

**A.A. Nauruzbayev<sup>1\*</sup>, M.Zh. Berniyazova<sup>2</sup>**

<sup>1,2</sup>*KIMEP University, Almaty, Kazakhstan*

<sup>1</sup>*alibek.nauruzbayev@kimep.kz*, <sup>2</sup>*marzhan@kimep.kz*

<sup>1</sup><http://orcid.org/0009-0008-1233-4127>, <sup>2</sup><http://orcid.org/0009-0000-8107-9969>

### **Earnings quality and national IPO: Central Asian case**

#### **Abstract**

*Object:* The study aims to assess the impact of the National IPO/SPO Program on Earnings quality in KASE-listed companies and provide recommendations to the investor community.

*Methods:* KASE Stock Exchange sample population is 52 local companies, 26 state and 26 private, across different industries excluding financial institutions and investment holdings. Time horizon is 13 years during 2009–2021 period totaling 572 unbalanced panel firm-year observations. To estimate Earnings quality, we follow (Kasznik, 1999) cash flow model for accrual-based Earnings management jointly with real activity (Roychowdhury, 2006) aggregate model.

*Findings:* We found that the National IPO/SPO process creates partial state-owned enterprises and improve their key investment indicators.

*Conclusions:* Partially state-owned companies outperform private ones and thus become the preferable investment strategy based on Earnings quality risk, cash generation, profitability and leverage-based risk. Theoretically, this study is the first to analyze Earnings management from the National IPO/SPO perspective and the first to relate Earnings quality with structure ownership in case of Kazakhstan. Practically, results and discussion are useful for investors of KASE-listed companies in investment decision-making.

*Keywords:* Earnings quality, Ownership structure, Earnings management, Republic of Kazakhstan, National IPO/SPO, KASE exchange.

#### **Introduction**

The National IPO/SPO program started more than 10 years ago. And Kazakhstani investors still raise the issue of trust. Proper functioning of capital markets highly depend on transparency and quality of financial information. Rational investors assess companies not only by profitability and cash generation but also by leverage, liquidity risk and risk of earnings information quality that affect future sustainability.

Here is an excerpt from the President of the Republic of Kazakhstan K.K. Tokayev's speech delivered to the representatives of international investment companies on December 3, 2021:

“A large-scale campaign is now underway on privatization of more than 700 state-owned enterprises in various sectors of the economy of Kazakhstan, including oil and gas, energy, infrastructure. We consider it preferable to place shares of the largest companies on national stock exchanges”.

#### **Are Hybrid (partially state-owned) enterprises characterized by better Earnings quality?**

##### **Historical perspective**

KazTransOil joint-stock company (hereinafter JSC) was the first state company to go public in 2012. As part of the participation in the National IPO program, citizens of Kazakhstan, as well as Kazakhstani pension funds, were offered to purchase 38 million ordinary shares of the company at 725 tenge per share by subscription.

On December 18, 2014, within the framework of the National IPO program, the initial offering of ordinary shares of KEGOC JSC on the KASE stock market was carried out through subscription.

In November 2018, Samruk-Kazyna JSC put over the National IPO of NC Kazatomprom JSC in the amount of 14.92% or 38 million shares and global depositary receipts with a double listing on the London Stock Exchange (or LSE) and the Astana International Exchange (or AIX) of the Astana International Financial Center. In 2019 and 2020, Samruk-Kazyna JSC conducted SPO (or Secondary Public Offering) of NC Kazatomprom JSC on both the LSE and AIX Stock Exchanges through the accelerated book building. As a result of the above-mentioned placements IPO/SPO, the share of the stock of NC Kazatomprom JSC owned by Samruk-Kazyna JSC is 75%, whereas 25% of the issued shares are in free circulation.

Samruk-Kazyna JSC and NC KazMunayGas JSC jointly announced that on December 08, 2022, secondary trading of KMG shares has started on the AIX and KASE Stock Exchanges.

\* Corresponding author. E-mail: [alibek.nauruzbayev@kimep.kz](mailto:alibek.nauruzbayev@kimep.kz)

Problem, objective and questions (RQ):

Research problem arises because of theoretical gaps and uncertainty regarding the effects of the National IPO/SPO on Earnings quality. To our best knowledge up to date, there is no such study to provide answers to the given problem. Many researchers use Earnings management as a measure of Earnings quality. Higher/lower EM lead to lower/higher EQ.

Recent study by (Brennan, 2021) analyze various definitions of EM and reviewed the frequently used items in the academic literature such as “Accounting choice”, “Income smoothing”, “Earnings management” and “Earnings manipulation”. Some scholars (Parfet, 2000) criticize the existence of only “Bad” EM and distinguish “Good and Bad” in the following way:

“Reasonable and proper practices that are part of operating a well-managed business and delivering value to shareholders” versus “Improper Earnings management, is intervening to hide real operating performance by creating artificial entries or stretching estimates beyond the point of reasonableness”.

We emphasize on the opportunistic use of the financial reporting strategy that usually leads to the accounting manipulations, mainly referring to the (Healy & Wahlen, 1999) definition:

“Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers”.

Research objective is to assess the impact of the National IPO/SPO on Earnings quality in KASE-listed companies and provide recommendations to investor community.

RQ1: Does the National IPO/SPO improve Earnings quality in KASE-listed companies?

RQ2: Does the National IPO/SPO decrease Earnings quality in KASE-listed companies?

Contributions:

Theoretically, to the best of our knowledge, this study is the first to analyze Earnings management from the National IPO/SPO perspective and the first to relate Earnings quality with structure ownership in case of Kazakhstan. Practically, results and discussion are useful for investors of KASE-listed companies’ decision-making in choosing private, 100% state or hybrid/partial state ownership structures to invest into.

The rest of the paper is organized as follows. In the literature review we develop the research hypothesis; in the methodology part we describe KASE population and justify earnings management models utilized. Then, we present our empirical results in Results & Discussion. Finally, we conclude.

### ***Literature review***

#### *Classic papers on Earnings management, both AEM and REM*

(Roychowdhury, 2006) believe that managers manipulate not only the abnormal accruals (or “AEM”), but also engage into the operational activities (or “REM”). One issue left behind the scope of her findings is the trade-off between AEM and REM conditioned that managers are flexible in their choice.

(Cohen et al., 2008) prove that the analysis of only AEM doesn’t provide a full picture without REM study. Moreover, both should be treated as substitutes to achieve earnings benchmarks in the post-SOX world.

(Zang, 2012) documents that managers do switch AEM and REM based on the relative costs, and REM goes first with AEM serving as an adjustment.

#### *Classic paper on Earnings management and ownership structure*

(Ding et al., 2007) investigated the role played by a firm's ownership structure in EM, with reference to the Chinese capital market and found that the relationship between EM measures and ownership concentration exhibits a statistically significant non-linear, inverted U-shape pattern known as the “entrenchment versus alignment” effect.

#### *Contemporaneous studies on Earnings management and ownership structure*

(Lu et al., 2023) using A-share listed Chinese firms on both the Shanghai and Shenzhen Stock Exchanges, investigated impacts of State ownership on management’s decision to select REM or AEM earnings management strategies. Authors found that state-owned enterprises tend to favor REM over AEM earnings management strategies more than private.

(Pramusti et al., 2022) analyzed 24 state-owned enterprises listed on the IDX Stock Exchange during 2015-2020. The findings revealed that Government ownership has no effect on Earnings management as well as audit quality has no effect on Earnings management within state companies.

(Gong & Choi, 2021) investigated the effect of State ownership on Accounting quality, measured by earnings management. Using the samples of state-owned enterprises listed in the A-share market in China during 2009-2017, authors found that there is a significantly positive relationship between State ownership and Earnings management. Furthermore, the results indicate that higher industry competition effectively inhibit the negative effect of State ownership on Accounting quality. It also turned out that positive relationship between State ownership and Earnings management has weakened in recent years, implying the mixed-ownership reform to be effective.

Hypotheses:

Recent paper (Orazalin, 2020) proved existence of Earnings management in Kazakhstan and found that companies with larger boards adopt a more restrained approach to earnings management practices. Based on the literature review, we hypothesize association between ownership structures and Earnings quality in our region. For the purpose of testing H2-H7 hypotheses, we investigate relation of key investment indicators to Earnings quality.

H1.1: State ownership is associated/correlated with Earnings quality

H1.2: Cash flow is associated/correlated with Earnings quality

H1.3: Profitability is associated/correlated with Earnings quality

H1.4: Leverage is associated/correlated with Earnings quality

H1.5: Growth is associated/correlated with Earnings quality

H1.6: Liquidity is associated/correlated with Earnings quality

Once direction and strength of association in H1 are determined, we are ready to answer our research questions whether the National IPO/SPO brings positivity and advantages to potential investors.

H2: Partially state-owned companies exhibit higher Earnings quality compared to SOE/POE. SOE stands for 100% public state-owned enterprises; POE means public privately-owned enterprises.

H3: Partially state-owned companies exhibit higher cash flow compared to SOE/POE

H4: Partially state-owned companies exhibit higher profitability compared to SOE/POE

H5: Partially state-owned companies exhibit lower leverage compared to SOE/POE

H6: Partially state-owned companies exhibit higher growth compared to SOE/POE

H7: Partially state-owned companies exhibit higher liquidity compared to SOE/POE

In the next section, we discuss population of KASE-listed companies, measurement methods of variables and choice of models.

## Methods

### Data collection and sampling

Data is manually collected from annual audited financial reports of the companies listed on KASE Stock Exchange. As a four-eyes review procedure, we (co-authors) separately extracted and compared data to minimize errors.

KASE Stock Exchange sample population is 52 local companies, 26 state and 26 private (out of 235 eminent) across different industries excluding banks, insurance companies, leasing companies, pension funds and other investment holdings. Time horizon is 13 years during 2009-2021 totaling 572 unbalanced panel firm-year observations. In Table 1 we present means and dispersions of main variables.

Table 1. Descriptive statistics

variable	mean	sd	iqr	max	p50	min
state	.4667832	.4993321	1	1	0	0
state_share	.2929699	.4078172	.5440000	1	0	0
AGG	.0012825	.1922879	.2267061	.608434	.0183802	-.547961
Abs(AGG)	.1471139	.1236611	.1582190	.608434	.1152467	.0001515
roa	.1047998	.2618265	.1437082	4.457944	.0605795	-1.05379
cfota	.1300129	.2074945	.1531988	1.063830	.1035490	-1.52381
lev	.6000122	.4197225	.3579337	3.268509	.5120107	.0586207
growth	.3578330	3.0916830	.3104409	71.727270	.1166663	-1
liq	1.8774750	1.9339820	1.474174	14.454550	1.3202750	.0144605
size	4.3441270	1.8607110	2.486751	9.592420	4.0943390	.1823216

Note – authors' calculation using Stata 15.1 tool

## Operationalization of variables

Non-stationary panel data produce unreliable results in panel data models and need to be transformed. Stata software offers variety of tests for unit roots in panel data including Fisher-type test for unbalanced panel data. For calculation of AEM and REM, variables don't contain unit root (p-values = 0 at 1% significance level.)

Testing for normality identified high kurtosis due to potential outlier presence. We apply the approach of winsorising outliers to deal with high kurtosis. Winsorising at 5% reached kurtosis around 3–3.5 which is within the acceptable range. A value of skewness for the residuals is between -0.5 and 0.5 indicating that the distribution is fairly symmetrical.

To measure overall Earnings quality we combine the effects of both AEM plus REM earnings management measures.

$$\text{Abs(AGG)} = \text{AEM} + \text{REM}, \quad (1)$$

where AGG – aggregate level of EQ,  
abs(AGG) – absolute value of AGG,  
AEM – accrual-based EM, and  
REM – real activity EM.

To measure AEM, we follow (Kaszniak, 1999) cash flow (variation of (Jones, 1991)) model:

$$\begin{aligned} \text{TA}_{i,t} / \text{A}_{i,t-1} = & \alpha_0 / \text{A}_{i,t-1} + \alpha_1 (\Delta \text{Rev}_{i,t}) / \text{A}_{i,t-1} + \\ & + \alpha_2 (\text{PPE}_{i,t}) / \text{A}_{i,t-1} + \alpha_3 (\Delta \text{CFO}_{i,t}) / \text{A}_{i,t-1} + \mu, \end{aligned} \quad (2)$$

where TA – EBIX-CFO (cash flow approach),  
EBIX – earnings before extraordinary items and discontinued operations,  
A – total assets,  
Rev – sales,  
CFO – net operating cash flow,  
PPE – gross fixed assets, and  
 $\mu$  – AEM.

Kaszniak model exhibits relatively higher ranking based on F-statistics, adjusted R<sup>2</sup>, individual model variable significance, separate period 2009–2021 and 4 industries regression significance (O&G, Manufacturing, Mining and Services). Based on the results of Hausman test (F-test, LM-test) and the presence of Autocorrelation, Heteroskedasticity, Cross-sectional dependence issues, we applied Random-effects GLS Regression with Driscoll-Kraay standard errors.

To measure REM, we follow (Roychowdhury, 2006) aggregate model of 3 models, cash flow model, production model and discretionary expenses model:

$$\text{CFO}_{i,t} / \text{A}_{i,t-1} = \beta_0 / \text{A}_{i,t-1} + \beta_1 (\text{Rev}_{i,t}) / \text{A}_{i,t-1} + \beta_2 (\Delta \text{Rev}_{i,t}) / \text{A}_{i,t-1} + \epsilon, \quad (3)$$

$$\text{PROD}_{i,t} / \text{A}_{i,t-1} = \pi_0 / \text{A}_{i,t-1} + \pi_1 (\text{Rev}_{i,t}) / \text{A}_{i,t-1} + \pi_2 (\Delta \text{Rev}_{i,t}) / \text{A}_{i,t-1} + \pi_3 (\Delta \text{Rev}_{i,t-1}) / \text{A}_{i,t-1} + \xi, \quad (4)$$

$$\text{DISX}_{i,t} / \text{A}_{i,t-1} = \Omega_0 / \text{A}_{i,t-1} + \Omega_1 (\text{Rev}_{i,t-1}) / \text{A}_{i,t-1} + \Upsilon, \quad (5)$$

where A – total assets,  
Rev – sales,  
CFO – net operating cash flow,  
PROD – Inventory + COGS,  
DISX – S G&A expenses,  
 $\beta$   $\pi$   $\Omega$  – constant variables, and  
SUM ((- $\epsilon$ ) +  $\xi$  + (- $\Upsilon$ )) – aggregate REM.

Based on the results of Hausman test (F-test, LM-test) and the presence of Autocorrelation and Heteroskedasticity issues, we applied Random-effects GLS Regression with robust standard errors.

Based on the results of Hausman test (F-test, LM-test) and the presence of Autocorrelation and Heteroskedasticity issues, we applied Fixed-effects (within companies) Regression with robust standard errors.

Based on the results of Hausman test (F-test, LM-test) and the presence of Autocorrelation, Heteroskedasticity, and Cross-sectional dependence issues, we applied Random-effects GLS Regression with Driscoll-Kraay standard errors.

State ownership has two measures: 1) Dummy variable equal 1 if SOE and 0 if POE; and 2) state shares variable measured as % of total owned by State. For further analysis, we split state owned companies into 3 sub-groups: 1) 0-49% partial SOE, 2) 50-99% partial SOE, and 3) 100% SOE.

Other control variables:

CFOTA – net operating cash flow scaled by total assets,

ROA – NI / Assets,

Leverage (or lev) – Liabilities / Assets,

Growth – Change % (Sales), and

Liquidity (or liq) – Current ratio.

### Results

In the Table 2, we compare SOE including partially owned against POE. On average, 62% of shares in KASE-listed state-related companies belong to Government. Looking at different criteria such as Earnings quality, profitability, cash flows, leverage, growth and liquidity, potential investors get a good picture on average which companies, private or state, outperform.

Table 2. Characteristics of SOE vs POE (by mean values)

state	state_shares	AGG	Abs(AGG)	roa	cfota	lev	growth	liq
Group 0 POE (0%)	0	-.032716	.154847	.124357	.146064	.619306	.536702	2.057669
Group 1 SOE (all)	.627636	.038571	.138631	.082458	.111676	.577972	.153506	1.671634
Total	.292969	.001282	.147113	.104799	.130012	.600012	.357833	1.877475

Note – authors' calculation using Stata15.1 tool

T-student statistic also confirms that private companies are relatively more profitable, generate higher operating cash flow, show better growth in sales and even more liquid during 2009-2021 timeline (Table 3). Negative mean value for Earnings quality (AGG) in private companies indicates that POE follow income-decreasing strategy whereas SOE prefer using income-increasing one. Statistically, abs(AGG) measure is lower in SOE and significantly different from that in POE. So, we conclude that Earnings quality is better in state-owned enterprises.

Table 3. T-test: Earnings quality in SOE vs POE

. ttestabsAGG, by( state ) unequal		
Two-sample t test with unequal variances		
Group	Obs Mean Std. Err. Std. Dev.	[95% Conf. Interval]
0	272 .1548477 .0076316 .1258638	.1398229 .1698725
1	248 .1386318 .0076761 .1208836	.1235128 .1537508
combined	520 .1471139 .0054229 .1236611	.1364604 .1577675
diff	.0162159 .0108242	-.0050491 .0374809
diff = mean(0) - mean(1)		t = 1.4981
Ho: diff = 0	Satterthwaite's degrees	of freedom = 516.592
Ha: diff < 0	Ha: diff != 0	Ha: diff > 0
Pr(T < t) = 0.9326	Pr(T > t) = 0.1347	Pr(T > t) = 0.0674

Note – authors' calculation using Stata15.1 tool

Table 4 presents KASE-listed companies in 4 sub-categories. Besides SOE (Group3) and POE (Group 0), there are two partial SOE split according to shares owned by Government: Group 1 (0-49%) and Group 2 (50%-99%).

Table 4. Characteristics of SOE vs POE vs partial SOE (by mean values)

state	state_shares	AGG	Abs(AGG)	roa	cfota	lev	growth	liq
Group 0 POE (0%)	0	-.0327164	.1548477	.1243576	.1460645	.6193063	.5367021	2.057669
Group 1 (0-49%)	.1749062	.0353001	.1170183	.0834919	.1299607	.6513630	.1376716	1.729455
Group 2 (50-99%)	.6922682	-.0100706	.1273776	.1608843	.1782246	.3942042	.1296875	1.666908
Group 3 SOE 100%	1	.0707933	.1660832	.0353457	.0559195	.6196401	.1818866	1.622000
<b>Total</b>	<b>.2929699</b>	<b>.0012825</b>	<b>.1471139</b>	<b>.1047998</b>	<b>.1300129</b>	<b>.6000122</b>	<b>.357833</b>	<b>1.877475</b>

Note – authors' calculation using Stata15.1 tool

On average Group 2 partial SOE has a mixed ownership of 69% owned by State and 31% by Private holders, and is characterized by higher ROA, cash and lower leverage compared to other Groups. It also pursues income-decreasing strategy and has better Earnings quality along with Group 1. Private companies still show relatively higher growth and liquidity rates.

Table 5. Pearson correlation (rows) vs Spearman rank (columns)

	AGG	Abs(AGG)	state	state_shares	cfota	lev	roa
AGG	1.0000	0.0045	0.2043*	0.2154*	-0.5774*	-0.0857*	-0.0993*
abs(AGG)	-0.0950*	1.0000	-0.0693	-0.0267	0.0896*	0.0652	0.1729*
state	0.1853*	-0.0656	1.0000	0.9382*	-0.1597*	-0.0155	-0.1286*
state_shares	0.1941*	0.0091	0.7685*	1.0000	-0.1746*	-0.0434	-0.1380*
cfota	-0.5912*	0.1657*	-0.0828*	-0.1177*	1.0000	-0.2086*	0.6229*
lev	-0.1240*	0.0881*	-0.0492	-0.0571	-0.1314*	1.0000	-0.4913*
roa	-0.1771*	0.1880*	-0.0799*	-0.0823*	0.4883*	-0.3466*	1.0000

\*at 10% significance level

A Spearman rank correlation describes the monotonic relationship between 2 variables. It is useful for nonnormally distributed continuous data, can be used for ordinal data, and is relatively robust to outliers. While the Pearson product-moment correlation coefficient is a measure of the strength and direction of association and requires data to be continuous, normal, and linear without significant outliers. Since we failed to meet normality assumption based on Doornik-Hansen multivariate normality test, the Spearman rank correlation is preferred. The Spearman approach can often be useful for nonnormal data, as it can increase power while maintaining a low Type I error rate ((Fowler, 1987); (Zimmerman & Zumbo, 1993)) Red-colored numbers are differences between correlation methods

Note – authors' calculation using Stata15.1 tool

Positive association between State ownership and Earnings quality (AGG) according to Spearman rank reconfirms that Private companies prefer income-decreasing EM while State companies, mainly Group 1 and Group 3, use income-increasing EM. There is no relation between Earnings quality (abs(AGG)) and State ownership which is explained by U-shaped nonlinear association with higher Earnings quality in Group 2 partial SOE (Table 5).

### Discussions

Based on the results of Spearman rank correlation analysis, we accept/reject hypotheses set before.

H1.1: We accept hypothesis (State ownership is associated/correlated with Earnings quality). Both ownership measures (+state and +state\_shares) are positively related to Earnings quality measure (AGG). This implies different income strategies used by SOE and POE.

H1.2: We accept hypothesis (Cash flow is associated/correlated with Earnings quality). Both Earnings quality measures (-AGG and +abs(AGG)) are related to cash flow measure (cfota). We conclude that highest cash flow is generated at cost of low Earnings quality. Plus, income-decreasing strategies generate more cash.

H1.3: Same logic as with cash flow. Highest ROA comes at cost of Earnings quality. We accept.

H1.4: We accept hypothesis (Leverage is associated/correlated with Earnings quality). Income-decreasing strategies incur more leverage.

Table 6. Spearman rank (for H1.5 and H1.6)

	AGG	Abs(AGG)
AGG	1.0000	
abs(AGG)	-0.0950*	1.0000
Growth		0.1445*
liq	0.1521*	

\*at 10% significance level

Note – authors' calculation using Stata15.1 tool

H1.5: We accept hypothesis (Growth is associated/correlated with Earnings quality). Very low growth and very high growth associate with low Earnings quality (Table 6).

H1.6: We accept hypothesis (Liquidity is associated/correlated with Earnings quality). Income-increasing strategies have better liquidity (Table 6).

Referring back to Table 4 above, we accept/reject hypotheses H2-H7 set in the literature review.

H2: We accept hypothesis in full (Partially state-owned companies exhibit higher Earnings quality compared to SOE/POE), because Earnings quality measure (abs(AGG) in Group 1 (0.11) and Group 2 (0.12) is lower to those of Group 0 POE (0.15) and Group 3 SOE (0.16).

H3: We accept hypothesis partially (Partially state-owned companies exhibit higher cash flow compared to SOE/POE), because cash flow measure (cfota) in Group 1 (0.12) is lower to that of Group 0 POE (0.14). Group 2 has the highest value (0.17).

H4: We accept hypothesis partially (Partially state-owned companies exhibit higher profitability compared to SOE/POE), because profitability measure (roa) in Group 1 (0.08) is lower to that of Group 0 POE (0.12). Group 2 has the highest value (0.16).

H5: We accept hypothesis partially (Partially state-owned companies exhibit lower leverage compared to SOE/POE), because leverage measure (lev) in Group 1 (0.65) has highest, whereas Group 2 the lowest value (0.39).

H6: We reject hypothesis in full (Partially state-owned companies exhibit higher growth compared to SOE/POE), because partially owned SOE have lowest growth rates (0.13 and 0.12) relative to SOE and POE, (0.53 and 0.18) respectively.

H7: We accept hypothesis partially (Partially state-owned companies exhibit higher liquidity compared to SOE/POE). Group 0 POE shows the largest liquidity (2.05) while Group 3 SOE exhibits the lowest (1.62).

### **Conclusions**

#### **Highlights:**

To conclude from investment perspective, partially state-owned enterprises, particularly Group 2 (50-99%) become ideally preferred investment strategy based on criteria such as Earnings quality risk, cash generation, profitability and leverage-based risk. To remind analysis based on Table 2, private companies are relatively more profitable, generate higher operating cash flow, show better growth in sales and are even more liquid during 2009-2021 timeline. Plus negative mean value for Earnings quality (AGG) in private companies indicates that POE follow income-decreasing strategy. When we separate 100% SOE from the pool, we observe how partially state-owned companies outperform private not only in terms of Earnings quality but other vital criteria as well. The National IPO/SPO process in Kazakhstan turns SOE into partial SOE and improves their key indicators.

#### **Contributions and limitations:**

Study is the first to analyze EM within the National IPO/SPO framework and the first to relate Earnings quality with structure ownership in Kazakhstan. Practically, our findings might be useful for potential investors in decision-making to choose where to invest in: private, 100% state or hybrid/partial state ownership structures.

Due to issues with manual data collection and results generalization based on relatively small KASE population, we admit some limitations we encounter during research. Research literature on Kazakhstani data is still scarce but expanding from year to year.

#### **Future research:**

Among the findings to mention based on the correlation analysis we state that there is no relation between Earnings quality and State ownership which might be explained by U-shaped nonlinear association with higher Earnings quality. This cause-effect relationship is expected to be tested using regression analysis. (Ding et al., 2007) already found that the relationship between EM measures and ownership structures exhibits a statistically significant non-linear, inverted U-shape pattern known as the “entrenchment versus alignment” effect.

(Gong & Choi, 2021) investigated the effect of State ownership on Accounting quality. It turned out that positive relationship between State ownership and Earnings management has weakened in recent years, implying the mixed-ownership reform to be effective. Thus, we recommend to conduct an event study and evaluate the impact of Covid-19 on dynamics of EM strategies pre- and post- year 2020.

## References

- Brennan, N. M. (2021). Connecting earnings management to the real World: What happens in the black box of the boardroom? *British Accounting Review*, 53(6), 101036. <https://doi.org/10.1016/j.bar.2021.101036>.
- Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and accrual based earnings management in the pre and post Sarbanes Oxley periods. *The accounting review*, 83(3), 757-787.
- Ding, Y., Zhang, H., & Zhang, J. (2007). Private vs state ownership and earnings management: Evidence from Chinese listed companies. *Corporate Governance: An International Review*, 15(2), 223–238. <https://doi.org/10.1111/j.1467-8683.2007.00556.x>.
- Fowler, R. L. (1987). Power and Robustness in Product-Moment Correlation. *Applied Psychological Measurement*, 11(4), 419–428. <https://doi.org/10.1177/014662168701100407>.
- Gong, Y., & Choi, S.U. (2021). State ownership and accounting quality: Evidence from state-owned enterprises in China. *Sustainability (Switzerland)*, 13(15). <https://doi.org/10.3390/su13158659>.
- Healy, P., & Wahlen, J. (1999). A Review of the Earnings Management Literature and Its Implications for Standard Setting. *Accounting Horizons*, 13(4), 365–383. <https://doi.org/10.2308/acch.1999.13.4.365>.
- Jones, J. J. (1991). Earnings Management During Import Relief Investigations. *Journal of Accounting Research*, 29(2), 193. <https://doi.org/10.2307/2491047>.
- Kasznik, R. (1999). On the Association between Voluntary Disclosure and Earnings Management. *Journal of Accounting Research*, 37(1), 57. <https://doi.org/10.2307/2491396>.
- Lu, S., Wu, P., Gao, L., & Gifford, R. (2023). Are State-Owned Enterprises Equally Reliable Information Suppliers? An Examination of the Impacts of State Ownership on Earnings Management Strategies of Chinese Enterprises. *Mathematics*, 11(4). <https://doi.org/10.3390/math11040814>.
- Orazalin, N. (2020). Board gender diversity, corporate governance, and earnings management: Evidence from an emerging market. *Gender in Management*, 35(1), 37–60. <https://doi.org/10.1108/GM-03-2018-0027>.
- Parfet, W. U. (2000). Accounting subjectivity and earnings management: A preparer perspective. *Accounting Horizons*, 14(4), 481–488. <https://doi.org/10.2308/acch.2000.14.4.481>.
- Pramusti, W. C., Nuraina, E., & Yusdita, E. E. (2022). Why State-Owned Enterprises Often Do Earnings Management? *AKRUAL: Jurnal Akuntansi*, 14(1), 106–121. <https://doi.org/10.26740/jaj.v14n1.p106-121>.
- Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, 42(3), 335–370. <https://doi.org/10.1016/j.jacceco.2006.01.002>.
- Zang, A.Y. (2012). Evidence on the trade-off between real activities manipulation and accrual-based earnings management. *Accounting Review*, 87(2), 675–703. <https://doi.org/10.2308/acch-10196>.
- Zimmerman, D. W., & Zumbo, B. D. (1993). Rank transformations and the power of the Student t test and Welch t' test for non-normal populations with unequal variances. *Canadian Journal of Experimental Psychology / Revue Canadienne de Psychologie Expérimentale*, 47(3), 523–539. <https://doi.org/10.1037/h0078850>.

## A.A. Наурузбаев, М.Ж. Берниязова

### Орталық Азиядағы қаржылық деректердің сапасына «Халықтық IPO» әсері

#### Аңдатпа:

**Мақсаты:** Зерттеудің мақсаты — KASE қор биржасында тіркелген компаниялардың қаржылық деректерінің сапасына «Халықтық IPO/SPO» бағдарламасының әсерін бағалау және инвесторлар қауымдастығына ұсыныстар беру.

**Әдісі:** KASE қор биржасының іріктеме құрамына қаржы институттары мен инвестициялық холдингтерді қоспағанда, түрлі салалардан 52 жергілікті компания, 26 мемлекеттік және 26 жеке компаниялар кірді. 2009 жылдан 2021 жылға дейінгі талданған кезең 13 жылды қамтуға және 572 теңгерімсіз панельдік бақылауды алуға мүмкіндік берді. Деректер сапасын бағалау үшін біз 1) Нақты қызмет әдісі негізінде деректер манипуляциясын есептеу үшін 2) жиынтық модельмен (Roychowdhury, 2006) бірлесіп есептеу әдісі негізінде деректер манипуляциясын есептеу үшін ақша ағындарының моделін (Kasznik, 1999) ұстанамыз.

**Қорытынды:** «Халықтық IPO/SPO» бағдарламасы мемлекеттік кәсіпорындарды ішінара жекешелендіруге және олардың негізгі инвестициялық көрсеткіштерін жақсартуға мүмкіндік беретіні анықталды.

**Тұжырымдама:** Гибридті меншік құрылымы бар мұндай компаниялар жеке компаниялардан асып түседі және қаржылық деректердің сапасына, қолма-қол ақшаны өндіруге, кіріске және қаржылық ақпараттарға негізделген таңдаулы инвестициялық стратегияға айналады. Теориялық тұрғыдан алғанда, бұл зерттеу деректердің манипуляциясын «Халықтық IPO» тұрғысынан талдайтын бірінші зерттеу және Қазақстан Республикасы компанияларының мысалында қаржылық деректердің сапасын меншік құрылымымен байланыстыратын бірінші зерттеу. Іс жүзінде нәтижелер мен талқылау KASE-де тіркелген компаниялардың инвесторларына инвестициялық шешімдер қабылдау кезінде пайдалы.

**Кілт сөздер:** қаржы деректерінің сапасы, меншік құрылымы, деректерді манипуляциялау, Қазақстан Республикасы, «Халықтық IPO/SPO», KASE биржасы.



А.А. Наурузбаев, М.Ж. Берниязова

### Влияние Народного IPO на качество финансовых данных в Центральной Азии

**Аннотация:**

**Цель:** Целью исследования является оценка влияния программы «Народное IPO/SPO» на качество финансовых данных компаний, котирующихся на фондовой бирже KASE, и предоставление рекомендаций инвесторскому сообществу.

**Методы:** В состав выборки фондовой биржи KASE вошли 52 местные компании: 26 государственных и 26 частных, из различных отраслей, за исключением финансовых институтов и инвестиционных холдингов. Анализируемый период (2009–2021) позволил охватить 13 лет и получить 572 несбалансированных панельных наблюдения. Для оценки качества данных мы исследовали: 1) модели денежных потоков (Kasznik, 1999) для расчета манипуляций данных на основе метода начислений совместно с 2) совокупной моделью (Roychowdhury, 2006) для расчета манипуляций данных на основе метода реальной деятельности.

**Результаты:** Мы обнаружили, что Программа «Народное IPO/SPO» позволяет провести частичную приватизацию государственных предприятий и улучшить их ключевые инвестиционные показатели.

**Выводы:** Такие компании с гибридной структурой собственности превосходят частные компании и становятся предпочтительной инвестиционной стратегией, основанной на качестве финансовых данных, генерировании денежных средств, прибыльности и финансовом рычаге. Теоретически это исследование является первым, в котором анализируются манипуляции данных с точки зрения Народного IPO, и первым, которое связывает качество финансовых данных со структурой собственности на примере компаний Республики Казахстан. Практически результаты и обсуждения полезны инвесторам компаний, зарегистрированных на KASE, при принятии инвестиционных решений.

**Ключевые слова:** качество финансовых данных, структура собственности, манипуляции данных, Республика Казахстан, программа «Народное IPO/SPO», биржа KASE.