

The Relationship between Ownership Concentration and Earnings Management- Evidence from Mongolian Listed Firms

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Article Info

Volume 82

Page Number: 15533 - 15541

Publication Issue:

January-February 2020

Article History

Article Received: 18 May 2019

Revised: 14 July 2019

Accepted: 22 December 2019

Publication: 28 February 2020

Abstract

Research purpose is to investigate the relationship between ownership concentration and earnings management in Mongolian listed firms in 2012-2018. During soviet era, Mongolia's economy was predominated by state-controlled, wide-spread inefficiencies, which reduced investor confidence. Transition to market economy brought several types of ownership in companies. Therefore, the study focuses on ownership concentration. The ownership is measured by percentage of shareholder's shares. Proxy of earnings management is defined by discretionary accruals. A total of 122 Mongolian listed firms are chosen as a study sample and found that controlling ownership and earnings management have positive and significant relation.

Keywords: Earnings management, Controlling shareholders, Mongolia, Ownership concentration.

I. Introduction

Mongolia had a centrally planned economy for seven decades until transferring to free market economy in 1990. Mongolia has only one stock market named Mongolian Stock Exchange (MSE). The Mongolian Stock Exchange was established in 1991 to implement privatization and develop securities market.

In the beginning of 90's, citizens didn't have any knowledge of private property, market economy and money to buy state industries. So, privatization process used investment vouchers, which consisted of one blue and three pink vouchers. The blue vouchers were used to buy large factories whereas the pink vouchers were used to buy small companies in trade and service. According to the Mongolian Civil Law, all vouchers were distributed to citizens free of charge. Citizens bought shares of large factories with blue vouchers and became its' shareholders. As a result of this process, 475 factories were registered on the stock

market. In another words, 25% of large enterprises were privatized by blue vouchers. In this way, the state factories were privatized and changed their ownership status. Although the stock market was established, a secondary market did not develop well until 1995. After the start of the second security trading, shares were concentrated and held by people who had money, also knowledge on market economy and stock. Stock concentration changed companies' function.

A. Research purpose

This research mainly focused on to investigate association between earnings management (EM) and ownership concentration in Mongolian listed firms. During soviet era, Mongolia's economy was predominated by state-controlled, wide-spread inefficiencies, which reduced investor confidence. Transition to market economy brought several types of ownership in companies. Therefore, study investigates following: 1) level of ownership concentration 2) ownership concentration and

earnings management's relation.

B. Research significance

In Mongolia, study on association between earnings management and ownership concentration is rare. Studies concerning corporate governance are few and all of them are conducted in a form of a questionnaire including small number of companies. The research is conducted using six-year panel data of listed companies.

C. Research method

The research tested hypothesis using multiple regression analysis and listed firms' data from 2012 to 2018. It determines the relation between earnings management and ownership concentration. The research uses discretionary accruals to measure earnings management. Using sample of 122 Mongolian listed companies, the research data are processed by SAS software program.

II. Institutional Background

As stated in the Mongolian Company Law, companies are classified into two main forms: a limited liability company and a joint-stock company. Mongolian company law coordinates limited liability companies, joint stock companies and state-owned companies. According to company law (2011), shareholders are the owners of shares of open and closed companies, while state agencies and local administrations own state-owned company's shares. As the end of 2018, 59614 limited, 234 stock and 86 state owned companies that have active operation are registered. Out of these companies, 218 companies are listed on the MSE, of which 188 are open companies, 30 - stated owned companies and partly state-owned companies.

Table 1. Number of companies by type

Form	Number of companies	Listed companies	TOP-100 companies
1 Stock companies	234	188	4
2 State and partly state – owned companies	86	30	7
3 Limited liability companies	59,614		
Total	59,934	218	11

Table 1 shows that 99.4% of operating as of January, 2018 companies are limited companies. It is obvious from the table that limited liability companies dominate in Mongolia.

In case of Mongolia, ownership structure is very complicated, because shareholder's voting rights include not only his own stock, but also stocks owned by his family members, friends and affiliated firms. Multiple ownership types and high ownership concentration is the feature of Mongolian companies. First, ownership is highly concentrated in Mongolian listed companies. The 2nd phase of Mongolian stock market development is period when this high level of ownership concentration has emerged. 94% of currently listed companies have been established as a result of privatization, and their shares are concentrated in the hands of same family members and friends. Thus, the ownership is highly concentrated. For the first time in December 2015, Financial Regulatory Commission announced stakeholders who own more than 5% of company shares. Report from FRC shows that ownership concentration was 82.2% on average whereas my research shows 81.8%. It shows that ownership concentration is similar in my research and FRC report.

Table 2. Ownership concentration

Concentration	Number of companies				
	Financial Regulatory Commission	Board	Board	Board	Total
5-60% ownership concentration	7	-	2	4	6
60-90% ownership concentration	137	4	22	43	69
More than 90% ownership concentration	49	2	6	39	47
Total	193	6	30	86	122

Table 2 shows comparison of ownership based on the report from FRC and the research data. It shows that this research includes twice less companies with 60-90% ownership.

Excessive concentration negatively affects the market development. Therefore, the Financial Regulatory Commission is taking measures to decrease concentration in companies with over 75% of it. In 2016, out of Mongolian TOP-100

companies, 83 were family owned companies as 80% and more of shares were owned by only three to five people. Dominant role of family and its members characterizes Mongolian ownership structure. Toshio Kikuchi (2011) found out that about 50% of the firms' owners and their families own more than 31% of shares. In other words, around half of listed firms are in hands of founders or their family members, and therefore they have the characteristics of a family business. Gedajovic et al. (2005) divided stakeholders into three groups of shareholders: market, inside and stable. The stable investors consist of insurance companies, banks and affiliated firms.

III. Literature Review

Earnings management issue receives significant attention in accounting research area. Related to previous studies, the study distinguishes following key approaches: government, managerial, foreign, institutional ownerships, and ownership structure. The study shows literature review of association between earnings management and every aspect of the ownership concentration. Literature review refers to these contrasted results.

- There aren't many researches on corporate governance and ownership in Mongolia. However, existing studies are conducted based on the survey results. Anderson, Korsun and Murell (1999) argued that 20.4% of outstanding shares are held by state, 44.9% - by outsiders, 34.8% - by insiders and their families, 11.0% - by managers in Mongolia. In the beginning, insider ownership did not arise because of preferred shares. Employees had preferred shares. When employees used their vouchers on the stock exchange, the company owners bought those shares. Kanichi Iijima (2011) document that in the founder or his acquaintances engaged in the management of 69 companies (76%). They were mostly working as president, chairman of board of directors.

- Regarding negative relation, Sandra Alves (2012) finds that the quality of annual earnings is increased by ownership concentration and

managerial ownership which decrease an earnings management. Moreover, it suggests that managers who hold great amount of equity are less likely to manipulate earnings, while large shareholders decrease managerial opportunism.

- Prior studies show that managers engage in aggressive accounting discretion, when institutional investors are orientated on short term results and have passive monitoring. Bhide (1993) indicates that corporate governance of the firm does not involve active participation of institutional investors. Institutional investors sell their shares when it doesn't bring desirable returns.

- When managers' ownership share increases in a firm, it may be addressed using two hypotheses: managerial entrenchment and alignment of interest. Jensen & Meckling, (1976) identify that increase in managerial ownership decreases agency conflicts of shareholders and managers. This reduces the managers' opportunistic actions. Relating to this, Demsetz & Lehn (1985) discover that firm performance and managerial ownership have positive relation.

- Bauwhede et al. (2003) analyzed the Belgian companies' data and found that state ownership positively influences discretionary accruals, because it incentivizes to manage earnings upward. Both state and private Belgian firms take part in earnings management and control earnings astutely to meet the target level of income year before.

IV. Research Hypothesis and Methodology

A. Research Hypotheses

Shleifer & Vishny (1986) state that with the purpose of keeping their major investment, large shareholders are strongly incentivized to support and influence the company's monitoring management. Sloan, Dechow & Sweeney (1996) argue that large shareholders effectively monitor managers' actions, reducing managerial opportunism to participate in earnings management.

Minority stakeholders do not take part in company's monitoring since they don't influence earnings management and company's activity. Therefore, the research proposes below hypotheses.

H1: Company's ownership concentration is positively associated with earnings management, other things being equal. Alternative hypothesis

H2: Controlling shareholders have stronger relation to earnings management than non-controlling shareholders, other things being equal.

B. Research Model

Research used following regression models to examine the association between earnings management and controlling shareholders, where earnings management is dependent variable and ownership concentration, controlling ownership and other control variables: total assets, leverage and return on assets are independent variables. As modified Jones model suggested, proxy of discretionary accruals is used to express EM. As suggested by previous literature (Klein, 2002; Sloan & Sweeney, 1995; Dechow, 1995), a group of control variables will be introduced to the estimation to regulate other parameters that might impact the relation EM and ownership types. We included: leverage (Lev), size (Size), cash flows from operations (CFO).

$$DACC_{j,n} = \beta_0 + \beta_1(OWN) + \beta_2(SIZE) + \beta_3(LEV) + \beta_4(ROA)$$

$$DACC_{j,n} = \beta_0 + \beta_1(MORE) + \beta_2(SIZE) + \beta_3(LEV) + \beta_4(ROA)$$

$$DACC_{j,n} = \beta_0 + \beta_1(LESS) + \beta_2(SIZE) + \beta_3(LEV) + \beta_4(ROA)$$

Where:

DACC : discretionary accruals

OWN : percent of shares held by stockholders, who own more than 5% of shares

HIGH: percent of stockholders, who own equal to

or

: more than 1/3 of shares

LOW : percent of stockholders, who own less than 1/3

: of share

SIZE : the natural logarithm of total assets

LEV : total liabilities divided by total assets

ROA : net income divided by total assets

C. Definitions of Variables and its Measure

1) Measurement of Discretionary Accruals

Davidson et al. (1986) describe EM as a process of making planned action to put earnings level in the limited range of GAAP. Schipper (1989) notes that managers and shareholders interfere external reports to get a private interest. Healy & Whalen (1999) identify that earnings management occurs through using decision on financial reporting and on structuring transaction of changing financial report in order to give stakeholders some misleading information and to influence contractual outcomes.

In order to investigate association between ownership types and EM, the study used the Modified Jones model presented by Bartov (2001) and Dechow (1995). I did following steps to estimate discretionary accruals. Firstly, total accruals (TA) was calculated.

$$TA_{j,n} = \frac{\Delta CA_{j,n} - \Delta CL_{j,n} - \Delta Cash_{j,n} + \Delta STD_{j,n} - Dep_{j,n}}{A_{j,n-1}}$$

Where:

TA_{j,n} : total accruals

ΔCA_{j,n} : current asset change

ΔCL_{j,n} : current liabilities change

ΔCash_{j,n} : cash and cash equivalents change

$\Delta\text{STD}_{j,n}$:debt included in current liabilities change

$\text{Dep}_{j,n}$: amortization and depreciations

$A_{j,n}$: total assets

n : year index, range 2009-2015

j : firm index, range 1-22

The second step after calculating total accruals is the calculation of the industry specific regression parameters $\alpha_1, \alpha_2, \alpha_3$ by employing a time-series model for each firm using 7 firm-year observations on the below formula.

$$\frac{\text{TA}_{j,n}}{A_{j,n-1}} = \alpha_1 \frac{1}{A_{j,n-1}} + \alpha_2 \frac{\Delta\text{Rev}_{j,n}}{A_{j,n-1}} + \alpha_3 \frac{\text{PPE}_{i,t}}{A_{j,n-1}} + \varepsilon_{j,n}$$

Where:

$\text{TA}_{j,n}$: Total accruals

$\Delta\text{REV}_{j,n}$: Revenue change

$\Delta\text{PPE}_{j,n}$: Gross property, plant and equipment

$A_{j,n}$: Total assets

ε : Error term

n : Year index, range 2009-2015

j : Firm index, range 1-22

Calculating nondiscretionary accruals is done after estimating the regression coefficients. Nondiscretionary accruals are calculated according to the modification of Dechow et al. (1995):

$$\text{NDA}_{j,n} = \hat{\alpha}_1 \frac{1}{A_{j,n-1}} + \hat{\alpha}_2 \frac{(\Delta\text{Rev}_{j,n} - \Delta\text{Rec}_{j,n})}{A_{j,n-1}} + \hat{\alpha}_3 \frac{\text{PPE}_{j,n}}{A_{j,n-1}}$$

Where:

$\text{NDA}_{j,n}$: Nondiscretionary accruals

$\Delta\text{REV}_{j,n}$: Revenue change

$\Delta\text{REC}_{j,n}$: Net receivables change

$\Delta\text{PPE}_{j,n}$: Gross property, plant and equipment

$A_{j,n}$: Total assets

$\hat{\alpha}_1, \hat{\alpha}_2, \hat{\alpha}_3$: Estimated regression coefficients

n : Year index, range 2009-2015

j : Firm index, range 1-22

To find proxy of earnings management, discretionary accruals, formula 3 is subtracted from formula 1.

$$\text{DACC}_{j,n} = \text{TA}_{j,n} - \text{NDA}_{j,n}$$

Where:

$\text{DACC}_{j,n}$: discretionary accruals

$\text{TA}_{j,n}$: total accruals

$\text{NDA}_{j,n}$: nondiscretionary accruals

2) Ownership concentration and its measure

Ownership concentration (OWN) is described as the concentration of the firm's shares and expressed as the percentage of the investors who own more than 5% of the company's shares. Findings of Zeskhauser & Pound (2015) who studied the influence of large investors on the firm's finance decision, show that major investors do not significantly affect firm's capital structure. Also, major investors have a significant role in monitoring managers for the advantage of other stakeholders. Large shareholders are motivated to control managers, since the expense of monitoring is less than expected gains. Blair&Ramsey (1993) suggest that high ownership concentration gives opportunity for large shareholders to incentivize screen managers.

3) Control variables and its measure

Size measure is transformed by taking the natural logarithm of the total assets of firm.

LEV is measured by total liabilities divided by total assets. Evidence shows that leverage is concerned with accounting choice decision.

ROA is measured by net income divided by total assets, as suggested by Dechow (1995)&Kaznik (1999). In order to monitor company's long-term development forecasting error on manager's incentive for earnings management, ROA is included. According to Kaznik (1999), ROA is likely to be positively associated with DA. Change in net profit before tax over previous year total assets used to measure ROA.

D. Data

A. Sample Selection

Sample selection is based on the board firms of MSE. As of 31, December, 2017, 218 companies are listed on the MSE. 9 of those companies are listed on 1st board, 41 – on 2nd board and 168 – on 3rd board. The research data is obtained from MSE website.

The first sample containing 1308 firm-years observation for the years between 2012 and 2017 is used to examine relation between ownership structure and earnings management. 80 firms with missing data were eliminated from the sample. 12 firms, whose ownership concentration data were not available, were excluded from the sample. As the nature of accruals for financial firms differs from other firms, four financial firms, such as commercial banks, insurance, investment brokerage, etc., are excluded from the sample. (Klein 2002, Park & Shin 2003, Chung et al. 2002) Consequently, research has the initial sample composed of 122 firms. Lastly, dependent variable (DACC) and independent variable (SIZE, LEV, ROA) are 95% winsorized in the empirical analysis to control the influence of extreme value, The final sample consists of 732 firm-year observations which are used to test the hypothesis.

B. Descriptive Statistics

Descriptive statistics of independent and dependent variables are shown in table 3. It presents the mean, standard deviation, minimums and maximums of variables. The mean of DACC is 0.1928, where minimum is 0.0006 and maximum is 0.4587. DACC is income-increasing according to the positive mean. The average of ownership concentration (OWN) equals to 84.1%. Mean of stakeholders, who own equal to or more than 1/3 of shares (HIGH) is 78.0%, while mean of shareholders, who own less than 1/3 of shares (HIGH) is 22.0%. Mean of the logarithm of total assets (SIZE) is 15.1 thousand MNT. Company's average leverage ratio is 29.6% while the sample firms are profitable with a mean ROA of 12.1%.

Table3. Descriptive statistics

Variable	N	Mean	Std dev	MIN	MAX
DACC	732	0.1928	0.1783	0.0007	0.4587
OWN	732	0.8408	0.2863	0.1129	1.0001
LOW	732	0.2203	0.1118	0.1130	0.3303
HIGH	732	0.7797	0.3725	0.4000	0.1000
SIZE	732	15.1427	2.3675	9.1951	21.2472
LEV	732	0.2961	0.3204	0.0004	1.7575
ROA	732	0.1214	0.0808	0.0000	0.3110

C. Correlation Test

Study variables' correlation coefficients are provided in Table 4. Earnings management proxy DACC has significant negative association with shareholders who held less than 1/3 of shares (LOW) at 1% levels with coefficient -0.1614 respectively. Moreover, DACC has significant positive relation to ownership concentration (OWN). Control variables LEV and SIZE have significant positive relation to earnings management at 1% levels. Control variable ROA is positively, but insignificantly related to DACC. The correlation coefficients indicate that serious multicollinearity problem does not exist.

Table 4. Pearson Correlation coefficient

Note: *, ** and *** indicate significance at 10%, 5% and 1% level, respectively

A. Empirical Results

A. Regression Results

Table 5 provides regression results for equation (1) and (2) for the full sample. Model 1 shows relation between EM and ownership concentration. The coefficient of ownership concentration (OWN) is positive (0.13983) and significant at less than the 1% level (5.81, $p=0.0001$). So, the ratio of stakeholders who own more than 5% of shares have significant positive association with EM. Result supports the hypothesis 1, which means that the greater share concentration results in higher earnings management. This result matches to research findings of Yeo (2002), Chung (2002), DeFond & Jiambalvo (1994) and Koh (2003) that block owners have significant role in monitoring earnings management activities and agency costs.

Table 5, model 2 shows the association of controlling and non-controlling shareholders with EM. The coefficient of HIGH is positive (0.12987) and significant at less than 1% level (4.00, $p=0.0001$). Stakeholders who own equal to or more than 1/3 of shares have significant positive relation to EM. Moreover, the coefficient of LOW is positive (0.09289), but insignificant (0.88, $p=0.3787$). The results support the hypothesis 2. So, controlling shareholders manage earning more intensely than non-controlling shareholders. Findings show that there is an affiliation with strategic significance between controlling and other majority shareholders or there is a conspiracy between them. In other words, controlling shareholders are interested in increasing their firm value than non-controlling shareholders. This findings are compatible with the views of Classens et al. (2002). When there is collusion of controlling shareholders with other shareholders, the controlling shareholders voting rights are further magnified through pyramid structures and cross-holdings. So, degree of earnings is manipulated upwards.

	DACC	OWN	LOW	HIGH	SIZE	LEV	ROA
DACC	1						
OWN	0.2358*	1					
LOW	-0.1614***	-0.6924***	1				
HIGH	0.2297**	0.9763***	-0.8322***	1			
SIZE	0.1120***	0.3787***	-0.2558***	0.3678***	1		
LEV	0.0978***	-0.0740**	0.17660821***	-0.1098**	-0.1866***	1	
ROA	0.0449	0.0750**	-0.1382***	0.0991***	0.0625*	-0.0349	1

Table 5. Model 1 and model 2 regression result

Table 5. Model 1 and model 2 regression result

Variables	MODEL 1		MODEL 2		MODEL 3	
	Coefficient	t-statistic (p-value)	Coefficient	t-statistic (p-value)	Coefficient	t-statistic (p-value)
Intercept	0.0565	1.26 (0.2077)	0.0800	1.75* (0.0806)	0.0800	1.75* (0.0806)
OWN	0.1398	5.81*** (0.0001)				
HIGH			0.1299	4.00** (0.0001)		
LOW					0.0928	0.88 (0.3787)
SIZE	0.0036	1.24 (0.2172)	0.0037	1.25 (0.2104)	0.0037	1.25 (0.2104)
LEV	0.0693	3.42*** (0.0007)	0.0709	3.45** (0.0006)	0.0709	3.45** (0.0006)
ROA	0.0648	0.82 (0.4131)	0.0604	0.76 (0.4482)	0.0605	0.76 (0.4482)
F test :	14.08 (0.0001)***		11.29 (0.0001)***		11.29 (0.0001)***	
R ² :	0.0719		0.0721		0.0721	
Adj R ² :	0.0668		0.0658		0.0658	
N :	732		732		732	

Note: *, ** and *** indicate significance at 10%, 5% and 1% level, respectively

Model:

$$DACC_{i,t} = \beta_0 + \beta_1(OWN) + \beta_2(SIZE) + \beta_3(LEV) + \beta_4(ROA) \quad (1)$$

$$DACC_{i,t} = \beta_0 + \beta_1(MORE) + \beta_2(LESS) + \beta_3(SIZE) + \beta_4(LEV) + \beta_5(ROA) \quad (2)$$

V. Conclusion

B. Research findings

Research purpose was to investigate a relation between ownership concentration and EM in Mongolian listed companies. Using a sample of 122 listed companies in the years from 2012 to 2018, study presents following conclusions.

1. Ownership concentrations is very high in Mongolia, which is 84.1%. This is a result of privatization in 1990. Controlling shareholders' ownership is 78%. Development of stock exchange is slow, which is one of the reasons of high ownership concentration.

2. Positive association exists between controlling shareholders and earnings management. These shareholders engage in company's operation and their decisions increase company value.

3. Non-controlling owners are not interested in the company operation, because legal environment for protecting interests of non-controlling and minority shareholders is weak.

C. Limitations

This research has been subject to several limitations, which will be discussed below.

1. Research includes only 2 companies that did IPO, so, the results suggest whether there is link between earnings management and ownership firms which surfaced as a result of privatization. Companies that launched IPO have limited results.

2. The explanatory power of the model can be limited by the absence of other variables that can interact with earnings management, but are not included in these models.

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