



## **Return on Assets and Financial Soundness Analysis: Case Study of Grain Industry Companies in Uzbekistan**

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**Abstract:** Ensuring financial stability and soundness of companies operating in a particular industry depends on the several internal and external factors, which can be classified as firm and macro levels. According to classical business finance theories, return on assets (ROA) are thought to be the most effective instrument of measuring monitoring the financial status of companies. In most literature, revenues from sales, total operating cost and asset structure of a company plays an important role in shaping an acceptable ROA indicator. In this paper, impact level of these factors on ROA was examined in case of three grain processing companies in Uzbekistan. Conducted OLS test showed that total operating cost and asset structure had negative influence on ROA, while revenues from sale supported the financial stability of the companies.

**Keywords:** Return on assets, Financial soundness, Grain industry, Uzbekistan

### **1. Introduction**

Financial stability of a company is measured with wide range of financial indicators that evaluate the particular aspects of company's finance. Capital, profit, income, cost, tax and turnover indicators reflect the overall financial profile and play central role in strategic management and decision-making. In a wider horizon, financial indicators are classified as liquidity, operational, profitability, debt and market indicators. However, overall profitability indicator has already become of out of interest, as it cannot provide the real scene of company's financial stance. Shareholders' focus mainly concentrated on the indicators how company is working for covering their investments. Especially return on assets gains inherent importance in investorevaluation.

The long-term trajectory of ROA is the best financial scorecard of a company's health and an indicator of how its decisions play out. Understanding the trajectory provides a foundation for taking a longer-term perspective that can help companies shape winning strategies (Hagel et al, 2013). Despite a great deal of financial soundness indicators, return on assets depicts the map for decision making in investment and management processes. Return reflects the true and the most reliable stance and scenario of financial health of the company by covering two key financial stability indicators: assets and profit. Asset structure provides a foundation and prerequisite for the presence of company, while profit level shows to what extent the company is operating. Combination of both stability-reflecting indicators how company is working out the invested capital by bearing profit.

Uzbekistan is the most diversified economy of Central Asia with progressively transiting economic sectors from agricultural and raw material to industrial output. In the economic development history of Uzbekistan, agricultural sector, namely cotton production had a strong position importance gross national output, employment, income. Grain industry was a comparatively new but with a perspective area, which expanded through the reduction of cotton fields. Nowadays, grain industry gains the key position in domestic supply and market saturation of grain and grain products in the economy due to the grain milling companies, located across countries.

Despite the high market need and government's comprehensive support, some of the grain milling companies' performance is usually found unsatisfactory, or at least not as expected. Their financial health is prone to the default and

at non-viability risk. In this paper, financial soundness of three publicly owned grain milling companies “Buxorodonmahsulotlari” JSC, “Qashqadaryodonmahsulotlari” JSC and “Toshkentdonmahsulotlari” JSC, are examined and improvement-oriented recommendations are proposed.

## 2. Literature Review

Return on assets has been the mostly discussed topic of scientific debates since the emergence of the modern business relations, as it reflects the true scene of the success in doing business. A great deal of literature studies the theoretical and practical aspects of return on assets through multilateral approaches. Moreover, international audit companies regularly publish monitoring reports on the recent trends in the application and limitations of return on assets theory. Results of recent studies showed that there is a growing level of skepticism among researchers over the appropriateness of return on assets as a tool for assessing the financial stability of a company.

Hagel et al. (2013) found that ROA is not the best-fit measure for assessing the financial stability of the company in long-term, but it is effective in monitoring the company’s performance in the short term. They proved that ROA is vulnerable to changes in financial condition of a company, especially changes in revenues from sales, income and assets.

Lassala, Apetrei and Sapina (2017) examined the impact of financial performance of companies on sustainability through financial ratio analysis. Their studies suggested that return on assets is an important indicator of sustainability for companies of specific industries.

The study by Youn and Gu (2010) attempted to assess the impact of return on assets on the performance of lodging firms in Korea. Their evaluations showed that operational cost and debts had the most considerable effect in return on assets.

## 3. Methodology

Profitability of a company is influenced by micro and macro factors, occurred in firm and economy levels. Other market factors such as seasonal and substitute may lead to significant changes in financial stability of the company. Grain industry companies are often vulnerable to natural factors, like weather condition, environment and agricultural calendar. Moreover, in Uzbekistan’s case economic growth also has both direct and collateral effect in the smooth and efficient functioning of grain industry companies.

Research methodology, applied in the paper is based on the set of financial report data and macroeconomic indicators. Revenues from sales reveal the company’s production and market condition. The total cost embraces all incurred costs company spent during its functioning. Assets structure shows the dynamics of invested capital and the expansion of the company. Macroeconomic condition in the economy (dynamics of GDP volume) influences on the company’s activity through all impact channels on all stability indicators.

Analytical part is based on the econometric analysis in OLS method. The structured model is specified as follows:

$$ROA_{it} = \alpha_0 + \beta_1 RFS_{it} + \beta_2 TOC_{it} + \beta_3 AST_{it} + \beta_4 MEC_t + \varepsilon_{it}$$

Here ROA – return on assets i company in t period, RFS – revenue from sales of i company in t period, TOC – total operating cost of i company in t period, AST – assets volume of i company in t period, MEC – macroeconomic condition in Uzbekistan in t period.

## 4. Data Analysis

In the analytical part, financial soundness of selected grain milling companies are tested through OLS test. The effect of revenues from sales, total cost, asset structure and macroeconomic condition in return on assets is examined based on the quarterly data ranging from the second quarter of 2015 to the first quarter of 2018 (Table 1,2 & 3).

The results of conducted OLS test for “Buxorodonmahsulotlari” JSC shows that the company’s asset structure (-0.000000555), total cost (0.000000106) and macroeconomic condition (0.00000148) influenced negatively on return on assets, while only revenues from sales influenced positively with 0.000000227 unit coefficient. Hannan-Quinn

criterion opted the best-fit model with -3.793391 coefficient. Durbin-Watson statistic showed that autocorrelation does not exist.

**Table 1:** OLS test results for “Buxorodonmahsulotlari” JSC

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.617964	0.049001	12.61122	0.0000
AST	-5.55E-09	3.84E-10	-14.44998	0.0000
RFS	2.27E-08	5.37E-09	4.228616	0.0022
TOC	-1.06E-08	5.32E-09	-1.988625	0.0780
MEC	-1.48E-06	4.30E-07	-3.441287	0.0074
R-squared	0.992028	Mean dependent var		0.447323
Adjusted R-squared	0.988485	S.D. dependent var		0.298421
S.E. of regression	0.032023	Akaike info criterion		-3.772264
Sum squared resid	0.009229	Schwarz criterion		-3.544029
Log likelihood	31.40585	Hannan-Quinn criter.		-3.793391
F-statistic	279.9876	Durbin-Watson stat		2.102887
Prob(F-statistic)	0.000000			

**Table 2:** OLS test results for “Qashqadaryodonmahsulotlari” JSC

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.232750	0.085434	2.724334	0.0296
ASS	-6.72E-09	1.68E-09	-3.995322	0.0052
RFS	5.36E-08	4.09E-08	1.311051	0.0312
TOC	-4.33E-08	4.42E-08	-0.979904	0.0598
MEC	1.44E-06	7.83E-07	1.843089	0.0079
R-squared	0.991579	Mean dependent var		0.337666
Adjusted R-squared	0.986767	S.D. dependent var		0.274276
S.E. of regression	0.031551	Akaike info criterion		-3.780069
Sum squared resid	0.006968	Schwarz criterion		-3.578024
Log likelihood	27.68041	Hannan-Quinn criter.		-3.854873
F-statistic	206.0638	Durbin-Watson stat		1.990107
Prob(F-statistic)	0.000000			

The OLS test results for “Qashqadaryodonmahsulotlari” JSC revealed that asset structure (-0.0000000672) and total cost (0.0000000433) had negative effect in return on assets. Revenues from sales and macroeconomic condition stimulated financial soundness of the company with 0.00000536 and 0.000000144 units of impact. In similar with the obtained results for “Buxorodonmahsulotlari” Hannan-Quinn criterion selected the best-fit model with -3.854873 coefficient. Durbin-Watson statistic showed that autocorrelation does not exist.

In similar with the obtained results for “Buxorodonmahsulotlari” JSC, in case of “Toshkentdonmahsulotlari” JSC asset structure (-0.00000000455), total cost (0.00000000467) and had negative effect in return on assets. Revenues from sales and macroeconomic condition stimulated financial soundness of the company with 0.00000536 and 0.000000144 units of impact. Hannan-Quinn criterion selected the best-fit model with -3.216119 coefficient. Durbin-Watson statistic showed that autocorrelation does not exist.

**Table 3:** OLS test results for “Toshkentdonmahsulotlari” JSC

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.580703	0.076890	7.552376	0.0000
ASS	-4.55E-09	6.09E-10	-7.465280	0.0000
RFS	9.99E-09	5.17E-10	19.32698	0.0000
TOC	-4.67E-10	2.55E-10	-1.830485	0.1004
MEC	-9.74E-07	3.77E-07	-2.584228	0.0295
R-squared	0.992198	Mean dependent var		0.612358
Adjusted R-squared	0.988731	S.D. dependent var		0.402598
S.E. of regression	0.042738	Akaike info criterion		-3.194992
Sum squared resid	0.016439	Schwarz criterion		-2.966757
Log likelihood	27.36494	Hannan-Quinn criter.		-3.216119
F-statistic	286.1480	Durbin-Watson stat		2.019649
Prob(F-statistic)	0.000000			

## 5. Conclusion

Conducted studies and analysis proved that the selected grain milling companies have lower than satisfactory level of financial soundness. OLS test results for each company showed the importance and strength of linkages between return on assets and revenues from sales. Asset structure and operating cost had negatively related effect on overall financial soundness and gained returns on assets. Macroeconomic condition is a factor of different effect category depending on the company’s financial condition. Therefore, we relied on the classical theory of positive interconnection between macro and microeconomic stability.

Deriving from the obtained results for selected companies, operating in the grain processing industry of Uzbekistan, we propose following proposals to strengthen the financial soundness:

- Net cost reduction is a key factor of boosting company’s financial stability indicators, especially ROA. Usually, companies attempt to reduce the net cost through optimization of raw material use, which eventually lead to the significant changes in quality of goods or services. Instead of making composition of the goods, we recommend to reduce the costs by introducing raw material- and labor-intensive technologies.
- Sticking to the net cost reduction and technological modernization serves to balance the costs related aspects of financial stability. Revenue related aspects can be stimulated by increasing the sales volume by expanding consumer geography, diversifying the produced goods and services and gaining market share.

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