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EARNINGS QUALITY AND NATIONAL IPO: AEM PRACTICES OF CENTRAL ASIA

Abstract

Once the key insights of corporate finance quality in Kazakhstani listed state SOEs are obtained, it is time to turn to separate strategies of corporate reporting manipulations. The purpose of this research is to look at accrual-based AEM strategies that adjust real activity REM practices at year-end. We follow Kasznik cash flow model for accrual-based earnings management as a best practice methodology and apply it to 572 unbalanced panel firm-year non-financial observations over 13-year time horizon. To strengthen our analysis, we compare main results with another popular measurement of accrual-based Earnings management based on the Shivakumar 1996 model. We also winsorised key investment indicators to reduce the impact of outliers on the main results. The results answer major questions: 1) what AEM strategies state SOEs prefer; 2) how accrual-based manipulations affect the choice of investment indicators; and 3) whether partially-privatized state SOEs under/over perform private POEs in Kazakhstan. In terms of theoretical and practical implications, our research findings could be useful to analysts of various strategies in the AEM/REM dimensions, academic scientists and advocates of partial privatization of state companies. We assure that theoretical gaps of corporate data manipulations in Central Asian context are to be reduced with increasing number of publications in the field of AEM practices.

Key words: Earnings quality, ownership structure, earnings management, Kazakhstan, National IPO/SPO, KASE.

Introduction

Earnings quality volatility is regarded one of important investment indicators that impact sustainability of companies. Preliminary analysis of Earnings quality in KASE-listed companies with different state control comes to conclusion that through-IPO partially privatized SOEs under 50–99% government holding become the best investment strategy based on criteria such as corporate earnings stability, cash generation, profitability and leverage risk.

Total Earnings quality composes of two manipulation practices, REM through real activities and AEM by means of accounting accruals. Most studies have been investigating AEM practices as a major Earnings management instrument in various academic papers though REM practices with direct cash effects have detrimental nature compared to accruals-reversals game in AEM practices. Accruals are extensively used and often act as a compensation instrument for cash-affecting REM distortions undertaken during operational period and before financial reporting adjustments. Purpose of this research is to look at accrual-based AEM strategies that adjust real activity REM practices at year-end, particularly in through-IPO partially privatized SOEs.

During our analysis we appeal to Brennan for earnings management academic definitions, explanations, interpretations [1]. Although some scholars insist on the existence of both «Good and Bad» earnings management, we emphasize on the opportunistic use of the financial reporting strategy that usually leads to the accounting manipulations with reference to Healy & Wahlen [2, 3].

«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».

To deal with research problem of AEM practices' effects in privatized SOEs we raise the following research questions (or «RQ»). Research objective is to assess the direct and separate impact of AEM strategies on Earnings quality in KASE-listed companies and provide recommendations to investors and analysts.

RQ1: Do KASE-listed companies engage into AEM practices?

RQ2: Do AEM-practicing companies differ in ownership structure?

RQ3: What are key investment indicators in AEM-practicing companies?

Findings might be useful to analysts of various AEM strategies. Despite data collection and scarcity issues, research literature keeps expanding little by little. We believe that theoretical gaps of corporate distortions in Central Asian context are being reduced each year as more publications become available to researchers.

The rest of the paper is organized as follows. In the methodology section we describe KASE population and present earnings management models utilized. In the literature review we develop the research hypotheses. Then, we share readers with our empirical findings in Results part. Finally, we conclude.

Materials and methods

We collect data from annual yearly reports or audited financial reports whichever is available on the KASE electronic site and apply a 4-eyes review procedure to minimize errors.

Sample population attributes are described in table 1 below. We have 52 local SOE and POE companies across different industries excluding finance-related institutions totaling 572 unbalanced panel firm-year observations over 2009–2021 period. 46% and 54% of firm-year observations are SOEs and POEs respectively with 29% government involvement or control on average.

Table 1 – Descriptive statistics

variable	Mean	SD	IQ range	Max	P 50	Min
State dummy	.4667	.4993	1	1	0	0
State share avg	.2929	.4078	.5440	1	0	0
AEM practices	.0642	.0529	.0846	.2815	.0501	.0000
Roa	.1047	.2618	.1437	4.4579	.0605	-1.0537
CFOTA (cash)	.1300	.2074	.1531	1.0638	.1035	-1.5238
Lev	.6000	.4197	.3579	3.2685	.5120	.0586
Growth	.3578	3.0916	.3104	71.7272	.1166	-1
Liq	1.8774	1.9339	1.474	14.4545	1.3202	.0144
Size	4.3441	1.8607	2.486	9.5924	4.0943	.1823
Note: Authors' calculation using Stata15.1 tool.						

To verify our raw data is stationary we conduct Fisher-type unit root tests designed for unbalanced panel data. According to the test, input data don't contain unit root with p-values = 0 at 1% significance level.

Testing for normality reveals high kurtosis indicating potential outlier presence. Following the rule of thumb, we apply winsorising major variables to deal with high kurtosis. Winsorising at 5% reaches kurtosis around 3–3.5 and skewness between -0.5 and 0.5 indicating that the distribution for residuals output fairly symmetrical.

To measure AEM or residuals output, we follow Kasznik cash flow, variation of Jones model [4, 5]:

$$TA_{i,} / A_{i,t-1} = \alpha_0 / A_{i,t-1} + \alpha_1 (\Delta Rev_{i,t}) / A_{i,t-1} + \alpha_2 (PPE_{i,}) / A_{i,-1} + \alpha_3 (\Delta CFO_{i,}) / A_{i,-1} + \mu, \quad (1)$$

where,

TA (total accruals) – (EBIX-CFO) per 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
μ - AEM or residuals output.

Kasznik model is a popular widely-used Jones 1991 model variation along with Kothari performance-based 2005 model and Shivakumar cash flow 1996 model besides classical Jones 1991 and Modified Jones 1995 models.

Kasznik model exhibits relatively higher ranking based on F-statistics, adjusted R^2, individual model variable significance, yearly cross-sectional and industry-based time-series regression significance. Based on the results of Hausman test (F-test, LM-test), the presence of Autocorrelation, Heteroskedasticity, Cross-sectional dependence issues, and due to insufficient number of industry-year observations instead of cross-sectional regression we apply Random-effects GLS Regression with Driscoll-Kraay standard errors.

For robustness analysis to strengthen our results, Shivakumar 1996 cash flow model is utilized:

$$TA_{i,} / A_{i,t-1} = \alpha_0 / A_{i,t-1} + \alpha_1 (\Delta Rev_{i,t}) / A_{i,t-1} + \alpha_2 (PPE_{i,}) / A_{i,-1} + \alpha_3 (CFO_{i,}) / A_{i,-1} + \mu, \quad (2)$$

Based on the results of Hausman test (F-test, LM-test) and the presence of Autocorrelation, Heteroskedasticity, Cross-sectional dependence issues, we apply Fixed-effects (within companies and with time effect) Regression with Driscoll-Kraay standard errors.

State ownership is expressed as % of total share owned by Government. For our analysis, we split KASE-listed companies into sub-groups depending on government control. Key investment indicators are measured as follows: CFOTA – net operating cash flow scaled by total assets, ROA – NI / Assets, Leverage (or lev) – Liabilities / Assets, Growth – Change % (Sales), Liquidity (or liq) – Current ratio, and Size – natural logarithm Ln (Assets). Next we discuss literature review and main provisions.

Main provisions

Transparent stable Earnings quality of SOEs is a key to long-term sustainability of companies and health of the Economy. The National or Peoples' IPO/SPO of key largest state companies under management of Samruk-Kazyna State Fund started in 2012 as a part of large state privatization program. We expect partial privatization of key large state-owned enterprises in various sectors of the economy of Kazakhstan through IPO on KASE/AIX Stock Exchanges. Earnings quality measures in academia, a few of which we discussed in Methods part, should be integrated into the National IPO/ SPO process to attract citizens and serve as an additional comfort to investors. Today, shares of listed companies compose less than 5% among investment instruments. People still trust not enough and prefer deposits and real estate as major investment tool.

Placing shares of the key largest companies on national stock exchanges through People's IPO should help diversify risk, reduce burden on Samruk-Kazyna State Fund, increase efficiency and effectiveness of SOEs, and continue raising investment culture among citizens. Willingness of people to become owners should be dependent on dividends and sustainability of enterprises which can be determined using several market and academic instruments so that investors could evaluate quality of corporate information in yearly reports. In the message to the People dated September 1, 2020,

President of the Republic of Kazakhstan Mr. Tokayev K.K. emphasized on fair competition and new privatization plan of fully state-owned enterprises (or «SOE») including continuation of People's IPO Program of large companies under control by Samruk-Kazyna State Fund. The National IPO/SPO program started more than 10 years ago with several local IPO launches: KazTransOil joint-stock company (hereinafter JSC) and Kcell JSC IPO in 2012, KEGOC JSC IPO in 2014 and SPO in 2023, Kazatomprom JSC IPO in 2018 and SPO in 2019-2020, KazMunayGas JSC IPO in 2022, and Air Astana JSC IPO in 2024. According to the development plan for 2023–2032, Samruk-Kazyna State Fund is going to launch another few major to meet KPI of less than 5% own share in the economy.

Last but not the least: recent IPO of Air Astana JSC: In February 15 2024, initial public offering of Air Astana JSC has become an important milestone in the development of the stock market in Kazakhstan, particularly this is the first IPO held simultaneously on 3 stock exchanges: Kazakhstan Stock Exchange (KASE), Astana International Exchange (AIX) and London Stock Exchange. The launch of the trades was held the AIX office in Astana, and the KASE office in Almaty (zakon.kz).

Air Astana JSC is the largest airline group in Central Asia and the Caucasus by revenue and fleet size, announces completion of its IPO in amount of USD 370 mln, the most substantial privatization in Kazakhstan to date with majority participation (58%) by local investors. The share of Samruk-Kazyna State Fund is reduced from 51% to 41%. Total demand on the local market exceeded USD 483 mln (kase.kz).

Interim results during last 3 years show growing interest among retail investors or ordinary people. Since 2021 citizens have opened more than 3.7 mln broker accounts against 0.2 mln at the beginning.

In the next section, we discuss examples of mixed-ownership reforms. We shall investigate Earnings quality in different ownership structures so that our results could support the National IPO/SPO and Kazakhstani economic reforms.

Literature review

Classic papers on Earnings management strategies – In well-known paper on REM strategies, Roychowdhury finds evidence consistent with managers manipulating operational real activities to avoid reporting annual losses suggesting price discounts to temporarily increase sales, overproduction to lower cost of goods sold, and reduction of discretionary expenditures to improve earnings margins. Roychowdhury believes that managers manipulate not only abnormal accruals and real activities through investment activities, but also engage into operational real activities [6]. Later Cohen and Zang discuss substitution and relative costs relating REM and AEM strategies together [7, 8]. Ding investigates the role played by a firm's ownership structure in earnings management in China and finds that the relationship might exhibit a statistically significant non-linear, inverted U-shape behavior named as the «entrenchment versus alignment» effect [9].

Using research engines (Ebscohost, Proquest, Emerald, Wiley, Jstor, Mendeley etc,) we list 18 peer-reviewed contemporaneous articles published in high-quality Scopus-indexed journals. Articles discuss AEM practices (6 jointly with REM strategies) mostly covering China on the basis of popular Jones and Modified Jones models. For example, Lu using 11,905 A-share listed Chinese firm-year observations on the Shanghai and Shenzhen Stock Exchanges, investigated effects of State ownership on management's decision to select REM/AEM earnings management strategies. Authors found that state-owned enterprises tend to favor REM over AEM earnings management strategies more than private [10]. However, SOEs could have different level of government engagement, and privatized SOEs might look more similar to POEs instead.

Among other studies on Earnings quality and ownership structure reforms we'd like to mention Pramusti in Indonesian market and Gong & Choi in Chinese one. In Indonesia Pramusti analyzes state-owned enterprises listed on the IDX Stock Exchange during 2015–2020 period. The findings reveal that Government ownership has no effect on Earnings management as well as audit quality has no effect on accrual-based Earnings management in state enterprises [11]. Absence of AEM practices doesn't necessarily mean that companies don't engage into REM manipulations.

In China Gong and Choi investigate the effect of State ownership on Accounting quality, using the samples of state-owned enterprises (8,115 observations) listed in the A-share during 2009–2017 period, authors conclude that there is a significantly positive relationship between State ownership

and Earnings management and it has been declining which refers to ineffective mixed-ownership reform [12]. However, such tendency might indicate the trade-off between AEM and REM strategies and need further exploration.

Recent paper by Orazalin discusses the existence of Earnings management in Kazakhstan and states that companies with larger boards adopt a more restrained approach to earnings management [13]. Based on the scarce local literature review we hypothesize association between ownership structure and Earnings quality in the form of AEM practices in the context of Kazakhstan as a key player of Central Asia.

Table 2 – Summary of hypotheses

Hypothesis	Description	Expected	Actual
H1	KASE-listed companies engage into AEM practices	+	
H2	State ownership is correlated with AEM practices	-	
H3	Partially privatized SOEs differ from other SOEs in AEM use	+	
H4	High and low AEM practices are different in key investment indicators	+ or -	
Note: Authors' calculation using Stata15.1 tool.			

Results and discussion

Following our methodology we measure AEM practices based on Kasznik 1995 cash flow model (AEM_KS), Kothari 2005 performance-based model (AEM_KT) and Shivakumar 1996 cash flow model (AEM_SV). AEM+/- values determine income-increasing (+) and income-decreasing (-) strategies. AEM_KS is an absolute value of accrual-based manipulations according to Kasznik model (table 3). Other two models are to be used for robustness analysis. State ownership is expressed as % of total share owned by Government and divided into sub-groups depending on government control. Out of 572 unbalanced panel firm-years, 54% are POEs and 46% - SOEs with 62% state control on average. 50–99% SOEs constitutes 25% of the total SOEs group.

Table 3 – Characteristics of SOE vs POE (by mean values)

POE/SOE	AEM+/-	AEM_KS	ROA	CFO / TA	LEV	Growth	LIQ	SIZE
0%	-.0026	.0683	.1243	.1460	.6193	.5367	2.0576	3.4186
0-49%	.0000	.0596	.0834	.1299	.6513	.1376	1.7294	4.4032
50-99%	-.0076	.0457	.1608	.1782	.3942	.1296	1.6669	5.8298
100%	.0144	.0680	.0353	.0559	.6196	.1818	1.6220	6.0537
Total	.0004	.0642	.1047	.1300	.6000	.3578	1.8774	4.3441
POE 0%	-.0026	.0683	.1243	.1460	.6193	.5367	2.0576	3.4186
SOE 62%	.0038	.0596	.0824	.1116	.5779	.1535	1.6716	5.4013
Note: Authors' calculation using Stata15.1 tool.								

Past analysis found that privatized SOEs with 50–99% state control have a mixed ownership of 69% owned by State and 31% by Private holders, and are characterized by relatively higher ROA (0.16), cash generation (0.17), and lower leverage (0.39) compared to other SOEs and POEs. Overall SOEs prefer upward real manipulations; however, 50–99% SOEs as well as POEs on average have lowest real manipulations.

Concerning AEM strategies, income-decreasing practices are mostly preferred by POEs (-0.0026) whereas SOEs choose mainly income-increasing manipulations (0.0038). Absolute corporate distortions according to Kasznik model are relatively higher in POEs (0.0683) and 100% state control SOEs (0.0680) indicating a U-shape relation to ownership structure. Thus, we accept hypothesis H3 in full based on Kasznik model and conclude that partially privatized SOEs differ in AEM levels (0.0457 vs 0.0642 total mean).

To test hypothesis H1: «KASE-listed companies engage into AEM practices» and to statistically re-confirm hypothesis H3 above, T-student statistic is utilized for within-group and between-group comparisons. We apply one-sample t-test separately by group, period and industry and two-sample t-test with unequal variances for group comparison.

In table 4 below we display results of t-test. Means for each group of ownership structure, for each year during 2009–2021 and 4 industries (untabulated) appear to be statistically different from zero at 1% significance level. Total number of observations is cut to 520 due to lags in Kasznik model. T-statistics for total population mean (0.0642) is 27.64 at 1% significance. So we accept hypothesis H1 and conclude the presence of accruals manipulations in KASE-listed enterprises.

Mean difference in two-sample t-test for POE vs SOE comparison is statistically significant at 10% sig.level meaning SOEs prefer AEM practices to a lesser extent. To conclude, we fully accept both hypotheses H1 and H3.

To remind, 50–99% state control SOEs on average have lowest real manipulations plus AEM levels are relatively low too which makes overall earnings quality be highest.

Table 4 – T-statistics for AEM_KS

POE/SOE	Obs	mean	SD	t-stat	p-value
0%	272	.0683	.0547	20.57***	.0000
0-49%	93	.0596	.0513	11.20***	.0000
50-99%	58	.0457	.0411	8.47***	.0000
100%	97	.0680	.0536	12.49***	.0000
Total	520	.0642	.0529	27.64***	.0000
POE 0%	272	.0683	.0547	20.57***	.0000
SOE 62%	248	.0596	.0506	18.56***	.0000
Diff in means of POE vs SOE		.0086		1.87*	.0615
***at 1% significance level Note: Authors' calculation using Stata15.1 tool.					

Hypothesis H2 states «State ownership is correlated with AEM practices» and to test it we apply Spearman rank correlation analysis at 10% significance level (table 5). Spearman rank describes the monotonic association between 2 variables and is useful for nonnormally distributed continuous data and relatively robust to outliers. Since we failed to meet normality assumption due to high kurtosis, the Spearman rank correlation is preferred and can increase power while maintaining a low Type I error [14, 15].

Table 5 – Spearman rank correlation

	AEM+/-	AEM_KS	ROA	CFO /TA	LEV	Growth	LIQ
AEM practices		1.000					
ROA	.146*		1.000				
CFOTA (cash)	-.435*		.622*	1.000			
Lev	-.241*	.150*	-.491*	-.208*	1.000		
Growth			.196*	.129*	.072*	1.000	
Liq	.294*		. 349*	.115*	-.540*		1.000
Size		-.075*					
State dummy		-.084*					
State shares avg							
*at 10% significance level Note: Authors' calculation using Stata15.1 tool.							

Correlation between ownership structure variable (State dummy) and AEM_KS Kasznik-based absolute measure of distortions is at negative 8.4% rate. Absence of association with strategy direction measure (AEM+/-) implies potential U-shaped relation which re-confirms hypothesis H3 regarding

the differences in AEM practices by SOEs. To remind, absolute corporate distortions according to Kasznik model are relatively higher in POEs (0.0683) and 100% state control SOEs (0.0680). Looking at separate strategies, we note that cash generation and leverage levels are larger in companies with income-decreasing strategies whereas profitability and liquidity – in income-increasing ones. To sum up, we partially accept hypothesis H2 at 10% level of significance and assert that SOEs practice AEM strategies to a lesser extent compared to POEs which supports mean difference two-sample t-test in hypothesis H3 above.

Last important hypothesis H4 that allows splitting AEM strategies into high (income increasing) / low (income-decreasing) levels depending on extent of aggressiveness and analyzing relevant investment indicators is presented in table 6.

Table 6 – AEM strategies (by mean values)

High/Low	State %	AEM+/-	AEM_KS	ROA	CFO /TA	LEV	Growth	LIQ
Very low	42%	-.1047	.1047	.0737	.2429	.8752	.2073	1.3547
Low (<0)	50%	-.0228	.0228	.1288	.1580	.5237	.2031	1.6517
High (>0)	50%	.0197	.0197	.0934	.0894	.5068	.2095	1.7626
Very High	47%	.1093	.1093	.1391	.0513	.5115	.7470	2.8741
Total	47%	.0004	.0642	.1086	.1353	.6043	.3417	1.9110
Low	46%	-.0639	.0639	.1011	.2006	.7001	.2052	1.5026
High	49%	.0644	.0644	.1161	.0704	.5091	.4772	2.3163
Note: Authors' calculation using Stata15.1 tool.								

To remind, very high/low AEM values imply above average aggressive accruals manipulations. First, we split populations into High (>0) and Low (<0) groups according to income manipulation strategy. Next each group is divided into two equal sub-groups to identify firm-year observations with more aggressive manipulative behavior. The level of aggressiveness lowers from very high/ low sub-groups closer to zero.

In the past REM strategies analysis 59% of the companies that practice high upward REM strategies are SOEs whereas 71% that prefer low REM levels are POEs. In case with AEM practices, the distribution is more or less equal. 46% SOEs practice income-decreasing and 49% SOEs utilize income-increasing AEM strategies. Comparing high is low groups, we conclude that strategies do differ particularly in terms of cash generation, leverage, and growth. If an investor is interested in cash generation, one had better look at an income-decreasing aggressive AEM strategy though at cost of high leverage and low accruals-based earnings quality. Going through table 6 in details, we'd recommend considering not aggressive income-decreasing AEM companies with balanced investment indicators (ROA, cash and leverage) and better earnings quality though REM analysis should be taken into account before the decision-making. In sum, we partially accept H4 saying that AEM strategies do differ and impact investment indicators, though we admit that joint analysis of table 3 and table 6 required to get more thorough comprehension of SOEs with partial state control. In future research joint AEM/REM dimensions could bring light on the nature of strategies as compensating or complementing mechanism of manipulations.

Table 7 – Summary of hypotheses

Hypothesis	Description	Expected	Actual
H1	KASE-listed companies engage into AEM practices	+	Accept
H2	State ownership is correlated with AEM practices	-	Partially accept
H3	Partially privatized SOEs differ from other SOEs in AEM use	+	Accept
H4	High and low AEM practices are different in key investment indicators	+ or -	Partially accept
Note: Authors' calculation using Stata15.1 tool.			

Robustness analysis

To strengthen our analysis, we compare main results (AEM_KS vs AEM_SV)) with another popular measurement of accrual-based Earnings management based on the Shivakumar 1996 model (table 8). To compare and discuss key points Shivakumar model has over Kasznik model, we look at their regressions, main and separate time-series and cross-sectional (omitted but available upon request).

Our panel data has over 500 firm-year observations with 52 companies across 4 industries during 2009–2021 (13 years) period. Shivakumar has all 13 time-series and 4 cross-sectional significant whereas Kasznik loses insignificant 2017 time period and 2009 last year due to model specifics (1st difference in CFO variable). Shivakumar exhibit higher R-squared (0.39), larger data pool (572 firm-years) but loses in terms of individual variable significance (PPE variable). Which model has lower Standard Errors is hard to determine. To sum, we cannot state that certain model outperforms the other in all key criteria. Next, we compare two models in terms of AEM-based Earnings quality.

We re-tested hypotheses H1 – H3 using AEM_SV and received more pronounced results in favor of privatized SOEs. Correlation with ownership variables improved and mean differences in two-sample t-tests for POE vs SOE comparison became more statistically significant. So, we reached the same but more pronounced conclusions for our hypotheses in table 7.

Table 8 – Shivakumar (1996) vs Kasznik (1999) model comparison

variable / model	Kasznik	Shivakumar
Regression (Coef (S.E.)	RE GLS (Coef (Drisc/Kraay)	FE with Time (Coef Drisc/Kraay)
$1 / A_{i,t}-1$	.0830 (.0337)**	-.1479 (.0701)*
$(\Delta Rev_{i,t}) / A_{i,t}-1$	.0727 (.0246)**	.0507 (.0146)***
$(PPE_{i,}) / A_{i,}-1$	-.0002 (.0000)***	-.0001 (.0000)
$(\Delta CFO_{i,}) / A_{i,}-1$	-.2007 (.0295)***	
$(CFO_{i,}) / A_{i,}-1$		-.3366 (.0324)***
FE Time		YES
constant	-.0604 (.0114)***	-.0038 (.0077)
N obs	520	572
N groups	52	52
Prob > F	0.0000	0.0000
R-squared	0.20	0.39
* at 10% significance level ** at 5% significance level *** at 1% significance level Note: Authors' calculation using Stata15.1 tool.		

Kothari model exhibit weak separate time-series and cross-sectional regressions losing in total five, 4 year-wise and 1 industry-wise. Plus, main regression with random effects has relatively lower R-squired (0.04) and insignificant individual variables such as Change in Sales / Accounts receivables and ROA. In the future research, we plan to extend analysis and include comparisons of classical Jones and Modified Jones models plus other popular variations of Jones model. Some studies suggest construction of composite AEM variable applying weights to AEM results of various models.

Conclusion

Highlights: The National IPO/SPO of Kazakhstan, the economy leader in Central Asia, creates partially privatized enterprises and improves their key indicators. SOEs under 50–99% state control are a product of a large privatization economic reform held since 2012 year. Research objective aims at assessment of the impact of AEM strategies on Earnings quality in KASE-listed SOEs under various government control levels. Following best-practice methodology we measure and compare accruals-

based corporate distortions based on Kasznik 1995 cash flow model, Kothari 2005 performance-based model and Shivakumar 1996 cash flow model. Kothari model, though very well-known and effective in some studies, don't perform well in Kazakhstani case whereas Shivakumar model bring more pronounced results. Following research objective we hypothesize association between state ownership structure and AEM practices being part of overall Earnings quality strategies.

H1: KASE-listed companies engage into AEM practices;

H2: State ownership is correlated with AEM practices;

H3: Partially privatized SOEs differ from other SOEs in AEM use; and

H4: High and low AEM practices are different in key investment indicators.

Concerning AEM strategies, income-decreasing practices are mostly preferred by POEs whereas SOEs choose mainly income-increasing manipulations. Absolute corporate distortions according to Kasznik model are relatively higher in POEs and 100% state control SOEs indicating a U-shape relation to ownership structure.

Regarding extent of aggressiveness, we would consider unaggressive income-decreasing AEM companies with balanced investment indicators (ROA, cash and leverage) and better earnings quality.

Future research: REM analysis should be taken into account before investment decision-making. Some studies suggest construction of composite AEM variable applying weights to several models like Jones, Modified Jones etc. In future research, joint AEM/REM dimensions could bring light on the nature of strategies as compensating or complementing mechanism of manipulations. We suggest the following cube matrix framework for strategies' consideration with 3 dimensions: X-axis for REM, Y-axis for AEM, and vertical Z-axis for state ownership structure. For example for POEs and each SOEs we split data pool into combined overall strategies:

- Aggressive both AEM and REM,
- Unaggressive both AEM and REM,
- Aggressive AEM and unaggressive REM, and
- Aggressive REM and unaggressive AEM.

We also take into account directions. REM is upward, so we assume income-increasing AEM to complement REM whereas income-decreasing AEM to compensate.

Contributions and limitations: Findings might be useful to analysts of various AEM strategies. Due to issues with manual data collection, we admit some limitations we encounter during research. Research literature on Kazakhstani data is still scarce but expanding from year to year. We truly believe that theoretical gaps of corporate distortions in Central Asian context are being reduced each year as more publications become available to researchers.

REFERENCES

1 Brennan N.M. Connecting earnings management to the real World: What happens in the black box of the boardroom? // British Accounting Review. 2021, no. 53(6).

2 Parfet W.U. Accounting subjectivity and earnings management: A preparer perspective // Accounting Horizons. 2000, no. 14(4), pp. 481–488.

3 Healy P., Wahlen J. A Review of the Earnings Management Literature and Its Implications for Standard Setting // Accounting Horizons. 1999, no. 13(4), pp. 365–383.

4 Kasznik R. On the Association between Voluntary Disclosure and Earnings Management // Journal of Accounting Research. 1999, no. 37(1), 57 p.

5 Jones J.J. Earnings Management During Import Relief Investigations // Journal of Accounting Research. 1991, no. 29(2), 193 p.

6 Roychowdhury S. Earnings management through real activities manipulation // Journal of Accounting and Economics. 2006, no. 42(3), pp. 335–370.

7 Cohen D.A., Dey A., Lys T.Z. Real and accrual- based earnings management in the pre- and post-Sarbanes- Oxley periods // The accounting review. 2008, no. 83(3), pp. 757–787.

8 Zang A.Y. Evidence on the trade-off between real activities manipulation and accrual-based earnings management // Accounting Review. 2012, no. 87(2), pp. 675–703.

9 Ding Y., Zhang H., Zhang J. Private vs state ownership and earnings management: Evidence from Chinese listed companies // Corporate Governance: An International Review. 2007, no. 15(2), pp. 223–238.

10 Lu S., Wu P., Gao L., Gifford R. Are State-Owned Enterprises Equally Reliable Information Suppliers? // An Examination of the Impacts of State Ownership on Earnings Management Strategies of Chinese Enterprises. Mathematics. 2023, no. 11(4).

11 Pramusti W.C., Nuraina E., Yusdita E.E. Why State-Owned Enterprises Often Do Earnings Management? // AKRUAL: Journal Akuntansi. 2022. no. 14(1). pp. 106–121.

12 Gong Y., Choi S.U. State ownership and accounting quality: Evidence from state-owned enterprises in China // Sustainability (Switzerland). 2021, no. 13(15).

13 Orazalin N. Board gender diversity, corporate governance, and earnings management: Evidence from an emerging market. Gender in Management. 2020, no. 35(1). pp. 37–60.

14 Fowler R.L. Power and Robustness in Product-Moment Correlation // Applied Psychological Measurement. 1987, no. 11(4), pp. 419–428.

15 Zimmerman D.W., Zumbo B.D. 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. 1993, no. 47(3), pp. 523–539.

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КОРПОРАТИВТІК ҚАРЖЫ МЕН ХАЛЫҚТЫҚ IPO САПАСЫ: ОРТАЛЫҚ АЗИЯДА АЕМ-ДІ ҚОЛДАНУ ТӘЖІРИБЕСІ

Аңдатпа

Листингке енгізілген Қазақстандық мемлекеттік компанияларда (SOE) корпоративтік қаржылық деректердің сапасы туралы негізгі нәтижелерді алғаннан кейін, корпоративтік есептілікті манипуляциялаудың жекелеген стратегияларын талдауға көшу қажет. Бұл зерттеудің мақсаты – есептеуге негізделген манипуляция стратегияларын (АЕМ) қарастыру, олар өз кезегінде қаржы жылының соңында нақты қызмет құралдары (REM) бойынша манипуляцияларды түзетеді. Ақша ағындарының моделі (Kasznik, 1999) саладағы ең жақсы әдістемелердің бірі ретінде есептеу әдісі негізінде деректерді манипуляциялауды есептеу үшін пайдаланылды және 13 жылдық кезеңдегі 572 теңгерімсіз панельдік қаржылық емес бақылауларға қолданылды. Талдауды күшейту үшін біз негізгі нәтижелерді басқа танымал есептеу моделімен салыстырамыз (Shivakumar, 1996). Біз сондай-ақ статистикалық шығындардың негізгі нәтижелерге әсерін азайту үшін негізгі инвестициялық көрсеткіштерді винсоризациялалдық. Нәтижелер келесі сұрақтарға жауап береді: 1) Мемлекеттік SOE қандай АЕМ стратегияларын қолдайды; 2) есептеу манипуляциясы инвестиция көрсеткіштерін таңдауға қалай әсер етеді; 3) ішінара жекешелендірілген мемлекеттік SOE Қазақстандағы жеке компаниялармен (POE) салыстырғанда тиімді ме? Теориялық және практикалық ұсыныстар тұрғысынан біздің зерттеу нәтижелеріміз АЕМ/REM салаларындағы әртүрлі стратегияларды талдаушыларға, академиялық ортадағы ғалымдарға және мемлекеттік компанияларды ішінара жекешелендіруді жақтаушыларға пайдалы болуы мүмкін. Біз Орталық Азия контексіндегі корпоративтік деректерді манипуляциялау саласындағы теориялық олқылықтар АЕМ практикасы саласындағы басылымдар саны артқан сайын азаятынына сенімдіміз.

Тірек сөздер: қаржылық деректер, меншік құрылымы, деректерді манипуляциялау, компаниялар, ақша ағындарының моделі, инвестициялық көрсеткіштер, корпоративтік есеп беру.

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КАЧЕСТВО КОРПОРАТИВНЫХ ФИНАНСОВ И НАРОДНОГО IPO: ОПЫТ ПРИМЕНЕНИЯ AEM В ЦЕНТРАЛЬНОЙ АЗИИ

Аннотация

После получения ключевых результатов о качестве корпоративных финансовых данных в казахстанских государственных компаниях (SOE), включенных в листинг, необходимо перейти к анализу отдельных стратегий манипулирования корпоративной отчетностью. Целью данного исследования является рассмотрение стратегий манипулирования (AEM), основанных на начислении, которые, в свою очередь, корректируют манипуляции по средствам реальной деятельности (REM) в конце финансового года. Использована модель денежных потоков (Kasznik, 1999) для расчета манипуляций данных на основе метода начислений как одна из лучших методологий в области и применена к 572 несбалансированным панельным нефинансовым наблюдениям за 13-летний период. Чтобы усилить анализ, авторы сравнивают основные результаты с другой популярной моделью по методу начисления (Shivakumar, 1996). Также провели винксоризацию ключевых инвестиционных показателей, чтобы уменьшить влияние статистических выбросов на основные результаты. Полученные результаты отвечают на следующие вопросы: 1) какие стратегии AEM предпочитают государственные SOE; 2) как манипуляции с начислениями влияют на выбор инвестиционных показателей; 3) являются ли частично приватизированные государственные SOE эффективными в сравнении с частными компаниями (POE) в Казахстане. С точки зрения теоретических и практических рекомендаций результаты исследования могут быть полезны аналитикам различных стратегий в областях AEM/REM, ученым в академической среде и сторонникам частичной приватизации государственных компаний. Авторы уверены, что теоретические пробелы в области манипулирования корпоративными данными в центральноазиатском контексте будут сокращаться по мере увеличения числа публикаций в области практик AEM.

Ключевые слова: финансовые данные, структура собственности, манипуляции данных, компании, модель денежных потоков, инвестиционные показатели, корпоративная отчетность.