

Financial Analysis of the Oil Sector in North Macedonia – The Case of Makpetrol AD Skopje

SCIENTIFIC ARTICLE

UDK 665.6/.7:005.71 (497.7)
DOI: 10.56362/Rev24107009T

Filip Taskovski*
Olivera Gjorgieva – Trajkovska**

Summary: *The volatility of world stock markets, especially the price of oil and oil derivatives, requires permanent creation of financial policies and financial construction of oil companies in order to maintain financial stability, precisely because oil companies are one of the key elements for maintaining a stable economy in a country. In North Macedonia, as a small and import-dependent economy, the primacy in the oil industry is held by Makpetrol AD Skopje, which is a highly ranked company with a high level of financial stability and financial indicators that in certain time periods exceed the industry average.*

The purpose of the research is to analyze trends in sales revenue and operating profit before and during the global increase in oil prices and to analyze the company's key financial indicators.

According to the research results, Makpetrol AD Skopje has a relatively stable financial situation with a relatively high level of liquidity and solvency, and relatively good indicators of return on funds and return on capital.

Received: 30.08.2024.

Accepted: 14.09.2024.

Published: 30.09.2024.

Keywords: *Makpetrol AD Skopje, sales revenue, financial analysis, financial performance and financial indicators*

INTRODUCTION

The oil industry, as one of the key industries in the economic system of a national economy, is of crucial importance to maintain its financial stability and record a relatively high-quality financial performance, that is, companies should be liquid and solvent, while having a relative return on assets and return on capital on a level of the industry average (12). Based on the research, it can be concluded that the financial indicators of the oil companies are highly volatile because the price of oil on the world stock markets is determined by a series of economic and political factors that are relatively quickly reflected in sales revenue, and thus the profit of the company, which is a key determinant for maintaining financial condition (10). Namely, the frequent oscillations of the world stock markets and the emergence of a series of crises in the past period caused a significant disruption

* Faculty of Economics, Goce Delcev University, Stip, North Macedonia.
E-mail: filip.30825@student.ugd.edu.mk
ORCID iD: <https://orcid.org/0009-0002-6440-3944>

** Faculty of Economics, Goce Delcev University, Stip, North Macedonia.
E-mail: olivera.trajkovska@ugd.edu.mk
ORCID iD: <https://orcid.org/0009-0002-9888-1741>

of financial performance of a large number of companies, in which noted a significant decrease in liquidity, solvency and the return of assets and capital (8). Since North Macedonia has a small and open economy, there are several companies within the oil industry, but according to the analysis, Makpetrol AD Skopje is the dominant company. Namely, Makpetrol AD Skopje, in addition to being a leader in the oil industry, is one of the largest companies in the country in terms of revenues and other financial performance, consequently, in the past period, despite major internal and external economic difficulties, the company managed to maintain its market position and financial stability.

The purpose of the research is analysis of the sales revenue and operating profit of Makpetrol AD Skopje, analysis of the key financial indicators, comparison of the mean value of the key financial variables before and during the global increase in the price of oil.

The research is based on secondary methods and is composed of descriptive statistics, trend analysis and comparative analysis.

LITERATURE REVIEW

The oil industry, in North Macedonia and worldwide, is one of the leading industries, according to research, the oil industry is one of the main six industrial sectors in India, China, the USA, Japan, and in a large part of other developed and developing countries (14). Consequently, the oil industry has a significant impact on maintaining the stability of the economic system of a national economy, whereby it can be concluded that companies from this industry must have good financial performance (11) (6) (4). Due to the fact that world stock markets, that is, oil futures, often fluctuate, and as a result of the decisions regarding the volume of production made by OPEC, the international political situation and the foreign trade relations of countries, companies from the oil sector are permanently forced to create financial strategies in order to maintain financial performance, above all operating profit, liquidity and solvency at the desired level (5) (3). The emergence of the Corona crisis and the global increase in the price of oil on the world stock markets have contributed to additional instability in the world stock markets, and thus a challenge to maintain the financial performance of oil companies, that is, in conditions of global growth in the price of oil, the income from sales of oil companies have drastically increased, while the same is reflected in the entire financial structure of the companies and conditions for the creation of financial policies in the direction of maintaining an optimal level of financial indicators (13) (1) (15) (2). Ensuring financial stability and the optimal level of financial performance of companies, especially those operating in industries that are highly volatile in the economic-financial changes of the world stock markets and world trade is of crucial importance for the long-term survival on the market, thus strengthening financial stability, allows oil companies to mitigate the negative consequences of financial fluctuations and maintain competitiveness in conditions of instability on the global market of petroleum products (9) (7).

RESEARCH METHODOLOGY

The subject of research is the financial situation of Makpetrol AD Skopje, that is, an analysis of the key financial variables of the company before and during the global growth in the price of oil and oil derivatives.

The purpose of the research is to analyze the trends in sales revenue and the operating profit of Makpetrol AD Skopje, analysis of the company's key financial indicators and comparison of the mean value of the key financial variables before the global increase in the price of oil and during the global increase in the price of oil.

The research was conducted using secondary methods. The following methods were applied: method of analysis, method of synthesis, method of induction, method of deduction and method of comparison. In order to identify the significance of the difference between the mean value of the variables before and during the global oil price increase, the t test was applied. When choosing a source of data, and in order to increase the relevance of the research, several criteria were applied: 1) the relevance of the institution that published the data, the date of publication of the data, the degree of scientific contribution, and others.

Equation for t test applied in the research:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} \quad (1)$$

t – value of the t test

$\bar{x}_1 - \bar{x}_2$ – difference between the mean values of the first and second data sets

$\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$ – Standard deviation of mean values

Hypotheses:

- H1:** Makpetrol AD Skopje permanently notes a stable financial condition.
- H2:** The global growth in the price of oil and oil derivatives did not cause a significant change in the key financial variables of Makpetrol AD Skopje.

Variables:

Variable	Abbreviation	Source
Sales revenue	SRV	Consolidated financial statements of Makpetrol AD Skopje
Operating profit	OIN	
Current liquidity ratio	CLR	
Coefficient debt/assets	DAR	Author's calculation
Coefficient debt/capital	DER	
Return of assets	ROA	AD Macedonian Stock Exchange
Return of capital	ROE	
Global price of oil	OIL	U.K. ICE Futures Europe
Income from excise taxes	EXD	Budget of RNM

Research period: from 2020 until 2023

RESEARCH RESULTS

Descriptive statistics

Based on the descriptive statistics, it can be stated that the average annual sales revenue of Makpetrol AD Skopje for the period 2020-2023 is 26450077.75 denars, the average operating profit is 980795.5 denars, the average value of the current liquidity ratio of the company is 1,55, the average annual debt/asset ratio is 0.62, and the average debt/equity ratio is 1.64. Descriptive statistics show that the average annual return on assets is 11.09 and the average return on equity is 14.23. The average annual price of BRENT oil on the world stock exchanges is 74.06 dollars per barrel, and the average budget revenues from excise taxes amount to 26.50 billion denars.

Table 1. Descriptive Statistics

	SRV	OIN	CLR	DAR	DER	ROA	ROE	OIL	EXD
Mean	26450077,75	980795,5	1,5475	0,62	1,635	11,0875	14,23	74,06	26,495
Standard Error	4587267,12	243070,7393	0,3475	0,004082483	0,018484228	2,951627729	3,476528441	12,36160656	1,575682392
Median	25858510	1021868	1,685	0,62	1,64	11,42	14,055	76,675	27,165
Mode	#N/A	#N/A	#N/A	0,62	#N/A	#N/A	#N/A	#N/A	#N/A
Standard Deviation	9174534,241	486141,4786	0,695	0,008164966	0,036968455	5,903255458	6,953056882	24,72321311	3,151364784
Sample Variance	8,41721E+13	2,36334E+11	0,483025	6,66667E-05	0,001366667	34,848425	48,345	611,2372667	9,9311
Kurtosis	-2,231852506	-3,861343323	1,073270846	1,5	-2,716240333	-2,623700986	-3,704888771	0,66963442	-1,694095044
Skewness	0,268138462	-0,252162768	-1,024750719	0	-0,475025954	-0,222463165	0,0830761	-0,578348895	-0,752059108
Range	20642965	1027102	1,62	0,02	0,08	13,15	14,99	58,97	6,75
Minimum	16720163	426172	0,6	0,61	1,59	4,18	6,91	41,96	22,45
Maximum	37363128	1453274	2,22	0,63	1,67	17,33	21,9	100,93	29,2
Sum	105800311	3923182	6,19	2,48	6,54	44,35	56,92	296,24	105,98
Count	4	4	4	4	4	4	4	4	4
Confidence Level(95,0%)	14598731,3	773559,5761	1,105900091	0,012992283	0,058825062	9,39339676	11,06386509	39,34014911	5,014524606

Source: Author's calculation (Excel)

According to the descriptive statistics, it can be concluded that the distribution of data in sales revenue, operating profit, debt/asset ratio, ROA, ROE and budget revenues is platykurtic. Namely, the smallest deviations from the mean value are noted in

the operating profit, the other variables have a leptokurtic distribution of data, with the largest deviation observed in the average annual price of BRENT type oil.

The distribution of frequencies for operating profit, current liquidity ratio, debt/equity ratio, ROA, the average price of BRENT oil and budget revenues from excise taxes has negative symmetry, with the data skewing to the left, for the rest of the variables with the exception of the debt ratio/means where symmetry of the data is noted, the distribution of frequencies has positive symmetry, that is, skewing of the distribution of frequencies to the right.

Analysis of sales revenue and operating profit of Makpetrol AD Skopje

According to Chart 1, the sales revenues of Makpetrol AD Skopje from 2020 to 2022 have a growing trend, with the fact that in 2020 they amounted to 16720163 denars, in 2021 they grew by 29% compared to 2020, and in 2022 compared to 2021 they recorded an increase of 74%. It is characteristic that, according to Chart 1 and Chart 2, the curves of sales revenue and the average annual price of BRENT type oil have a relatively similar slope, which is due to the direct influence of the price of oil on sales revenue. After the drop in the price of oil, the sales revenues also decrease in 2023, with a drop of 19%, which is similar to the drop of 18% in the price of oil compared to 2022.

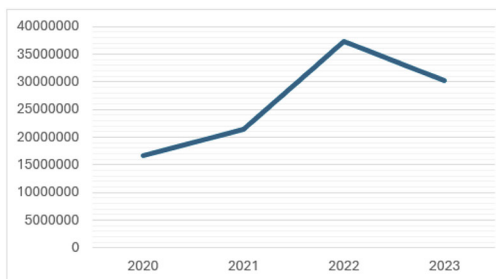


Chart 1. Makpetrol AD Skopje Sale Revenues, 2020-2023
Source: Makpetrol AD Skopje Financial Statements

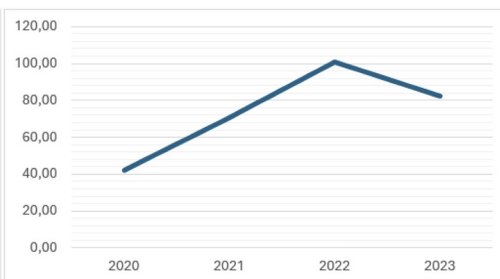


Chart 2. BRENT oil stock exchange price, 2020-2023
Source: U.K. ICE Futures Europe

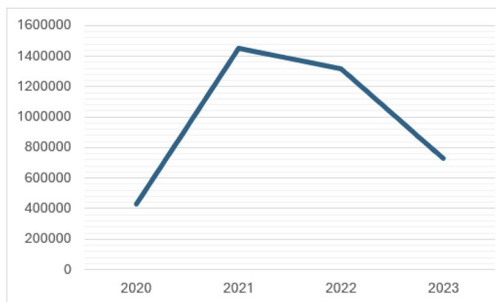


Chart 3. Makpetrol AD Skopje Operating profit, 2020-2023
Source: Makpetrol AD Skopje Financial Statements

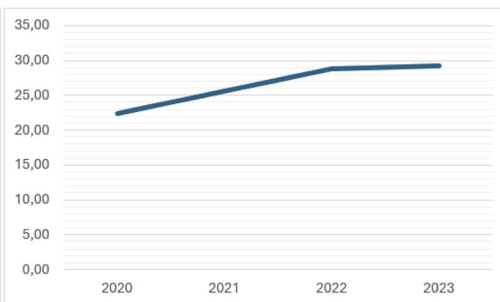


Chart 4. Excise Revenues in Macedonia Budget, 2020-2023
Source: <http://budget.finance.gov.mk/prihodi.html>

The operating profit of Makpetrol AD Skopje in 2021 recorded a growth of 241%, while a downward trend was noted in 2022 and 2023, what is characteristic is that although the trend is downward, the amount of operating profit in both 2022 and 2023 is higher compared to 2020 of 209% in 2022 and 70 % in 2023. Similarly, the growth in sales revenue and the growth in the price of oil did not contribute to the increase of the operating profit in terms of the fact that it recorded a drastic growth before the start of the global increase in the prices of oil and oil derivatives.

From Chart 4, it can be noted that the budget revenue from excise duty recorded a permanent and stable growth during the accounting period.

Analysis of the financial indicators of Makpetrol AD Skopje

Based on Table 2, it can be concluded that in 2020 the current liquidity ratio of Makpetrol AD Skopje is lower than 1, while the company was not liquid enough to settle current liabilities if they were due in a given period of time, in the remaining years the same was relatively highly liquid, with the highest current liquidity ratio recorded in 2023. Based on the debt/asset ratio, it can be concluded that it relatively has the same value throughout the entire accounting period, so it can be concluded that Makpetrol AD Skopje has more assets than debts. The debt/equity ratio during the accounting period has a relatively high value, with the company borrowing funds to a greater extent than the equity capital. Considering the fact that Makpetrol AD Skopje is a stable company in the field of market share and activity, the value of these coefficients is relatively good for the company. From Table 2, it can be concluded that in 2020 the company has a relatively low ROA compared to 2021 and 2022, consequently, the highest return on assets was noted in 2021, which represents a relatively above-average return on assets in the business. In 2023, the return on assets decreases to 8.45, which is a relatively good ratio compared to other companies in the industry. In the domain of return on capital, it is characteristic that according to the established practice for classification in ROE values, in 2021 it is excellent and above the industry average, it is also good in 2022 and 2023, but in 2020 a low return on capital is noted taking into account the company's activity. Namely, from Table 2, it can be concluded that the highest return on assets and return on capital were recorded in 2021 and 2022, which coincides with the growth of sales revenues and, in a certain period, the increase of the price of oil and oil derivatives.

Table 2. Makpetrol AD Skopje Key financial ratios

Year	CLR	DAR	DER	ROA	ROE
2020	0,60	0,62	1,62	4,18	6,91
2021	1,51	0,61	1,59	17,33	21,90
2022	1,86	0,62	1,66	14,39	18,09
2023	2,22	0,63	1,67	8,45	10,02

Source: Autor's calculation and <https://www.mse.mk/mk/issuer/makpetrol-ad-skopje/>

The results of the t test

Based on the results of the t test, it can be concluded that in all variables, no significant difference in the mean value was observed in the period before the energy crisis and in the period of growth in the global price of oil and oil derivatives. Namely, according to the results of the t-test, it can be concluded that the growing trend of income from selling is not significant, as the rest of the variables do not have significant changes in the direction of increasing their values during the global growth in the price of oil and oil derivatives.

Table 3. T test results

Description	Value	Mean	St.Dev	t test (p value)
SRV	16720163	19108442	3377536	0,245460037
	21496720			
	37363128	33791714	5050742	
	30220300			
OIN	426172	939723	726270,7892	0,935592696
	1453274			
	1317489	1021868	418071,2275	
	726247			
CLR	0,60	1,06	0,643467171	0,173323176
	1,51			
	1,86	2,04	0,254558441	
	2,22			
DAR	0,62	0,62	0,007071068	0,5
	0,61			
	0,62	0,63	0,007071068	
	0,63			
DER	1,62	1,61	0,021213203	0,204832765
	1,59			
	1,66	1,67	0,007071068	
	1,67			
ROA	4,18	10,76	9,298454173	0,955718264
	17,33			
	14,39	11,42	4,20021428	
	8,45			
ROE	6,91	14,41	10,59953065	0,980680961
	21,90			
	18,09	14,06	5,706351724	
	10,02			
OIL	41,96	56,41	20,43538598	0,376037382
	70,86			
	100,93	91,71	13,03904905	
	82,49			
EXD	22,45	24,00	2,192031022	0,167015802
	25,55			
	28,78	28,99	0,296984848	
	29,20			

Source: Author's calculation

DISCUSSION

From the research, it can be concluded that during the accounting period (2020-2023), the sales revenue of Makpetrol AD Skopje within the period from 2020-2022 shows an increase, while in 2023, they note a decline. Namely, it is characteristic that the same trend is recorded by the global price of BRENT type oil, with which during the period from 2020-2022 an increase is recorded, and in 2023 it drops significantly. Such trends indicate that the sales revenues of Makpetrol AD Skopje have a strong correlation with the global price of oil. The operating profit of Makpetrol AD Skopje from 2021 has permanently been declining, which indicates a reduced consumption of oil and oil derivatives by the population and companies in North Macedonia.

According to the results of the research, Makpetrol AD Skopje records a state of liquidity during the accounting period, except in 2020, but characteristic of the same year is the emergence of the Corona crisis, which is reflected on the liquidity of the companies in the direction of its reduction and the prevention of an economic crisis. During the accounting period, Makpetrol AD Skopje records a relatively identical debt/asset ratio, which indicates that the company's debt amounts to about 60% of total assets. According to the debt/equity ratio, during the accounting period, the debt of the company is higher compared to the equity capital. According to the analysis, it can be concluded that the return on assets and the return on capital during the accounting period oscillate, while moving around the industry average or above it. Analogously, it can be concluded that H1 is accepted.

According to the t test, the mean values of the variables in the period before and during the global increase of the price of BRENT type oil do not have a significant difference, consequently H2 is accepted.

CONCLUSION

The oil industry in developed countries, as well as in developing countries such as the Republic of North Macedonia, has a significant impact on national economic flows and the development of the economy. Characteristic of the oil industry is the form of market representation, so that in most countries they are represented in the form of monopolies or oligopolies. Given that North Macedonia is a relatively small market, the oil sector is largely served by Makpetrol AD Skopje. Namely, Makpetrol AD Skopje, as one of the key companies for the economic stability of North Macedonia, according to the analyses and reports of AD Macedonian Stock Exchange during the past period, recorded a high level of financial condition, consequently the company during the past period was financially liquid to settle its current obligations and generates a positive financial result.

According to the research, it can be concluded that the sales revenues of Makpetrol AD Skopje show a trend that is positively correlated with the trend of the global price

of BRENT oil. According to the financial analysis, it can be concluded that, except for 2020, in the remaining years of the accounting period, the company is liquid and has a good debt/assets ratio, which reflects the solvency of the company. It can also be stated that the return on assets and return on capital are moving within the industry average or above it which indicates a solid financial performance.

According to the research, and in order to strengthen the financial performance, Makpetrol AD Skopje in the future must create financial policies aimed at reducing borrowing, which would improve the debt/equity ratio, and thus the solvency of the company.

LITERATURE

- 1) Albulescu, C. (2003). Coronavirus and oil price crash. *arXiv preprint arXiv:2003.06184*.
- 2) Anozie, O. R., Muritala, T. A., Edet Ininm, V., & Yisau, N. S. (2023). Impact of capital structure on financial performance of oil and gas firms in Nigeria. *Future Business Journal Vol.9*.
- 3) Apergis, N., & Miller, S. M. (2009). Do structural oil-market shocks affect stock prices? *Energy Economics Vol.31(4)*, 569-575.
- 4) Arezki, R., & Brückner, M. (2011). Oil rents, corruption, and state stability: Evidence from panel data regressions. *European Economic Review Vol.55(7)*, 955-963.
- 5) Bagirov, M., & Mateus, C. (2019). Oil prices, stock markets and firm performance: Evidence from Europe. *International Review of Economics & Finance Vol.61*, 270-288.
- 6) Baltagi, B. H., Demetriades, P. O., & Law, S. H. (2009). Financial development and openness: Evidence from panel data. *Journal of Development Economics Vol.89(2)*, 285-296.
- 7) Chikunov, S., Ponkratov, V., Sokolov, A., Pozdnyaev, A., Osinovskaya, I., & Ivleva, M. (2019). Financial risks of Russian oil companies in conditions of volatility of global oil prices. *International Journal of Energy Economics and Policy Vol.9(3)*, 18-29.
- 8) Duguleană, C., Duguleană, L., & Deszke, K. D. (2024). Financial performance and capital structure – an econometric approach for Romanian e-commerce companies during the COVID-19 pandemic. *Economic Analysis and Policy Vol.83*, 786-812.
- 9) Hajiyeve, N., Abdullayeva, S., & Abdullayeva, S. (2024). Financial stability strategies for oil companies amidst high volatility in the global oil products market. *Energy Strategy Reviews Vol.53*.
- 10) Laitinen, E. K. (2018). Financial reporting: Long-term change of financial ratios. *American Journal of Industrial and Business Management Vol.8(9)*.
- 11) Mohammed, J. I., Karim, A., Fiador, V. O., & Abor, J. Y. (2020). Oil revenues and economic growth in oil-producing countries: The role of domestic financial markets. *Resources Policy Vol.69*.
- 12) Orazalin, N., Mahmood, M., & Narbaev, T. (2016). The impact of sustainability performance indicators on financial stability: evidence from the Russian oil and gas industry. *Environmental Science and Pollution Research Vol.26*, 8157-8168.
- 13) Salisu, A. A., Ebu, G. U., & Usman, N. (2020). Revisiting oil-stock nexus during COVID-19 pandemic: Some preliminary results. *International Review of Economics & Finance Vol.69*, 280-294.

- 14) Venkataraman, P., & Subramaniam, K. (2022). An Empirical Analysis of Financial Performance of Selected Oil Exploration and Production Companies in India. *International Journal of Engineering and Management Research Vol.12(3)*.
- 15) Zhang, Q., Yang, K., Hu, Y., Jiao, J., & Wang, S. (2023). Unveiling the impact of geopolitical conflict on oil prices: A case study of the Russia-Ukraine War and its channels. *Energy Economics Vol.126*.

Finansijska analiza naftnog sektora u Severnoj Makedoniji – – Slučaj Makpetrol AD Skoplje

REZIME: Promenljivost svetskih berzi, posebno cena nafte i naftnih derivata, zahteva permanentno kreiranje finansijskih politika i finansijske konstrukcije među naftnim kompanijama kako bi se održala finansijska stabilnost, upravo zato što su naftne kompanije jedan od ključnih elemenata za održavanje ekonomske stabilnosti u jednoj zemlji. U Severnoj Makedoniji, kao malo i uvožno zavisnoj privredi, primat u naftnoj industriji ima Makpetrol AD Skoplje, koja je visoko rangirana kompanija sa visokim nivoom finansijske stabilnosti i finansijskim pokazateljima koji u određenim vremenskim periodima prevazilaze industrijski prosek.

Svrha istraživanja je analiza kretanja prihoda od prodaje i operativnog profita pre i tokom globalnog rasta cena nafte i analiza ključnih finansijskih pokazatelja kompanije.

Prema rezultatima istraživanja, Makpetrol AD Skoplje ima relativno stabilnu finansijsku situaciju sa relativno visokim nivoom likvidnosti i solventnosti, i relativno dobrim pokazateljima prinosa na sredstva i prinosa na kapital.

Ključne reči: Makpetrol AD Skoplje, prihod od prodaje, finansijska analiza, finansijski učinak i finansijski pokazatelji.