ORIGINAL PAPER



DOI: 10.26794/2587-5671-2023-27-4-142-152
UDC 336.63(045)
JEL G30

# Comparison of the Efficiency of Overcoming the Crisis of Russian and Foreign Oil and Gas Companies

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## ABSTRACT

**The purpose** of the study was to evaluate the performance of large domestic and foreign oil and gas companies based on a factor analysis of the return on equity in the context of financial and economic crises. The **relevance** of the topic is due, on the one hand, to the leading role of the oil and gas industry in the Russian economy, and, on the other hand, to the need develop modern tools for the assessment and prediction of the performance of companies and comparison of the results of economic activity with those of foreign competitors. The **object of the study** was the financial performance of the largest domestic and foreign vertically integrated oil and gas companies. The **subject of the** study is the methods of deterministic factor analysis for assessing indicators in the oil and gas sector. The paper analyzes the main empirical indicators that reflect the degree of efficiency, justifies the choice of the profitability indicator of own assets as the main indicator for research in the oil and gas industry, analyzes approaches to assessing the contribution of various factors to the final efficiency. **Methods** of classification, decomposition, statistical, comparative and factor analysis were used. A five-factor DuPont decomposition of the return on equity was carried out, and the key factors affecting the efficiency of companies were identified: tax burden coefficient, percentage burden coefficient, return on sales, asset turnover ratio, financial leverage ratio. Using the LMDI-1 model, the impact of changes in economic factors on changes in the efficiency of companies in 2013–2017 and 2018–2021 was assessed. It was concluded that domestic companies, on average, slightly outperformed foreign ones in terms of the considered efficiency indicator and coped better with the consequences of financial and economic crises in the periods under review. At the same time, domestic companies have a higher value of the tax burden coefficient with lower values of assets turnover and financial leverage.

***Keywords:*** oil and gas companies; performance evaluation; return on equity; DuPont model; factor analysis

***For citation:*** **Filimonova I.V., Komarova A.V., Angarov A.A., Novikov A. Yu. Comparison of the efficiency of overcoming the crisis of Russian and foreign oil and gas companies. *Finance: Theory and Practice*. 2023;27(4):142-152. (In Russ.). DOI: 10.26794/2587-5671-2023-27-4-142-152**

## INTRODUCTION

In modern conditions there is an urgent need to ensure sustainable development of the oil and gas companies, which is due to the system-forming role of this industry for the Russian Federation, its influence on the development not only of the related industries, but also the economy as a whole [1, 2]. Thus, there is a need for continuous improvement of the criteria of companies' performance and tools for its improvement.

There are many interpretations of the term "efficiency", and there is often a lack of a unified approach, which is objectively due to the diversity of public relations, spheres of activity and financial resources. Domestic and foreign researchers also presented a detailed discussion on this issue [3–7].

The efficiency of operational processes, resource use, finance, and investment activities of the company can all be evaluated in the context of methods to evaluate the performance of companies [8].

Indicators calculated on the basis of revenue, production rate, profit, payables and receivables, cash flow, assets and changes in equity are often used [9–11]. However, not all of the above indicators are well applied to the oil and gas industry. The dynamics of sales revenues, characterizing the economic activity and structure of the oil and gas industry, has been unstable in recent years, which is determined by the simultaneous influence of production (oil and gas output and export) and price indicators, as well as macroeconomic indicators (exchange rate, key rate). In recent years, operating costs have steadily increased as a result of the deterioration of the resource and raw material base of hydrocarbons, the relocation of production centers to regions with severe natural and climate conditions, the increase in the cost of production and transportation of hydrocarbons [12, 13].

In order to carry out a comprehensive analysis of the financial and economic effectiveness of the domestic and foreign oil and gas industry, the specifics of the application and calculation of the indicator of economic efficiency — return on equity (*ROE*) — were considered and studied [14–17].

The main methods of statistical analysis were considered to assess the change of the selected indicator over time, compare different objects, and identify the main influencing factors. In particular, econometric analysis is often used by the authors for the analysis of financial indicators [18, 19]. However, in the build-up of regression models, factors that do not correlate with the resulting performance indicator must be selected.

Another common method of assessment is factor analysis. In particular, in this group of methods, the decomposition of the *ROE* indicator into components by the DuPont method is popular [20–22].

The next stage of the study is the choice of methods of factor analysis. In recent years, domestic and foreign researchers have increasingly used the method LMDI-1 (Logarithmic Mean Divisia Index) in the analysis of the influence of economic factors on business activity of companies, as well as in analysis of factors affecting the increase in trade turnover [23–26].

Thus, the purpose of the study is to evaluate of the performance of large domestic and foreign oil and gas companies on the basis of factor analysis of the indicator of profitability of own capital in the context of financial, economic and energy crises. To this purpose, the DuPont five-factor decomposition was chosen, followed by an analysis of the contributions to performance change using the LMDI-1 model.

## MATERIALS AND METHODS

In the first phase of the study, the *ROE* was calculated and decomposition was carried out using the DuPont five-factor model. This type of model was chosen for the study because it is the most detailed and more accurately reflects the change of priorities of companies

compared to models with fewer factors [27]. Decomposition was made according to the formula (1):

$$ROE = \frac{NI}{SE} = \frac{NI}{EBT} \times \frac{EBT}{EBIT} \times \frac{EBIT}{R} \times \frac{R}{TA} \times \frac{TA}{SE}, \quad (1)$$

where *NI* — net income; *TA* — assets; *SE* — equity (investment capital); *EBT* — earnings before tax; *EBIT* — earnings before interest and taxes; *R* — revenue.

The ratios obtained in decomposition can be described as tax (*T*) and interest burden (%), return on sales on *EBIT* (*ROS*), assets turnover (*AT*) and financial leverage (*FL*).

The second phase of the study, using the LMDI-1 model, assessed the impact of the change in these five factors on the resulting indicator.

In order for this method of factor analysis to be applied to assess the impact of factors on the change in return on equity, the formulas have been adapted to the characteristics and trends of the oil and gas industry:

$$\Delta D_{x^n} = L\left(ROE_t, ROE_0\right) \bullet \left(\frac{X_t}{X_0}\right), \quad (2)$$

$$L\left(ROE_t, ROE_0\right) = \begin{cases} \dfrac{ROE_t - ROE_0}{\ln(ROE_t) - \ln(ROE_0)} \; for \; ROE_t \neq ROE_0 \\ ROE_t \; for \; ROE_t = ROE_0 \end{cases}, \quad (3)$$

where the factors influencing the change in return on equity (*ROE*) — $X_t$ and $X_0$, are the components obtained by the DuPont five-factor model.

Thus, for each company and industry, calculated Δ*ROEnT*, Δ*ROEn%*, Δ*ROEnROS*, Δ*ROEnAT*, Δ*ROEnFL* — the contributions of the corresponding indicators to the total change Δ*ROE*.

15 companies (7 domestic and 8 foreign) were selected for comparative assessment of the effectiveness of companies of the oil and gas complex. Assessment of the impact of factors on the change in return on equity was carried out for the periods — 2013–2017 and 2018–2021. The boundaries of time intervals are defined by the extremes of the ROE function, reflecting the beginning and end of financial, economic and energy crises.

Basic data on the activities of oil and gas companies were collected from open sources: annual reports and consolidated financial statements according to IFRS standards.

## RESULTS AND DISCUSSION

### Dynamics of Return on Equity of Russian and Foreign Companies

Return on equity indicators vary greatly between companies during the period under review (*Table 1*).

Positive results of the *ROE* indicator show the stable position of almost all domestic companies for the period 2013–2021.

Gazprom's *ROE* indicators decreased significantly during the 2014 and 2020 crisis periods. This is due to the fact that the company's net profit declined sharply during these periods. The weakening of the ruble, caused by the sharp fall in oil and gas prices in the second half of 2014, contributed to a decrease in sales of production, which negatively affected the company's final financial results. The quarantine measures imposed for the COVID-19 pandemic in 2020 were accompanied by a decline in global demand for oil and gas and, as a result, a fall in profitability due to the negative dynamics of the net profit of all OGC (oil and gas companies).

The 2014 and 2020 crises negatively affected the financial performance of almost all OGC. Rosneft demonstrated a reduction in ROE in 2014 by 30% and in 2020 by 80% respectively. In 2016, there was also a drop of *ROE* of Rosneft due to the fact that oil prices dropped significantly. Such a phenomenon was caused by the excess of supply over demand, which was due to the established tendency at the time to "overproduction" of oil in the world. At the same time, the reduction in *ROE* was also influenced by the

*Table 1*

**ROE Indicator of Domestic Oil and Gas Companies of 2013 to 2021, %**

| Companies | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|
| Gazprom | 12.09 | 1.55 | 7.38 | 8.71 | 6.38 | 11.10 | 8.69 | 1.09 | 12.80 |
| Rosneft | 17.41 | 12.15 | 12.15 | 5.08 | 7.10 | 13.88 | 15.63 | 3.03 | 15.60 |
| Lukoil | 24.47 | 12.92 | 9.07 | 6.44 | 12.03 | 15.25 | 16.16 | 0.41 | 17.16 |
| Gazprom neft | 18.74 | 11.24 | 9.29 | 14.54 | 16.27 | 20.13 | 19.07 | 5.35 | 20.45 |
| Surgutneftegas | 13.52 | 30.42 | 21.27 | –1.80 | 5.40 | 19.21 | 2.39 | 14.40 | – |
| Tatneft | 15.48 | 16.84 | 16.11 | 14.95 | 17.25 | 27.23 | 25.64 | 12.38 | 21.10 |
| Novatek | 29.49 | 9.56 | 17.29 | 40.27 | 21.39 | 20.63 | 53.00 | 4.82 | 23.64 |
| Industry | 15.57 | 9.73 | 10.93 | 7.75 | 8.46 | 14.52 | 13.17 | 4.06 | 15.38 |

*Source:* Compiled by the authors.

tax maneuver in the oil and gas industry due to the effect of additional fiscal burden.

Lukoil's return on equity in 2017–2019 was fairly high and stable, but in 2020 there was a sharp decline of the indicator by 98% due to a decrease in net profit.

For "Gazprom neft", the value of the profitability indicator was steadily increasing or decreasing at various times. The ROE fell in 2013–2015, then there was a positive dynamic of the ratio up to the crisis in 2020. In 2021, profitability increased from 5 to 20%, through a five-fold increase in net profit.

The return on equity of the company "Surgutneftegaz" increased from 14 to 30% for the period 2013–2014. The significant foreign exchange financial assets of the company, predominantly dollar deposits, were an important factor. The return on equity company was stable at a high level, but in 2016 the indicator dropped sharply and became negative. The reason for the net loss was the strengthening of the ruble and, as a result, losses on exchange rate differences. The same happened in 2019, when the net profit and the return on equity decreased 8 times.

"Tatneft" showed stable return on equity values for the period 2013–2016, which ranged from 15 to 17%. In 2017, there was a sharp jump in profitability to 27%, due to the growth of the company's net profit, while the Company's equity remained unchanged.

"NOVATEK" has seen a decline in return on equity and net profit in 2014, as a result of the fall in demand and gas prices. In subsequent years, the *ROE* was high, rising to 40% in 2016 and 53% in 2019. This is due to multiple growths in revenue and net profit of the company as a result of the exchange rate differences.

The industry *ROE* declined sharply from 15.6% to 9.7% in 2014. Then there is a sharp jump of the indicator in 2018 to 14.5% due to the rise in the prices of hydrocarbons and doubling of the net profit of companies. ROE of domestic oil and gas industry again falls in crisis in 2020 to 4% and recovers to its pre-crisis values in 2021.

Similar calculations were made for foreign companies (*Table 2*).

The Chinese oil and gas companies Sinopec and PetroChina have a stable return on equity for the entire period under review. However, these values range from 1 to 10%, which can be considered a low level of indicator given that these companies receive some of the highest annual revenues. This is due to the high cost of mining and dividends.

*Table 2*

***ROE* Indicator of Foreign Oil and Gas Companies for 2013 to 2021, %**

| Companies | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|
| Sinopec | 10.70 | 7.24 | 4.13 | 5.60 | 6.03 | 7.21 | 6.54 | 3.75 | 9.43 |
| PetroChina | 10.20 | 8.14 | 2.64 | 0.58 | 1.67 | 3.76 | 3.16 | 1.41 | 8.16 |
| Saudi Aramco | – | – | – | – | 34.50 | 40.55 | 31.61 | 16.67 | 32.16 |
| Royal Dutch Shell | 9.12 | 8.50 | 1.34 | 2.54 | 6.77 | 11.77 | 8.59 | –13.52 | 11.77 |
| BP | 18.08 | 3.36 | –6.63 | 0.12 | 3.40 | 9.22 | 3.96 | –23.60 | 8.54 |
| Exxon Mobil | 18.01 | 17.96 | 9.15 | 4.48 | 10.46 | 10.45 | 7.19 | –13.66 | 13.69 |
| Total | 10.87 | 4.47 | 5.37 | 6.08 | 7.54 | 9.75 | 9.50 | –6.79 | 14.16 |
| Petrobras | 7.45 | –6.32 | –12.88 | –6.15 | –0.12 | 9.86 | 13.78 | 1.83 | 28.43 |
| **Average** | 12.06 | 7.30 | 2.06 | 2.30 | 10.70 | 15.35 | 12.26 | –1.15 | 17.35 |

*Source:* Compiled by the authors.

Saudi oil giant "Saudi Aramco" has high returns on equity, ranging from 31 to 40% in non-crisis years. In 2020, the company's profitability decreased by 15% in the pandemic. As oil prices recovered in 2021, the company achieved significant success, with its net profit increasing approximately twice as much as its profitability— from 16 to 32%.

The 2020 crisis, caused by the COVID-19 pandemic, has had a negative impact on all oil and gas companies. In particular, large American and European oil and gas companies suffered the most in these circumstances. These companies were forced to record net losses after 2020. For example, European companies Shell, BP, Total and American Exxon Mobil have negative indicators of capital returns for 2020. Their *ROE* values fell by 22, 27, 16 and 21%, respectively.

By 2020, Shell had a stable *ROE* that ranged from 1 to 11%. The decline is due to the fact that the company spent a significant amount of money on R&D in 2015, primarily in the field of alternative energy sources.

The reasons for the negative return on equity in 2015 and the subsequent low values of the same indicator for BP are the prolonged legal proceedings and payments of high compensation amounts for the drilling platform accident in the Gulf of Mexico.

The Brazilian company Petrobras also participated in the trial, which resulted in net losses for 4 years — in 2014–2017.

Comparison of Russian and foreign oil and gas companies on *ROE* dynamics for the period from 2013 to 2021 showed that Russian companies operated more efficiently, as well as more successfully overcame crisis periods.

## FACTOR ANALYSIS OF RETURN ON EQUITY FOR RUSSIAN COMPANIES

In order to determine the impact of each component derived from the DuPont five-factor model, data were prepared for each element and calculations were made according to the LMDI-1 model (*Table 3*).

The calculations showed that for the period 2013–2017 for the domestic oil and gas industry as a whole the greatest negative impact (–4.50%) on the change in return on equity (*ROE*) was the decrease in return of sales (*ROS*) in the industry. A similar outcome was expected because 2014 marked the beginning of the oil crisis, which lasted until 2017 in conjunction with an unfavorable

*Table 3*

**Factor Analysis of Return on Equity of Domestic Oil and Gas Companies of 2013–2017, %**

| Companies | *ΔROEnT* | *ΔROEn %* | *ΔROEnROS* | *ΔROEnAT* | *ΔROEnFL* | *ΔROE* |
|---|---|---|---|---|---|---|
| Gazprom | –0.36 | –0.78 | –4.57 | –0.76 | 0.76 | –5.71 |
| Rosneft | –1.63 | –3.98 | –4.33 | –2.76 | 2.40 | –10.31 |
| Lukoil | –1.46 | 0.21 | –7.89 | –4.64 | 1.35 | –12.44 |
| Gazprom neft | 0.07 | 0.27 | –1.30 | –3.59 | 2.09 | –2.46 |
| Surgutneftegas | –0.20 | –0.34 | –5.61 | –2.10 | 0.14 | –8.13 |
| Tatneft | –0.35 | 0.38 | 0.95 | –1.53 | 2.32 | 1.77 |
| Novatek | 0.71 | –0.14 | –7.12 | 2.85 | –4.40 | –8.10 |
| Industry | –0.62 | –1.00 | –4.50 | –2.16 | 1.17 | –7.11 |

*Source:* Compiled by the authors.

geopolitical situation. The economic and technological sanctions imposed against Russia also had a negative impact.

The calculations also indicate that for most of the companies analysed, the most negative factor for *ROE* is the profitability of sales. Positive impact is observed only for the company "Tatneft". In particular, the company's revenue grew at an average rate of about 11% per year, while the earnings indicators, namely *EBIT*, earnings before tax (*EBT*) and net profit, at "Tatneft" grew approximately twice over the period 2013–2017. This growth in the company's profits during the crisis period for the oil and gas industry is due to the fact that the company was able to increase the depth of oil refining to 74% in 2014 and to 99% in 2016 through the efficient operation and modernization of production at the refinery "TANEKO" complex, built at the end of 2011.

ROE was negatively impacted by an asset turnover rate (*AT*) of –2.16% of the total decline over the period, reflecting a 12% increase in the average annual value of assets in the industry, with an average annual growth of 6% in revenue.

At the same time, the financial leverage factor (*FL*) has had a positive impact on the *ROE* of almost all companies except "NOVATEK". In particular, for "Tatneft", the financial leverage factor is a key factor in the growth of capital profitability (2.32%) due to the significant growth of the company's borrowed funds during the period under review.

The rate of interest loads (–1.00%) had a minor negative impact on the decline in the industry's *ROE*. In part, the overall negative effect of the factor was influenced by the decrease in the rate of interest burden of "Rosneft" due to the gradual increase in debts and, as a consequence, an increase in interest payments on them. This growth in liabilities is mainly due to a number of transactions to acquire new assets: the purchase of TNC-BP in 2013, the acquisition of the controlling stake of "Bashneft" in 2015 etc.

Further, a factor analysis of ROE for the period 2018–2021 was carried out (*Table 4*). The distribution of the influence of factors on the return on equity has changed significantly. Thus, the biggest impact on the change in ROE is also the return of sales (*ROS*), but this effect is positive.

For "Gazprom", "Rosneft", "Tatneft" and "Novatek", the factor of the change in sales profitability was the key one. Overall, the indicator had a positive impact on the growth of *ROE* of all companies except for "Tatneft".

*Table 4*

**Factor Analysis of Return on Equity of Domestic Oil and Gas Companies for 2018–2021, %**

| Companies | ΔROEnT | ΔROEn % | ΔROEnROS | ΔROEnAT | ΔROEnFL | ΔROE |
|---|---|---|---|---|---|---|
| Gazprom | –0.68 | 0.25 | 1.93 | –0.51 | 0.71 | 1.70 |
| Rosneft | 0.52 | 1.53 | 3.58 | –2.38 | –1.53 | 1.72 |
| Lukoil | –0.02 | 0.31 | 0.72 | –0.32 | 1.23 | 1.91 |
| Gazprom neft | –0.38 | 0.23 | 1.14 | –2.72 | 2.04 | 0.32 |
| Tatneft | 0.07 | –0.02 | –9.42 | 2.53 | 0.72 | –6.12 |
| Novatek | 2.69 | 0.20 | 9.81 | –8.26 | –1.42 | 3.01 |
| Industry | –0.13 | 0.50 | 2.35 | –1.39 | 0.32 | 1.65 |

*Source:* Compiled by the authors.

*Table 5*

**Factor Analysis of Return on Equity of Foreign Oil and Gas Companies of 2013–2017, %**

| Companies | ΔROEnT | ΔROEn % | ΔROEnROS | ΔROEnAT | ΔROEnFL | ΔROE |
|---|---|---|---|---|---|---|
| Sinopec | –1.28 | 1.64 | –0.81 | –2.76 | –1.46 | –4.67 |
| PetroChina | –2.46 | –0.84 | –4.30 | –0.66 | –0.27 | –8.53 |
| Shell | 3.24 | –1.24 | –0.56 | –4.09 | 0.30 | –2.35 |
| BP | –6.37 | 1.98 | –8.36 | –3.36 | 1.43 | –14.68 |
| Exxon Mobil | 9.14 | –0.44 | –7.10 | –8.20 | –0.96 | –7.55 |
| Total | 5.01 | 0.28 | –3.83 | –4.02 | –0.77 | –3.33 |
| **Average** | 1.19 | –1.65 | –2.99 | –3.08 | 0.03 | –6.49 |

*Source:* Compiled by the authors.

The positive impact of the indicator in most companies was due to the improvement of the energy market, the recovery of demand and the strong rise in oil and gas prices after the crisis of 2020.

The asset turnover factor had a major negative impact on "Gazprom neft's" efficiency. Its contribution to the change in the *ROE* of the industry as a whole was –1.39%, and the contribution of "Gazprom neft" to the change of *ROE* was 2.72%.

Finally, the main change in Lukoil's effectiveness is caused by the financial leverage effect. In this case, the ratio characterizing the share of borrowed funds in the overall equity structure has had a positive impact on the *ROE* of Lukoil. Its contribution to *ROE* growth is 1.23% of total growth.

## FACTOR ANALYSIS OF RETURN ON EQUITY FOR FOREIGN COMPANIES

It was revealed that during the period 2013–2017 the change in the turnover of assets had the maximum impact on the dynamics of ROE on foreign OGCs, and this impact was negative. (*Table 5*).

The contribution of the asset turnover factor to the reduction in *ROE* in the total amount of the decrease is –3.08%. In particular, the *ROE* of British Petroleum fell by 14.68% due to a 40% decline in revenue

*Table 6*

**Factor Analysis of The Return on Equity of Foreign Oil and Gas Companies of 2018–2021, %**

| Companies | *ΔROEnT* | *ΔROEn %* | *ΔROEnROS* | *ΔROEnAT* | *ΔROEnFL* | *ΔROE* |
|---|---|---|---|---|---|---|
| Sinopec | 1.09 | 1.29 | 4.15 | –5.15 | 0.85 | 2.22 |
| PetroChina | 2.59 | 0.17 | 1.04 | 0.44 | 0.17 | 4.40 |
| Saudi Aramco | 0.96 | –0.09 | –5.19 | –13.22 | 9.15 | –8.38 |
| Shell | 0.34 | –0.15 | 2.22 | –4.31 | 1.89 | 0.00 |
| BP | –1.27 | 0.22 | 4.62 | –5.61 | 1.37 | –0.68 |
| Exxon Mobil | 1.13 | 0.27 | 0.00 | 0.12 | 1.72 | 3.24 |
| Total | –0.35 | –0.02 | 4.25 | –1.64 | 2.18 | 4.41 |
| Petrobras | 1.00 | 2.70 | 14.25 | 4.16 | –3.54 | 18.57 |
| **Average** | 1.12 | 0.01 | 3.28 | –4.11 | 1.69 | 2.00 |

*Source:* Compiled by the authors.

and a 14% increase in total assets over the period under review.

The decline in capital profitability was also adversely affected by return on sales of –2.99% of the total decline. In 2013–2017, foreign companies' profits declined by 53% while revenue decreased by 32%.

In 2018–2021 the distribution of the influence of factors on *ROE* changed, in particular the *ROE* of foreign companies increased by 2% (*Table 6*).

The biggest contribution to *ROE* growth is the return on sales, which accounts for 3.28% of the total growth. The decline in *ROE* was mostly influenced by the turnover of assets of 4.11% of the total change.

"Total" and "Petrobras" companies were mainly affected by the change in return on sales. The growth in the return on sales of "Petrobras" has had a major impact on the growth of the company's *ROE* of 18.57%.

For "PetroChina", the tax burden effect was the most important. It was positive due to the fact that the company's profit tax in 2018 amounted to 40% of the profit before taxation, while in 2021 this share decreased to 28%.

Sinopec, Saudi Aramco, Shell and BP were mainly affected by changes in asset turnover. The effect of the coefficient was unfavorable, as the revenues of these companies did not have time to recover to the level of 2018–2019.

## CONCLUSION

The calculations showed that all domestic oil and gas companies were effectively managing their own funds during the period under consideration. At the same time, average values for domestic companies are superior to foreign ones in most years, including in crisis years.

A quantitative assessment of the degree of sensitivity of return on equity of domestic oil and gas companies revealed that the biggest influence on the change of *ROE* for the industry is the factor of return on sales (*ROS*). The positive or negative effect of the factor depends on market conditions, oil prices and company structures. For the period 2013–2017, *ROS* had a negative impact due to the oil crisis that began

in 2014 and the sanctions imposed against Russia. For the period 2018–2021, *ROS* had a positive impact on *ROE* due to high energy prices and the rapid recovery of the market after the 2020 crisis. Similar analysis showed that the largest impact on the *ROE* of foreign companies is the return on sales and turnover of assets.

The factor analysis of the ROE allowed for the identification of the main variables affecting each business, including those with the greatest impact of sales profitability ("Gazprom", "Rosneft", "Tatneft", "NOVATEK", "Total", and "Petrobras"), the greatest impact of financial leverage (Lukoil and Exxon Mobil), the greatest impact of asset turnover ("Gazprom neft", "Sinopec", "Saudi Aramco", Shell, and BP) and with the maximum effect of interest burden ("PetroChina").

## ACKNOWLEDGEMENTS

The work was carried out according to the research plan of the IEIE SB RAS, project 5.6.6.4. (0260–2021–0008) "Methods and models for substantiating the strategy for the development of the Russian economy in the context of a changing macroeconomic reality". IEIE SB RAS, Novosibirsk, Russia.

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**I. V. Filimonova** — statement of the problem, development of the concept of the article, formation of the conclusions of the study.
**A. V. Komarova** — literature analysis, problems, approaches and methods for analyzing the effectiveness of companies.
**A. A. Angarov** — collection of statistical data, decomposition and evaluation of factors.
**A. Yu. Novikov** — tabular presentation and description of the results of the study.

*Conflicts of Interest Statement: The authors have no conflicts of interest to declare.*

*The article was submitted on 03.11.2022; revised on 20.11.2022 and accepted for publication on 27.01.2023.*
*The authors read and approved the final version of the manuscript.*