

**THE EFFECT OF CORPORATE GOVERNANCE ON COMPANIES’
EARNINGS MANAGEMENT: EMPIRICAL STUDY OF KAZAKHSTAN
COMPANIES IN NATURAL RESOURCES SECTOR**

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ABSTRACT

Reliable and fair accounting information is the issue of vital importance for all national companies operating in natural resources sector and competing to acquire resources on international capital markets or just considering going global someday. Elimination of earnings management problem and as a result high quality financial reports are appreciated by all market participants – it diminishes information asymmetry and promotes foreign capital inflow. The importance of the latter is even more valuable for Kazakhstani transitional economy and emerging capital markets. Moreover, the significance of corporate governance and its role in earnings management has been highlighted by global corruption scandals of recent decades, which have proven the fact that it is not enough to have all accounting policies/principles at place – it also requires an implementation and effective monitoring of corporate governance as a means to eliminate agency costs and strengthen investor confidence. The practical implication of efficiently operating corporate governance is represented by lower absolute discretionary accruals and improved quality of financial report. Vast market liberalization and open international trade areas require relevant and reliable financial information presented by market players, and that is why it is so important for Kazakhstani natural resources companies to improve agency theory related deviations (if any) and strive to develop international relationships which will definitely entail additional foreign capital investments international developing economy.

KEYWORDS: Earnings Management, Resources Sector

INTRODUCTION

It has become apparent in recent years that the issue of corporate governance (CG) and its impact on earnings management (EM) is the one that needs to be looked at very carefully. Ongoing development of global markets entails increased investor activity and thus creates higher standards of corporate social responsibility and fair representation of a firm's financial performance. Those companies that tend to go global and enter international capital markets encounter the increased demand for conformity to corporate governance cross-culture practices of representational faithfulness. As according to Chang and Sun, 2009, investor's confidence is proven to mainly depend on the strength of the capital market which is primarily associated with such monitoring mechanisms as internal corporate governance.

The importance of corporate governance is characterized by not only helping economies to attract foreign investments, but also by providing the means to ensure credibility of financial reporting and substantial impact on earnings management practices. The issue of earnings management is a world-wide phenomenon which may constraint the

reliability of financial reporting and thus diminish investor activity in any given country. The attempts of the management board to deliberately manipulate the company's earnings so that to obtain the figures matching some pre-determined target is mainly used in order to smooth the income and present the company as being stable and prosperous. Even though the evidences of CG influence on EM can be found and justified in any particular industry, the author attempts to explore natural resources sector of Kazakhstan as the one that occupies a significant position within the country's industrial structure and which has the corporate social responsibility holding all the companies accountable under three dimensions - environmental performance, human energy safety and traditional financial perspective.

It is worth mentioning that there are few investigations conducted on Corporate Governance (CG) and Earning Management (EM) attributes in the context of developing countries. Therefore, the current research attempts to fill in the gap by illustrating findings from Kazakhstani natural resources sector operating in an emerging capital market.

This study contributes to the growing field of literature related to corporate governance in the following ways. First, the study provides both cross-sectional and longitudinal empirical evidence regarding the role of corporate governance mechanisms as defining earnings management practices in a specific economy industry using a relatively large sample of companies. Second, it extends the very limited research on the impact of CG on a firm's EM in developing economies (namely, Central Asian countries) and provides a more comprehensive picture of this association. Third, this paper investigates the influence of corporate governance characteristic (Board Size and Independence) and firm specific characteristics (firm size, firm performance, operating cash flows and leverage) on earnings management of companies listed on Kazakhstan Stock Exchange (KASE). The author seeks to contribute to the debate of whether solid corporate governance may be considered as a turning point in defining the good business by reducing the occasions of earnings management practices. The outcomes of the given study are expected to bring about benefits to investors in the emerging markets in general and contribute to their understanding of what is the importance of corporate governance and how can it enlarge the quality of earnings presentation.

The remainder of the paper is structured as follows: the next two sections review the existing literature on corporate governance, discuss agency issues and develop the hypotheses to be tested; third section provides research design and describes research methodology; the latter is then followed by presentation and discussion of the results; and the last sections deal with stating research limitations, possible future research opportunities and finally presenting the main research conclusions.

LITERATURE REVIEW

Since global financial crisis of 2008, this affected a large number of countries, corporate governance has been considered as a main stream concern. In addition, "technological progresses, opening up of international financial markets, trade liberalization, and them obilization of capital have increased the importance of corporate governance as an important framework for corporations" (Claessens, 2000). Moreover, the wave of corporate corruptions candals that took place back in last few decades has proven the fact that corporate governance implemented in any given company can significantly reduce the possibility of financial figures restatement and drastically increase earning quality. As according to Waweru & Riro (2013) the number of financial statement alterations accompanied with fraud transactions and the lack of responsible corporate governance of publicly traded firms, "has sharpened the ever increasing attention on corporate governance in general and quality of corporate reporting". The bank ruptcy of such companies as Enron and World Com has stressed the

importance of that issue and highlighted the need to create oversight frameworks and processes that will help to keep the board of directors accountable and ensure both internal and external audits are conducted in a fair manner and are highly reliable. Following the falls of globally trusted corporations, many countries have issued and adopted special guidelines and codes that rule the issues of corporate governance within the country and help managing big shareholder based firms.

Corporate Governance in Kazakhstan

Corporate governance has become an increasingly popular topic in Kazakhstan in the recent decades. It can be justified with an increased extent of local companies becoming more sophisticated and internationally-oriented and many of local enterprises realizing that their corporate governance needs to be improved in order to remain competitive on a global market and to attract foreign investment. It is widely known that many national companies trade on international stock exchanges and have Eurobond issuances.

Kazakhstan being a leading economy in Central Asian region adopted Code on Corporate Governance back in 2005. The Code is a general set of rules and regulations which corporations should follow in the course of its business in order to ensure high level of business transparency, informational efficiency and overall effectiveness. The major purpose standing behind the creation and adoption of the Code is formation and implementation of appropriate internationally acceptable norms and practices of corporate governance, with the latter not only referring to some legislative acts and laws, but covering also a general sense ethical issues that sometimes are overlapping everything else. Corporate governance practices are being constantly updated and revised, thus, in 2007 President of the Republic of Kazakhstan issued a decree ordering national state bodies to develop corporate governance basic ruling principles and start implementing them beginning from state-owned enterprises.

The fact that this issue is discussed and paid attention to at such a high power level proves its highest significance for state companies to go global and develop in compliance with international standards. Kazakhstan made several necessary steps in establishing and developing its market economy: introduction of free-floating exchange, introduction of International Accounting Standards, pension reform, and on-going improvement in the banking system. All of the latter together with developing stock market imply the basic grounds for corporate governance to develop and prosper. Although corporate governance currently on a developing stage, there are some key areas for improvement identified in OECD Report: absence of transparency, which corresponds to not full and faithful financial statements representation, lack of disclosures and the need to establish standards for joint stock companies.

Fair Financial Representation and Earnings Management

Financial reporting should provide information to help investors, creditors, auditors and other users of financial statements to better understand the amounts presented, assess the risks, timing and certainty of projected earnings. As it was stated in IASB Report of 2010, "information about enterprise earnings and its components measured by accrual accounting generally provides a better indication of enterprise performance than information about current cash receipts and payments". As discussed in the earlier sections, demand for fairly reflected financial figures and company representation arises from information asymmetry and possible agency problem existing between board of directors and shareholders.

However, adoption of International Financial Reporting Standards (in Kazakhstani case) is not the only tool to ensure quality earnings management. This should be considered only as a framework, and environment & guiding principles/rules to apply, but the issue of fair company representation lays deeper and thus the current research aims at identifying all the possible root causes that may lead to misstatements of financial figures and misleading investors by incorrectly reflected data.

There can be different reasons why board of directors acting as agents of shareholders may tend to manipulate earnings. As per Whalen and Healy (1999), “managers mainly manipulate earnings for four kinds of incentives: external contract incentives, management compensation contract incentives, regulatory motivations and capital market motivations”.

Basing on the literature covered during the current research, the author can highlight the major techniques that can be used in order to manipulate the earnings:

- Discretionary accruals (being the most popular one)
- Research & Development (R&D) costs manipulations
- Sales and lease back
- Revenue recognition methods use
- Unrealistic assumptions regarding liabilities

In addition, Gerald (2008) has presented the following techniques used in earnings management, which include adjusting accounts receivables (bad debt expense misstatement), increasing/decreasing gains and losses from disposals, changing the depreciation method without a solid justification and misstatement of operating cash flows.

Earnings managements' objective in majority of cases is to reduce short-term volatility of cash inflows and thus end up with steadily incoming stream of profits. Accounting choices made by the management can be considered as a major measure of earnings manipulations since those are mainly made by the board of directors and adopted as per their approval. The discussion on accounting techniques can be summarized with the idea which is common for different researches, countries and types of companies - use of discretionary accruals as a tool to manipulate the earnings. If to discuss this idea in more details, it is important to note that its purpose is mainly to shift the revenues between the periods and thus play with profit figures represented in P&L statements. However, it is worth mentioning that as many previous researches reveal, it is not so easy to detect earnings management when companies use accruals to manipulate their earnings. Moreover, accrual method does not take into account such factors influencing earning management as firm size, growth rate, level of leverage, board independence and cash flow intensity. Waweru & Riro in their report (2013) have additionally highlighted that the issue of discretionary accruals is even more sophisticated if consider it with fair market value approach to financial reporting. Fair value measurement and disclosures are considered at increased importance as the IASB continues to require recognition and measurement at fair value in the financial statements in more and more business cases. It is believed that this concept « old gradually become one of the most challenging and subjective areas as Kazakhstan is currently in process of transmission to IFRS and adoption all newly issued requirements/updates. Under fair value approach, firms report losses if fair values of their assets are less than book values and the amount of liabilities grows

in comparison with previous periods. In both cases net income reported by a company decreases and in some particular cases this might be very beneficial for board of directors to show lowered profits. Despite limitations discussed above, the use of discretionary accruals is steady and in some particular cases is even growing (Laux and Leux, 2009).

As according to Waweru and Riro (2013), the following dimensions define corporate governance impact on earnings management: board size and independence, firm size, firm performance and the extent of leverage. In addition, Abdul Rauf, Johari and Buniamin (2012) outline such factor as cash flows from operations as having a significant relationship with discretionary accruals. All of those independent variables will be used in the current research in order to define the relationship of each with the earnings management and as a result earning quality.

METHODOLOGY

In order to identify and examine the relationships between independent variables defining corporate governance (Board Size/Independence and Firm Size/Performance/Leverage/Cash Flows) and dependent variable (Earning Management) quantitative methods will be used by the author in the current research and research hypothesis will be stated and then tested accordingly.

The data is planned to be obtained from the annual financial reports of 24 (twenty four) natural resources companies listed on Kazakhstan Stock Exchange (KASE). The data will be gathered and analyzed for the past five years (2009-2013).

In order to calculate values of independent variables outlined in the above section, Statements of Financial Position, Profit & Loss Statements, disclosure notes and Manager's report will be thoroughly examined for the period 2008-2012. Corporate annual reports for mentioned companies will be obtained on KASE official website and are all available for research based examinations.

This study is based on accounting accruals approach to measure earnings management.

As stated by Healy (2001), accruals include a wide range of possible implications to practice earnings management techniques (mainly, accounting policy choices and various estimates). Discretionary accruals are extensively used all over the world by managers to move the earnings from one period to the other.

Hypothesis Development

For stakeholder groups using the financial reports for auditing, investing or any other purposes, earning figures are a critical factor that influences their decisions. Therefore, managers occasionally manipulate earning figures in financial reports for various reasons, misleading users of financial reports and affecting the decisions of investors or creditors. In order to prevent enterprises from misleading investors and taking them under threat of potential losses by publishing misstated financial reports, it was globally agreed to have implemented corporate governance mechanisms that tend to provide effective oversight of managers and reduce the possibility of manipulating the profits. One of the significant corporate governance characteristics targeted for deeper discussions in the current research is the size of the board of directors. Even though there is no optimal size of the board approved by the global business societies, this particular measure of earnings quality shall always be considered thoroughly since k may have an outstanding impact on the quality of final total profits revealed by a firm. There were myriad debates on the optimal board size: some of the

scholars tend to assume smaller board of directors to be most efficient, while other prefer larger ones. Thus, Gulzar and Wang's investigation (2011) found a clear inverse relationship between firm's market valuation and the size of board of directors, proving that the smaller is the size of the board; the better is the performance of the latter. Moreover, studies show that smaller boards are more effective in managing their day to day duties. However, John & Senbet (1998) argued that larger board of directors tends to be more efficient in monitoring the actions of top management, which, in turn can be even more practical for corporate governance purposes.

HI: Board Size has a Significant Positive Relationship with Earnings Management in Kazakhstani Natural Resources Companies

The operational definition of board size is the number of directors constituting the board.

Taking into account that most of the previous researches consider Board independence as a substitute for transparency and disclosure of annual reports, it has always been recommended that the number of external members in the board of directors should be greater than internal owners, who may have more incentive and interest in manipulating earnings. Diversified composition of the Board helps to ensure more oversight of management and maximizing the value of the presented financial statements. This proves the fact that the degree of Board independence is directly related to the extent of information quality that firms issues and presents in its annual reports. Moreover, some studies provide empirical evidence confirming that a higher proportion of external independent directors will lead to better quality of financial information provided by a firm and thus diminish the possibility of earnings manipulation (Bradbury et al, 2006).

H2: Board Independence has a Significant Negative Relationship with Earnings Management in Kazakhstani Natural Resources Companies

There are different kinds of firms existing in the business world: some of them are very small and operate seasonally while others might be international conglomerates with huge stream of funds. In order to get them equal to the extent of fair comparison, it would be better to consider companies as per their total assets possessions. As per Waweru and Riro, "prior studies have commonly used company size to represent political costs because there is a perception that large companies are subject to intense scrutiny, especially if they are reporting huge profits". As the authors have identified, those political costs mainly constitute governmental interventions, retaliations from customers and potential effects on opportunity costs. Moreover, if to take into account general sense and common practices observable all over the world, larger companies are more visible, especially in terms of reported profits, management wealth and stream of cash. As a result of such an intent attention, managers may tend to manipulate the earnings treatment by choosing particular accounting methods that delay the reporting of income thus making those political costs lower. Moreover, Lobo and Zhou (2006) have noted that firms that are larger in size may have greater incentives to manage the earnings and smooth the income figures due to highly sophisticated company financial structure entailing much more difficulties for the auditing bodies or any other regulating organizations to find out the figure dressing and playing the funds.

H3: There is a Significant Negative Relationship between Firm Size and Earning Management in Natural Resource Companies of RoK

The operational definition of firm size is the amount of total assets for any given year of operations.

As it was discussed in the previous sections, Agency Theory suggests that managers of big and relatively

profitable companies will tend to use information to stabilize their positions increase their levels of compensations (Riro and Waweru, 2013). Summers and Sweeney (1998) argue that managers of firms may choose to use discretionary accruals in periods of slower or no growth in order to be perceived as stable and progressing company. As according to DeAngelo and Skinner (1994), there are evidences that accruals may be used by the managers in order to hide poor performance and dress the figures to look like appealing for potential investors. They can also manage earnings in order to avoid reporting losses and conceal earning declines in any given operating cycle. Having studied previous researches on the relationships between firm performance and earning management, the following hypothesis has been developed for the current one:

H4: There is a Significant Positive Relationship between Firm Performance and Earnings Management in Kazakhstani Natural Resources Sector

The operational definition of the firm performance is the return on equity (net profit after taxes divided by total equity).

One more significant factor that may influence earnings quality is the extent of leverage existing in a firm. Leverage increases tend to generally constrain the opportunistic behavior of managers, and this implies that high leverage may restrict managers' ability to manipulate income increasing accruals, since management opportunism and earnings management are found to be associated. Beatty and Weber (2003) suggests that leveraged firms engage in earnings management to avoid debt covenant default. Nevertheless, Jelinek (2007) studies the effect of leverage increase on accrual earnings management and concludes that increased leverage is associated with reduced accrual earnings management. Watt and Zimmerman (1990) argue that firms relying more on debts tend to use accounting techniques that allow them to window-dress the income figures and make them look more appealing. The results of empirical hypothesis testing of both sides has been supported by a solid theory background, but neither managed to deliver a defensive and fully confirmed answer to the question of the impact of leverage extent has on the earnings quality. Thus, the following hypothesis was developed in order to obtain an answer for emerging economies, particularly related to Kazakhstani oil and gas sector:

H5: There is a Significant Positive Relationship between the Extent of Leverage and Earnings Management in Natural Resources Industry of Kazakhstan

The operational definition of leverage is measured as the ratio of total long-term liabilities to shareholder's equity.

Cash flows from operating activities are considered as major factor influencing the extent of practicing discretionary accruals and thus is the issue requiring an intent attention. Operating cash flows on cash flow statement indicate firm's ability to produce cash flows. However, most of financial analysts argue that cash flows from operating activities are funds intended to be used for not investing in new fixed assets or marketable securities of other companies but also to be distributed as a dividend or share-repurchase to satisfy shareholders' interests. Jensen (1989) was among the pioneers who introduced free cash flows theory and presented a definition of it to the public. The opportunity for earnings management is higher among companies with high surplus free cash flow. Past studies indicate that companies with high surplus free cash flow face major agency problems (Chung, Firth & Kim, 2005) particularly when the free cash flow is high but there is no investing opportunities available. Managers of these companies act opportunistically for personal gain, and tend to get involved in unprofitable projects, over investments and misuse the funds (Jensen, 1986). They tend to carry out non-value maximizing activities amounting to agency problems (Jensen, 1986). Their activities may bring benefits or

rewards for themselves at the expense of the shareholders and thus bring about no value to the company as a whole. Moreover, agency theory implies that firms with poor operating cash flows tend to engage in income increasing accounting techniques and accruals to end up with positive financial figures, and in order to be consistent with the Agency Theory, the hypothesis for the current research is as follows:

H6: Cash Flows from Operating Activities have a Significant Positive Relationship with Earnings Management in Kazakhstani Oil and Gas Sector Companies

The operational definition of operating cash flows is the total amount of cash flows from operating activities as reflected on the Cash Flows Statement.

Discretionary Accruals (DA) - A Proxy for Earnings Management

Magnitude of discretionary accruals was used as a proxy for earnings management in the current research. It is assumed that companies having larger absolute value of DA are more likely practicing earnings management to manipulate financial information for any given period of time. Consistent with previous researches on earnings management, the current one used modified Jones model to partition total accruals (TA) into discretionary and non-discretionary components. Previous studies argued that discretionary accrual estimates are positively correlated with performance of the firm and suggested that the latter should be controlled when conducting calculations of DA. Thus, following Kothari et al (2005), the author included firm performance as an independent variable in the estimation of discretionary accruals and used the absolute value of the performance-adjusted discretionary accruals as the earnings management proxy. Moreover, in order to increase the robustness of the test and respective findings, ROA being a proxy for firm performance have been included into the regression model to estimate discretionary accruals.

Total Discretionary Accruals (TDA) - Modified Jones Model

Following the modified Jones model Total Discretionary Accruals (TDA) is calculated as the difference between Total Accruals (TA) and Non-discretionary Accruals (NDA) scaled by the prior year's Total Assets. To estimate the coefficient values, an Ordinary Least Squares (OLS) regression was used by the author, where TDA is the residual from the following estimation model:

$$TACC_{it}/A_{it} - 1 = \alpha_1 t (1/A_{it} - 1) + \alpha_2 (\Delta REV_{it} - \Delta REC_{it}/A_{it} - 1) + \alpha_3 (PPE_{it}/A_{it} - 1) + \alpha_4 (ROA_{it}) + \varepsilon_{it}$$

Where

Table 1

$TACC_{it}$	Total accruals measured as the difference between Net Income (earnings bef(extraordinary items and discontinued operations) and operating Cash Flows for the firm I in the year T ;
A_{it}	Total assets for the firm I in the year L ;
ΔREV_{it}	Change in net revenue for the firm I from year $T-1$ to year T ;
ΔREC_{it}	Change in accounts receivable for the firm I from year $T-1$ to year T ;
PPE_{it}	Gross property, plant and equipment for the firm I in the year;
ROA_{it}	Ratio of net income divided by assets for the firm I in the year T ;
ε_{it}	Error term for the firm I in the year T ;

All variables in the regression model are deflated by lagged total assets in order to estimate heteroskedasticity of residuals (and the intercept is constrained to zero).

SPSS Statistics/Multiple Regression Analysis

When performing multiple regression analysis the author's primary goal was to get the best possible estimate of the dependent variable on the basis of independent variables. However, there is a certain questionable issue dealing with defining what independence of a variable implies - in some particular cases discussed below some variables are not generally independent in a sense of probability. These variables being associated with a dependent variable can also be closely related to each other (multicollinearity issue). For the purpose of that research paper, independence of such variables would be considered as separately determined and thus able to vary, whereas the value dependent variable can only be obtained as a result of particular measurement tests and regression conducted.

Multiple regression is a flexible method of data analysis that might be very helpful whenever a quantitative variable is to be examined against some other predetermined factors referred to as predictor variables.

It should be stressed out that some companies operating in natural resources sector in the Republic of Kazakhstan disclose a considerable amount of information in their annual reports thus staying in compliance with international reporting standards and practices, while others make a little use of their annual reports. The latter fact is not under any kind of control and thus can be considered as a limitation or drawback of some particular kinds of information directly extracted from a company's annual reports and interim financial statements. The amount of information provided in the annual report of any given company within the selected sample is correlated to market risk and valuation estimates. In addition to the extent of reported financial information current research does not control or anyhow influence the accuracy of the provided information, it is solely based on the publicly disclosed financial statements, annual reports and disclosure statements. Although any additional sources of information like company official websites, global internet references and previous researches covering financial situation of the companies comprising current research sample, may seem suitable for shareholders and potential investments, however, current research is mainly based on core publicly disclosed reports.

The following sections analyze the output of regression analysis in more detail. Regression output would be able to cover the following points of interest: first of all, it would reveal how much of the Earnings Management variance can be predicted by the joint effect of the selected independent variables (board size, board independence, firm size and performance, extent of leverage and the amount of operating cash flows). In addition, it would also discuss the predictive power of each variable separately.

For any statistical test to be accurate, a set of particular assumptions were applied to the current research as well. The key assumption is that the causes are sampled randomly and independently from each other, and that deviations of Earnings Management values are normally distributed with equal variance.

Regression analysis is used to produce an equation that will be able to predict the value of dependent variable given the set of independent ones. The latter relationship can be easily observed in the following format:

$$Y = a_1X_1 + a_2X_2 + \dots + \varepsilon,$$

Where, Y is Earnings Management - dependent variable, which the research attempts to predict by using

explanatory variables X_1 , X_2 , X_3 , etc and a_1 , a_2 , a_3 are regression coefficients or multipliers that are used to describe the total effect that all independent variables have on Y .

Finally, ε is the residual term that represents the composite effect of all the other variables that were not taken into the consideration under the current research and that were not explicitly identified in the model. Multipliers a_1 , a_2 , a_3 can have a different values and that difference is explained by their different correlations with the dependent variable; the sign of the coefficient explains the direction (whether those two variables are negatively or positively related to each other). In any regression with several independent variables coefficients/multipliers generally tell us how much the dependent variable is expected to increase or decrease given one level increase/decrease in any particular independent variable assuming all the other independent variables staying constant.

ANALYSIS AND FINDINGS

Before starting analyzing the regression results in more details it is of vital importance to identify whether the coefficients of independent variables differ from zero (otherwise it would basically mean there is no sizable effect on the dependent variable). The regression results of the current research model reveal that coefficients of the independent variables do really differ from zero thus implying a direct effect the latter have on the final outcome values of Earnings Management. If the regression coefficient is positive then it can be surely concluded that there is a positive relationships between the variables (however, the extent of importance should be considered separately for each pair), if the sign is negative then it shows that there are inverse relationships between the independent and dependent variables.

The p-value (sig*) is the probability of considering a result as extreme as the one you are getting in a set of random data in which the variable had no effect. With a p-value being equal to zero to three decimal places, the model is viewed to be statistically significant. With p-value being equal to 5% or less, the results of the regression are generally acceptable to reject the null hypothesis, p-value present within the range of 5% (equal or less than 0.05), would mean that the regression outcome might have been obtained as a result of some random distribution for only 5% confidence, thus leaving 95% probability for confirmation that selected variable has some particular effect on the dependent variable.

The R-squared (commonly referred to as "Coefficient of determination") is generally considered to be not of primary importance unless the major aim of the research is to make an accurate prediction. R-squared explains the percentage of the variation of the dependent variable and is mainly used to assess the model fit. R-square is calculated as 1 minus the ratio of residual variability. For instance, if X being a dependent variable and Y being an independent variable are perfectly related to each other, then there would be no residual variance left over and the ratio of the variance would be 0.00 thus making R-square comprise 1. On the contrary, if the above mentioned X and Y variables are not related to each other at all, then R-square becomes 0 and the original variances equals to 1. In most cases varianceratio and R-square figures obtained as a result of regression model fall somewhere between the two extremes and comprise any amounts between 0.00 and 1.00. It should worth mentioning that R-square is known to have predictive power problems, namely, every time a new predictor is added to a model, the R-squared increases, consequently, a model with more terms may appear to have a better fit simply because it has more terms. Moreover, some scholars believe that if a model has too many predictors and higher order polynomials, it begins to model the random noise in the data; it may then lead to producing misleadingly high R-squared values and a lessened ability to make predictions (Cohen, 2004). The adjusted R-squared is a modified version of R-squared that has been adjusted for the number of predictors in the model. The adjusted R-squared

increases only if the new term improves the model more than would be expected by chance. It decreases when a predictor improves the model by less than expected by chance. Adjusted R-square is known to be usually lower than R-square and that helps the researchers to be consistent and stay conservative in analyzing their results.

Since the aim of the research is to investigate the influence that corporate governance mechanisms have on earnings management, the following regression model was used to examine the latter relationship between the variables:

$$EM = \beta_0 + \beta_1 \text{Board_SIZEXX}_1 + \beta_2 \text{Board_INDXX}_2 + \beta_3 \text{FSXX}_3 + \beta_4 \text{FPXX}_4 + \beta_5 \text{LevXX}_5 + \beta_6 \text{CFOXX}_6 + \varepsilon$$

Where,

EM = Earnings Management

Bo= Intercept

Board size (Board_SIZEXX₁) is measured by total number of directors constituting the Board of Directors. Board Independence (Board_INDXX₂) is measured by the proportion of external directors inside the Board (namely, the ratio of external directors to internal representatives). Another control variable is Firm Size (FSXX₃) measured by the natural logarithm of total assets at the end of the year, controlling with it all the possible effects of the company size on accounting choices and estimates. The author generally expects a negative relation between the firm size and earnings management, taking into account that larger firms and corporations tend to have more sophisticated and effective control systems, internal audit practices, more negotiating power with external auditors and greater number of skilled advisory personnel inside the company. All the mentioned factors help to maintain the level of earnings management at places at a lower level and drastically diminish the possibility of accounting/financial fraud (Prior et al., 2008). Control variable describing firm performance (FPXX₄) is calculated as Return on Equity ratio at the beginning of year *t*. The extent of leverage existing in the company's debt structure (LevXX₅) is another control variable which is described as the ratio of total non-current liabilities to shareholders' equity). A high indebtedness is associated with the risk of excessive leverage (Press and Wientrop, 1990), which helps earnings management to conceal inconvenient information and display a greater capacity to generate future economic benefits (Balsam et al.2003) Cash flows of operating activities (CFOXX₆) is the last control variable tested in the current research. The latter is directly obtained from the company's financial statements and constitutes the net cash flows from operating activities stated in the any given period of time.

Table 1: Cross-Sectional Analysis (Panel A: Descriptive Statistics on Earnings Management)

	Non Discr Accruals	Board Sizexx ₁	Board Independence XX ₂	Firm Sizexx ₃	Firm Performance XX ₄	Leverage XX ₅	Cash Flows From Operating Activites xx ₆
N	75	96	96	96	96	96	96
Mean	.000	5.21	.3982	24.903	.0801	.47	3.81
Median	-.007	5.00	.3750	24.704	.115	.27	1.21
Std. Deviation	.1312	1.88	.095	2.552	1.021	.962	5.598
Minimum	-.370	3	.25	18.027	-6.569	-3	-3004
Maximum	.667	10	.70	29.639	3.384	5	2.E ₁₁

Table 1 shows the descriptive statistics of the dependent and independent variables that were used in the

regression model and states the mean, median, standard deviation of the latter. Thus, with respect to Board characteristics variables, it can be observed that in Kazakhstani natural resources companies the Board is usually composed of 5-6 people on average, of whom approximately 39% are independent external directors, and that is the fact clearly indicating that the composition of this executive organ is mainly based on internal members, which, in turn, may be considered as a signal of increased potential for earnings manipulation. However, basing on current Kazakhstani requirements, at least one third of the Board to be represented by independent directors, the average percentage close to 40% is considered as a relative prove that national natural resources companies tend to adhere to worldwide corporate governance practices. The mean for firm size among KASE listed natural resources companies comprises around 24.90, mean of operating net cash flows is 3.81, while average return on equity served as a proxy for firm performance was calculated to be around 8.01%. The average extent of leverage amount of the researched companies comprises 47%, which is a clear indicator of the fact that Kazakhstani companies operating in natural resources sector are excessively leveraged, which might be viewed as a possible accelerating factor in regards to earnings management practices.

Table 2: Cross-Sectional Analysis (Panel B: Pearson Correlations Matrix)

		Nondisc r Accruals	Board Size XX ₁	Board Independence XX ₂ (Proportion of Independent Directors to Total Directors)	Firm Size XX ₃ (Natural Logarithm of TA)	Firm Performance XX ₄ (ROE)	Leverage XX ₅ (Total Non- Current Liabilities to Owners Equity)	Cash Flows from Operating Activities XX ₆ (Net Cash Flows From Operating)
NonDiscr Accruals	Pearson Correlation	1	-.149	-.087	-.039	.263*	-.126	-.103
	Sig.(1-tailed)		.101	.230	.369	.011	.140	.189
	N	75	75	75	75	75	75	75
Board size XX ₁	Pearson Correlation	-.149	1	.434**	.434**	-.091	.278**	.445**
	Sig.(1-tailed)	.101		.000	.000	.190	.003	.000
	N	75	96	96	96	96	96	96
Board independence XX ₂ (proportion of independent directors to total directors)	Pearson Correlation	-.087	.434**	1	.211*	-.258**	-.129	.118
	Sig.(1-tailed)	.230	.000		.019	.006	.106	.126
	N	75	96	96	96	96	96	96
Firm size XX ₃ (natural logarithm of TA)	Pearson Correlation	-.039	.495**	.211*	1	.094	.236*	.700**
	Sig.(1-tailed)	.369	.000	.019		.181	.010	.000
	N	75	96	96	96	96	96	96
Firm Performance XX ₄ (ROE)	Pearson Correlation	.263*	-.091	-.258**	.094	1	-.189*	.108
	Sig.(1-tailed)	.011	.190	.006	.181		.033	.147
	N	75	96	96	96	96	96	96
Leverage XX ₅ (Total non- current liabilities to owner s equity)	Pearson Correlation	-.126	.278**	-.129	.236*	-.189*	1	.039
	Sig.(1-tailed)	.140	.003	.106	.010	.033		.352
	N	75	96	96	96	96	96	96
Cash flows from operating activities XX ₆ (Net cash flows from operating)	Pearson Correlation	-.103	.445**	.118	.700**	.108	.039	1
	Sig.(1-tailed)	.189	.000	.126	.000	.147	.352	
	N	75	96	96	96	96	96	96

*Correlation is significant at the 0.05 level (1 – tailed).

** Correlation is significant at the 0.01 level (1 – tailed).

The correlation matrix of the dependent and independent variables is reported in Table 2, Panel B. As per the results obtained and summarized in Table 2, discretionary accruals tend to have significant correlation (correlation is significant at 0.05 level 1-tailed) with firm performance measured as company's Return on Equity. As per Pearson correlation result summary, it can be observed that there is a proven multicollinearity issue in the regression model, which is supported by the following pairs of variables being mutually correlated: board size has significant (level of significance 0.01, $r=.434$, $p=.000$) positive relationships with board independence, $r=.495$, $p=.000$ with firm size. $r=.278$, $p=.0003$ with leverage and $r=.4445$, $p=.000$ with net operating cash flow variables; Board independence variable has strong negative relationship with firm performance ($r=-.258$, $p=.006$) and strong positive significant relationships ($r=.211$, $p=.019$) with firm size. Firm size variables being measured by natural logarithm of total assets has level 0.01 strong positive relationship with net cash flows obtained from operating activities ($r=.700$, $p=.000$) and the extent of leverage currently existing in the selected companies. The common interpretation of the computed regression parameters (i.e. measuring the change in the expected value of the dependent variable associated with the respective increase/decrease in a corresponding independent variable holding all the other ones constant, is not fully applicable when there is a high degree of correlation between the independent figures. The whole issues arise because it becomes difficult to assign a particular change in dependent variable to any one of the independent variables.

Table 3: Model Summary: Regression Results

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Durbin-Watson
1	.337a	.114	.035	.128873353	1.518

^a**Predictors:** (Constant), Cash flows from operating activities XX6 (Net cash flows from operating), Leverage XX5 (Total non-current liabilities to owner's equity), Firm Performance XX4 (ROE), Board independence XX2 (proportion of independent directors to total directors), Board size XXI, Firm size XX3 (natural logarithm of TA)

^b**Dependent Variable:** Discr Accruals

R-square of the current research is .114 and Adjusted R-square equals to .035 meaning that approximately 3,5% of the Earnings Management variability is explained by the independent variables selected. 11.4% presented by R-square is perceived as possessing a noise and thus being not valuable for a final research completeness assessment. Table 3 discussing Model Summary also shows the result of Durbin-Watson statistical test. This test statistics is used to detect the presence of autocorrelation in the residuals from the regression results. An assumption that the residuals are not correlated serially from one observation to the next is made at this stage meaning that the size of the residual for one case has no impact on the size of the residual for the next case. While this is particularly a problem for time-series data, SPSS provides a simple statistical measure for serial correlation for all regression problems. The Durbin-Watson Statistic is used to test for the presence of serial correlation among the residuals. If the deviations are auto correlated, there may be a number of consequences for the computed results: 1) the estimated regression coefficients no longer have the minimum variance property; 2) the mean square error may seriously underestimate the variance of the error terms; 3) the computed standard error of the estimated parameter values may underestimate the true standard error (McConell, 2003). Small values of Durbin-Watson statistics indicate the presence of autocorrelations. The value generally falls somewhere within the range of 0 and 4, for the current research the value comprises 1.518, which is close to the mid-point 2 and thus proves the assumption that there is no autocorrelation between the residual errors.

Table 4: ANOVA: Regression Results

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.145	6	.024	1.452	.208 ^a
Residual	1.129	68	.017		
Total	1.274	74			

a Predictors: (Constant), Cash flows from operating activities XX6 (Net cash flows from operating), Leverage XX5 (Total non-current liabilities to owner's equity), Firm Performance XX₄(POE), Board independence XX₂ (proportion of independent directors to total directors), Board size XX₁, Firm size XX₃ (natural logarithm of TA)

b Dependent Variable: NonDiscr Accruals

Analysis of Variance (ANOVA) implies the statistical test of whether or not the means of several groups are equal and analyzes the differences between the latter. The analysis of variance can be used as an exploratory tool to explain observations and make decisions using statistical data. A test result is called statistically significant if it is deemed unlikely to have occurred by chance, assuming the truth of the null hypothesis. A statistically significant result, when a probability (p-value) is less than a threshold (significance level), justifies the rejection of the null hypothesis. If the significance level is less than .05 (i.e. 5%) then there is a statistically significant difference in the mean earnings management between the various independent variables assumed to have an effect on the latter.

The F-ratio presented in ANOVA table gives us the idea of whether the overall regression model is a good fit for the selected and tested data. Table 4 shows that independent variables not that significantly predict the nature of Earnings Management: $F(6,68) = 1.452, p=.005$. This means that the regression model is not a perfect fit of the analyzed data). The level of significant is $Sig=.208$, which does not fall within the 5% range.

Table 5: Analysis of Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1 (Constant)	-143.001	.200.001	.021
Board size XXI	-.087	.190	-.064
Board independence XX2 (proportion of independent directors to total directors)	.007	.009	.142
Firm size XX3 (natural logarithm of TA)	.071	.032	.271
Firm Performance XX4 (ROE)	-.025	.018	-.190
Leverage XX5 (Total non-current liabilities to owner's equity)	-4.76	.000	.208
Cash flows from operating activities XX6 (Net cash flows from operating)			

a. **Dependent Variable:** NonDiscr Accruals

Model	t	Sig.	Coefficients
(Constant)	-.717	.476	
Board size XXI	.126	.900	
Board independence XX2 (proportion of	-.456	.650	

independent directors to total directors)		
Firm size XX3 (natural logarithm of TA)	.836	.406
Firm Performance XX4	2.209.031	(ROE)
Leverage XX5	-1.407	.164
(Total non-current liabilities to owner's equity)		
Cash flows from operating activities XX6	-1.246	.217
(Net cash flows from operating)		

a. Dependent Variable: NonDiscr Accruals

Regression Equation

$$EM = -.143 + .001 \text{ Board_SIZEXX1} -.087 \text{ Board_INDXX2} +.007\text{FSXX3} +.071\text{FPXX4}-.025\text{LevXX5} - 4.76\text{CFOXX6} + \varepsilon$$

In order to get an general outline of relationships between Earnings Management and independent variables, namely, Board of Directors' size. Board Independence, Firm Size and Performance, extent of Leverage and the level of Operating Cash Flows, it is useful to determine the model equation (discussed in more details in the previous chapters) that summarizes the overall research outcome.

The coefficients for each variable indicate the level/amount of change one could expect in Earnings Management given a one-unit increase/decrease in the value of any particular variable assuming that all other variables tested in the model are held constant.

Thus, one unit increase in Board Size would result in 1% increase in Earnings Management practices and one unit increase in Board Independence would mean 8.7% decrease in EM. Moreover, if firm size increases for one level, then EM for that particular case would also increase by 7%. Almost the same percentage change would appear if Firm performance is changed per unit while the extent of leverage is inversely related to Earnings Management meaning that if a firm decides to become more leveraged Earnings Management practices (if any) would decrease by 2.5%. Operating Cash Flows measure is also negatively associated with Earnings Management resulting in inversely directed change in EM as a result of one-unit change of CF levels.

It is also very important to calculate whether a multiple regression coefficient is statistically significant. It is noted that when a large number of explanatory variables are used within a small sample, observed multiple correlations are quite large and at the same time they vary widely from their population values. This issue is resolved by the help of multiple regression procedure which assigns greatest weight to those variables having the strongest relationship with the criterion variables in the sample data. Lack of statistical significant might serve as a signal point meaning that an observed multiple correlations might turn occurred by chance.

The tests aiming to identify the statistical significance for both standardized and unstandardized regression coefficients for any given variable can also be viewed as identical to the significant tests for partial and semi partial

correlations between the searched Y and independent variable X if the same variables are used. The major reason of the latter can be explained by the implication that variable of interest does not make a unique contribution to the prediction of Y beyond the contribution of the other predictors in the model. When two explanatory variables are highly correlated, neither one may add a unique predictive power beyond the other.

As according to the Table 5 discussing each regression coefficient in details, the following conclusions are made in regards to the predictive power and significance level each of the selected independent variable have on Earnings Management:

- Board size (Board SIZE XXI) is not significantly related to the Earnings Management, level of significant Sig = .900. Thus, Hypothesis #1 is rejected.
- Board independence (Board_INDXX2) variable does not have significant influence on the Earnings Management practices occurred in natural resources sector of Kazakhstan, Sig = .650. Hypothesis #2 is rejected.
- Firm size (FSXX3) variable is concluded to have insignificant relationships with Earnings Management, Sig=.406. Thus, Hypothesis #3 is rejected.
- Firm performance (FPXX4) measured as Return on Equity calculated for any given company is proven to have a significant relationships with EM, Sig = .031. Hypothesis #4 stating that there is a significant positive relationship between firm performance and Earnings Management in Kazakhstani natural resources sector is accepted.
- Extent of Leverage independent variable (LevXX5) is found to have significant predictive power value to be equal to .164; the latter observation serves as a base to reject Hypothesis #5.
- Cash flows from operating activities (CFOXX6) also has insignificant relationships with the dependent variable Y (i.e. Earnings Management), Sig = .217. Thus, Hypothesis #6 is rejected.

Table 6: Research Results

Hypothesis	Research Results	Rejected/Accepted
H ₁	Board size (BoardSIZEXXI) is not significantly related to the EM, level of significant Sig = .900.	Rejected
H ₂	Board_INDXX2 does not have significant influence on the EM practices, Sig = .650.	Rejected
H ₃	FSXX3 is concluded to have insignificant relationships with EM, Sig=.406.	Rejected
H ₄	FPXX4 is proven to have a significant relationships with EM, Sig = .031.	Accepted
H ₅	LevXX5 is found to have significant predictive power value to be equal to .164	Rejected
H ₆	CFOXX6) also has insignificant relationships with the dependent variable Y (i.e. Earnings Management), Sig = .217.	Rejected

CONCLUSIONS AND RECOMMENDATIONS

Effective corporate governance is the core component ensuring the effectiveness and efficiency of a market economy, and it is considered as a special point of interest when observing it within the realities of transition economy.

Effective corporate governance practices require that shareholders being the major stakeholder groups for any given company should have a timely, full and fair financial information so that to be able to make further investment decisions and properly influence the management through the particular set governance process. This involves both internal control practices (for instance, through elected board of directors), and external legal and regulatory mechanisms. At the macro level, it is of vital importance to develop and implement a strong regulatory environment with working and enforceable laws as well as to set some particular levels of transparency and disclosure required by the market. Thus, it is a proven fact that countries with strong regulations and investor protection rights maintained for ages are better insulated against market turmoil than those countries where investor protection laws are not that much developed. As per the latter it can be argued that corporate governance is often referred to as one of the major reasons of investor inactive behavior and reluctant market positions. Moreover, Earnings Management being closely related to the corporate governance practices is also perceived by the public as a real obstacle towards the fair financial representation.

Due to the lack of information and various gaps in financial statements and annual reports disclosures reported by local natural gas companies, five out of six hypotheses were not confirmed. The latter can be also explained by relatively small research sample (comprising only 24 enterprises). Probably time range should also be increased from 5 to, for instance, 10 years - it is believed that this would be useful in order to obtain a more complete picture of local market representatives and thus improve the results. Moreover, the fact that selected sample consists of companies operating in various spheres of natural resources market (namely, Oil & Gas, refinery, selling of finished goods, etc.) this could also have a certain effect on the research outcome, and for better results it is recommended to break down the groups into subdivisions (per particular industry) thus ensuring smooth comparison among the sample.

To conclude the research the author wants to emphasize the importance of the topic currently being discussed in terms of complete financial information presentation, fair business conducts, protected shareholder rights, the increased tendency of local companies going global, expanding local content and attracting foreign investments into Kazakhstani economy.

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