of large board size because large board members possess different skills as compare to small board members. For example; large board members have more knowledge and experiences from different sources. In china, the board size is from five to nineteen members (Jiang & Kim, 2015) which is considered as a large board as compared to the US and UK. It means that large companies have more directors on their board and because these large number of directors can easily monitor and control the operations and business activities of the different professional managers.

Besides, the Resource dependency theory also sheds light on a large number of directors because they perceive the link between directors and the external environment of the companies. A company needs more financial resources when they are in the growth stage, therefore it needs more resources, which can be possible only having more directors on the board. In addition, if some directors on the board are politically connected then they can also manage resources from outside sources and there will be minimal pressure on

the managers to mislead the other stakeholders through information asymmetry.

Hypothesis 1: There is a negative association between board size and earnings management.

Board independence

Board independence is also one of the important characteristics of the board. It is also considered as a substitute for the transparency and good quality of the information. The corporate governance system can also be checked from the ratio of independent directors on the board. Independent directors are defined as those directors who are not taking a salary from the companies and also not dependent on the company for employment or other benefits (Hillman, Cannella, & Paetzold, 2000). According to agency theory, the conflict between the two main parties in the organizations i.e. managers and owners are due to potential interests, therefore managers opportunistically manipulate earnings to mask the bad performance of the company or to get some personal benefits (Fama & Jensen, 1983; Jensen & Meckling, 1976). Therefore, the independent director focused on the different activities of the managers to prevent the wrongdoings and unethical conduct. Therefore, the Chinese government implemented the restriction of one-third of independent directors on the corporate board in 2003 to safeguard the rights of the minority shareholders.

In summary, more independent directors on the company board are a sign of good corporate governance mechanism and it plays a signaling role for the stakeholders about the company performance. Therefore based on the previous studies we expect that more independent directors are expected to prevent the opportunistic behavior of the managers and to reduce the chances of earnings management.

Hypothesis 2: There is a negative association between Independent director and earnings management.

CEO duality

CEO duality means that one person holds both top positions at a time i.e. CEO as well as Chair of the board. CEO duality hurts the monitoring role of the directors because CEO cum chairman has more power over the other board members (Firth, Fung, & Rui, 2007). In this case, there are more chances of earnings management because managers can exploit the shareholder's rights for their personal benefits. In addition, managers hide information from the board members especially from the independent directors and mask the poor performance of the company. Therefore, the separation of these two top positions is important for the smooth running of the firms and stakeholders.

Therefore we expect that:

Hypothesis 3: There is a positive association between CEO-duality with EM.

Board meetings (NBM)

The board meeting is another important characteristic of a corporate board. Board meeting provides an opportunity for all members of the board to understand each other point of view to discuss different strategies so that to make a better decisions for the firm and also to reduce the earnings management (Gulzar & Zongjun, 2011). Extant studies discussed the importance of more board meetings as a tool for enhancing the financial reporting quality and mitigating the opportunistic behavior of managers (Gulzar & Zongjun, 2011). On the other hand ,some studies showed that board meetings are not so much effective and there is a significant and positive relation between NBM and EM (Jensen, 1993; Obigbemi, Omolehinwa, Mukoro, Ben-Caleb, & Olusanmi, 2016). Therefore, we expect that when the frequency of board meetings increases then, the board members can devote maximum time to with full focus to the strategic decision making process..

Based on these arguments we expect that:

H4: The frequency of board meetings is associated with earnings management.

Board Characteristics, Earnings Management and Ownership Structure

The ownership structures of the Chinese listed firms are different from some developed countries. The maximum listed firms was initially controlled by the government after 1990, but after the split share reforms in 2005, majority of them are privatized and the ownership is changing from SOE's to Non-SOES's (Liu, Wei, & Xie, 2014). After these reforms the board of directors took keen interest in the internal and external governance systems of these firms According to some authors the SOEs and Non-SOEs have different objectives, which can affect the overall performance of the firms. It is not important that the firm is state owned or private but, it is important to check what is the hidden agenda of these owners. Therefore it should be studied in detail to get know how about the actual performance of these firms.

Therefore, it is also important point, to consider this government ownership for understanding the relationship between BC and EM. We expect that in SOE the board characteristics can influence the EM in different way as compare to Non-SOEs. We argue that if managers are sure that there is no hard punishment from the government then they can go for managing the earnings easily as compare to those who have no political background and affiliations with a government.

Hypothesis 5: The relationship between board characteristics and earnings management is different in SOE's from Non-SOE's

Board characteristics, earnings management and external governance mechanism

Corporate governance are divided in to two parts i.e. internal and external governance mechanism (Jiang & Kim, 2015; Misangyi & Acharya, 2014). The external Governance in china is not so much developed as compare to other advanced countries, although Chinese government are trying their level best to improve it in a speedy way. There are still some issues for example weak legal environment, no protection for the creditors rights, tunneling, no active role of the institutional investors, labor market and external control is also weak, that should be consider on priority basis to attract the foreign investors and boost their confidence which is whether institutional investors in China are active monitors, is somewhat controversial, so we spend some time on it.

We thus measure the market for corporate control by the three control mechanism i.e. Auditing Quality, Dividend, and Cross-listing on Hong Kong stock exchange. We have used the big 4 international auditors as a proxy for auditing quality. We used the dividend payout ratio as a proxy for dividend, it is an indicator variable which is equal to 1 if the firm gives dividend in a year, and 0 otherwise). We used the indicator variable HK which is equal to 1 if the firm is listed in Main land China as well as on Hong Kong stock exchange. The external governance environment of all developing countries is not so much advance to protect the interest of the minority shareholders, therefore we are interested to investigate the substitution and complementary impact of the external governance mechanisms on the relationship between board characteristics and earnings management (Chen, Cai, Jebran, & Chen, 2019). therefore we are proposing.

Hypothesis 6: There is a negative relationship between BC and EM in the Presence of external monitoring factors.

Data and Methodology

Data collection and data sources

Our study sample consists of all A-Share (non-financial) firms listed on Shanghai or Shenzhen stock exchanges. The time frame of the study covers period from 2008-to-2016. However, based on the distinctive characteristics of the financial firms they are excluded from our dataset (Chen et al., 2019; Leuz, Nanda, & Wysocki, 2003). We delete firm years with missing data for any of the variables used in the estimation and firms years with a negative book value of equity or negative total assets (Khan & Watts, 2009). We have also dropped

those industries where the number of firms in a year is less than 10 for calculating our EM variable.

Our final dataset is consists of 13,472 firm-year observations. 2009 is selected because of major developments in the corporate governance regulations in 2005 in china for the trading of all shares on the stock exchanges and also the is after the major financial crisis and global recession all over the world.31 December 2016 is the most recent year for which data is available for most of our variables.

We have collected the data from China Stock Market and Accounting Research (CSMAR) database which is a famous and reliable source of financial and firm-level data for all listed companies in China (Conyon, He, & Zhou, 2015; Conyon & He, 2012). Finally, we have winterized all the continuous variables at 1 percent on both side and obtained 13,472 firm-year observations during the specified period. We adopted the 13-industry classification (A-M) system of the Chinese Securities Regulatory Commission and their two-digit industry codes(C0-C90 for the manufacturing industry, for a total of 21 industries (Jiang, Xu, Yuan, Q., & Chan, 2018).

Variables

Dependent variable (measurement of earning management)

Extant studies have employed different models for the measurement of earnings management. These models differ in their complexity levels, some of them are simple and simply using discretionary accruals as a measure of total accruals while some of them are very sophisticated because of dividing total accruals into further components i.e. discretionary as well as non-discretionary components (Dechow, Sloan, & Sweeney, 1995). There are two types of earnings management efficient earnings management and opportunistic earnings management. Efficient earnings management means communicating private information to the shareholders and creditors so that to build the trust of these stakeholders. On the other side, opportunistic earnings management means to maximize one's own benefits i.e. to mask the poor performance of the company or to reduce the reporting quality of the earnings. In emerging countries finding out the opportunistic earnings management is very difficult because of their complex cash flow consequence.

To measure the discretionary accruals we use the well-known model in the field of accounting research which is Jones model (1991) and the modified Jones model (Dechow, et al., 1995) and estimate equation (1) for every Industry-year using the industry classification of China Securities Regulatory Commission (CSRC) by using Ordinary least Squares(OLS) .

$$TA_{it}/A_{it-1} = K_{it} * \left(\frac{1}{A_{it-1}}\right) + K_{it} * \left(\frac{\Delta Sales_{it} - \Delta TR_{it}}{A_{it-1}}\right) + K_{it} * \left(\frac{PPE}{A_{it-1}}\right) + \varepsilon_{it} \quad (1)$$

Where $TA_{i,t}$ represents total accruals of a firm i in year t which is calculated as net income from the operation minus cash flow from the operations,

$$TA_{i,t} = EARN_{i,t} - CFO_{i,t}$$

ΔRev is the change in revenue; PPE is the value of property plant and equipment, and A_{it-1} stands for total assets of the company. A_{t-1} represents the past year's total assets. The last term in equation 1 above is the residual from the year and industry regression model, which represents the discretionary or abnormal component of earnings management. For removing the heteroscedasticity issue both sides of the equation are scaled by previous year total assets (A_{it-1}). To further estimate the above equation (1) concerning industry-year with less than ten observations are excluded (DeFond & Jiambalvo, 1994). We are calculating the normal accruals ($NDAcc_{it}$) as follows:

$$NDAcc_{it} = K_1 * \left(\frac{1}{TA_{t-1}}\right) + K_2 * \left(\frac{\Delta Sales_{it} - \Delta AR_{it}}{TA_{t-1}}\right) + K_3 * \left(\frac{GPPE_t}{TA_{t-1}}\right) \dots (2)$$

$$DA_{it} = TA_{it}/A_{it-1} - NDAcc_{it} \dots (3)$$

For robustness, we are using Kothari, Leone, Simon, and Wasley (2005) model

$$TACC_t/TA_{t-1} = \alpha_0 * \left(\frac{1}{TA_{t-1}}\right) + \alpha_1 * \left(\frac{\Delta Sales_{it}}{TA_{t-1}}\right) + \alpha_2 * \left(\frac{GPPE_t}{TA_{t-1}}\right) + \alpha_3 * \left(\frac{ROA_t}{TA_{t-1}}\right) + \varepsilon_t \quad (4)$$

Where $\Delta ARec$ is the change in account receivables and K_i are the estimated values of K_{in} the above equation number (1). The last step is to calculate the abnormal accrual. It is equal to total accrual minus normal accruals, $DAK_{it} = TA_{it}/A_{it-1} - NDAcc_{it} \dots$ Researchers are interested in the magnitude not in the directions of the accruals; therefore by following those researchers we are taking the absolute value of abnormal accruals for the detection of earnings management in the firms.

Explanatory variables

Board characteristics are the main independent variable of the study. Board size is the total number of directors on the corporate board. We have used the natural logarithmic value of the board members in our study. Board independence displays the board composition and board leadership structure

(Nguyen, Locke, & Reddy, 2015) the proxy for the board composition is the proportion of Independent directors to the total directors. Duality is an indicator variable and is equal to 1 if both Chairman of the board and CEO are the same person and 0 otherwise. The detail definitions and measurements of the variables are depicted in Table 1.

Control variables

Following the previous studies, we also control several factors that can influence our earnings management. The definition of control variables are given in the definition table. As mentioned above the data for control variables are also collected from the CSMAR database. We control for firm profitability by using return on assets proxy (Yermack, 1996). We used firm size which is measured by taking the natural log of the total assets. For controlling firm expected growth opportunities and other firm-specific attributes we included different control variables to capture this aspect (for example we are using Leverage, Growth, market-to-book ratio (MTB), Loss and firm age), as a control variable. We measured leverage as the ratio of total debts (short term plus long terms) over total assets. We calculated growth as the percentage change in sales, MTB is the ratio of the market value of equity to book value of assets. We also control firm age which is the date of inception. To handle the outliers in the data we have not trimmed the outliers but used the winsorization method by taking 1% at both tails of the data for all of our continuous variables.

Econometric model specification

To investigate the influence of BC on EM , we have developed the following model;

$$\begin{aligned} |DA_{it}| = & \alpha_0 + \alpha_1 \text{Board Size} + \alpha_2 \text{Board Ind} + \alpha_3 \text{Dual} \\ & + \alpha_4 \text{BMeeting}_{it} + \alpha_5 \text{ROA}_{it} + \alpha_6 \text{Firm Size}_{it} \\ & + \alpha_7 \text{Leverage}_{it} + \alpha_8 \text{Growth}_{it} + \alpha_9 \text{MTB}_{it} \\ & + \alpha_{10} \text{Loss}_{it} + \alpha_{11} \text{SOE}_{it} + \alpha_{11} \text{Firm Age}_{it} \\ & + \alpha_{12} \text{Industry } i + \alpha_{13} \text{Year } t + \varepsilon_t \end{aligned}$$

Where DA_{it} is the absolute discretionary accrual, on the right side of the equation, from board size to board meeting are the board characteristics and from ROA_{it} to firm age are the control variables. We have also controlled the year and industry effect and for robust standard error we used the method of (Petersen, 2009).

Given below is the model for the robustness. We used the Kothari, et al. (2005), a performance-matching model, to check whether our results are

consistent by using different methods for calculating abnormal discretionary accruals.

$$(DAK)_{it} = \alpha_0 + \alpha_1 Board\ Size_{it} + \alpha_2 Board\ Independent\ Director\ Proportion_{it} + \alpha_3 Duality_{it} + \alpha_4 Board\ Meeting + \alpha_5 ROA_{it} + \alpha_6 Firm\ Size_{it} + \alpha_7 Leverage_{it} + \alpha_8 Growth_{it} + \alpha_9 MTB_{it} + \alpha_{10} Loss_{it} + \alpha_{11} SOE_{it} + \alpha_{12} Firm\ Age_{it} + \alpha_{13} Industry_i + \alpha_{14} Year_t + \mu_o \quad (5)$$

Where DAK denote absolute discretionary accrual by adding one extra variable ROA_{it} in our main model of modified jone model (1995).

Empirical Results & Interpretation

Descriptive statistics

Panel A of table1 displays our sample distribution by year and industry. We can see that our sample distribution ranges from 8.57% in 2009 to 15.98% in 2016 suggesting a fair and equal distribution across our sample period. The manufacturing industry is the largest in China, therefore we have considered the sub-industry classification in which only the manufacturing industry is divided into 10 small industries (i.e. from C0 to C9).

The second part of Table 1 i.e., Part (B) represents the descriptive statistics of all the variables. The dependent variables are the measures of financial reporting quality proxies by absolute Discretionary accrual measures. The mean (median) values of absolute discretionary accrual (DA) are 0.051 or 5.1% (0.037 or 3.7%), and it is in line with previous studies. Therefore indicating that Chinese firms on average manipulate their earnings either too happy the controlling shareholders or to get their own benefits. The mean (median) value of the DAK (Kothari, et al., 2005) is 0.048 (0.035) or 4.8% (3.5%). it means on average both proxies of the dependent variable are approximately the same.

Furthermore, our control variables descriptive statistics are consistent with other studies in China (Jebran et al., 2019; Ullah, Jiang, Shahab, Li, & Xu, 2019).

Table 1: *Variable Definitions and Measurements*

Variables	Definition/measure
Dependent Variable	
Earnings Management (DA)	Detecting earnings management (modified Jones model 1995) by Dechow, et al. 1995
Board size (BS)	the total number of board of directors(BOD) in a firm
Board Independence (BI)	The proportion of independent directors to total directors in a firm.
Duality (Duality)	Dummy variable that takes the value of one if the chairperson is also CEO, and zero otherwise.
Board meeting	The number of a meeting attended by the BOD in a year

(NBM)	
Return on Asset (ROA)	Profitability: the ratio of Net profit to total assets
Firm size (fsize)	The natural logarithm of the book value of total assets.
Leverage (lev)	The ratio of total debt to total assets.
Growth (growth)	The ratio of the difference in sales and sales of the previous period of firm i in year t
market-to-book ratio (MTB)	The market value of shares divided by total assets.
Loss (Dummy variable) (loss)	Value of 1 if the company have losses in the previous last one year and,0 otherwise
Firm Age (fage)	The number of years since the inception or the difference from Year _{t} to Year _{$t-1$}
Big four auditor (Big4)	Dummy variable which is equal to 1 if a firm is audited by international big 4 audit firms and 0 otherwise.
Cross-listing (HK)	Dummy varbl equals '1' if firm is listed on mainland China as well as on Hong Kong stock exchange and '0' otherwise.
State-Owned Enterprises (SOE)	1 if the ultimate controlling shareholder is the government (central or local), 0 otherwise
Industry dummy (Industry dummies)	A dummy variable for each of the 74 industries defined by CRC 2012 categories,
Year dummy (Year dummies)	Nine-year dummies for each of the ten years from 2009 to 2016.

Table2 Panel A Industry-wise Distribution of the full sample

	industry	9	10	11	12	13	14	15	16	17	%
A	Agriculture	18	20	22	28	28	31	33	32	212	1.53
B	Mining	45	44	44	53	56	62	62	61	427	3.09
C0	Food, beverage	54	56	59	69	77	81	76	86	558	4.04
C1	Textiles, clothing	30	31	36	45	47	54	52	57	352	2.54
C2	Wood and furniture	0	0	0	0	0	10	9	12	31	0.22
C3	Papermaking, printing	19	21	25	26	31	33	30	34	219	1.58
C4	Petroleum, chemicals, plastics	100	109	113	151	179	188	192	197	1,229	8.89
C5	Electronics	0	0	0	14	15	16	19	21	85	0.61
C6	Metal, nonmetal	102	106	114	141	151	160	155	163	1,092	7.9
C7	Machinery, equipment, instruments	188	197	238	324	391	412	425	467	2,642	19.1
C8	Medicine, biological products	77	81	91	116	123	131	125	148	892	6.45

C9	Other manufacturing industries	0	0	0	0	0	10	12	12	34	0.24
D	Power, gas, and water	67	65	72	74	76	81	82	86	603	4.36
E	Construction	34	32	39	47	54	54	57	58	375	2.71
F	Transportation	56	58	65	69	70	71	69	72	530	3.83
G	IT	125	135	168	245	281	299	300	319	1,872	13.5
H	Retail	105	106	108	116	120	121	123	127	926	6.69
J	Real estate	84	90	98	106	108	107	110	101	804	5.82
K	Social services	51	53	60	79	86	87	88	107	611	4.42
L	Communication and Culture	12	11	16	22	28	33	33	34	189	1.37
M	Conglomerate	18	17	18	17	18	18	17	16	139	1.06
	Total	1,185	1,232	1,386	1742	1,939	2,059	2,069	2,210	13,822	100
	%	8.57	8.91	10	12.6	14	14.9	15	16	100	

Descriptive statistics

Table 3. *Descriptive Statistics*

	N	Mean	SD	Q1	Median	Q3
DA	13472	0.051	0.048	0.017	0.037	0.069
DAK	13472	0.048	0.044	0.016	0.035	0.065
BS	13472	8.857	1.786	8.000	9.000	9.000
BI	13472	0.370	0.057	0.333	0.333	0.400
duality	13472	0.219	0.413	0	0	0
NBM	13472	9.658	4.153	7.000	9.000	12.000
ROA	13472	0.040	0.049	0.014	0.034	0.063
FSize	13472	22.149	1.253	21.254	21.976	22.875
Lev	13472	0.451	0.207	0.290	0.451	0.613
Growth	13472	0.197	0.534	-0.021	0.105	0.273
MTB	13472	2.175	1.967	0.896	1.626	2.759
Loss	13472	0.079	0.269	0	0	0
Fage	13472	15.109	5.260	11.000	15.000	19.000
Soe	13472	0.462	0.499	0	0	1
big4	13472	0.064	0.245	0	0	0

This table depicts the descriptive statistics for all the variables in our sample of 13,472 firm-year observations from the year 2009 to 2016. Please see Appendix A for descriptions of variables.

Table 4 *Correlations Statistics*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
DA	1.00													
DAK	.9**	1.00												
BS	-.1**	-.06**	1.00											
BI	.01	.01	-.4**	1.00										
duality	.01	.02*	-.18**	.10**	1.00									
NBM	.1**	.07**	-.03**	.04**	.01	1.00								
ROA	-.0**	-.05**	.00	-.02**	.05**	-.06***	1.00							
fsize	-.1**	-.06**	.28**	.03**	-.2**	.24***	-.01	1.00						
lev	.1**	.11**	.17**	-.01	-.1**	.20***	-.4**	0.5**	1					
growth	.1**	.10**	-.03**	.01	.0**	.11***	.2**	0.1**	0.04**	1				
MTB	.1**	.03**	-.2**	.05**	.1**	-.07***	.3**	-.01**	-.05**	0.1**	1			
loss	.1**	.1**	-.00	.00	-.0**	-.02**	-.6**	-.0**	0.15**	-.01**	-.00	1		
Fage	.04**	.04**	.03**	-.0**	-.1**	.10***	-.1**	0.2**	0.2**	-.00*	-.01**	.0**	1	
soe	-.04**	-.03**	.3**	-.1**	-.28**	-.1***	-.1**	0.3**	0.3**	-.1**	-.03**	.05**	0.2*	1
big4	-.1**	-.0**	.1*	.0**	-.1**	.0**	.05**	.4**	.1**	-.0**	-.1**	-.0**	.0**	.2**

Table 2 shows the variance inflation factor (VIF) and correlations among Board characteristics, earnings management, and different control variables. For checking the multi-collinearity we have run the VIF command in stata after estimating the regression results. Our data have values of VIF that are below the critical values of 10. It means there is no issue of multi-collinearity. Moreover, the results in the correlation columns show that the two measures of earnings management, namely Modified Jones (Absolute discretionary Accrual) and Kothari, et al. (2005) (absolute discretionary accrual), are strongly correlated with each other (89.7%). Therefore, it shows that we can use both proxies for detecting the earnings manipulations if the results are also consistent in the regression models. The relationships between earnings management and control variables are similar to those found in previous studies.

Table 3 contains the regression results of the effect of BC on EM with industry and year fixed effect. We are interested to determine the level of influence that BC has on Absolute discretionary accruals. Thus, Columns 1 and 2 report the regression results obtained from the linear model (OLS) (first hypothesis about the impact of BC on EM) of the A-listed Chinese firms. In column 1 we have checked first the impact of board characteristics on earnings management without taking the control variables. The findings shows that out of four variables, we found two variables(board size and Board Independence) are positive and statistically significant at level of 1% and 5% respectively, and the remaining two(duality and board meeting) are negative and statistically significant at 10% and 1% respectively, with the earnings management. The findings shows that if board size is large and also if the directors are independent then they are reducing/mitigating the earnings management and it supports the agency theory which suggests that if board size is large or if there are independent directors on the board, they can easily monitor the

opportunistic behavior of managers and constrain the chances of earnings unethically. The findings of the other two aspects of corporate board i.e. duality and board meeting shows that duality is not a good sign for effective corporate governance, and there are more chances that the CEO can easily influence the board and can mask the bad performance of the firms from the potential investors and other stakeholders. Board meetings results show that most of the time the directors are old friends club and they are not fully concentrating on the agenda items and other long term strategies of the firm, therefore the manager can exploit this opportunity and they can manage their earnings.

On the other hand, if we are taking control variables in our model then, the sign and magnitude of the two aspects i.e. board size and board meetings are the same, but board independence has the same sign but lost the significance level, this findings show that in china the independent directors are not so much active to perform their monitoring duty in true spirit. Also, the duality is still positive but it is insignificant. It shows that duality is not a big issue in China as compared to the US and other developed countries. The argument behind this is that in China, mostly, there are concentrated ownership and family members or their friends are managing their business, therefore, the duality is not harming the performance of the firms.

In addition, when we are using different proxy for our dependent variable i.e. Kothari, et al. (2005) model, then all the variables in column maintain their level of significance and the expected sign. It shows that we can use both proxies alternatively for the investigation of the impact of board characteristics on discretionary accruals. Furthermore, the results of the association between EM and our control variables are similar to the previous studies (Arun et al., 2015; Du, Lai, & Pei, 2016; García Lara et al., 2017) among others.

Subsample analysis of the effect of BC on EM

In Table 5, we have divided the overall sample into two dimensions: SOEs versus non-SOE. The empirical results show that the Board Size coefficient is negatively significant in both samples. Board Independence is negative but insignificant in SOE and Non-SOE. It shows that Independent directors are not active in china if they are in SOE or Non-SOE,s. Duality and board meetings are positively significant in Non-SOE at 10% and 1% level respectively and positive but insignificant in SOE. Control variables are similar to the main model of our studies. This leads us to conclude that Board Characteristics is positively associated with the earnings management in full-sample and the subsample of NSOEs but it is different in case of SOEs.

Role of external monitoring on the relationship between BC and EM

This part of the study shows whether external Corporate Governance mechanism plays role or not. We are following the previous studies who considered the presence or absence of the external monitoring mechanism by using complementary perspective (Schepker & Oh, 2013) and substitutional view (Oh, Chang, & Kim, 2018). Our study also following the previous studies and consider only three external CG variables that can influence the relationship between BC and EM. Recently and firms outcomes An, Li, & Yu, (2016) found that strong external institutional environment and debt can reduce the agency cost and improve the firm performance by reducing the earnings management. These important variables are auditor big4, Dividend, and HK shares i.e., cross-listing on mainland Chinese and Hong Kong stock exchanges (Gul, Kim, & Qiu, 2010; Xu, Li, Yuan, & Chan, 2014).

We have two groups of each external monitoring variable, which show the presence or absence. We represent presence by 1 and absence by 0. If a firm is audited by big4 international auditors then it is equal to 1, otherwise 0. if a firm is listed on Hong Kong as well as on Mainland China then it is equal to 1, otherwise 0, and in the last ,if a firm give dividend to their investors in a year then it is equal to 1, otherwise 0.

Outputs in table 7 show the empirical results of all three external CG variables on the association between BC and EM Columns 2 and 3, shows the relationship between BC and EM in the presence and absence of big4 auditors. It shows that Board size plays a significant role when auditor big 4 is absent and mitigate the earnings management, as compare to when auditor big4 are present.

In columns 4 and 5, we split the sample, based on a cross-listing of firms. The results suggest that BC has a negative and significant impact on EM when a firm is only listed on Chinese stock exchanges (SHSE and SZSE), however, the relationship between BC and EM is insignificant when a firm is also listed on Hong Kong stock exchange. The results regarding dividends are presented in columns 6 and 7.

Taken together, these results show that the role of BC in enhancing Earnings Quality is particularly important when a firm has weak external monitoring. Thus, based on these findings, our study support the substitutional view (Srinidhi et al., 2011); by showing that in the absence of effective external monitoring, BC substitute the weak governance mechanism and protect the interest of all stakeholders.

Table 3: *The Impact of BC on EM*

	(1)	(2)	(3)	(4)
Variables	DA	DA	DAK	DAK
BS	-0.00*** (-6.63)	-0.00*** (-3.48)	-0.00*** (-6.45)	-0.00*** (-3.41)
BI	-0.016** (-2.161)	-0.003 (-0.461)	-0.013* (-1.820)	-0.001 (-0.136)
Duality	0.002* (1.672)	0.001 (0.948)	0.002** (2.147)	0.002 (1.626)
NBM	0.001*** (5.606)	0.001*** (4.962)	0.000*** (4.134)	0.000*** (3.445)
ROA	0.077*** (5.136)		0.058*** (4.265)	
FSize	-0.004*** (-8.245)		-0.005*** (-9.810)	
Lev	0.035*** (11.802)		0.034*** (12.111)	
Growth	0.007*** (6.413)		0.007*** (7.422)	
MTB	0.001*** (3.613)		0.001** (1.990)	
Loss	0.025*** (12.733)		0.020*** (10.961)	
Fage	0.000** (2.103)		0.000** (2.066)	
soe18	-0.002* (-1.956)		-0.001 (-1.237)	
Big4	-0.004*** (-2.578)		-0.000 (-0.132)	
Constant	0.077*** (14.575)	0.129*** (11.706)	0.071*** (14.451)	0.138*** (13.359)
Year effect	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes
Observations	13,472	13,472	13,472	13,472
R-squared	0.060	0.099	0.048	0.085
F	21.19	28.39	18.13	24.29

This table presents the regression results for the effect of BC on EM. All the variables of this table are provided in detail in the definition table1. Column (1) and (2) are the main model based on the Modified Jones model (1995) and column (3) and (4) are based on Kothari, et al. (2005) model used for the robustness. Industry and year effects have been controlled in the analysis and F-statistic and R² value has been reported; Robust t-statistics are in parentheses. ***, ** and * denotes 1%, 5% and 10% significance levels respectively. Robust t-statistics in parentheses*** p<0.01, ** p<0.05, * p<0.1

Table 4. *Subsample Analysis of the Effect of BC on EM.*

Variables	SOE	Non-SOE
BS	-0.001** (-2.440)	-0.001** (-2.112)
BI	-0.000 (-0.014)	-0.002 (-0.229)
Duality	0.002* (1.692)	0.001 (0.580)

NBM	0.000*** (3.051)	0.000 (1.629)
ROA	0.071*** (3.940)	0.037* (1.710)
Fsize	-0.004*** (-5.506)	-0.005*** (-7.160)
Lev	0.039*** (9.892)	0.028*** (6.994)
Growth	0.007*** (5.526)	0.009*** (5.092)
MTB	0.000 (1.060)	0.002*** (2.592)
Loss	0.026*** (8.992)	0.014*** (6.206)
Fage	0.000 (0.964)	0.000** (1.989)
big4	0.002 (0.635)	-0.001 (-0.702)
Constant	0.133*** (7.525)	0.132*** (9.332)
Industry/Year Effect	Yes	Yes
Observations	7,247	6,225
R-squared	0.080	0.100
F	12.54	50.02

This table presents the regression results for the subsample analyses of the impact of BC on EM at State and Non-State ownership. This table provides information about the role of ultimate controlling shareholder (soe=1) and those who are not the controlling shareholder (soe=0) A detailed description of the variables has been provided in table1. Industry and year effects have been controlled in the analysis F-statistic and R² value has been reported; t-values are reported in brackets. Robust t-statistics in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 5: *Subsample Analysis of the Effect of BC on EM*

Variables	Big4=0	Big4=1	HK=0	HK=1	dividend=0	dividend=1
	EM	EM	EM	EM	EM	EM
BS	-0.00*** (-3.397)	-0.000 (-0.497)	-0.00*** (-3.658)	0.00 (0.309)	-0.00** (-2.279)	-0.00*** (-2.752)
BI	-0.002 (-0.203)	-0.002 (-0.122)	-0.004 (-0.474)	0.011 (0.507)	0.004 (0.281)	-0.007 (-0.781)
Duality	0.001 (1.111)	0.006 (1.242)	0.001 (1.175)	0.011* (1.678)	0.003 (1.341)	0.001 (0.967)
NBM	0.001*** (4.962)	0.000* (1.677)	0.001*** (5.317)	0.000 (1.375)	0.000 (1.341)	0.001*** (5.498)
ROA	0.074*** (4.764)	0.083 (1.275)	0.076*** (4.940)	0.089 (1.568)	-0.114*** (-3.582)	0.179*** (10.621)
Fsize	-0.00*** (-7.717)	-0.00*** (-4.317)	-0.00*** (-8.296)	-0.01*** (-3.561)	-0.004*** (-4.068)	-0.006*** (-10.454)
Lev	0.035***	0.002	0.034***	0.030*	0.027***	0.040***

	(11.477)	(0.143)	(11.360)	(1.697)	(5.192)	(11.160)
Growth	0.007***	0.004	0.007***	0.007	0.007***	0.007***
	(6.437)	(0.899)	(6.431)	(0.994)	(4.959)	(4.876)
MTB	0.001***	-0.003*	0.001***	-0.008**	0.001**	0.000
	(4.158)	(-1.957)	(3.860)	(-2.408)	(2.508)	(0.590)
Loss	0.025***	0.016**	0.025***	0.012	0.009***	0.021***
	(12.301)	(2.225)	(12.528)	(1.578)	(3.068)	(4.261)
Fage	0.000*	0.000	0.000	0.000	0.000	0.000
	(1.668)	(0.213)	(1.552)	(0.276)	(1.376)	(1.221)
Constant	0.13***	0.18***	0.13***	0.31***	0.13***	0.16***
	(10.829)	(5.321)	(11.660)	(4.162)	(5.985)	(13.539)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	12,549	854	13,000	403	3,708	9,695
R-Square	0.098	0.107	0.096	0.141	0.094	0.106
F	26.64	.	27.44	2.247	8.699	21.73

This table presents the substitution and complementary effect of different external governance mechanisms on the association between BC and EM nexus. The regression results for the subsample analyses of the impact of BC on EM at different levels big4 auditors, a cross-listing of firms, and Dividend are given below. A detailed description of the variables has been provided in Appendix A. Industry and year effects have been controlled in the analysis, F-statistic and R² value has been reported; t-values are reported in brackets. Robust t-statistics in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Additional tests

We further use another proxy of EM to test the robustness of our results. In table 3, we followed the method of Kothari et al. (2005) and measure EM just like the modified Jones model along with adding one variable Return on Assets of the previous period to control the performance effect on the earnings management. The third column shows the impact of BC on EM by regressing only independent variables on the dependent variables. In columns 4, we are regressing the independent variables along with all control variables of column 2 to control the firm characteristics. the results are consistent with our main models and therefore we conclude that we can use both proxies for studying the impact of BC on EM in the Chinese context.

Conclusion

This study explores the relationship between BC (Board size, board independence, CEO duality, and Board meetings) and Earnings Management of A-share listed companies in China. We argue that the board structure is an important component of the internal governance system and it plays a significant role in reducing earnings management and thereby enhancing earnings quality. Board size depends upon the nature and scope of the business, therefore the size of the board should be according to the complex operation of the business. Independent directors in developing countries and especially in China are not affectively monitoring the top managers; therefore, there is an insignificant relationship between Board independence and discretionary accruals. This is in contrast to prior studies in other contexts (Klein, 2002; Biao Xie, Davidson Iii, & Dadalt, 2003). Furthermore, if the external governance mechanism is weak we expect that effective board structure can mitigate the earnings management and can enhance the board monitoring.

The board meeting is positively and significantly related to discretionary accruals. It means that directors are not giving proper time to the meetings. According to Kang, et al. (2019) face to face meeting is not so much effective as compare to remote meeting. Further they explain that independent directors are busy and they can easily attend a remote meeting easily and also there are more chances of dissent with the management .Therefore, we expect that if directors are allowed to attend a remote meeting then there are more chances to perform their monitoring duty with full devotion and reducing the pressure for conformity. On the other hand, if there are more meetings of directors, it shows a signal that there is something going in wrong direction and directors are meeting again and again, and they are on same page with seniors managers to hide the bad performance of the firms. This result is in line with previous studies. It shows that financial reporting quality can be improved if the directors give full time with a focus on the meeting's agenda items and to study these documents before attending these meetings.

For robustness analysis, we used other proxy for the dependent variable and our results are in line with the main findings. Weak External governance mechanism can be substituted with affective board structure as well as with cross-listing of the shares on other stock exchanges. Using the subsample analysis we concluded that board size is very effective in SOE as compare to non-SOEs, as well as board meeting has a positive and significant relationship with EM in Non-SOE and insignificant relationship if the state is the majority shareholders. Therefore, we conclude that the board meeting of the state-controlled firm is better than non-SOE.

Board structure, ownership structure, and auditor quality are very important factors of corporate governance in China. This study is based on non-financial firms therefore in future researchers can extend the findings of this study to financial firms and in addition, can also take other governance variables to check the full impact of overall governance mechanism on earnings management.

This study is just a new contribution to the empirical studies on the nexus between BC and EM. The policymakers can focus on board-level corporate governance reforms such as board diversity, and also can focus on the quality of information, by either improving the disclosure of information or to reduce the hoarding of bad news, so that investors can make informed decisions on the time. Furthermore, policymakers should focus on the improvement of external governance mechanisms to safeguard the interest of the minority shareholders and boost the confidence levels of the potential investors (Kapoor & Goel, 2017).

References

- An, Z., Li, D., & Yu, J. (2016). Earnings management, capital structure, and the role of institutional environments. *Journal of Banking and Finance*, 68, 131–152.
- Arun, T. G., Almahrog, Y. E., & Ali Aribi, Z. (2015). Female directors and earnings management: Evidence from UK companies. *International Review of Financial Analysis*, 39, 137-146.
- Chen, S., Cai, W., Jebran, K., & Chen, S. (2019). Does social trust mitigate earnings management? Evidence from China. *Emerging Markets Finance and Trade*, 1–22.
- Chung, R., Firth, M., & Kim, J. B. (2002). Institutional monitoring and opportunistic earnings management. *Journal of Corporate Finance*, 8(1), 29–48.
- Canyon, M. J., He, L., & Zhou, X. (2015). Star CEOs or political connections? Evidence from China's publicly traded firms. *Journal of Business Finance & Accounting*, 42(3-4), 412-443.
- Canyon, M. J., & He, L. (2012). CEO compensation and corporate Governance in China. *Corporate Governance: An International Review*, 20(6), 575-592.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting Review*, 193-225.

- DeFond, M. L., & Jiambalvo, J. (1994). Debt covenant violation and manipulation of accruals. *Journal of Accounting and Economics*, 17(1-2), 145-176.
- Du, X., Lai, S., & Pei, H. (2016). Do women top managers always mitigate earnings management? Evidence from China. *China Journal of Accounting Studies*, 4(3), 308–338.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics*, 26(2), 301-325.
- Firth, M., Fung, P. M., & Rui, O. M. (2007). Ownership, two-tier board structure, and the informativeness of earnings—Evidence from China. *Journal of Accounting and Public Policy*, 26(4), 463-496.
- García-Meca, E., & Sánchez-Ballesta, J. P. (2009). Corporate governance and earnings management: A meta-analysis. *Corporate Governance: An International Review*, 17(5), 594–610.
- García Lara, J. M., García Osma, B., Mora, A., & Scapin, M. (2017). The monitoring role of female directors over accounting quality. *Journal of Corporate Finance*, 45, 651–668.
- Gul, F. A., Kim, J. B., & Qiu, A. A. (2010). Ownership concentration, foreign shareholding, audit quality, and stock price synchronicity: Evidence from China. *Journal of Financial Economics*, 95(3), 425–442.
- Gull, A. A., Nekhili, M., Nagati, H., & Chtioui, T. (2018). Beyond gender diversity: How specific attributes of female directors affect earnings management. *British Accounting Review*, 50(3), 255–274.
- Gulzar, M. A., & Zongjun, W. (2011). Corporate Governance Characteristics and Earnings Management: Empirical Evidence from Chinese Listed Firms. *International Journal of Accounting and Financial Reporting*, 1(1), 133-145.
- Haider, J., & Fang, H. X. (2016). Board size and corporate risk: evidence from China. *Journal of Asia-Pacific Business*, 17(3), 229–248.
- Haynes, K. T., & Hillman, A. (2010). The effect of board capital and CEO power on strategic change. *Strategic Management Journal*, 31(11), 1145-1163.
- Hillman, A. J., Cannella, A. A., & Paetzold, R. L. (2000). The resource dependence role of corporate directors: Strategic adaptation of board composition in response to environmental change. *Journal of Management studies*, 37(2), 235-256.

- Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28(3), 383–396.
- Hsu, C., Lai, W., & Yen, S. (2019). Boardroom diversity and operating performance: the moderating effect of strategic change. *Emerging Markets Finance and Trade*, 55(11), 2448–2472.
- Jebran, K., Chen, S., & Tauni, M. Z. (2019). Principal-principal conflicts and corporate cash holdings: Evidence from China. *Research in International Business and Finance*, 49(June, 2018), 55–70.
- Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *the Journal of Finance*, 48(3), 831-880.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Jiang, F., & Kim, K. A. (2015). Corporate governance in China: A modern perspective. *Journal of Corporate Finance*, 32, 190–216.
- Jiang, X., Xu, N., Yuan, Q., & Chan, K. C. (2018). Mutual-fund-affiliated analysts and stock price synchronicity: Evidence from China. *Journal of Accounting, Auditing & Finance*, 33(3), 435-460.
- Kapoor, N., & Goel, S. (2017). Board characteristics, firm profitability and earnings management: Evidence from India. *Australian Accounting Review*, 27(2), 180–194.
- Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, 33(3), 375–400.
- Khan, M. & Watts, R. L. (2009). Estimation and empirical properties of a firm-year measure of accounting conservatism. *Journal of Accounting and Economics*, 48(2–3), 132–150.
- Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of accounting and economics*, 39(1), 163-197.
- Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. *Journal of financial economics*, 69(3), 505-527.
- Liao, L., Lin, T. P., & Zhang, Y. (2018). Corporate Board and Corporate Social Responsibility Assurance: Evidence from China. *Journal of Business Ethics*, 150(1), 211–225.
- Liu, Y., Wei, Z., & Xie, F. (2014). Do women directors improve firm performance in China?. *Journal of Corporate Finance*, 28, 169-184.

- Misangyi, V. F., & Acharya, A. G. (2014). Substitutes or complements? A configurational examination of corporate governance mechanisms. *Academy of Management Journal*, 57(6), 1681–1705.
- Nguyen, T., Locke, S., & Reddy, K. (2015). Ownership concentration and corporate performance from a dynamic perspective: Does national governance quality matter? *International Review of Financial Analysis*, 41, 148–161.
- Obigbemi, I. F., Omolehinwa, E. O., Mukoro, D. O., Ben-Caleb, E., & Olusanmi, O. A. (2016). Earnings management and board structure: evidence from Nigeria. *Sage Open*, 6(3), 2158244016667992.
- Oh, W. Y., Chang, Y. K., & Kim, T. Y. (2018). Complementary or substitutive effects? Corporate governance mechanisms and corporate social responsibility. *Journal of Management*, 44(7), 2716–2739.
- Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies*, 22(1), 435–480.
- Pucheta-Martínez, M. C., Bel-Oms, I., & Olcina-Sempere, G. (2018). The association between board gender diversity and financial reporting quality, corporate performance and corporate social responsibility disclosure: A literature review. *Academia Revista Latinoamericana de Administración*, 31(1), 177-194.
- Schepker, D. J., & Oh, W. Y. (2013). Complementary or Substitutive Effects? Corporate Governance Mechanisms and Poison Pill Repeal. *Journal of Management*, 39(7), 1729–1759.
- Srinidhi, B., Gul, F. A., & Tsui, J. (2011). Female directors and earnings quality. *Contemporary Accounting Research*, 28(5), 1610–1644.
- Ullah, F., Jiang, P., Shahab, Y., Li, H.-X., & Xu, L. (2019). Block ownership and CEO compensation: does board gender diversity matter? *Applied Economics*, 1–15.
- Xie, B., Davidson III, W. N., & Da-Dalt, P. J. (2003). Earnings management and corporate governance: the role of the board and the audit committee. *Journal of corporate finance*, 9(3), 295-316.
- Xu, N., Li, X., Yuan, Q., & Chan, K. C. (2014). Excess perks and stock price crash risk: Evidence from China. *Journal of Corporate Finance*, 25, 419–434.
- Yermack, D. (1996). Higher market valuation for firms with a small board of directors. *Journal of Financial Economics*, 40(40), 185–211.

- Yeung, W. H., & Lento, C. (2018). Ownership structure , audit quality , board structure , and stock price crash risk: Evidence from China. *Global Finance Journal*, 37(April), 1–24.
- Young, M. N., Peng, M. W., Ahlstrom, D., Bruton, G. D., & Jiang, Y. (2008). Corporate governance in emerging economies: A review of the principal–principal perspective. *Journal of Management Studies*, 45(1), 196-220.