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HYPOTHESES OF KAZAKHSTAN COMPANIES ASSESSMENT AND THEIR IMPACT ON MANAGERIAL DECISION MAKING

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ABSTRACT

The purpose of this study is to examine under and overvaluation in top public companies in Kazakhstan and affect on behavioral approach to corporate finance, in the case incorrect valuation.

Methodology. We choosed of six listed companies between the years 2015-2018. We test the three hypotheses via a statistica analysis; all quantitative data were collected from audited financial annual reports.

Originality / value of the research. This study is the first to investigate the relationship between incorrect valuation and corporate decision in emerging markets such as Kazakhstan.

Findings. The analysis reveal that equity issuance and total financing by firms increase with equity overvaluation. Literature review part covers the theories regarding the relationship between over/undervaluation equity and financing decisions. Based on the theory three hypotheses are created. Our evidence supports the hypothesis that over valuation and under valuation equity affects financing decisions.

Conclusion. This research paper showed that firms raise more capital and especially issue more equity, when their shares are overvalued.

Keywords: undervaluation, Overvaluation, Equity, Debt Issuance, Equity Issuance.

ҚАЗАҚСТАНДЫҚ КОМПАНИЯЛАРДЫ БАҒАЛАУ ГИПОТЕЗАЛАРЫ ЖӘНЕ ОЛАРДЫҢ БАСҚАРУШЫЛЫҚ ШЕШІМДЕР ҚАБЫЛДАУҒА ӘСЕРІ

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АҢДАТПА

Зерттеудің мақсаты – Қазақстандағы жетекші мемлекеттік компаниялардағы бағалауды және компанияның дұрыс емес бағалауларының корпоративтік қаржыландыруға мінез-құлық тәсіліне әсерін зерттеу.

Әдіснамасы. Біз Қазақстандағы 6 ірі листинг компанияларын таңдадық. Үш гипотеза қалыптастырылды және статистикалық талдауды қолдана отырып сыналды; барлық сандық деректер 2015 жылдан 2018 жылға дейінгі кезеңдегі аудиттелген қаржылық жылдық есептерден жиналды.

Зерттеудің бірегейлігі / құндылығы. Бұл зерттеу Қазақстан сияқты дамып келе жатқан нарықтардағы қате баға мен корпоративтік шешімдер арасындағы байланысты зерттейтін алғашқы болып табылады.

Зерттеу нәтижелері. Талдаулар капиталды қайта бағалаумен акцияларды шығару және фирмаларды жалпы қаржыландыру өсетінін көрсетеді. Әдебиеттерді шолудың бір бөлігі капиталды қайта бағалау / қайта бағалау немесе қаржыландыру туралы шешімдер арасындағы байланыс туралы тео-

рияларды қамтиды. Теория негізінде үш гипотеза жасалады. Біздің деректер капиталды қайта бағалау және дұрыс бағаламау қаржылық шешімдерге әсер етеді деген болжамды қолдайды.

Қорытынды. Бұл зерттеу фирмалар көбірек капиталды көбейтетінін және әсіресе акциялары қайта бағаланған кезде көбірек акция шығаратынын көрсетті.

Түйін сөздер: компанияларды дұрыс бағалау, қайта бағалау, акциялар шығару, қарыздық міндеттемелер.

ГИПОТЕЗЫ ОЦЕНОК КАЗАХСТАНСКИХ КОМПАНИЙ И ИХ ВЛИЯНИЕ НА ПРИНЯТИЕ УПРАВЛЕНЧЕСКИХ РЕШЕНИЙ

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АННОТАЦИЯ

Целью данного исследования – является изучение оценки в ведущих публичных компаниях в Казахстане и влияние неправильной оценки компании на поведенческий подход к корпоративным финансам.

Методология. Мы выбрали 6 крупных листингующих компаний Казахстана. Сформировали и проверили три гипотезы с помощью статистического анализа; все количественные данные были собраны из аудированных финансовых годовых отчетов за период 2015 по 2018года.

Оригинальность / ценность исследования. Это исследование является первым, в котором исследуется связь между неправильной оценкой и корпоративными решениями на развивающихся рынках, таких как Казахстан.

Результаты исследования. Анализ показывает, что эмиссия акций и общее финансирование фирм увеличиваются с переоценкой капитала. Часть обзора литературы охватывает теории, касающиеся взаимосвязи между переоценкой / недооценкой капитала и решениями о финансировании. На основании теории созданы три гипотезы. Наши данные подтверждают гипотезу о том, что переоценка и недооценка капитала влияют на финансовые решения.

Вывод. Эта исследовательская работа показала, что фирмы привлекают больше капитала и особенно выпускают больше акций, когда их акции переоценены.

Ключевые слова: недооценка компаний, переоценка, выпуск акций, долговые обязательства.

INTRODUCTION

Business world has faced questions regarding the management of behavior in financial decision-making. The main question in the paper is following: How does equity valuation affects corporate financing decisions. Overvaluation may force a company to use its shares to acquire another company whose shares are not overpriced.

The research aims to identify the relationship between over/undervaluation equity and financial decisions. We decided for reaching this aim to test the hypothesis in six big listed companies of Kazakhstan. Inefficient markets approach to corporate finance predicts that the firm will raise more capital when it can get a higher price relative to the fundamental value of securities that is the question, and a relatively low price for the securities that the ransom. Stock markets can be volatile, and the reasons for the increase or decrease can be a daunting task. Most often, the stock prices are affected by a number of factors and events, some of which affect the prices of the shares directly, and others who are doing it indirectly. Events that can occur within companies will affect the price of its shares, including mergers and acquisitions, earnings reports, suspension of dividends, the development or approval of a new product innovation, employment or dismissal of the heads of companies and allegations of fraud or negligence.With capital is more sensitive to the value of the

company than the debt, the effects of wrong assessment should be stronger stock than debt issuance for the net inflow, net equity issuance more allows the firm to maximize profits it derives from the new owners of the securities. This is desirable for existing shareholders, and for the manager who wants to increase the long-term stock price. Thus, the behavioral approach assumes that the net equity issue, in fact, by virtue of substitution between them, the sensitivity of debt issuance in an incorrect assessment can be negative. The articles Xu, Xin [1] said that mergers and acquisitions (M&A) are result of Overvaluation Company. If stock of company is overvalued, the managers will use this situation to acqure other companies, and this leads to increase ferquency of M&A. Cha, Sangkwon [2] in the article showed that business strategy and valuation errors interconnected. They used for this purpose 8117 Companies in Korea and analized managerial tendency, managerial decision making and overvaluation. Results empirical studies showed positive correlation with the valuation errors in the big companies, and negative correlation with overvaluation in small companies. In its turn, in researching paper Huber, Christoph [3] showed importance a constant fundamental value and he found that overvaluation and bubble infomation have a strong relationship with fundamental value. For this analising, he used 280 companies. Huber and Kirchler [3], Bagestanyan and Walker [4] and Cason and Samek [5] also demonstarted, that the overvaluation companies with a decrease FV can affect market price. Underfunding problem is getting from replacing assets between bondholders and shareholders. One of the reason of high-risk debt is a low market value, and this may influence the investment decision of the firm, where decision will be adversely for company. Myers [6] noticed If NPV is lower than the amount debt issued, the shareholders may refuse positive NPV projects. For understanding real worth of the business and its assets, for making good decision to invest in right company need to work with professionals who can analyzed not only tangible assets, and recognize intangible assets Donald E. Anders [7]. The asymmetry of information in investment decision studied in the theoretical works of works of Jensen and Meckling [8], Myers and Myers and Majluf [9]. The first two articles emphasize the consequences of the existence of asymmetric information after the conclusion of an agreement between shareholders and bondholders, while the article by Myers and Mailuf [9] emphasizes the role of asymmetric information before an agreement is concluded between current and potential shareholders. All of the above documents show that information asymmetry can lead to the fact that some investment projects with positive net present value (NPV) will not be implemented.

Dynamic Investment and Financing in companies of Kazakhstan. Kazakhstan is a country with a dynamically growing economy; therefore, the GDP growth should be accompanied by a high rate of fixed capital savings. The financial crisis and economic slowdown have adversely affected the global economy, and Kazakhstan was not an exception. Despite this, business activity here is rapidly recovering. Corporate governance has become an increasingly popular topic in Kazakhstan; local companies are becoming increasingly more sophisticated and internationally-minded and more companies are realizing that their corporate governance needs to be improved in order to remain competitive and to attract investment. Some companies have listed their shares in London and have had Eurobond issuances, thus showing that Kazakhstan is entering into the minds of the international business community. Now our country is experiencing difficult times. Kazakhstani companies are not yet accessible to foreign investors, since most of them do not circulate on large world exchanges.

We can see that, worsening global economic conditions and worlds pandemic are damage all sector of economic. Despite all the difficulties, we hope that the country will come out of the economic crisis with minimal losses.

THE MAIN PART OF THE STUDY

Problem Discussion

We also check three hypotheses proposed behavioral approach to corporate finance, examining how the sensitivity issue in an incorrect assessment varies depending on the evaluation, size, turnover, book-to-market and others.

Hypothesis 1: Equity issuance and debt is increase with the degree of overvaluation.

Hypothesis 2: For growth companies (with low book-to-market rations) relationship between degree with overvaluation and total issuance with stronger than that of value companies.

Hypothesis 3: For small companies relationship between debt issuance and total issuance is stronger than among large companies.

Our approach to testing for undervaluation and overvaluation effect effects upon net issuance is to apply a single overall measure of over/under valuation. By definition, incorrect pricing problem affects market price is to determine a good benchmark for the fundamental, so that the deviation between the fundamental and is a relative measure of relatively pure measure of mis-valuation. To test our hypotheses, we find the price to book of a company and price-to-book equity ratio of industry. Our measure of overvaluation and undervaluation are the industry-adjusted market-to-book ratio of equity (Ind-adj OV). We also tested the financial indicator ROE to understand company performance.

Methodology. The research methodology consists of quantitative research method, which includes analysis-using data from annual reports of six Kazakhstani listed companies. The quantitative data is gathered using annual accounts available on KASE, LSE websites. The information in the annual reports can be classified as secondary data: data that has already been collected for some other purposes. The advantage of using secondary data is that is has already been summarized, it is rather easy to obtain (annual accounts are available on KASE and the company website) and it is comparable to other annual reports. We collected all information from different financial resources for check our hypothesis, all financial data covered in Table 1. The firstly we calculated equity issuance in percentage and debt issuance in percentage. The next step we found price to book of the company and price to book benchmark (S&P/TSX) to identify which one of the companies are overvalued and undervalued. Based on these the financial results we divided our companies at growth company and Value Company, and at overvalued company and undervalue company. We measure firms' issuances during each fiscal year; table 2 reports the debt issuance and equity issuance in percentage. Our sample includes firms with same year-ends. We perform both portfolio sorting analysis and regression analysis in Table 3. In sorting tests, we sort firms into valuation quintiles each year, calculate security issuance across quintiles.

We assume that all firms in an industry have the same costs of capital and expected growth rates, and use equation 2 to estimate 1/(ki - gi) for a typical firm by regressing the market values of all firms in the industry on their profits for a period of time when, based on the aggregate price/earnings ratio for the S&P index, shares in aggregate do not appear to be overpriced. Our measure of overvaluation is the industry-adjusted market-to-book ratio of equity:

$$ind - adj\ OV = \frac{\left(\frac{M}{B}\right)_{it} - \left(\frac{M}{B}\right)_{jt}}{\left(\frac{M}{B}\right)_{it}}$$

This measure has been used in studies Ang and Cheng [10]

adj OV - are the industry-adjusted market-to-book ratio of equity

$\left(\frac{M}{B}\right)_{it}$ Is the market-to-book equity ratio of stock i. The market to book financial ratio, also called the price to book ratio, measures the market value of a company relative to its book or accounting value. The market value of the company is its value at any point in time as determined by the financial marketplace. $\left(\frac{M}{B}\right)_{jt}$ s the median market-to-book equity ratio of industry J which stock I belongs at time T. Targets acquired by stock bidders are generally overvalued prior to the merger, but targets acquired by cash bidders are approximately fairly valued.

A positive number suggests overvaluation relative to the industry median while a negative number suggests undervaluation. We have analyzed valuation all companies and we can see overvaluation companies and undervaluation companies. (Table 1)

For this, we used the market and book value indicator S & P / TSX, where

Book Value per shares S & P / TSX (usd) = 1.39
Stock Price S & P / TSX (usd) = 1.23
P / Bben. * = Stock Price S & P / TSX (usd) | / Book Value per shares S & P / TSX (usd) P / Bben. * = 0.88

We take indicators S & P / TSX for the current year, as this most accurately shows the position of the company now. The additional indicators for investors is ROE (Return On Equity), because this significant indicator of profitability. This rate shows, which reflects the essence of the business - its effectiveness. This is the rate illustrated how shareholder's money works in the company. The higher ROE is the better for the investor.

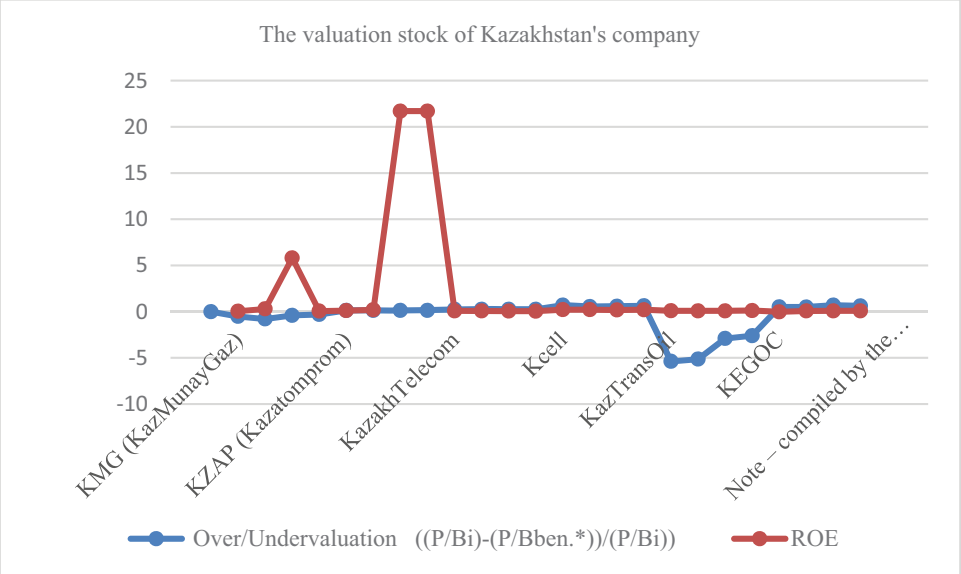

Figure 1 – Comparative analysis of ROE indicators and Over/Undervaluation rate

In the Picture 1 has the data from Table 1, where used two indicators: ROE and indicators of under or overvaluation stocks. This graph shows these indicators are 90% identical in dynamics, this means our indicators have direct correlation. Kazakhtelecom's indicators are is not dynamic, this is because we used the data of book to price ratio only for 2018. This company just started listing on the stock exchange from 2018. In the table 1 also shows that Kegoc, Kcell, Kazakhtelecom, Kazatomprom are overvaluation indicators in Kazakhstan. It means more 90% of big companies in Kase have "good" numbers or indicators in financial report, bit it not good for investors, for making corporate decisions. Investors for taking right decision should use dynamics of changes data. The dynamics shows what is happening in the company in the different periods and how its business is developing. The different periods shows the assessment, but for a full information, it is not enough just to compare the company's results with each other, the most to consider them in the context of the market, comparing with industry values.

Measure of issuance. Results of the Graham and Harvey [11] survey of financial officers suggest that managers try to time interest rates in their debt issuance decisions. We measure firm's equity and debt issuance using accounting data from annual auditing report

We define debt issuance as the change in book debt between two consecutive years, scaled by lagged firm assets. The issuance variables effectively capture all public and private issuance, as well as issues that are expired or repurchased.

Net issuance of debt is the cash a company received or spent through debt related activities such as debt issuance or debt repayment. If a company pays down its debt during the period, this number will be negative. If a company issued more debt, it receives cash and this number is positive. We have tested our companies between this formula Net Debt=Short total debt +Long total debt –Cash and Cash Equivalents, and results

shows all firms have positive numbers of debt; it means companies have more debt, than have cash. That practice is normal for business sectors; these results will help us for tasting our hypothesis.

For finding Financial Leverage Ratio (Table 2), we long term debt divided by total capital, this ratio is debt-to-equity ratio.

We can see, our analysis of financial leverage or Debt Issuance shows how a business or investor is using borrowed money. JSC Kazmunaygaz, JSC Kazakhtelecom, JSC Kegoc have more 50% debt issuance, this indicators are normal and its means they can made max profit with low risk. We know with high leverage are to be considered to be a high risk of bankruptcy.

Following Baker and Wurgler [12], Equity issuance (EI) was illustrated in the Table 3. For finding it, we divide the shares into capital, and we test our hypothesis about sensitive equity issuance and overvaluation. As we can see from the results of Table 3, where the data of large firms are displayed, they show a weak connection between mis-valuation and equity issuance. In fact, our findings here of mis-valuation effects on issuance are strongest among small firms.

We also examine the total external equity and debt issuance TI= EI+DI (Table 4). Results our analysis illustrated that, for big company the sensitivity of equity issuance and total issuance to overvaluation and undervaluation is less than for small company. We tested big companies and finding results shows weak sensitive total issuance and mis-valuation.

Hypothesis analysis and Findings. Statistical analysis was used in this study. We apply MS Excel 2010 to confirm the accuracy of the results. Hypothesis testing we use the two-sample t-test, because our testing companies have equal sample sizes and equal variances.

The first step to examining this question is to establish the specific hypotheses we wish to examine. Specifically, we want to establish a null hypothesis and an alternative hypothesis to be evaluated with data. Once a t-value is determined, a p-value can be found using a table of values from Student's t-distribution. If the calculated p-value is below the threshold chosen for statistical significance, then the null hypothesis is rejected in favor of the alternative hypothesis. An informal interpretation of a p-value, based on a significance level of about 10%, might be p<= 0.01: very strong presumption against null hypothesis, 0.01 < p <=0.05: strong presumption against null hypothesis, 0.05 < p <=0.1: low presumption against null hypothesis p > 0.1: no presumption against the null hypothesis. We use six companies for 2015-2018 periods in our paper.

Each year, firms are grouped into quintile portfolios according to either price-to-book (Table 6), the industry-adjusted market-to-book ratio of equity (Table 5) and Market capitalization (Table 7) of the month preceding each fiscal year start. In these tables includes 6 firms listed on KASE or LSE during 2015-1018. Then firms are sorted into quintile portfolios according to O/U ratio, P/B and Mar. Cap ratio. This table reports the time-series mean of equity issuance, debt issuance, total issuance, all scaled by lagged total assets, for each valuation portfolio. Difference in issuances between the most over and undervalued portfolios, value and Growth, Small and Large portfolios and the associated t-statistic of the difference, are also reported. N is the time-series average number of firms in each portfolio.

Table 5 – Security Issuance of Firms sorted by O/U

Valuation Portfolio	N	P/Bi (usd)	P/B S&P500, S&P/TSX (usd)	Over/Undervaluation ((P/Bi)-(P/Bben.))/(P/Bi)) (usd)	equity issuance %	debt issuance %	total issuance %
1 (Undervaluation)	6	0,39	0,88	-2,27	0,89%	116,30%	117,19%
2	6	0,97	0,88	0,07	22,34%	181,29%	203,63%
3	6	1,24	0,88	0,29	26,83%	418,47%	445,30%
4 (Overvaluation)	6	2,31	0,88	0,6	17%	393,80%	395,50%
Difference 1-4				-1,31	0,5	7,55	8,06
(t-statistic)					-0,6848	-2,11	-2,1353
Note - compiled by the authors based on [13, 14, 15]							

Table 5 reports how under or over valuation is related to external equity and debt net issuances. Mean values O/U and the issuance variables EI, DI, the sum of the two issuance Equity issuance and debt is increase with the degree of overvaluation. Consistent with Hypothesis 1, using the O/U measure, overvalued firms issue more equity than undervalued firms. Each year mean issuance levels are computed for each quintile. Finally, time-series mean of the issuances for each quintile is computed. (TI) and the differences between top and bottom valuation firms are reported.

Table 6 – Security Issuance of Firms sorted by P/B

Valuation Portfolio	**N**	**P/Bi (usd)**	**P/B S&P500, S&P/TSX (usd)**	**Over/Undervaluation ((P/Bi)-(P/Bben.))/(P/Bi)) (usd)**	**equity issuance %**	**debt issuance %**	**total issuance %**
1 (Undervaluation)	6	0,39	0,88	-2,27	0,89%	116,30%	117,19%
2	6	0,97	0,88	0,07	22,34%	181,29%	203,63%
3	6	1,24	0,88	0,29	26,83%	418,47%	445,30%
4 (Overvaluation)	6	2,31	0,88	0,6	17%	393,80%	395,50%
Difference 1-4				-1,31	0,5	7,55	8,06
(t-statistic)					-0,6848	-2,11	-2,1353
Note – compiled by the authors based on [13, 14, 15]							

Table 6 reports how growth and value is related to external equity and debt net issuances.

Table 7 – Security Issuance of Firms sorted by Market Capitalization

Valuation Portfolio	**N**	**P/Bi (usd)**	**P/B S&P500, S&P/TSX (usd)**	**Over/Undervaluation ((P/Bi)-(P/Bben.))/ (P/Bi)) (usd)**	**equity issuance %**	**debt issuance %**	**total issuance %**	**MKT CAP (in millions)**
1 (Large)	6	0,81	0,88	-0,18	21,58%	41,64%	63,22%	8 277 941
2	6	1,60	0,88	0,29	1,83%	366,97%	368,79%	750 378
3	6	1,05	0,88	-1,75	0,55%	199,50%	205,00%	346 381
4 (Small)	6	1,45	0,88	0,33	26,27%	326,89%	353,16%	274 204
Difference 1-4 (t-statistic)				-1,31	0,5 -0,688	7,55 -2,11	8,06 -2,1353	9 648 905
Note – compiled by the authors based on [13, 14, 15]								

Table 7 reports how small and big is related to external equity and debt net issuances. Mean values Market Cap and the issuance variables EI, DI, the sum of the two issuance (TI) and the differences between top and bottom valuation firms are reported.

O/U – Quintile Regressions. Hypothesis 1 and Hypothesis 2. Consistent with Hypothesis 1, using the O/U measure, overvalued firms issue more equity than undervalued firms; the inter-quintile difference between Undervaluation and Overvaluation in EI is 0.5 (t =- 0,68), in DI is 7,55 (t=-2.11), TI is 8,06 (t=-2,13)

Hypothesis 1: Equity issuance and debt is increase with the degree of overvaluation.

Consistent with Hypothesis 2, using the P/B measure, growth company issue more equity than value firms do.

Hypothesis 2: For growth companies (with low book-to-market rations) relationship between degree with overvaluation and total issuance with stronger than that of value companies.

If we compare table 5 and table 6, we can see similar results on columns: over/undervaluation, debt issuance, equity issuance and total issuance. It means for testing our two hypothesis we can use results table 8, 9 and 10. We report T-statistics based on standard errors clustered by both year and firm. The dependent variables are EI, DI and TI. We report three regression specifications for each dependent variable.

We first examine test conducted on the dependent variables is EI (equity issuance), our P value is more than 0,05 it means we should reject our the first part of Hypothesis 1 and 2.

Table 8 – T-Test for Equity Issuance of Hypothesis 1 and 2

t-Test. Two-Sample Assuming Equal Variances	equity issuance			
Equal Sample sizes				
	Recipe1	*Recipe2*		
Mean	-0,3282	0,12558		
Variance	2,34094	0,02569		
Observations	6	6		
Pooled Variance	1,18332			
Hypothesized Mean Difference	0			
Df	14			
t-stat	-0,8343			
P(T<=t) one tail	0,20906	accept Null Hypothesis because p>0,05		
T critical one-tail	1,76131			
P(T<=t) two tail	0,41812	accept Null Hypothesis because p>0,05		
T critical two-tail	2,14479			

Note – compiled by the authors based on [13, 14, 15]

Table 9 – T-Test for Debt Issuance of Hypothesis 1 and 2

t-Test. Two-Sample Assuming Equal Variances	debt issuance		
	Recipe1	*Recipe2*	
Mean	-0,328201873	1,888597	
Variance	2,340943896	5,256872	
Observations	6	6	
Pooled Variance	3,798907801		
Hypothesized Mean Difference	0		
Df	14		
t-stat	-2,274714771		
P(T<=t) one tail	0,019591014	reject Null Hypothesis because p<0,05	
T critical one-tail	1,761310136		
P(T<=t) two tail	0,039182029	reject Null Hypothesis because p<0,05	
T critical two-tail	2,144786688		
Note – compiled by the authors based on [13, 14, 15]			

The next step we examine test conducted on the dependent variables is DI (Debt Issuance) our P value is less than 0,05 it means we should accept our the second part of Hypothesis 1. *Debt Issuance is increase with the degree of overvaluation*.

Table 10 – T-Test for Total Issuance of Hypothesis 1 and 2

t-Test. Two-Sample Assuming Equal Variances	total issuance	
Equal Sample sizes		
	Recipe1	*Recipe2*
Mean	-0,328201873	2,014174
Variance	2,340943896	5,655632
Observations	6	6
Pooled Variance	3,998288049	
Hypothesized Mean Difference	0	
Df	14	
t-stat	-2,342877123	
P(T<=t) one tail	0,017213752	reject Null Hypothesis because p<0,05
T critical one-tail	1,761310136	
P(T<=t) two tail	0,034427505	reject Null Hypothesis because p<0,05
T critical two-tail	2,144786688	
Note – compiled by the authors based on [13, 14, 15]		

The last step we examine test conducted on the dependent variables is TI (Total Issuance) our P value is less than 0,05 it means we prove our the Hypothesis 1, because TI is the sum of EI and DI. *Hypothesis 1: Equity issuance and debt is increase with the degree of overvaluation.*

We prove our Hypothesis 2, and The sensitivities of total issuance and debt issuance to mis-valuation stronger among growth company (with low book-to-market ratios).

Size–Quintile Regressions. Hypothesis 3. According to Hypothesis 3, the estimated sensitivity of debt issuance and total financing to mis-valuation will be greater among small firms,

Hypothesis 3: For small companies relationship between debt issuance and total issuance to mis-valuation is stronger than among large companies

Table 14 – T-Test for Equity Issuance of Hypothesis 3

t-Test. Two-Sample Assuming Equal Variances	equity issuance	
Equal Sample sizes		
	Recipe1	*Recipe2*
Mean	-0,3282	0,125577
Variance	1,473932	0,031394
Observations	6	6
Pooled Variance	0,752663	
Hypothesized Mean Difference	0	
Df	14	
t-stat	-1,0461	
P(T<=t) one tail	0,15662	can not reject Null Hypothesis because p>0,05
T critical one-tail	1,76131	
P(T<=t) two tail	0,313241	can not reject Null Hypothesis because p>0,05
T critical two-tail	2,144787	

Note – compiled by the authors based on [13, 14, 15]

We first examine test conducted on the dependent variables is EI (equity issuance), but our P value is greater than 0,05.

Table 15 – T-Test for Debt Issuance of Hypothesis 3

t-Test. Two-Sample Assuming Equal Variances	DI		
Equal Sample sizes			
	Recipe1	*Recipe2*	
Mean	-0,3282	1,888597	
Variance	1,473932	6,290577	
Observations	6	6	
Pooled Variance	3,882255		
Hypothesized Mean Difference	0		
Df	14		
t-stat	-2,25016		
P(T<=t) one tail	0,020521	reject Null Hypothesis because p<0,05	
T critical one-tail	1,76131		
P(T<=t) two tail	0,041041	reject Null Hypothesis because p<0,05	
T critical two-tail	2,144787		

Note – compiled by the authors based on [13, 14, 15]

We examine test conducted on the dependent variables is DI our P value is less than 0,05.

Table 16 – T-Test for Total Issuance of Hypothesis 3

t-Test. Two-Sample Assuming Equal Variances	TI	
Equal Sample sizes		
	Recipe1	*Recipe2*
Mean	-0,3282	2,014174
Variance	1,473932	6,462558
Observations	6	6
Pooled Variance	3,968245	
Hypothesized Mean Difference	0	
Df	14	
t-stat	-2,35173	
P(T<=t) one tail	0,016926	reject Null Hypothesis because p<0,05
T critical one-tail	1,76131	
P(T<=t) two tail	0,033852	reject Null Hypothesis because p<0,05
T critical two-tail	2,144787	

Note – compiled by the authors based on [13, 14, 15]

We examine test conducted on the dependent variables is TI our P value is less than 0,05.

We prove our Hypothesis 3, the estimated sensitivity of debt issuance and total financing to mis-valuation will be greater among small firms.

Hypothesis 3: For small companies relationship between debt issuance and total issuance to mis-valuation is stronger than among large companies.

Annex A

Table A-1 – Descriptive analysis of the stock overvaluation/undervaluation

Company	Years	Book Value per shares (usd)	Stock Price (usd)	P/B ratio = Stock Price / Book Value per share (usd)	Over/Undervaluation ((P/Bi)-(P/Bben.))/(P/Bi)) (usd)	ROE
KMG (KazMunayGaz)	2015	10,22	5,97	0,58	-0,51	4,71%
	2016	10,55	5,21	0,49	-0,79	29,83%
	2017	11,20	7,10	0,63	-0,40	5,82%
	2018	11,42	7,80	0,68	-0,30	5,82%
KZAP (Kazatomprom)	2015	47,09	48,55	1,03	0,14	11,40%
	2016	32,36	33,36	1,03	0,14	19,60%
	2017	27,07	27,91	1,03	0,14	21,7%
	2018	4,75	4,88	1,03	0,14	21,7%
KazakhTelecom	2015	0,69	0,83	1,20	0,26	8,60%
	2016	0,69	0,83	1,20	0,26	8%
	2017	0,69	0,83	1,20	0,26	5,60%
	2018	0,69	0,83	1,20	0,26	5,50%
Kcell	2015	1,25	3,80	3,04	0,71	21,79%
	2016	1,07	2,10	1,96	0,55	21,79%
	2017	1,07	2,30	2,15	0,59	18,26%
	2018	0,91	2,20	2,40	0,63	20,42%
KazTransOil	2015	20,24	2,81	0,14	-5,38	9,60%
	2016	18,41	2,65	0,14	-5,14	8,40%
	2017	17,91	4,06	0,23	-2,90	8,40%
	2018	14,66	3,61	0,25	-2,60	12,20%
KEGOC	2015	1,31	2,35	1,80	0,51	-2,22%
	2016	1,39	2,45	1,76	0,50	7,80%
	2017	1,44	4,32	3,01	0,71	8,93%
	2018	1,81	4,17	2,31	0,62	8,93%

Table A-2 – Debt Issuance

	2015	2016	2017	2018
KMG (KazMunayGaz) (KZT in thousand)				
debt issuance (long-term debt)	3 332 925 707	3 913 414 613	4 640 396 061	5 064 055 708
total capital	6 278 279 150	6 090 177 797	6 783 604 858	7 143 068 313
debt issuance (long-term debt)	**53,09%**	**64,26%**	**68,41%**	**70,89%**
KZAP (Kazatomprom) (KZT in thousand)				
debt issuance (long-term debt)	150 239 000	106 493 000	75 875 000	134 731 000
total capital	469 405 000	567 830 000	641 176 000	963 010 000
debt issuance (long-term debt)	**32,01%**	**18,75%**	**11,83%**	**13,99%**
KazakhTelecom (KZT in thousand)				
debt issuance (long-term debt)	61 027 626	87 564 132	70 126 194	214 193 976
total capital	292 421 442	343 797 610	359 107 937	380 906 789
debt issuance (long-term debt)	**20,87%**	**25,47%**	**19,53%**	**56,23%**
Kcell (KZT in thousand)				
debt issuance (long-term debt)	6 322 503	15 297 696	18 021 899	17 801 926
total capital	80 446 103	72 680 286	70 539 391	68 075 289
debt issuance (long-term debt)	**7,86%**	**21,05%**	**25,55%**	**26,15%**
KazTransOil (KZT in Million)				
debt issuance (long-term debt)	187 556	192 163	310 819	265 775
total capital	2 506 414	2 407 998	2 273 930	2 097 935
debt issuance (long-term debt)	**7,48%**	**7,98%**	**13,67%**	**12,67%**
KEGOC (KZT in thousand)				
debt issuance (long-term debt)	231 816 802	211 737 823	214 952 852	236 953 765
total capital	340 976 614	362 084 070	374 167 560	470 962 237
debt issuance (long-term debt)	**67,99%**	**58,48%**	**57,45%**	**50,31%**
Note – compiled by the authors based on [20]				

Table A-3 – Equity Issuance

	2015	2016	2017	2018
KMG (KazMunayGaz) (KZT in thousand)				
equity issunace (common stock)	68 162 635	68 162 635	74 357 042	74 357 042
total capital	6 278 279 150	6 090 177 797	6 783 604 858	7 143 068 313
equity issunace (common stock)	**1,09%**	**1,12%**	**1,10%**	**1,04%**
KZAP (Kazatomprom) (KZT in thousand)				
equity issunace (common stock)	259 356	259 356	259 356	259 356
total capital	469 405 000	567 830 000	641 176 000	963 010 000
equity issunace (common stock)	**0,5525%**	**0,4568%**	**0,4045%**	**0,2693%**
KazakhTelecom (KZT in thousand)				
equity issunace (common stock)	10 922 876	10 922 876	10 922 876	10 922 876
total capital	292 421 442	343 797 610	359 107 937	380 906 789
equity issunace (common stock)	**3,74%**	**3,18%**	**3,04%**	**2,87%**
Kcell (KZT in thousand)				
equity issunace (common stock)	200 000	200 000	200 000	200 000
total capital	80 446 103	72 680 286	70 539 391	68 075 289
equity issunace (common stock)	0,25%	0,28%	0,28%	0,29%
KazTransOil (KZT in Million)				
equity issunace (common stock)	385	385	385	385
total capital	2 506 414	2 407 998	2 273 930	2 097 935
equity issunace (common stock)	**0,02%**	**0,02%**	**0,02%**	**0,02%**
KEGOC (KZT in thousand)				
equity issunace (common stock)	260 000	260 000	260 000	260 000
total capital	340 976 614	362 084 070	374 167 560	470 962 237
equity issunace (common stock)	**0,08%**	**0,07%**	**0,07%**	**0,06%**
Note – compiled by the authors based on [20]				

Table A-4 – Total Issuance

	2015	2016	2017	2018
KMG (KazMunayGaz) (KZT in thousand)				
debt issuance (long-term debt)	53,09%	64,26%	68,41%	70,90%
equity issunace (common stock)	1,09%	1,12%	1,10%	1,04%
total issuance	54,17%	65,38%	69,50%	71,94%
KZAP (Kazatomprom) (KZT in thousand)				
debt issuance (long-term debt)	32,01%	18,75%	11,83%	13,99%
equity issunace (common stock)	0,5525%	0,4568%	0,4045%	0,2693%
total issuance	32,56%	19,43%	12,28%	14,92%
KazakhTelecom (KZT in thousand)				
debt issuance (long-term debt)	20,87%	25,47%	19,53%	56,23%
equity issunace (common stock)	3,74%	3,18%	3,04%	2,87%
total issuance	24,61%	28,65%	22,57%	59,10%
Kcell (KZT in thousand)				
debt issuance (long-term debt)	7,86%	21,05%	25,55%	26,15%
equity issunace (common stock)	0,25%	0,28%	0,28%	0,29%
total issuance	8,11%	21,32%	25,83%	26,44%
KazTransOil (KZT in Million)				
debt issuance (long-term debt)	7,48%	7,98%	13,67%	12,67%
equity issunace (common stock)	0,02%	0,02%	0,02%	0,02%
total issuance	7,50%	8,00%	13,69%	12,69%
KEGOC (KZT in thousand)				
debt issuance (long-term debt)	67,99%	58,48%	57,45%	50,31%
equity issunace (common stock)	0,08%	0,07%	0,07%	0,06%
total issuance	68,06%	58,55%	57,52%	50,37%
Note – compiled by the authors based on [20]				

CONCLUSION

Kazakhstan has a favorable investment climate for future investors; the laws of the country well protect foreign investors. In the researching paper Ma and Ma [16], developing markets have a very strong impact on the global economy, as noted by Li et al. [17] in the last decade, a huge share of investment falls on developing markets and Kazakhstan is no exception. We cannot rule out the existence of information asymmetries in emerging markets. According to leading audit firms, the quality of financial reporting in emerging markets and countries with economies in transition is often considered inaccurate and unreliable. Due to the high

information asymmetry, as was noted in a study by Mahmoud and Orazalin [18], it is difficult to assess the quality of reporting in emerging markets. Although Kazakhstan is one of the leading economies in Central Asia and the CIS, future comparative studies, including other emerging markets, will allow study that is more detailed in different markets. In our study, we were guided by the data of financial statements taken from verified sources, which are available on the company's websites and on the KASE website (www.kase.kz). Our research has shown how a company's incorrect valuation can affect financial decisions. This research paper showed that firms raise more capital and especially issue more equity, when their shares are overvalued. We have tested whether equity mis-valuation as measured by the ratio of overvaluation is the industry-adjusted market-to-book ratio of equity affects the net amount of equity and debt issuances. We also tested growth company and value company and proved that the sensitivities of total issuance to mis-valuation are stronger among growth company, used for this research the measure Price-to-book. We also checked our hypothesis about small and large company and tested how equity, debt and total issuance is greater among small than large firms are. In our paper, we studied and tested three hypothesis, and we proved all hypothesis. The theoretical and practical part of the article shows one of the methods for choosing company for investors. The long-term investments need to choose companies that for a long time show stable performance, firmly hold industry positions. The price of shares increases for successful companies and decrease for unprofitable ones, but it should also be taken into attention that there are undervalued and overvalued companies where the share price is mis-valuation due to the manipulation of financial indicators. Therefore, it is very important to look at the dynamics and check the companies for a number of indicators, thereby reducing the risk of incorrect decisions.

Despite the above limitations, this study complements a very limited study in the context of Central Asia on the impact of company valuations and its consequences on investor decisions.

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SUMMARY

This article discusses the relationship between firm value and investment and how equity overvaluation and undervaluation effects on corporate decisions. We also checked three hypotheses proposed behavioral approach to corporate finance, examining how the sensitivity issue in an incorrect assessment varies depending on the evaluation, size, turnover, book-to-market and others.

Our approach to testing for undervaluation and overvaluation effect effects upon net issuance is to apply a single overall measure of over/under valuation. The findings and analysis reveal that equity issuance and total financing by firms increase with equity overvaluation. Our evidence supports the hypothesis that over valuation and under valuation equity affects financing decisions.

ТҮЙІНДЕМЕ

Бұл мақалада фирмалық құндылық пен инвестиция арасындағы байланыс, сондай-ақ капиталды қайта бағалау мен бағалаудың корпоративтік шешімдерге әсері талқыланады. Сондай-ақ, біз корпоративті қаржыландыруға ұсынылған мінез-құлық тәсілінің үш гипотезасын сынап көрдік, дұрыс емес бағалау кезінде сезімталдық мәселесі бағалауға, мөлшерге, айналымға және басқаларына байланысты өзгеретінін зерттедік.

Таза шығарындыларға шамадан тыс бағалау мен қайта бағалаудың әсерін тексеруге деген көзқарасымыз біртұтас жалпы шектеу немесе төмендету бағасын қолдану болып табылады. Нәтижелер мен талдау көрсеткендей, акциялар шығарылымы және фирмаларды жалпы қаржыландыру капиталды қайта бағалаумен жоғарылайды. Біздің деректер капиталды қайта бағалау және дұрыс бағаламау қаржылық шешімдерге әсер етеді деген болжамды қолдайды.

РЕЗЮМЕ

В этой статье обсуждается взаимосвязь между стоимостью фирмы и инвестициями, а также влияние переоценки и недооценки капитала на корпоративные решения. Мы также проверили три гипотезы предложенного поведенческого подхода к корпоративным финансам, исследуя, как проблема чувствительности в неправильной оценке варьируется в зависимости от оценки, размера, оборота и других.

Наш подход к проверке влияния эффекта недооценки и переоценки на чистую эмиссию заключается в применении единой общей меры завышенной или заниженной оценки. Результаты и анализ показывают, что эмиссия акций и общее финансирование фирм увеличиваются с переоценкой капитала. Наши данные подтверждают гипотезу о том, что переоценка и недооценка капитала влияют на финансовые решения.

СВЕДЕНИЯ ОБ АВТОРАХ

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