

SPECIFIC FINANCIAL AND STOCK MARKET RATIOS OF THE WORLD'S MAJOR PUBLIC OIL AND GAS CORPORATIONS AS AN INDICATOR OF INVESTMENT ATTRACTIVENESS OF DOMESTIC VERTICALLY INTEGRATED OIL AND GAS COMPANIES

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Abstract

Subject. This article considers the specific financial and stock market indicators of the twenty five leading listed oil and gas companies within 2006 through 2018.

Objectives. The study aims to determine the current level of values of the specific financial and stock market indicators of the leading publicly traded oil and gas companies, as well as identify the key trends in the changes within the studied period and factors that have caused these changes.

Methods. For the study, I used comparative, and financial and economic analyses, and generalization of materials of the companies' consolidated financial statements.

Results. The article shows a tangible decline in most of the key specific indicators over the period under study, except for net revenue from core activities per barrel of production. The article finds that the long-term industry crisis impacts the group's performance greatly, and independent companies are suffering the most. It says that specific stock market coefficients are acceptable for assessing the possible value of the industry corporations, and the ratio of market capitalization to production is preferable. The article finds that domestic corporations are inferior to competitors in terms of specific stock market indicators, so the country specificity of the group coefficients is obvious.

Conclusions. The article concludes that a decrease in the specific profitability of hydrocarbon production in the industry's stock market segment affects the market attractiveness of the oil and gas sector negatively.

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Introduction

The domestic scientific community pays close attention to various areas of financial and economic activities of oil and gas corporations throughout the modern history of Russia,

which are studied both on the scale of the entire global oil and gas sector of the economy, and at the level of various countries or even certain companies. Such a long and consistently high interest in this topic confirms the importance of the oil and gas industry not only for science itself, but also for the national economy of Russia. This is very eloquently confirmed by the structure of industrial production and export of goods in the country, which indicate the raw material nature of the entire domestic economy. It turns out that the total proceeds from the sale of crude oil, natural gas and products of their processing make up a tangible component of the entire budget and form the stabilization fund of the Russian Federation.

Consequently, the largest domestic corporations of the oil and gas sector taken together play an important role within the entire Russian economy. Meanwhile, the key industry companies of the country have the status of publicly traded joint-stock companies, their shares are freely listed on the Moscow Exchange, and depositary receipts are traded on well-known trading floors in the United States and the most developed countries of Western Europe. Then, it is quite obvious that the representatives of the oil and gas industry hold the main positions in the stock market segment of the economy of the Russian Federation. It should also be noted that oil and gas corporations have not lost their significant importance for the entire global stock market.

In turn, a very remarkable and rather important feature of the oil and gas industry is the instability and unpredictability of oil prices, which actually eliminates any attempts to reliably predict them for the medium term in a relatively narrow confidence interval of possible values. This specificity is clearly confirmed by the oil price situation in the current century (*Table 1*). Thus, the oil and gas sector has already felt the effects of the global financial shock and a purely sectoral crisis before the recent drop in quotations, which occurred against the backdrop of the termination of the agreement to reduce oil production between the Russian Federation, Kazakhstan, Azerbaijan and OPEC countries and the spread of the pandemic in the world.

Unit ratios take on more importance in such a rapidly changing environment, which is usually the ratio between various financial and stock market indicators on the one hand and operating data such as production and proved reserves of liquid hydrocarbons and natural gas on the other. Consequently, the indicators of this group include all the most important components that collectively characterize any publicly traded company in the industry. Moreover, these ratios essentially express the results of financial and economic activities or the market valuation of the leading publicly traded oil and gas corporations per unit of operating indicators, which makes it possible to compare publicly traded companies of the industry of different size and structure. Undoubtedly, domestic scientists do not neglect the specific financial and stock market indicators of oil and gas corporations, which is confirmed by a number of scientific papers.

Thus, specific coefficients are considered as part of a comprehensive analysis of the main indicators of the operating and financial activities of publicly traded oil and gas

corporations [1]. Specific indicators are also used in assessing the impact of an unfavorable economic and geopolitical situation on the value of Russian oil and gas companies [2]. Moreover, specific coefficients are also important from the standpoint of ensuring economic sustainability in an unstable environment [3]. The indicators of this group are used in forecasting [4] and integral assessment [5] of the financial condition of oil producing enterprises. In addition, specific coefficients are used in the analysis [6] and development of key indicators [7] of the effectiveness of business strategies [8] of Russian oil and gas companies [9]. In addition, various specific indicators are taken into account when assessing resource strategies [10] and the economic efficiency of exploiting the mineral resource base [11]. In addition, specific coefficients find their application in setting goals [12], determining the level [13] and improving the management mechanism [14] for the sustainable development of oil and gas corporations.

It is also quite natural that specific indicators are used in the analysis of the tax burden, which is an important aspect in the activities of oil and gas companies [15–17]. Various introduced measures are also evaluated [18] and a comparison is made of fiscal relations in the oil industry of various countries of the world [19] using the coefficients of the group. The authors refer to specific indicators in the context of assessing the innovative activity of enterprises in the oil and gas sector of Russia [20]. The indicators of this group of financial analysis coefficients are given attention in the study of world oil prices [21] and in the research of the domestic market of oil production and oil refining [22].

However, it should be noted that domestic science still does not pay due attention directly to the very indicators of this group, despite the sufficient prevalence of specific coefficients in works devoted to oil and gas topics. Moreover, such important aspects as the establishment of key trends in changes in the main specific indicators are not covered, and the core reasons for the transformations taking place at the level of the largest publicly traded oil and gas companies are not identified. At the same time, it is necessary to take into account all the difficulty of carrying out this kind of research, which is expressed in the need for preliminary collection and subsequent processing of a significant amount of information on a large number of corporations over a very long period of time. The opportunity to form the most reliable idea of the situation that develops with the main specific indicators in the stock market segment of the oil and gas sector is created only if all of the above conditions are met.

A methodology to form a list of the world's leading publicly traded oil and gas corporations

The most important aspect in the implementation of a comprehensive analysis are the principles on the basis of which the selection and inclusion of corporations in the list of leading publicly traded oil and gas companies for further compilation of characteristic values for the industry is made. At the same time, it is obvious that market capitalization is the most important indicator for publicly traded corporations, whose shares are freely quoted on various world exchanges. Therefore, it is quite natural that the market value of

equity should be used as the main parameter when ranking corporations for the subsequent compilation of a list of the leading publicly traded oil and gas companies of the world.

The stock market segment of the world economy is formed by a huge number of companies representing a wide range of industries, among which there is an impressive number of corporations from the oil and gas sector. In this case, the availability of reliable sources of information, through which it is possible to conduct a correct analysis over a long period of time and obtain the required list of the leading publicly traded companies in the industry, is of particular importance. Such criteria are met by the Financial Times Global 500¹ list, which was released up to 2015, and the still-publishing Forbes Global 2000² rating, where data on the market capitalization of the largest publicly traded companies in the world is concentrated. Then only those of them that were present on a relatively regular basis throughout the affected period of time in each of the ratings published at that time need to be included in the list of the world's leading publicly traded oil and gas corporations necessary for subsequent analysis.

It was determined based on the results of a detailed analysis of all sources released within the study period that 25 companies in the industry quite correspond to the criteria put forward. The largest number of such corporations is concentrated in the USA. And such leadership looks quite justified due to the fact that many more large publicly traded companies than in any other country in the world are located in the United States. The USA is represented in the general list by multinational integrated corporations ExxonMobil and Chevron, as well as independent companies ConocoPhillips, Occidental Petroleum, Devon Energy, Anadarko Petroleum, EOG Resources, Apache and Marathon Oil.

This list also includes companies from another country in North America, which is Canada. These are the integrated corporations Imperial Oil, Suncor Energy, Husky Energy and the independent company Canadian Natural Resources. This list also includes one company from South America, which is the integrated corporation Petrobras from Brazil. The list also contains only integrated corporations from Western Europe, which include Royal Dutch Shell, BP, TOTAL, Eni and Equinor. It is also necessary to note the presence in the list of the independent company CNOOC and the integrated corporations Sinopec and PetroChina from China. Publicly traded companies from Russia also meet the criteria. Domestic PAO Gazprom, PAO NK Rosneft and PAO LUKOIL also belong to the category of integrated corporations. All the listed companies collectively form a list of leading publicly traded oil and gas corporations, on the basis of which it is possible to establish the values of specific financial and stock market indicators typical for the stock market segment of the industry.

¹ FT Global 500 2015. URL: <http://im.ft-static.com/content/images/b38c350e-169d-11e5-b07f-00144feabdc0.xls>

² Forbes Global 2000 2019. URL: <http://www.forbes.com/global2000/list>

Changes in the specific financial indicators of the leading publicly traded oil and gas companies

It seems possible to use as operational indicators in the structure of specific coefficients also data on the output of products from the segments of oil refining and petrochemicals in addition to production and proved reserves. But such indicators make it possible to compare only integrated oil and gas corporations from a rather extensive list of publicly traded oil and gas companies producing liquid hydrocarbons and natural gas. Therefore, it is reasonable to use ratios based on these indicators to compare purely refining companies such as Phillips 66 and Marathon Oil.

Moreover, it seems possible to use the physical expression of indicators of product sales. But the influence of such a phenomenon as the presence of resale of third-party products and processing of purchased raw materials in the sales structure, which is very common among companies in the stock market sector of the industry, may affect the indicators in such a case. However, as a rule, even a significant share of such components in revenue usually does not bring significant profits to companies in the industry, and therefore has a rather weak effect on the market capitalization and operating income of publicly traded oil and gas corporations, examples of which are Devon Energy, BP, PetroChina, Sinopec and PAO LUKOIL. It turns out that just coefficients based on production or proved reserves are better suited for comparison.

One of the widely used specific financial indicators is the ratio of net revenue from core activities to production in barrels of oil equivalent (*Table 2*). It is worth noting that the choice of such an interpretation of revenue as part of the coefficient is not accidental. It is caused by the fact that the general approach to the presentation of this indicator in the structure of the income statement of corporations within the global oil and gas industry has not yet been developed. For example, oil and gas companies from the United States often do not include royalty payments in their revenues, but industry corporations from Canada started using this practice only ten years ago. Moreover, not all industry corporations from Canada represent excises, fees and all other taxes that are not related to income tax in the structure of expenses. In turn, leading domestic companies include excises and export duties in their revenues. It is also important that the structure of the financial statements of companies tends to transform over time. So, ExxonMobil has ceased to include sales taxes as part of its costs since 2017³, and therefore revenue has also been cleared of this component.

It turns out that it is required to apply for a proper comparison of oil and gas companies such a component that can be easily determined for any publicly traded corporation in the industry. Such a component is precisely the net revenue from core activities. And it is for oil and gas companies the sale of their own and marketing resale of purchased hydrocarbon reserves, as well as refined products and petrochemicals. Moreover, this

³ Form 10-K Annual Report Pursuant to Section 13 or 15 (d) of the Securities Exchange Act of 1934 for the Fiscal Year Ended December 31, 2017. Exxon Mobil Corporation.
URL: <https://www.sec.gov/Archives/edgar/data/34088/000003408818000015/xom10k2017.htm>

figure does not include all receipts from non-core activities, as well as payments of royalties, excises, export duties and other taxes not related to income tax. It is this interpretation of revenue that is best suited for the subsequent comparison of publicly traded corporations in the industry through specific financial indicators.

The coefficient under consideration demonstrates the amount of net revenue from core activities, which falls on a barrel of oil equivalent of hydrocarbons produced by the corporation. It is quite natural that the studied specific indicator essentially depends on the price situation on the world oil market. Therefore, it is not surprising that the level of the coefficient of the ratio of net revenue from core activity to production, which is typical for the leading publicly traded companies in the industry, only slightly increased over the studied period (*Fig. 1*). It is also obvious that the industry indicator reached its highest values in the most favorable periods for the oil and gas sector, and its bar dropped to the lowest value in times of crisis.

But there are certain nuances in this case, which must be taken into account when comparing oil and gas companies. One of them is that the cost of a barrel of hydrocarbon raw materials and products of oil refining and petrochemicals in different countries can vary in a fairly wide range of values. It is for this reason that the specific net revenue from the core activities of PAO Gazprom and PAO NK Rosneft is much lower than that of integrated corporations from other countries of the world included in the list. In addition, refining and petrochemicals products are typically significantly more expensive than the extracted feedstock per barrel of oil equivalent. That is why the level of the indicator within one country is significantly higher for integrated corporations than for independent companies. And the declared specificity is shown by the example of the coefficients of Marathon Oil and ConocoPhillips, which moved from the category of integrated corporations to the number of independent companies after the withdrawal from the structure of the entire processing business in 2011 and 2012, respectively.

Meanwhile, an integrated corporation is quite able to produce more refined products than its own production figures by purchasing the missing hydrocarbon feedstock from other oil and gas companies, if there is adequate production capacity, which is noted in the indicators of Sinopec. At the same time, the value of the coefficient is also affected by the presence in the sales structure of the resale of hydrocarbon raw materials and products. This is confirmed by the specific indicators of net revenue from core activities per barrel of production of Royal Dutch Shell, BP, TOTAL, Devon Energy, PetroChina and PAO LUKOIL corporations, which were previously mentioned in a similar context.

Another common indicator is the ratio of income from core activities to production in barrels of oil equivalent. The value of the indicator inherent in the leading publicly traded oil and gas companies has seriously decreased over the entire period covered by the study (*Fig. 2*). It is also worth highlighting that the deepest decline occurred during a protracted purely sectoral crisis. Moreover, these coefficients for integrated corporations are distinguished by higher and more stable values compared to independent companies in the

midst of shocks. At the same time, the indicators of the considered specific coefficient for the leading publicly traded oil and gas companies are a clear confirmation of the fact that resale does not significantly affect the profits of industry corporations. Royal Dutch Shell, BP, TOTAL, Devon Energy, PetroChina and PAO LUKOIL, which have a high share of resales in the structure of net revenues, do not stand out from their competitors in terms of indicators. Meanwhile, the output of oil refining products was several times higher than the production of liquid hydrocarbons due to purchased raw materials from Sinopec, which ensured a good level and stability of the indicators of the company during the industry crisis.

It is also quite natural that the ratio of EBITDA to total production in barrels of oil equivalent is quite often used within the group of specific indicators of oil and gas corporations. The indicator reflects the amount of profit that an oil and gas corporation generates before income taxes, interest on loans and bonds, and depreciation charges per barrel of oil equivalent of hydrocarbon production. It is also predictable that the level of the indicator, which is typical for the leading publicly traded oil and gas companies, has decreased over the entire studied period (*Fig. 3*).

It should be noted that the value of this coefficient for independent companies is more susceptible to the impact of an impressive decline in oil prices than for integrated corporations. However, the range of values of the indicator is not as wide as that of the previous coefficient of the group. At the same time, this difference is due to the fact that EBITDA does not include depletion, depreciation and amortization of oil and gas assets, which can have a significant impact on the amount of income from core activities during periods of crisis for the industry. Domestic companies are distinguished by rather low values of the indicator during the studied period. Such data indicate the presence of a pronounced country factor in pricing and taxation in the oil and gas industry.

The specific indicator, which expresses the ratio of the net income of shareholders of the company to production in barrels of oil equivalent, is used quite often. It is quite understandable that such an indicator shows how much of the income or loss per barrel of oil equivalent of produced hydrocarbon raw materials remains with the publicly traded corporation of the industry after covering all expenses, paying income tax and accounting for the share for minority shareholders. It should be noted that the bar of this specific indicator common for the leading publicly traded oil and gas companies of the world also decreased over the studied period (*Fig. 4*), which is already quite obvious based on the dynamics of the values of all previous coefficients of the group.

Therefore, it is important to note that there is a significant drop in the profitability of production in the stock market segment of the global oil and gas industry. This circumstance is due not only to the hydrocarbon prices, but also to the general increase in the costs of publicly traded oil and gas corporations, which is clearly reflected in the indicators of independent companies. Even the presence in the structure of the corporation of indicators of the output of refined products, which are several times higher than the

level of production, as in the case of Sinopec, is not able to change this trend. At the same time, the state of affairs of integrated corporations as a whole is noticeably better. It is also noteworthy that domestic publicly traded companies maintained a positive value of the sought coefficient during the protracted purely sectoral crisis, despite the relatively low level of values.

Another important specific coefficient for the stock market segment of the oil and gas industry is the ratio of capital expenditures of corporations in the exploration and production sector to the amount of hydrocarbon recovery in barrels of oil equivalent. Exploration and production capital expenditures per barrel of recoverable resources of individual companies also need to be studied in relation to typical industry values. It is worth paying attention to the fact that the bar of this indicator, which is typical for the leading publicly traded oil and gas corporations, has decreased over the entire period (*Fig. 5*) even in the absence of a dynamics expressed for all the studied companies.

The key factor in the decline was a very long industry crisis. There was impressive growth in unit capital expenditures in the upstream segment of the oil and gas sector before it, which was briefly interrupted during the global financial turmoil. It turns out that oil and gas companies are forced to reduce specific capital expenditures to support profitability and maintain a stable financial position in times of crisis for the industry. The values of this indicator decreased the most among independent companies, but this approach can lead to significant difficulties in maintaining the required level of production and proved reserves in the future. It is also natural that the consistently low values of the coefficient under consideration for the industry are a significant competitive advantage for an oil and gas company. On the contrary, a tangible and long-term growth of this indicator can be a rather alarming signal. In turn, the specific capital costs are quite low for domestic oil and gas companies compared to competitors, which is undoubtedly a positive factor.

Changes in the specific stock market indicators of the leading publicly traded oil and gas companies

Specific stock market ratios are also common among publicly traded oil and gas corporations, in addition to the financial indicators of the group under study. One of these indicators is the ratio of market capitalization to production in barrels of oil equivalent. This indicator expresses the market value of a barrel of oil equivalent of hydrocarbons extracted by an oil and gas corporation. Therefore, it is quite expected that the level of the indicator inherent in the leading publicly traded companies of the industry has seriously dropped (*Fig. 6*) against the backdrop of a very obvious decrease in the market capitalization of the oil and gas sector over the studied period.

It is also worth pointing out that this ratio is quite suitable for assessing the possible value of assets even with low oil prices due to the relative stability and not so wide range of values. Another notable feature of the indicator is that the value of the coefficient also usually increases with the degree of vertical integration. Moreover, the presence in the

structure of the corporation and another sufficiently developed segment of activity can have a positive effect in addition to oil refining, as is the case with the petrochemical business of the independent company Occidental Petroleum. High profitability is also able to increase the level of the coefficient, as evidenced by the EOG Resources indicator.

It is important not to lose sight of other specifics inherent in the market capitalization of oil and gas companies. Thus, low proved reserves life significantly reduces the market valuation of industry corporations, which is manifested in the indicators of Husky Energy and Equinor. At the same time, it is also necessary to take into account the country factor, which significantly affects the performance of the leading domestic oil and gas corporations. The high level of debt in the total capital structure also negatively affects the market capitalization, which became clearly visible in the value of the Petrobras indicator after the corruption scandal, and therefore it is better to use the enterprise value in the coefficient structure instead of market capitalization to compare corporations with different debt ratios.

It is advisable to consider the ratio of market capitalization to proved reserves in barrels of oil equivalent as the final, but also quite significant indicator within the group of specific coefficients of the financial analysis. This ratio expresses the market value of a barrel of oil equivalent of proved reserves of liquid hydrocarbons and natural gas of a publicly traded oil and gas corporation. It should be noted that the value of this indicator, which is typical for the leading publicly traded oil and gas corporations, significantly decreased over the period under study (*Fig. 7*). It is natural that the coefficient has the same features as the previous specific stock market indicator. Therefore, it is better to use a similar coefficient based on the enterprise value indicator to compare and estimate the possible value in the presence of significant differences in the level of debt. Nevertheless, there is also its own specificity, which also needs to be taken into account when comparing and evaluating the range of possible value of the company.

Thus, an important feature of using the coefficient is that the proved reserves themselves belong to the estimated category of indicators. Meanwhile, a common approach has not yet been developed to determine their level in the oil and gas industry itself. Therefore, it is necessary to pay close attention to the classification according to which the value of proved reserves is established when determining the coefficient. The most stringent, and therefore the most preferred, is the classification of the US Securities and Exchange Commission (SEC). This is followed by the Petroleum Resources Management System (PRMS) methodology proposed by the Society of Petroleum Engineers (SPE), and last on this list is National Instrument 51-101, known by the Standards of Disclosure for Mineral Projects, which is used by the Canadian Securities Administrators (CSA).

It is completely inappropriate to compare coefficients based on proved reserves with indicators based on probable or possible reserves and fundamentally different classifications, which are based on geological knowledge and the degree of industrial development of resources, but do not take into account economic factors. These are the

Classification of Reserves and Probable Resources of Oil and Combustible Gases in force in the Russian Federation and the Classification of Field Reserves, Prospective and Probable Resources of Oil and Natural Hydrocarbon Gas adopted in Kazakhstan. It is the estimated nature of information about proved reserves of raw materials that does not allow using this coefficient on a par with the previous specific stock market indicator. Nevertheless, the coefficient is quite applicable as an auxiliary specific stock market indicator when comparing or assessing the possible value of oil and gas companies. It should also be taken into account that a rather high proved reserves life against the background of competitors in the industry has a negative impact on the value of the indicator, of which the low coefficient values of PJSC Gazprom are a clear example.

Conclusions

A comprehensive analysis of key specific ratios makes it possible to formulate a number of conclusions regarding the transformations that have occurred in the ratio between financial, stock market and operating indicators at the level of leading publicly traded oil and gas corporations within the considered period of time. It was revealed that only the ratio of net revenue from core activities to production in barrels of oil equivalent showed a slight increase among all the studied indicators of the group, which was facilitated by the price situation in the market. The values of all other studied coefficients were characterized by a rather pronounced final decline.

It was also found that the prolonged industry crisis had the strongest impact on the values of the indicators of this group, from which independent companies suffered more seriously than others. But the stock market segment of the global oil and gas sector suffered much more easily the global financial shock that preceded it. In addition, certain negative trends appeared in the industry shortly before the industry crisis during the period of high oil prices, when net revenue from core activities per barrel of oil equivalent reached the highest values. Unit capital expenditures in the exploration and production sector began to increase in such favorable conditions, while profitability and market valuation of a barrel of oil equivalent of recoverable hydrocarbons began to decline. The subsequent industry crisis led to a decrease in specific capital costs and only aggravated the situation in the industry. Therefore, it seems possible to conclude that the market attractiveness of the stock market sector of the oil and gas industry has decreased.

Moreover, it is determined that it is required to take into account a number of specific factors when using specific financial and stock market indicators. It was revealed that the refining of purchased raw materials, as well as the resale of hydrocarbons and processed products, can have a rather significant impact on the specific net revenue from core activities. Therefore, a preliminary analysis of the structure of production, refining, output and sales of products is important when comparing data on the specified indicator. It has also been established that the coefficients based on market capitalization are quite acceptable for assessing the possible value of oil and gas corporations, but the enterprise value indicator is more appropriate with a significant difference in the level of debt. It has

been determined that a specific indicator based on cumulative production is preferable for valuation, while a coefficient based on total proved reserves is better used as an auxiliary component in determining the cost. It was also revealed that domestic corporations are inferior to competitors in terms of specific stock market indicators, and therefore the pronounced country specificity of the coefficients of the group is obvious.

Table 1

The average price for WTI and Brent crude oil for 1999–2018, USD per barrel

Year	WTI	Brent
1999	19.34	17.9
2000	30.38	28.66
2001	25.98	24.46
2002	26.18	24.99
2003	31.08	28.85
2004	41.51	38.26
2005	56.64	54.57
2006	66.05	65.16
2007	72.34	72.44
2008	99.67	96.94
2009	61.95	61.74
2010	79.48	79.61
2011	94.88	111.26
2012	94.05	111.63
2013	97.98	108.56
2014	93.17	98.97
2015	48.66	52.32
2016	43.29	43.64
2017	50.8	54.13
2018	65.23	71.34

Source: Authoring, based on the U.S. Energy Information Administration data. URL: <https://eia.gov>

Table 2

The average values of the key specific financial and stock market indicators of the twenty five leading publicly traded oil and gas corporations for 2006–2018, USD per barrel of oil equivalent

Indicator	2006	2007	2008	2009	2010	2011	2012
Net revenue per barrel of production	134	153.42	186.01	132.52	166.56	199.73	193.62
Income from core activity per barrel of production	26.05	28.18	30.27	15.8	20.5	29.06	24.03
EBITDA per barrel of production	37.56	42.2	41.58	29.16	36.83	46.38	44.06
Net income of shareholders per barrel of production	18.11	19.73	16.87	9.6	14.33	19.36	15.93
Capital expenditures in the exploration and production sector per barrel of production	16.65	17.39	22.06	16.44	20.3	24.24	26.96
Market capitalization per barrel of production	186.18	276.49	145.85	194.4	186.84	176.02	169.94
Market capitalization per barrel of proved reserves	15.08	21.87	11.55	14.62	14.79	13.15	13.07

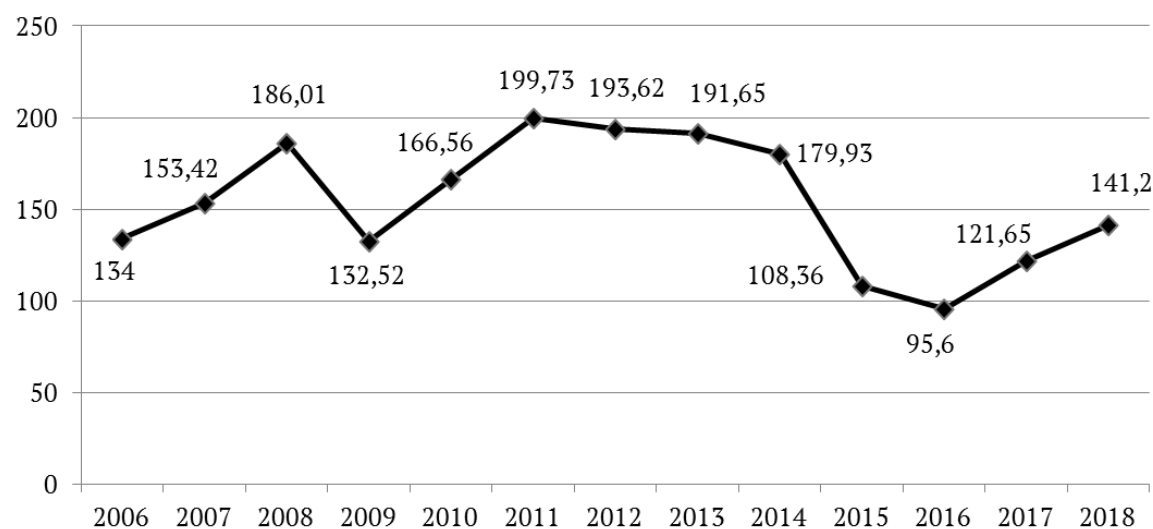
Continuation of the table

Indicator	2013	2014	2015	2016	2017	2018
Net revenue per barrel of production	191.65	179.93	108.36	95.6	121.65	141.2
Income from core activity per barrel of production	21.86	13.43	-13.55	-0.64	6.88	14.76
EBITDA per barrel of production	41.79	35.54	10.7	16.85	23.2	31.22
Net income of shareholders per barrel of production	14.39	8.73	-10.99	-0.44	4.57	10.28
Capital expenditures in the exploration and production sector per barrel of production	31.08	27.96	16.92	11	13.16	13.34
Market capitalization per barrel of production	175.23	157.51	109.46	140.81	145.11	118.65
Market capitalization per barrel of proved reserves	13.07	11.78	9.57	13.62	13.49	10.94

Source: Authoring, based on [23]

Figure 1

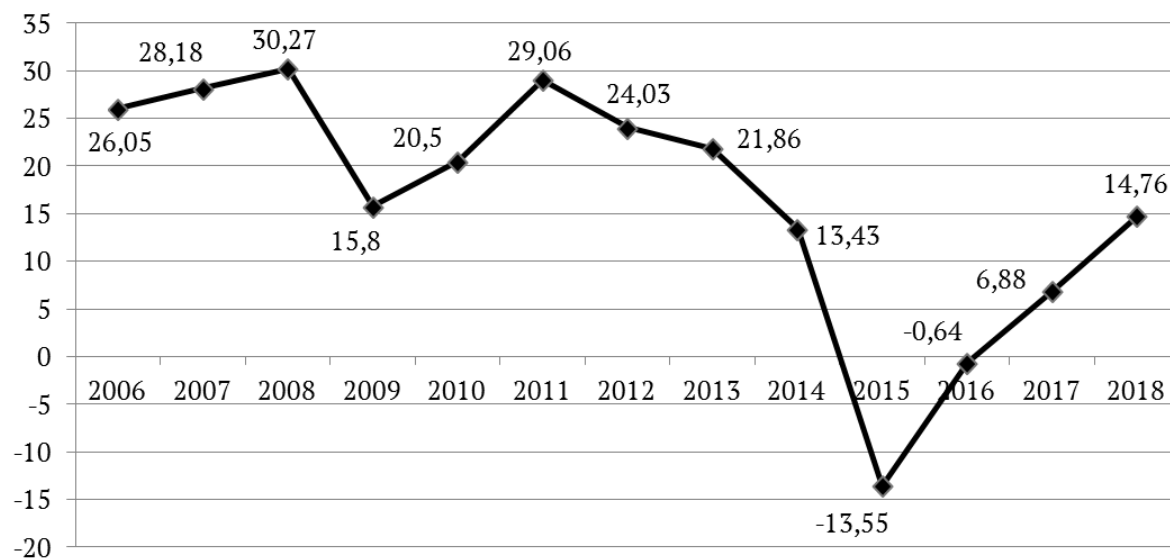
The average values of net revenue per barrel of production of the twenty five leading publicly traded oil and gas corporations for 2006–2018, USD per barrel of oil equivalent



Source: Authoring

Figure 2

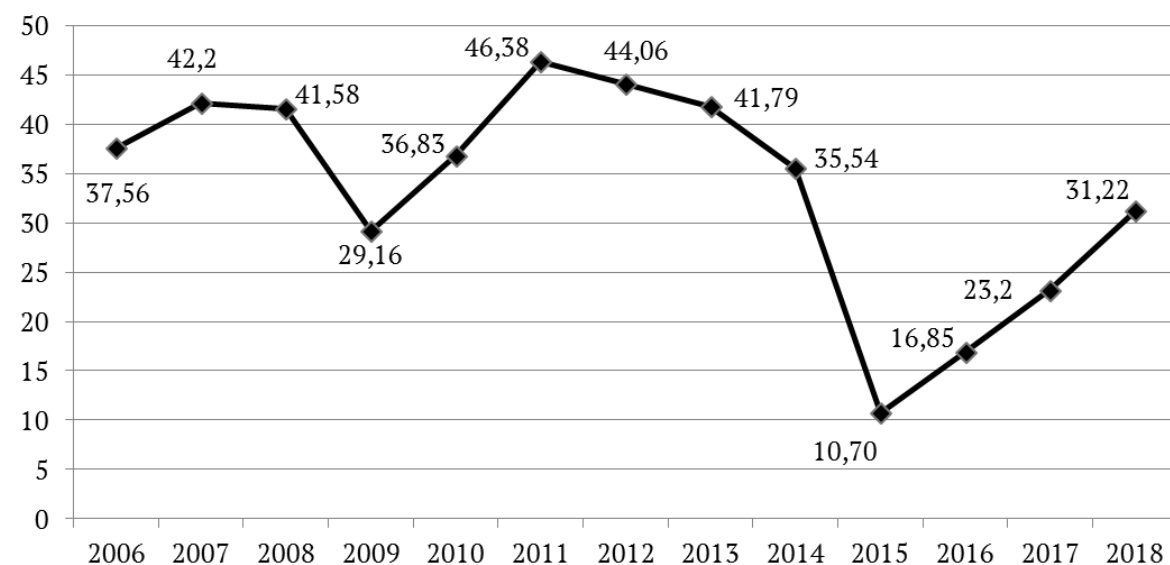
The average values of profit on ordinary activities per barrel of production of the twenty five leading publicly traded oil and gas corporations for 2006–2018, USD per barrel of oil equivalent



Source: Authoring

Figure 3

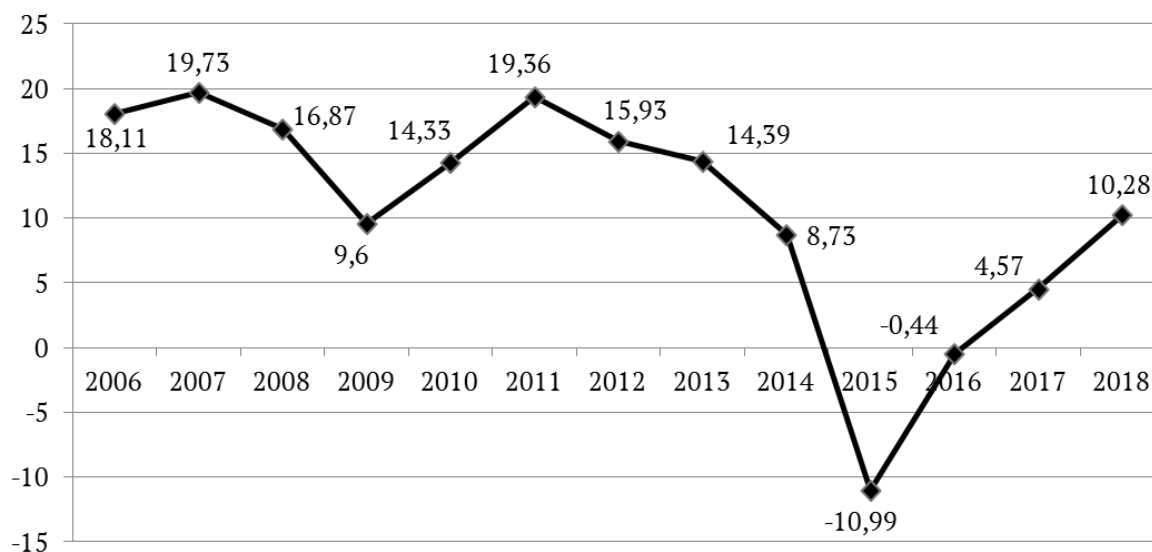
The average EBITDA per barrel of production of the twenty five leading publicly traded oil and gas corporations for 2006–2018, USD per barrel of oil equivalent



Source: Authoring

Figure 4

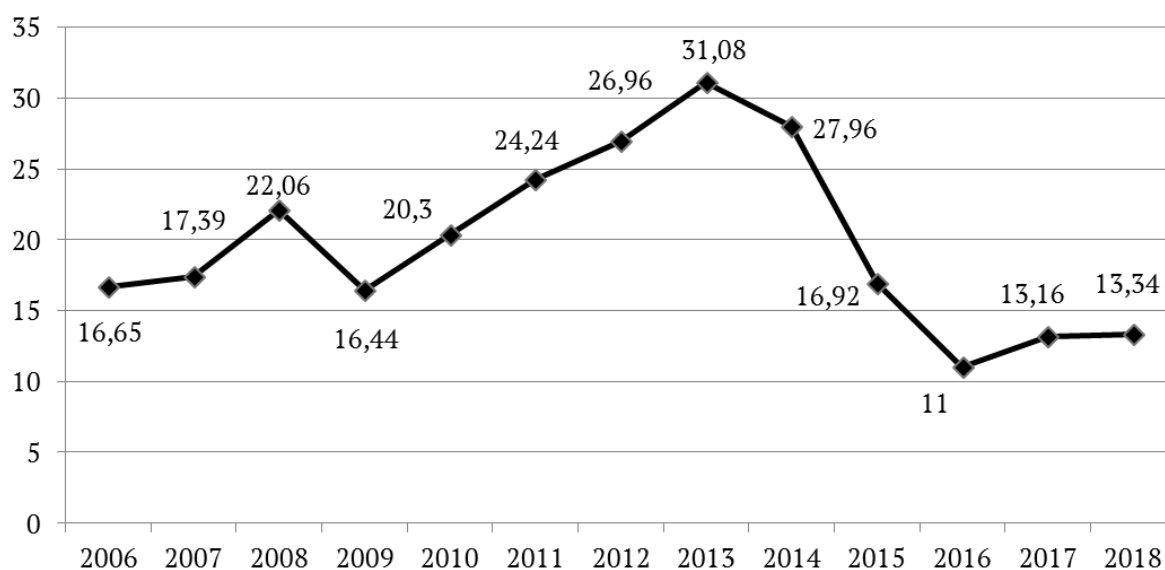
The average values of net profit attributable to shareholders per barrel of production of the twenty five leading publicly traded oil and gas corporations for 2006–2018, USD per barrel of oil equivalent



Source: Authoring

Figure 5

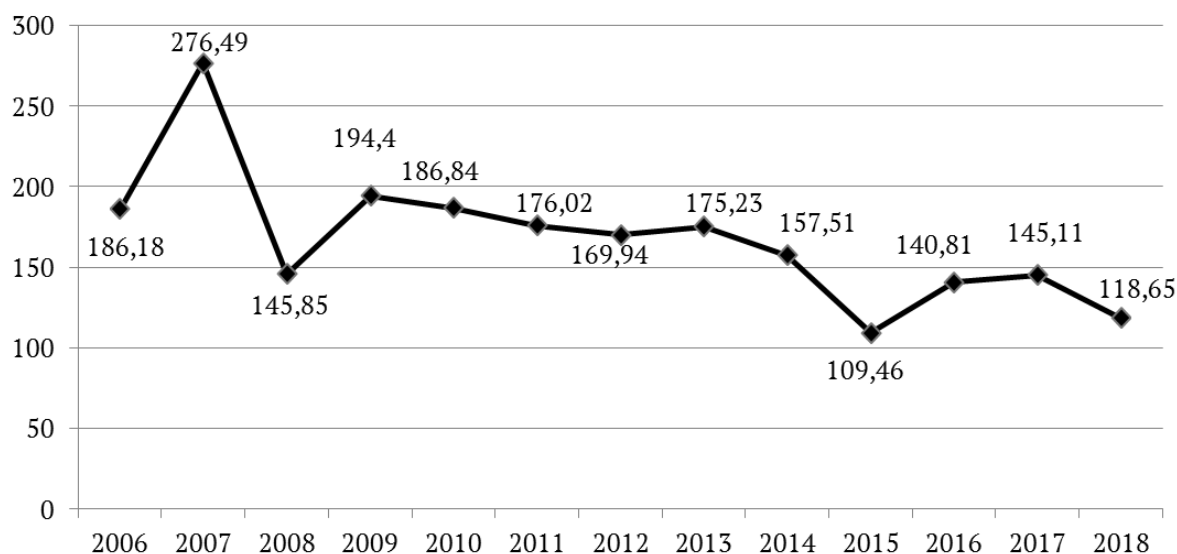
The average values of capital expenditures in the exploration and production sector per barrel of production of the twenty five leading publicly traded oil and gas corporations for 2006–2018, USD per barrel of oil equivalent



Source: Authoring

Figure 6

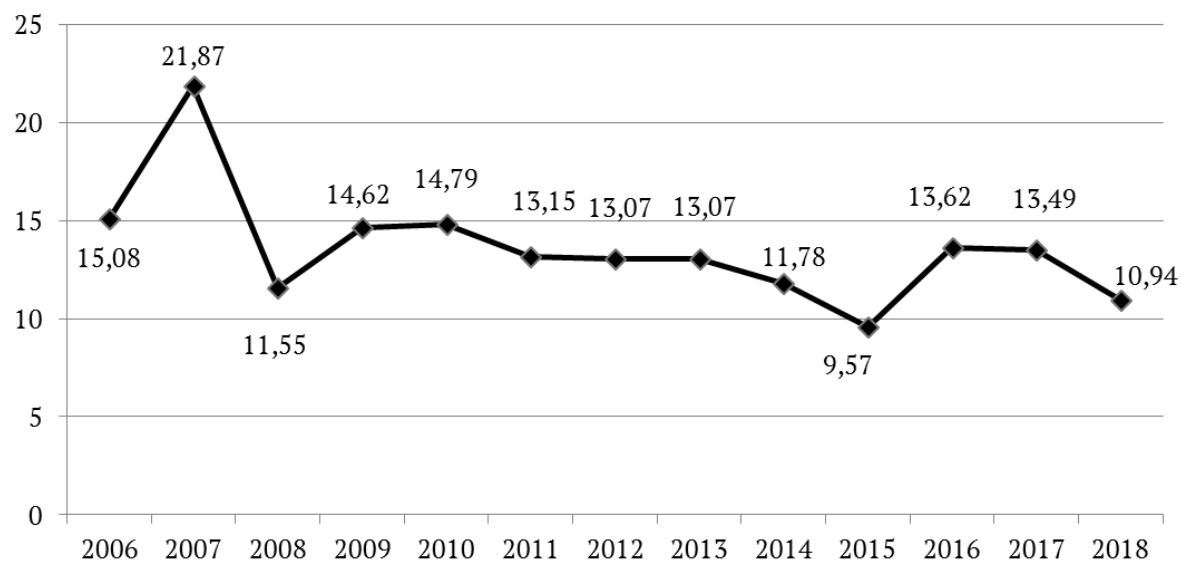
The average values of market capitalization per barrel of production of the twenty five leading publicly traded oil and gas corporations for 2006–2018, USD per barrel of oil equivalent



Source: Authoring

Figure 7

The average values of market capitalization per barrel of proved reserves of the twenty five leading publicly traded oil and gas corporations for 2006–2018, USD per barrel of oil equivalent



Source: Authoring

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Conflict-of-interest notification

I, the author of this article, bindingly and explicitly declare of the partial and total lack of actual or potential conflict of interest with any other third party whatsoever, which may arise as a result of the publication of this article. This statement relates to the study, data collection and interpretation, writing and preparation of the article, and the decision to submit the manuscript for publication.