

Role of Audit Quality, Political Connections and Investor Protection on Discretionary Accruals in China

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Abstract

The purpose of this paper is to determine the effect of audit quality, political connections and investor protection on discretionary accruals using the modified Jones model as the proxy for discretionary accruals. The top four auditors were used as the proxy for high quality auditors while political connectedness was proxied by percentage of shares owned by the state in a firm (state/non-state owned enterprises). Investor protection was measured by the listing status of a firm whether mainland China or outside. The empirical analyses presented provide support for the proposition that high quality auditors and common law environment regulations mitigate occurrence of discretionary accruals. Additionally, it was observed that politically connected firms have lower discretionary accruals. This study provides a unique focus investor protection and elucidates the effects of listing environment on discretionary accruals by distinguishing between Chinese firms listed in and outside mainland China.

Keywords: Audit Quality, Political Connections, Investor Protection, Discretionary Accruals, China

1. Introduction

This paper aims to determine the relationship between audit quality, political connections, investor protection and discretionary accruals among firms domiciled in China. Audit quality, political connections and investor protection are largely recognized as among the determinants of discretionary accruals but whose linkages remain largely unexplored. The aim of this study is to determine the effect of political connections and audit quality on discretionary accruals. It will also determine the role of investor protection measures based on the environment in which firms operate or are domiciled in.

First we determine whether there exists any relationship between audit quality and discretionary accruals by examining the accruals differences between firms that are audited by the big four and non-big four auditors. Secondly we determine the effect of political connections by distinguishing between state owned and non state owned companies and examining the behavior of discretionary accruals on both samples. And finally, guided by Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) approach we distinguish accruals between firms that are listed in civil law country(mainland china) and common law countries (Hong Kong). Our study controls for the effects of a firm's financial uniqueness such as firm size, leverage and absolute total accruals.

Our study provides insightful information on the relationship between discretionary accruals and audit quality. We study the role of high quality audits as measured by big four auditors in controlling the occurrence of discretionary accruals. Our results add to the body of existing literature on audit quality by indicating a relation between audit quality and discretionary accruals though the relationship is insignificant in China. Discretionary accruals are a decomposed component of accounting earnings (earnings management) that is considered to be prospective thus undercuts the enlightening nature of earnings. Due to this, a number of previous studies have focused on the assumption that accounting adjustments made by management are for opportunistic reasons, (Jiambalvo, 1996; McNichols & Wilson, 1988). However, this is improbable to be the case as factors vary across firms and they include previous decisions made that influence future choices (Sweeney, 1994), organization structure (Dechow, Sloan, & Sweeney, 1996) and audit quality (Becker, DeFond, Jiambalvo, & Subramanyam, 1998). Effectiveness of audit varies with the quality of an auditor, and choice of an auditor in China has two competing views, first one being that high quality auditors quell the notion that political connections have an adverse effect on minority shareholders (Choi & Wong, 2007). Adversaries of this postulates claim that politically connected firms are beneficiaries of state goodies and therefore they are not inclined towards mollifying the requirements of outside investors (Brandt & Li, 2002)

Secondly, the study documents the relationship between political connections (measured by the percentage of shares that are owned by the state) and discretionary accruals. Two competing views exist regarding the role that political connections has on firm performance. Opponents of this view claim that politically connected firms have access to cheap loans from state owned banks thus they are less likely to pacify investors' demands resulting to a decline in corporate transparency. Proponents of this view postulate that firms with political connections are likely to appoint high quality auditors in order to reduce agency problems and information asymmetry (Choi & Wong, 2007). This study therefore adds to the existing literature by determining the relationship between politically & non-politically connected firms and discretionary accruals

Paucity of research exists on the role of investor protection (both firm and environment level) on discretionary accruals. This study therefore seeks to extend research on audit quality, political connections and discretionary accruals while incorporating the environment level protection measures. We postulate that the environment level of the legal systems in which a firm operates also has an impact on discretionary accruals. The environment level will be divided common law (English law origins) and civil law (Roman law origins). Firms subject to higher investor protection are generally governed by common law at the environment level, as compared to firms that are subject to civil law. Previous studies on earnings management and investor protection worldwide indicate that firms operating in regions that have developed equity markets with stronger investor rights have reduced earnings management levels (Leuz, Nanda, & Wysocki, 2002). The unique setting of the Chinese market (mainland China and Hong Kong) provides an opportunity of understanding how legal environments influence discretionary accruals since China based stocks are subject to civil law while Hong Kong based firms are subject to common law.

Our sample comprises of firms listed in Shanghai and Shenzhen stock exchanges for the period 2001 – 2014. Political connections were measured as postulated by Faccio (2006) whereby a firm is politically connected if a large shareholder is the state or closely related to government. Audit quality is measured by the big 4 proxy to represent demand for high quality audits while investor protection is measured by the law governing the environment in which the firm is listed. The empirical results support our supposition that audit quality has an effect of reducing discretionary accruals even though the effect is not significant enough which is attributed to the market share of big four firms being low (10-12%). Political connections also have an inverse relationship with discretionary accrual with state owned enterprises having lower discretionary accruals as compared to non – SOEs. One probable explanation is that state owned companies are not under pressure to report quality earnings thus opportunistic earnings management practices are not associated with them. We examine the environment in which the firms are listed and find that common law listed companies have lower discretionary accruals compared to civil law listed ones. Collectively our results suggest that companies that are state owned, audited by the big four and are operate in a common law environment are likely to have lower DACs thus reduced opportunistic earning management practices.

Our paper makes several contributions; it add further evidence to the propositions that audit quality inhibits discretionary accruals and that non state owned enterprises have higher DACs. The unique contribution of our research is the examination of listing environment of a firm on discretionary accruals. The results indicate the importance of a stronger legal protective environment and reduction of opportunistic earning management practices.

The second chapter discusses the relevant literature and develops the hypothesis, section 3 describes the research design. Section 4 presents the data and empirical analysis and robustness tests while section 5 provides the conclusion.

2. Literature Review

2.1. *Discretionary accruals and audit quality*

One of the widely employed earnings management hypothesis test is the accruals based measures (Healy, 1985). Separation into the managed (discretionary) and unmanaged (non-discretionary) gave rise to the standard – Jones (1991) and the modified Jones- model (Dechow, Sloan, & Sweeney, 1995). Guay, Kothari, and Watts (1996) indicate that despite their popularity, both models estimate discretionary accruals with considerable indistinctness but (Peasnell, Pope, & Young, 2000) found out that the standard and modified standard Jones models were suitable in detecting revenue and bad debt earning manipulations. Total accruals are defined as the change in the non cash working capital accruals less depreciation and amortization. This is the first stage in separating the accruals into the managed and unmanaged components. In order to incorporate the effect of all accounting decisions that influence reported incomes, it is important to study the behavior of total discretionary accruals. Various methodologies have been applied in previous studies; (Sweeney, 1994) examined the changes in choice of specific accounting methods, (Leuz, Nanda, & Wysocki, 2003) examined earnings smoothing using the accrual and operating cash flow components of earnings. In a study of selected US firms Peasnell et al. (2000), found out that the standard –Jones and modified –Jones models were potent at detecting earnings management caused by revenue and bad debt manipulations though it suffers from misspecification when cash flow performance is significant. They however couldn't establish whether there was a significant difference in detecting revenue manipulations from the two models. The incentive to manage earnings is created by agreements based on reported earnings and any other occurrences where earnings play an important role (DeFond, 1997; Hagerman, 1979). One of the factors that limits or constrains a firm's ability to manage earnings is the audit quality. Becker et al. (1998) in a study of the effect of audit quality on earnings management found out that firms audited by the big six auditors have accruals that are 1.5 percent of the assets lower than firms with non-big six auditors. Their study indicates that Big six auditors are of higher quality as compared to the non-big six but they fail to examine the portion of unwarranted accruals that is prevented by each auditor group. Auditors

constrain the prospect of manipulation of accruals thus they are dominant in reduction of noise in earnings management (Watts & Zimmerman, 1990). As indicated by Balsam, Krishnan, and Yang (2003) discretionary accruals' enlightening component increases with an increase in audit quality. The credibility of any company process is always enhanced by the quality of the audit service. The study seeks to examine the effect of audit quality on discretionary earning since it is one of the factors affecting earnings management. Astami et al. (2017) quoting Becker et al. (1998) indicates that the price of earnings management will be detected by high quality auditors. Rusmin (2010) echoes this through a study of the Big 4 audit firms in which he found out that degree of earnings managements is lower in companies that engage the services of these four firms. The Chinese context presents a fascinating disparity since the Big 4 firms account for 10 – 12 percent (Habib, Jiang, & Zhou, 2014) thus indicating dominance of local firms. Based on this, the following hypothesis is developed;

H₁: Discretionary accruals are mitigated by high quality audits

2.2. Political Connections

The Chinese 'contract responsibility system' was propelled by the economic reforms of 1980s that decentralized decision rights of State Owned Enterprises (SOEs) in order to enhance growth of the local market. Before then, political intervention was rife due to the corporatization process that started around 1990 (Fan et al 2007). Political connections in Chinese firms are important since politically connected firms are more inclined towards meeting political objectives rather than shareholders interest. Furthermore the Chinese government maintains firm control over resource distribution thus politically connected firms secure favors and preference from government (Claessens, Feijen, & Laeven, 2008). Most SOEs in China fall under the jurisdiction of local governments thus resulting to vast interests from local governments in the affairs of the SOEs which results to favors and subsidies like ease of regulations and controls (Chaney, Faccio, & Parsley, 2011). Overlooking of expropriation activities results to the quality of earnings being compromised subsequently affecting the performance of an organization.

To meet the requirements of the China Securities Regulatory Commission (CRSC) most firms have strong motivations to manage earnings and it mostly applies to politically connected firms (Chen & Yuan, 2004). In order to improve performance and raise capital for State Owned Enterprises (SOEs) the Chinese stock market was established and this resulted to firms being listed that formerly were SOEs which were characterized by government bureaucrats draining resources from them resulting to conflicts with shareholders (Kung & Cheng, 2012) ((Allen, Qian, & Qian, 2005). They enjoyed increased resource allocation, asymmetric timeliness towards vital information (Su and Fung, 2013), pay lower taxes (Faccio, 2006) thus indicating essence of having political connections. The government's desire to stop the dominance of state owned firms resulted to the launch of the "split-share structure reform" in 2005 which got rid of restrictions that had been imposed on state shares implying that declining state ownership is always associated with demand for high quality auditors. The entrenchment effect is still widespread despite the above mentioned reforms thus encouraging a possibility of suppressing firm specific information as postulated by Bushman, Piotroski, and Smith (2004)

Prevalence of political connections has been documented in previous studies (Claessens et al., 2008; Faccio, 2006; Fisman, 2001) and it has resulted to the appointment of a large number of former government officials to manage SOEs. It is because of this that the Chinese Ministry of Finance launched a program dubbed "Disaffiliation program" in 1998 which entailed restructuring firms into liability companies' independent from their original overseeing institutions (Cheng, Hsu, & Kung, 2015). As a result of this the State Owned Assets Supervision and Administration Commission (SASAC) was incorporated as the body that controls SOEs centrally thus ultimately controlling the local SOEs as it takes a pyramid ownership structure. Competition between regional governments and bureaucrats seeking political and resourceful gains arises because regional SOEs are influenced by the said governments. Ultimately, this may result to administrative and political favors thus influencing the choice of auditors as an institution will prefer dealing with a sympathetic auditor who will turn a blind eye on the sequester activities. (Fan, Wong, & Zhang, 2007), in a study of politically connected CEOs and corporate governance among Chinese listed firms; found out that personal connections are prevalent between government and top management of the said firms. Market pressures for high quality earnings and increased transparency are not likely to be associated with firms that have politically connected CEOs since they are likely to appoint low quality auditors to withhold information about organization performance (Chaney et al., 2011).

Based on the postulations above, the second hypothesis is developed;

H₂: There is a negative relationship between discretionary accruals and politically connected firms

2.3. Investor protection

The agency problem arises due to the need for separation of a firm's decision making, risk bearing and management functions (Fama & Jensen, 1983). To mitigate the risk of expropriation by self centered managers, there arises the need for investor protection. Furthermore minority shareholders require need to be protected

from expropriating large shareholders who may transfer a firms' assets, (legal or illegal) out of reach of creditors (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000).

Chavez and Silva (2009) in a study of the Sao Paulo Stock exchange adoption of corporate governance provisions found out that protection is enhanced by improved corporate governance and it leads to a reduction of asymmetric information costs. On the other hand, (Chung, Elder, & Kim, 2010) observed that narrower spreads are always associated with firms that have enhanced corporate governance mechanisms.

Shi, Dempsey, Duong, and Kalev (2015) postulate that firms in Asia are characterized by opaque communication channels and inadequate responsibility to shareholders i.e. compared to their European counterparts, they only pay a third of their profits in dividends and buy-backs. Proponents of this belief indicate that it allows for long-term decision making while detractors say that it creates cronyism. In a study of 44 countries, McLean, Zhang, and Zhao (2012) found out that where greater levels of investor protection are enforced, a firm's fundamentals are reflected by its stock price while (Lombardo & Pagano, 1999) indicate that investors are willing accept lower return rates in environments whose level of investor protection is quite higher. Brockman and Chung (2003) in a study of firms listed on the Hong Kong Exchanges and Clearing Limited (HKEx) observed that blue chip shares (Hong Kong based) have a higher liquidity as compared to China based shares listed there. This can be attributed to enhanced investor protection at the environment level for HK firms as compared to the China based firms.

Porta et al. (1998) contends that legal rules protecting investors vary among various traditions and their source is typical of a country's colonization. Common law traditions - countries whose legal system origin is the common English law are viewed to be more protective to external investors compared to civil law traditions (Roman origins). They justify this by indicating that civil law is related to increased government ownership and regulation whose indicators are associated with adverse impacts such as corruption. Based on this line of thought, civil law encourages state desired outcomes while common law supports private market outcomes. Therefore In line with the above postulation that common law countries provide a stronger level of investor protection than civil law countries, our third hypothesis is as follows;

H₃ Chinese firms that are listed in Hong Kong (subject to common law environment) have lower discretionary accruals than firms that are listed in mainland China (subject to civil law).

3. Research Design

3.1. Sample

This study will focus on the listed companies in the Shanghai and Shenzhen Stock Exchanges. In order to test the hypotheses, data will be collected from the RESSET database. The study period will be for the years 2001 – 2014. Choice of the study has been based on the recommendations of (Gray, Kang, Lin, & Tang, 2015) who found out that tendency to engage in opportunistic earnings management were still prevalent during this post IFRS adoption period.

As it's the norm and consistent with prior research, firms from insurance, banking, finance and unit trusts are excluded from the study because they are subject to different regulatory requirements. Upon exclusion of firm – years with missing values and missing variables the final sample consists of 18,681 firm – year observations;

3.2. Proxy for discretionary accruals, audit quality, political connection and investor protection

The study adopts the two stage modified Jones 1991 model as the proxy for estimating discretionary accruals. As observed in previous studies (DeFond & Subramanyam, 1997; Subramanyam, 1996) the cross sectional model is suitable than the time series models since the latter is restrictive and may have specification problems due to possibility of correlated residuals.. The model defines total accruals are as income before extra ordinary items less cash flows from operating activities. The error term is referred to as discretionary accruals.

Prior to estimating DACs, total accruals (TAC) are calculated as follows;

$$TAC_{ij} = (IBEL_{ij} - OCF_{ij}) \tag{1}$$

Where;

- TAC_{ij} : Total accruals for firm i in year j
- IBEL_{ij} : Income before extraordinary items for firm i in time period j
- OCF_{ij} : the operating cash flows for firm i in time period j

Total Accruals are then decomposed into normal and discretionary accruals by the modified Jones (1991) model which is defined as

$$TA_{ij} = \alpha_{ij} \left[\frac{1}{A_{ij-1}} \right] + \beta_{ij} \left[\frac{\Delta REV_{ij} - \Delta REC_{ij}}{A_{ij-1}} \right] + \beta_{2ij} \left[\frac{PPE_{ij}}{A_{ij-1}} \right] + \varepsilon_{ij} \tag{2}$$

Where;

- TA_{ij} : total accruals for the firm (Income before extraordinary items less operating cash flows)
- A_{ij-1} : total assets for the firm i at the end of year j-1

ΔREV_{ij} : change in net revenues for the firm i between year $j-1$ and j

ΔREC_{ij} : change in receivables for firm i between years $j-1$ and j

PPE_{ij} : Property Plan and Equipment for firm i in year j

ε : error term

DACs are calculated as the residuals from equation 2 above

Frankel, Johnson, and Nelson (2002) and Gul, Chen, and Tsui (2003) postulate that the magnitude of discretionary accruals is affected by the quality of an auditor. Prior research (Mayhew & Wilkins, 2003) argues that the quality of the Big-4 auditors is higher as compared to the non-Big 4 auditors and therefore it is expected that earnings management will be lessened for Big 4 clients. The study therefore incorporates audit quality as a dummy variable which will be coded as 1 if a firm is audited by big four and 0 if otherwise.

3.3. Political connections

To test the hypothesized relationship with discretionary accruals, the study followed the approach of (Faccio, 2006) who observed that politically connected firms are those whose largest shareholders are the state or closely related to the state. A single proxy was used to measure political connections – firms whose ultimate controlling shareholder is a government department or agencies whereby a dummy variable was assigned a value of 1 when the firm's ultimate shareholder is the central or local government otherwise 0. State Ownership was measured by the percentage of shares held by the government and shareholder information was collected from the RESSET database. In line with the approach developed by Wang, Wong, and Xia (2008), the study divided the sample into State Owned Enterprises (SOEs), and non-SOEs to test further the hypothesized relationships.

3.4. Investor protection

In line with Porta et al. (1998) the legal and regulatory environment was used as a measure of this variable. Firms in the sample were classified into two major categories, firms listed in mainland China only and those listed in both mainland china and Hong Kong. We postulate that firms that are listed in Hong Kong operate in a well protected environment thus it is presumed that they will have lower discretionary accruals since their quality of earnings is expected to be higher as compared to firms listed and operating in mainland China only. Guided by the approach of (Shi et al., 2015) firms will be classified into two main categories; Mainland China listed firms only and both China Mainland & Hong Kong listed firms

3.5. Proxies for control variables

A couple of previous studies indicate that larger firms have a greater litigation risk as compared to smaller firms (Heninger, 2001; Lys & Watts, 1994) thus justifying the reason for including firm size as a control variable. It is calculated as the natural logarithm of the market value of a firm in a specific year. Prior studies also indicate that a higher probability for debt default is an indication of a likelihood of earnings managements (Benkel, Mather, & Ramsay, 2006). This justifies the inclusion of leverage as a control variable and its calculated as the ratio of total debt to total assets for firm i in year j .

To control for larger discretionary since the value of discretionary accruals will differ across the samples, there is need to control for the possibility of absolute accruals. Absolute Total Accruals is thus included and is calculated as the absolute value of TAC divided by total assets. Firms with higher absolute total accruals are expected to have higher accruals, though Becker et al. (1998) found an inverse relationship between absolute total accruals and discretionary accruals.

3.6. Model equation

The main econometric model for regression is defined as follows;

$$DAC_{ij} = \alpha_0 + \alpha_1 AQ_{ij} + \alpha_2 POL_{ij} + \alpha_3 LST_{ij} + \alpha_4 (AQ_{ij} * POL_{ij}) + \alpha_5 (AQ_{ij} * LST_{ij}) + \alpha_6 (POL_{ij} * LST_{ij}) + \alpha_7 AbsT_{ij} + \alpha_8 SIZE_{ij} + \alpha_9 LEV_{ij} \varepsilon \quad (3)$$

Where,

DAC : the discretionary accruals for firm i in year j as measured by the Jones (1991) model (modified)

AQ : Audit Quality is a dummy variable that takes a value of 1 if the auditor is among the big four and 0 if otherwise

POL : Political connections is a dummy variable that takes the value of 1 if a firm is politically connected otherwise 0

LST : refers to the measure for investor protection that takes the value of 1 if a company is listed in mainland china and 0 if listed in Mainland China and Hong Kong

AbsT : refers to the absolute value of total accruals divided by total assets of the firm

CSize : logarithm of market value of equity for a firm in a fiscal year

Leverage : refers to the ratio of total debt of firm i for year j to total assets of firm i for year j

4. Results

4.1. Descriptive statistics

Table I indicate the descriptive studies for the dependent, independent and control variables for the study. The average firm market capitalization is \$443.95m calculated as the antilog of the mean value of the variable firm size variable. The absolute value of total accruals is 8.6 percent of total assets at the beginning of the year. The debt to asset ratio ranges from 0 to 91.66 per cent and averages 0.29 per cent.

Table I. Descriptive Statistics

Description	Observations	Mean	Std. Dev.	Minimum	Maximum
<i>Dependent Variable</i>					
Discretionary Accruals	18681	0.0000336	0.2289681	-9.241381	9.870014
<i>Control Variables</i>					
AbsT	18681	0.0869532	0.2167336	0.000007	9.862146
CSize (ln)	18681	9.473365	0.4563057	7.88298	12.3498
leverage	18681	0.2979019	1.069735	0.00000	91.6681
<i>Independent/Categorical Variables</i>					
<i>Audit Quality</i>		Mean	SD	Observations	Percentage
Big 4		-0.0007255	0.2089442	983	5.26
Non- Big 4		0.0000757	0.2300345	17698	94.74
<i>POL(Political Connections)</i>					
Non SOE		0.0085009	0.2535082	10098	54.05
SOE		-0.0099283	0.1957516	8583	45.95
<i>LST (Listing Status)</i>					
Mainland		0.0003875	0.2323485	18047	96.61
Mainland & HK		-0.0110306	0.0919887	634	3.39

Notes: Disc Accruals of firm i for year t calculated by the Modified Jones model (1991); *Audit quality* is an indicator variable with the score 1 if the auditor is a Big- 4 firm and zero (0) if otherwise; *POL* is also an indicator variable with firm i scoring one (1) if its state owned and zero if otherwise; *LST* –listing status is a variable with the score one (1) if the firm is listed in mainland china and zero (0) if otherwise; *CSize* is the natural logarithm for market value of equity; *AbsT* is the value of Total accruals for firm i in year t divided by Total assets for year $t-1$; leverage is the ratio of total debt to total asset for firm i in year j .

4.2. Univariate and subsample analysis

Table II (a) indicates the discretionary accruals across the Big-4 and the Non-big 4 audited sample companies. The findings indicate that sample companies that are audited by Big 4 auditors have lower Discretionary accruals (-0.000726) as compared to the non-big 4 audited firms (0.0000757) though it is statistically not significant

Table II (a). Sub-sample for Audit Quality

Audit Quality	Observations	Discretionary Accruals		t-value	Significance
		Mean	Std. Dev.		
Big 4	983	-0.0007255	0.2089442	-0.10	0.918
Non- Big 4	17698	0.0000757	0.2300345		

Notes: Discretionary Accruals measured by the Modified Jones (1991) model; Audit quality is a categorical variable which takes the value of one (1) if the auditor is a big four firm and zero (0) if otherwise.

Table II (b) represents the subsample characteristics for firms that are audited by the big for and non big four auditors respectively. Except for absolute accruals all the control and independent variables are inversely related to discretionary accruals. However, none of the variables is significant among the big four client sample. In the case of the non big four sample, political connections and listing status are significant and inversely related to discretionary accruals indicating that state share ownership and listing environment considerably affect opportunistic earnings management practices.

Table II (b). Sub-Sample analysis for Audit Quality

Description	Big four		Non Big four	
	β	t	β	t
Constant	-0.3836	-2.63	-0.32658	-9.16*
POL	-0.02306	-1.74	-0.00138	-4.22*
LST	-0.01845	-0.46	-0.02674	-2.86*
AbsT	-0.00646	-0.19	0.34623	45.96*
Csize	0.04315	2.82	0.03246	8.67*
Leverage	-0.04867	-3.24	-0.01202	-5.91*
N (firm-years)	983		17698	
F - statistic	5.2		438.8	
Prob > F	0.0001		0.000	
R-squared	0.0259		0.1103	
Adj R-squared	0.0209		0.1101	

Notes: *DAC* – Discretionary accruals of firm *i* for year *j* measured by the modified Jones (1991) model; *POL* is an indicator variable whose score is one (1) if the company is state owned and zero (0) if otherwise; *LST* – listing status is also an indicator that is equal to one(1) if the company is listed in Mainland China & Hong Kong and zero (0) if listed in Mainland China only; *AbsT* – refers to the absolute value of total accruals for firm *i* in year *j* deflated by Total assets in year *j-1*; *Csize* refers to the Log of market value of equity for firm *i* in year *j*; *Leverage* is the ratio of Total Debt to Total assets of firm *i* in year *j*

Table III indicates the sample of firms that are state owned have lower discretionary accruals as compared to firms that are Non state owned.

Table III (a). Sub-Sample for Political Connections

POL	Observations	Discretionary Accruals		t-value	Significance
		Mean	Std. Dev.		
Non state Owned	10098	0.0085009	0.2535082	-5.58	0.000
State Owned	8583	-0.0099283	0.1957516		

Note: Discretionary Accruals measured by the Modified Jones (1991) model; *POL* is a categorical variable which takes the value of one (1) if the firm is state owned and zero (0) if otherwise.

The regression results for SOEs and non-SOEs are indicated in Table III (b). Consistent with previous results (Liu & Zhou, 2007) we also find that the Chinese market doesn't attach significance as to whether a firm is audited by the big four or non-big four.

Table III (b). Sub-Sample analysis for Political Connections

Description	SOE		NSOE	
	Coef.	t	Coef.	t
Constant	-0.34273	-8.1*	-0.3434	-6.38*
AuditQ	-0.01016	-1.12	0.0050	0.48
LST	-0.03068	-2.92*	-0.0222	-1.45
AbsT	0.31495	28.22*	0.33747	34.1*
CSize	0.0331	7.38*	0.03419	6.05*
Leverage	-0.01466	-6.78*	-0.0081	-2.17**
N (firm-years)	8583		10098	
F statistic	171.38		236.1	
Prob > F	0		0	
R-squared	0.0908		0.1048	
Adj R-squared	0.0903		0.1043	

Notes: Disc Accruals of firm *i* for year *j* calculated by the Modified Jones model (1991); *Audit quality* is an indicator variable with the score 1 if the auditor is a Big- 4 firm and zero (0) if otherwise; *LST* –listing status is a variable with the score one (1) if the firm is listed in mainland china and zero (0) if otherwise; *Size* is the natural logarithm for market value of equity; *AbsT* is the value of Total accruals for firm *i* in year *j* divided by Total assets for year *j-1*; *leverage* is the ratio of total debt to total asset for firm *i* in year *j*

Table IV (a) and (b) illustrates the spread of discretionary accruals across companies that are listed in Mainland China and in Hong Kong. The findings indicate that firms listed in both mainland China and Hong Kong have lower discretionary accruals and they are statistically significant.

Table IV (a). Sub-Sample for the Listing Status firms

LST	Observations	Discretionary Accruals		t-value	Significance
		Mean	Std. Dev.		
Listed In China	18047	0.0003875	0.2323485	-3.37	0.001
Listed in China & HK	634	-0.0110306	0.0919887		

Note: Discretionary Accruals measured by the Modified Jones (1991) model for firm i in year t ; LST is an indicator variable which takes the value of one (1) if the firm is listed in Mainland China and zero (0) if listed in both Mainland China and Hong Kong.

Table IV (b). Sub-Sample analysis for Mainland China and Hong Kong listed firms

Description	MC & HK Listed		MC listed	
	β	t	β	t
Constant	0.01395	0.24	-0.35914	-9.83*
AuditQ	0.01576	0.93	-0.0026	-0.36
POL	-0.01161	-1.6	-0.0140	-4.29*
AbsT	-0.31455	-6.57*	0.33314	44.51*
CSize	0.00090	0.16	0.03606	9.41*
Leverage	-0.02710	-1.15	-0.0124	-6.08*
N (firm-years)	634		18047	
F statistic	10.22		414.67	
Prob > F	0		0	
R-squared	0.0752		0.1031	
Adj R-squared	0.0679		0.1028	

Notes: Disc Accruals of firm i for year t calculated by the Modified Jones model (1991); *Audit quality* is an indicator variable with the score 1 if the auditor is a Big- 4 firm and zero (0) if otherwise; *POL* is also an indicator variable with firm i scoring one (1) if its state owned and zero if otherwise; *CSize* is the natural logarithm for market value of equity; *AbsT* is the value of Total accruals for firm i in year t divided by Total assets for year $t-1$; leverage is the ratio of total debt to total asset for firm i in year j

4.3. Correlation Matrix

Table V indicates the Spearman's correlation coefficient. The results do not provide overarching support for the hypotheses. Discretionary accruals are negatively and significantly correlated to audit quality, state ownership and investor protection coefficients. This indicates that high quality audits appear to constrain the occurrence of discretionary accruals. This also indicates that listing a company overseas constrains the incidence of income increasing DACs.

The findings further indicate a significantly low correlation among the independent variables, with the highest one having a coefficient of 0.2864 which is between listing status (LST) and firm size ($CSize$). For control variables, the correlation between absolute accruals and leverage is the (0.0809) is the highest one and with the value being below the set limit of 0.80 indicates that all independent and control variables are not multi-collinear in the model.

Table V. Correlation Matrix

	DAC	Audit Q	State Share	LST	AbsTAC	Csize	Leverage
DAC	1.0000						
Audit Q	-0.0009	1.0000					
POL	-0.0408	-0.0011	1.0000				
LST	-0.0092	-0.0057	0.0455	1.0000			
AbsT	0.3056	.00045	-0.0072	-0.0184	1.0000		
Csize	0.0478	-0.0092	-0.0686	0.2864	-0.0601	1.0000	
Leverage	-0.0240	-0.0040	0.0260	-0.0032	0.0081	-0.0782	1.0000

Notes: *DAC* – Discretionary accruals of firm i for year t measured by the modified Jones (1991) model; *AuditQ* – Audit Quality is a categorical variable whereby one (1) indicates the auditor is a Big 4 firm and zero (0) if otherwise; *POL* is an indicator variable whose score is one (1) if the company is state owned and zero (0) if otherwise; *LST* – listing status is also an indicator that is equal to one(1) if the company is listed in Mainland China & Hong Kong and zero (0) if listed in Mainland China only; *AbsT* – refers to the absolute value of total accruals for firm i in year j deflated by Total assets in year $j-1$; *Csize* refers to the Log of market value of equity for firm i in year j ; *Leverage* is the ratio of Total Debt to Total assets of firm i in year j

To determine the suitable model for testing the hypothesis, the Hausman specification test was applied to determine whether the fixed effect or random effect model would be appropriate. The test results did not support

use of the fixed effect model thus we conducted a Breusch-pagan test whose results justified use of the ordinary least square (OLS) regression.

4.4. Multivariate Regression analysis results

The results of the multivariate regression analysis are reported in Table VI. Panel A to C indicates regression results using one independent variable while Panel D to F indicates the regression results with two variables. The main results are reported in panel G and they are statistically significant at $p < 0.01$ except for the audit quality variable and the model explains 10 percent of the variances in the dependent variable. The table further indicates a consistent result that audit quality is negatively and insignificantly associated with discretionary accruals in Panel A, D & E which represent the result when we include only audit quality; audit quality and state share; and audit quality and LST status respectively. The regression results are consistent when all the independent and control variables are included in the panel regressions. These consistent findings across the multiple regressions indicate that discretionary accruals are mitigated by high quality audits though the relationship is insignificant among listed firms in China.

As indicated in Table VI state share is negatively and significantly associated with DAC and this finding supports our second hypothesis. This suggests that firms that are prevalent with political connections have no pressure for high quality earnings as postulated in previous studies (Chaney et al., 2011). Such firms are less motivated to hire high quality auditors' i.e. the more the percentage of shares held by government, the less likely a firm will report discretionary accruals

We also sought to determine whether investor protection (measured by listing status of a company) has an effect on discretionary accruals. The results indicate that the coefficients of Investor protection are negatively and significantly associated with DAC across the models and are significant at 5 percent level. This finding supports our H₃ thus suggesting that firms that are further listed in countries that are subject to 'common law' (Hong Kong) mitigate the occurrence of discretionary accruals. The findings are virtually consistent with previous study of Shi et al. (2015) which found out that firms that operate in what is considered to be a stronger protective environment have a higher level of investor protection and subsequently reduced earning management practices

Table VI. Multivariate Regression Results

	A		B		C		D	
DAC	β	t-statistic	β	t-statistic	β	t-statistic	β	t-statistic
Constant	-0.32338	-9.76*	-0.30588	-9.18*	-	-10.29*	-0.30576	-9.18*
AuditQ	-0.00193	-0.27			0.35466		-0.00198	-0.28
POL			-0.01521	-4.78*			-0.0152	-4.78*
LST					-0.0297	-3.26*		
AbsT	0.330777	44.86*	0.330312	44.82*	0.33070	44.86*	0.3303	44.82*
Csize	0.031528	9.05*	0.030405	8.71*	0.03492	9.61*	0.030404	8.71*
Leverage	-0.01283	-6.35*	-0.01262	-6.25*	-0.0127	-6.29*	-0.01262	-6.25*
<i>Model Summary</i>								
Prob > F		0.0000		0.0000		0.0000		0.0000
R-squared		0.0997		0.1008		0.1002		0.1008
Adj R-squared		0.0995		0.1006		0.1000		0.1006
F statistic		517.02		523.37		519.97		418.68
N (firm years)		18681		18681		18681		18681

(continued)

Panel H indicates the results of the multivariate analysis on the respective interaction terms. *AuditQ X POL* found a negative and insignificant coefficient. This can be interpreted to mean that the big four auditors minimize the occurrence of discretionary accruals among politically connected firms even though it is insignificant in the Chinese market

DAC	E		F		G		H		I	
	β	t-statistic	β	t-statistic	β	t-statistic	β	t-statistic	β	t-statistic
Constant	-0.35456	-10.28*	-0.3348	-9.64*	-0.3347	-9.64*	-0.3451	-10.20*	-0.3362	-9.68*
AuditQ	-0.002	-0.28			-0.0020	-0.29			.00438	0.45
POL			-0.014	-4.57*	-0.0145	-4.57*			-0.0134	-4.04*
LST	-0.02972	-3.26*	-0.0268	-2.94*	-0.0268	-2.94*			-0.0230	-1.66***
AbsT	0.33071	44.86*	0.3302	44.82*	0.33027	44.82*	0.3309	44.89*	0.330	44.83*
Csize	0.034922	9.61*	0.033	9.19*	0.03352	9.19*	0.0339	9.52*	0.033	9.22*
Leverage	-0.0127	-6.29*	-0.012	-6.2*	-0.0125	-6.2*	-0.0127	-6.31*	-0.012	-6.20*
AuditQ * POL							-0.0180	-1.73	-0.015	-1.08
AuditQ * LST							0.0156	0.38*	0.018	0.45
POL * LST							-0.0387	-3.30***	-0.008	-0.48
<i>Model Summary</i>										
Prob > F		0.0000		0.0000		0.0000		0.0000		0.0000
R-squared		0.1002		0.1012		0.1012		0.1004		0.1013
Adj R-squared		0.1000		0.1010		0.1009		0.1001		0.1009
F -statistic		415.96		420.60		350.48		347.23		233.82
N (firm years)		18681		18681		18681		18681		18681

Note: *, ** and *** indicate significance at $p < 0.01$, $p < 0.05$ and $p < 0.10$ respectively. DAC – discretionary accruals is measured by the Jones (1991) model; *AuditQ* – Audit Quality is a categorical variable whereby one (1) indicates the auditor is a Big 4 firm and zero (0) if otherwise; *POL* is an indicator variable whose score is one (1) if the company is state owned and zero (0) if otherwise; *LST* – listing status is a variable with the score one (1) if the firm is listed in both mainland china (MC) and Hong Kong (HK) and zero (0) if listed in Mainland China only; *AbsT* – refers to the absolute value of total accruals for firm i in year t deflated by Total assets in year $j-1$; *Csize* refers to the Log of market value of equity for firm i in year j ; *Leverage* is the ratio of Total Debt to Total assets of firm i in year j

POL X LST is found to be negative and significantly associated with discretionary accruals suggesting that politically connected firms that are listed in a common law environment have lower discretionary accruals. An investigation on the interaction term *AuditQ X LST* finds a positive and significant relationship with discretionary accruals. This can be interpreted to mean that companies that are audited by the big four auditors and listed in mainland china have higher discretionary accruals thus there is a likelihood of opportunistic earnings management practices.

The control variable results are included in Table VI across each panel. Firm size and absolute accruals are positive and significantly related to discretionary accruals. This indicates that firm size will influence the opportunistic behavior as indicated by discretionary accruals. Leverage is however negative and significantly associated to discretionary accruals. Inclusion of single or all variables doesn't alter the outcome of the regression. The results indicate that firm size and absolute accruals have an influence on discretionary accruals which is consistent with (Becker et al., 1998) who postulated that the opportunistic behavior of firms is positively associated with Discretionary accruals.

4.5. Sensitivity and Robustness Tests

To ensure that we establish a suitable conclusion we conduct an additional sensitivity and robustness check to cement the results. Following the approach of (Young, 1999) we will use Working Capital Accruals (WCA) as a measure of discretionary accruals. Young (1999) observed that WCA is better than the total accruals (TAC) residue method because the latter induces substantial measurement error while estimating accruals. WCA utilizes a balance sheet approach and is calculated as;

$$WCA_{ij} = (\Delta CA_{ij} - \Delta Cash_{ij}) - (\Delta CL_{ij} - \Delta LTD_{ij} - \Delta ITP_{ij})$$

Where;

- WCA : the working capital accruals for firm i in year j
- ΔCA : Change in current assets for firm i between year $j-1$ and j
- $\Delta Cash$: the change in cash balance for firm i between year $j-1$ and j
- ΔCL : refers to the change in current liabilities for firm i between year $j-1$ and j
- ΔLTD : the change in long term debt included in current liabilities for firm i between year $j-1$ and j
- ΔITP : the change in income tax payable for firm i between year $j-1$ and j

Table VII. Regression results using Working Capital Discretionary Accruals

Panel Description	A		B		C	
	β	t-statistic	β	t-statistic	β	t-statistic
Constant	-0.214	-2.99**	-0.2404	-3.44*	-0.218	-3.04*
AuditQ	-0.012	-0.88			0.00052	0.03
POL	-0.015	-2.30**			-0.0127	-1.85***
LST	-0.003	-0.19**			0.0067	0.23
<i>AuditQ X POL</i>			-0.038	-1.81*	-0.0319	-1.09
<i>AuditQ X LST</i>			0.0481	0.57	0.0383	0.45
<i>LSTX POL</i>			-0.023	-0.97	-0.021	-0.59
AbsT	0.9095	59.79*	0.9102	59.83*	0.9097	59.80*
Csize	0.0157	2.10**	0.0178	2.42	0.016	2.13**
Leverage	-0.018	-4.40*	-0.0184	-4.43*	-0.018	-4.40*
N (firm years)	18681		18681		18681	
R-squared	0.1611		0.1610		0.1612	
Adj R-squared	0.1608		0.1608		0.1608	
F statistic	597.64		597.28		398.50	

Note: *, ** and *** indicate significance at $p < 0.01$, $p < 0.05$ and $p < 0.10$ respectively. DAC – discretionary accruals is measured by the (Young, 1999) model; *AuditQ* – Audit Quality is a categorical variable whereby one (1) indicates the auditor is a Big 4 firm and zero (0) if otherwise; *State Share* is an indicator variable whose score is one (1) if the company is state owned and zero (0) if otherwise; *LST* – listing status is also an indicator that is equal to one(1) if the company is listed in mainland china and zero (0) if it's also listed outside china. *AbsT* – refers to the absolute value of total accruals for firm i in year t deflated by Total assets in year $t-1$; *Csize* refers to the Log of market value of equity for firm i in year t ; *Leverage* is the ratio of Total Debt to Total assets of firm i in year t

The results in Panel A indicate that the main variables of interest – Audit quality, State Share and Listing status all have the signs as expected. However only two of the variables, listing status and state share are significant at $p < 0.05$ thus they do not result in significant changes as compared to the initial findings reported in Table VI. Inclusion of the integrating variables in Panel C results in one independent variable (political connection) becoming significant while the control variables are all significant.

5. Conclusion

The study utilizes data from listed companies in China to determine the role of political connections, audit quality and investor protection on discretionary accruals. Chinese political connections are strong and most SOEs are expected to have negative accruals thus we predicted an inverse relationship between political connections and discretionary accruals. The results are consistent with the predictions as it is observed that SOEs have negative accruals while no SOEs have marginally higher positive accruals. This is consistent with previous studies (Wahab, Aswadi, Zain, Norzila, & Abdul Rahman, 2011) which postulated that SOEs are not associated with market pressures for high quality earnings thus lower probabilities of engaging in opportunistic earnings management practices. Consistent with Astami et al. (2017) the study finds that firms audited by the big four accounting firms have lower (negative) discretionary accruals even though the relationship is not significant. This can be explained by the fact that the market is dominated by local firms and big 4 account for only 10 – 12 percent (Habib et al., 2014). These findings suggest that monitoring by big four auditors deters occurrence of discretionary accruals. The third hypothesis sought to examine the issues of investor protection at the environment level based on the listing status – China based firms listed on the Hong Kong Stock Exchange. Our results confirm our hypothesis that China Based firms listed in Hong Kong (represents what is believed to be a stronger protective environment) have lower discretionary accruals that are significant.

As the Asian continent and world economy rises, institutional investors are interested in Asian enterprises thus demanding firm performance. The unique Chinese setting helps indicate the role of political connections and investor protection as proxied by listing status. This study extends the findings of a number of previous studies by examining the effect of listing environment on discretionary accruals. We confirm that firms operating the common law environment (considered to generally stronger) have lower DACs. Our findings have significant implications for firms that seek to reduce opportunistic earnings management practices. Appointment of quality auditors and lesser government hand is key in ensuring high quality earnings.

References

Allen, F., Qian, J., & Qian, M. (2005). Law, finance, and economic growth in China. *Journal of financial*

- economics*, 77(1), 57-116.
- Astami, E. W., Astami, E. W., Rusmin, R., Rusmin, R., Hartadi, B., Hartadi, B., . . . Evans, J. (2017). The role of audit quality and culture influence on earnings management in companies with excessive free cash flow: Evidence from the Asia-Pacific region. *International Journal of Accounting & Information Management*, 25(1), 21-42.
- Balsam, S., Krishnan, J., & Yang, J. S. (2003). Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice & Theory*, 22(2), 71-97.
- Becker, C. L., DeFond, M. L., Jiambalvo, J., & Subramanyam, K. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research*, 15(1), 1-24.
- Benkel, M., Mather, P., & Ramsay, A. (2006). The association between corporate governance and earnings management: The role of independent directors. *Corporate Ownership & Control*, 3(4), 65-75.
- Brandt, L., & Li, H. (2002). Bank discrimination in transition economies: ideology, information or incentives?
- Bushman, R. M., Piotroski, J. D., & Smith, A. J. (2004). What determines corporate transparency? *Journal of accounting research*, 42(2), 207-252.
- Chaney, P. K., Faccio, M., & Parsley, D. (2011). The quality of accounting information in politically connected firms. *Journal of accounting and Economics*, 51(1), 58-76.
- Chavez, G. A., & Silva, A. C. (2009). Brazil's experiment with corporate governance. *Journal of Applied Corporate Finance*, 21(1), 34-44.
- Chen, K. C., & Yuan, H. (2004). Earnings management and capital resource allocation: Evidence from China's accounting-based regulation of rights issues. *The accounting review*, 79(3), 645-665.
- Cheng, C.-L., Hsu, C.-S., & Kung, F.-H. (2015). Political connections, managerial incentives and auditor choice: evidence from China. *Pacific Accounting Review*, 27(4), 441-465.
- Choi, J. H., & Wong, T. J. (2007). Auditors' governance functions and legal environments: An international investigation. *Contemporary Accounting Research*, 24(1), 13-46.
- Chung, K. H., Elder, J., & Kim, J.-C. (2010). Corporate governance and liquidity.
- Claessens, S., Feijen, E., & Laeven, L. (2008). Political connections and preferential access to finance: The role of campaign contributions. *Journal of financial economics*, 88(3), 554-580.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting review*, 193-225.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research*, 13(1), 1-36.
- DeFond, M., & Subramanyam, K. (1997). Restrictions to accounting choice: evidence from auditor realignment: Working paper, University of Southern California.
- Faccio, M. (2006). Politically connected firms. *The American economic review*, 96(1), 369-386.
- Fama, E. F., & Jensen, M. C. (1983). Agency problems and residual claims. *The Journal of Law and Economics*, 26(2), 327-349.
- Fan, J. P., Wong, T. J., & Zhang, T. (2007). Politically connected CEOs, corporate governance, and Post-IPO performance of China's newly partially privatized firms. *Journal of financial economics*, 84(2), 330-357.
- Fisman, R. (2001). Estimating the value of political connections. *The American economic review*, 91(4), 1095-1102.
- Frankel, R. M., Johnson, M. F., & Nelson, K. K. (2002). The relation between auditors' fees for nonaudit services and earnings management. *The accounting review*, 77(s-1), 71-105.
- Gray, S. J., Kang, T., Lin, Z., & Tang, Q. (2015). Earnings management in Europe post IFRS: do cultural influences persist? *Management International Review*, 55(6), 827-856.
- Guay, W. R., Kothari, S., & Watts, R. L. (1996). A market-based evaluation of discretionary accrual models. *Journal of accounting research*, 83-105.
- Gul, F. A., Chen, C. J., & Tsui, J. S. (2003). Discretionary accounting accruals, managers' incentives, and audit fees. *Contemporary Accounting Research*, 20(3), 441-464.
- Habib, A., Jiang, H., & Zhou, D. (2014). Audit quality and market pricing of earnings and earnings components in China. *Asian Review of Accounting*, 22(1), 20-34.
- Healy, P. M. (1985). The effect of bonus schemes on accounting decisions. *Journal of accounting and Economics*, 7(1-3), 85-107.
- Heninger, W. G. (2001). The association between auditor litigation and abnormal accruals. *The accounting review*, 76(1), 111-126.
- Jiambalvo, J. (1996). Discussion of "Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC". *Contemporary Accounting Research*, 13(1), 37-47.
- Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of accounting research*, 193-228.

- Kung, F.-H., & Cheng, C.-L. (2012). The determinants of overseas listing decisions: Evidence from Chinese H-share companies. *Asian Business & Management*, 11(5), 591-613.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of financial economics*, 58(1), 3-27.
- Leuz, C., Nanda, D., & Wysocki, P. D. (2002). Earnings management and investor protection: An international comparison.
- Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. *Journal of financial economics*, 69(3), 505-527.
- Liu, F., & Zhou, F. (2007). Does Big 4 represent high audit quality? *Accounting Research*, 3(1), 79-89.
- Lombardo, D., & Pagano, M. (1999). Legal determinants of the return on equity.
- Lys, T., & Watts, R. L. (1994). Lawsuits against auditors. *Journal of accounting research*, 65-93.
- Mayhew, B. W., & Wilkins, M. S. (2003). Audit firm industry specialization as a differentiation strategy: Evidence from fees charged to firms going public. *Auditing: A Journal of Practice & Theory*, 22(2), 33-52.
- McLean, R. D., Zhang, T., & Zhao, M. (2012). Why does the law matter? Investor protection and its effects on investment, finance, and growth. *The Journal of Finance*, 67(1), 313-350.
- McNichols, M., & Wilson, G. P. (1988). Evidence of earnings management from the provision for bad debts. *Journal of accounting research*, 1-31.
- Peasnell, K. V., Pope, P. F., & Young, S. (2000). Detecting earnings management using cross-sectional abnormal accruals models. *Accounting and Business research*, 30(4), 313-326.
- Porta, R. L., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of political economy*, 106(6), 1113-1155.
- Rusmin, R. (2010). Auditor quality and earnings management: Singaporean evidence. *Managerial Auditing Journal*, 25(7), 618-638.
- Shi, X., Dempsey, M., Duong, H. N., & Kalev, P. S. (2015). Investor protection and market liquidity revisited. *Corporate Governance*, 15(4), 517-529.
- Subramanyam, K. (1996). The pricing of discretionary accruals. *Journal of accounting and Economics*, 22(1), 249-281.
- Sweeney, A. P. (1994). Debt-covenant violations and managers' accounting responses. *Journal of accounting and Economics*, 17(3), 281-308.
- Wahab, A., Aswadi, E., Zain, M., Norzila, M., & Abdul Rahman, R. (2011). Political Connections: A Threat to Auditor Independence?
- Wang, Q., Wong, T.-J., & Xia, L. (2008). State ownership, the institutional environment, and auditor choice: Evidence from China. *Journal of accounting and Economics*, 46(1), 112-134.
- Watts, R. L., & Zimmerman, J. L. (1990). Positive accounting theory: a ten year perspective. *Accounting review*, 131-156.
- Young, S. (1999). Systematic measurement error in the estimation of discretionary accruals: An evaluation of alternative modelling procedures. *Journal of Business Finance & Accounting*, 26(7 - 8), 833-862.