pISSN 2073-8005
eISSN 2311-9438

Risks, Analysis and Evaluation / Риски, анализ, оценка

MULTIPLIERS BASED ON NET INCOME AS AN INDICATOR OF THE INVESTMENT ATTRACTIVENESS OF DOMESTIC VERTICALLY INTEGRATED OIL AND GAS COMPANIES

Oleg V. SHIMKO

Center for Innovative Economics and Industrial Policy,
Institute of Economics of Russian Academy of Sciences (IE RAS),
Balashikha, Moscow Oblast, Russian Federation
shima_ne@mail.ru
https://orcid.org/0000-0002-0779-7097

Article history:
Article No. 82/2022
Received 28 Feb 2022
Received in revised form
30 March 2022
Accepted 26 May 2022
Available online
29 June 2023

JEL classification: G32, L25, L71, M41, O12

Keywords: valuation, multiplier, market capitalization, net income, oil and gas industry

Abstract

Subject. This article focuses on the market-capitalization-to-net-income ratios of the twenty five leading publicly traded oil and gas companies within 2008 through 2018.

Objectives. The article aims to identify key trends in the changes in the values of market-capitalization-to-corporations'-net-income ratios of the oil and gas companies, as well as identify key trends in their change within the studied period, and identify the factors that caused those changes.

Methods. For the study, I used the methods of comparative, financial and economic analyses, summarizing financial reporting data.

Results. The article finds that the studied multipliers based on net income of shareholders are of little use for assessing the value of oil and gas companies due to the volatility of oil prices. Integrated corporations are not as dependent on oil prices as independent companies. Net income can be affected not only by a decrease in revenue, but also by the cost of impairment, revaluation or write-off of assets in the event of a fall in oil prices, and therefore, the use of the multipliers is advisable in case of high profitability in the industry. Net income may also be affected by income and expenses that are not related to operating activities. This factor should be taken into account when choosing an analogue company. It was revealed that the characteristic features of the market capitalization of companies in the industry are reflected in the indicators, which include the provision with proved reserves and level of debt. It is better to use an enterprise value indicator instead of market capitalization in a multiplier if there is a noticeable difference in debt burden.

Conclusions and Relevance. To apply the multipliers based on net income is very difficult in the face of declining profitability and increasing debt burden in the stock market sector of the global oil and gas industry. The findings can help appraise the value of oil and gas assets as part of a comparative approach and decide on actions for raising the market capitalization of publicly traded oil and gas corporations.

Please cite this article as: Shimko O.V. Multipliers Based on Net Income as an Indicator of the Investment Attractiveness of Domestic Vertically Integrated Oil and Gas Companies. *Digest Finance*, 2023, vol. 28, iss. 2, pp. 122–146.
https://doi.org/10.24891/df.28.2.122

Introduction

Many representatives of the modern domestic economic school pay particular attention to the oil and gas industry. This interest is quite predictable due to the fact that the designated sector of the economy still plays a key role in the national economy of the country. Such a high importance is due to the fact that the products of the oil and gas industry retain their leading positions in industrial production and commodity exports. That is why the proceeds from the sale of crude oil, natural gas and products of their processing make a significant contribution to the formation of the revenue side of the state budget of the Russian Federation and contribute to the replenishment of the National Welfare Fund of the country. And the capitalization of domestic oil and gas corporations together forms a significant part in the market valuation of the entire stock market segment of the Russian economy.

The scientific community also shows a genuine interest in such an important component as the valuation of assets in the study of various areas of economic activity in the oil and gas industry. The authors in their works mainly touch upon the methods of income, cost and comparative approaches generally accepted for all sectors of the world economy, identify the advantages and disadvantages of their application for the oil and gas sector and also determine the value of various industry assets based on them. It is necessary to note the comparative approach in this regard, which has become very widespread in the scientific articles of domestic scientists [1].

The analogous company method and the industry formulas method within the framework of the comparative approach are based on the use of various multipliers, which include both the coefficients generally accepted for all sectors of the economy, and indicators inherent only for the oil and gas industry. Usually, those coefficients are distinguished among commonly used multipliers that demonstrate the ratio of market capitalization or enterprise value, which is supplemented by the amount of net debt, to such indicators as assets [2], revenue [3], net income [4], EBITDA [5], DACF [6] or CF [7]. It is customary to classify as sectoral multipliers those coefficients where one of the components included in their structure is data on total production [8] or total reserves [9] of crude oil and natural gas.

The multiplier of the ratio of market capitalization to the net income of shareholders of an oil and gas company has become widespread in the works. In another interpretation, which is mainly used by the authors in their scientific research, this indicator is the ratio of the stock market price of a share to the share in the net profit of an oil and gas corporation that it accounts for [10]. It is in this version that the indicator is usually analyzed when studying the features of appraising the value of companies in the industry by the method of market multipliers [11]. This ratio is also taken into account when determining the possible value of a controlling stake in domestic oil and gas corporations using other valuation methods [12].

The multiplier is used in the context of such topics as the analysis of the investment attractiveness of companies in the oil and gas industry [13], which is very close to

evaluating the value. The authors pay attention to the financial control of indicators of investment attractiveness, among which there is also the declared indicator [14]. The multiplier is also used when considering the methods [15] for the formation of an investment portfolio [16] in order to place free funds [17]. This indicator finds its application in scientific articles and when highlighting the motives and features of the buyback of shares [18], as well as when studying the reaction of quotations of the securities themselves to this procedure [19]. The multiplier itself is also significant from the standpoint of establishing strategic factors that influence the development of oil and gas corporations in Russia [20]. For this reason, it is taken into account in the analysis [21] and comparative assessment [22] of the efficiency of the activities of industry companies in the current economic conditions [23–25].

All of the above confirms that the indicator under study has become quite widespread in works on the economics of the oil and gas sector. However, the domestic scientific community still does not show interest in such a very important direction in assessing value using the methods of the comparative approach, as determining the sectoral level of the multiplier. That is why the authors do not identify the main trends and do not establish the key reasons for the changes occurring in the stock market segment of the global oil and gas industry. However, conducting such studies is a rather difficult task, the implementation of which requires preliminary collection and subsequent processing of an impressive amount of data for a long period of time and for a significant number of companies in the industry. But only this approach makes it possible to form the most complete and reliable idea of the situation that develops with the studied multiplier on the scale of the entire stock market segment of the oil and gas industry.

Methodology for compiling a list of the world's leading publicly traded oil and gas corporations

The principles on the basis of which the selection and inclusion of various companies in the list of corporations that are then analyzed are important for the establishment of the multiplier indicators inherent in the stock market segment of the global oil and gas industry. It is necessary to focus attention in this case on the fact that market capitalization is the most important characteristic for any company whose shares are freely traded on the stock exchange. That is why it is advisable to choose the designated parameter as a target for the inclusion of a particular company in the industry in the list of the world's leading publicly traded oil and gas corporations.

The stock market segment of the world economy currently consists of a huge number of companies, which together represent a wide range of various sectors of the national economy. The availability of information sources that can ensure the correct selection of corporations for their inclusion in the list of the world's leading publicly traded oil and gas companies comes to the fore with such a variety. And the key criteria for such sources of information are their reliability and the ability to cover a fairly long time range, which allows us to trace the transformation of the industry-specific multiplier level as a result.

Such an approach to ranking companies is collectively provided by the list of the Financial Times Global 500[1] that existed until 2015 and the still published Forbes Global 2000[2] rating, each of which contains information on the market capitalization of the world's largest corporations. It turns out that it is advisable to add corporations from those ratings to the list of oil and gas companies required for further analysis. But those of them are suitable that were present on a relatively stable basis in each of the ratings available at that time throughout the entire period of interest. It was determined based on the results of the study that twenty-five oil and gas corporations are quite consistent with the designated criteria.

The largest number of all companies included in the final list is from the US oil and gas sector. These include the integrated corporations ExxonMobil and Chevron, as well as fairly large independent companies ConocoPhillips, Occidental Petroleum, Devon Energy, Anadarko Petroleum, EOG Resources, Apache and Marathon Oil. Such a high proportion of US corporations in the resulting list is understandable by the fact that this country is the recognized world leader in the number of publicly traded companies with high market capitalization based there. The list also includes companies from neighboring Canada. These are the integrated corporations Imperial Oil, Suncor Energy, Husky Energy and the independent company Canadian Natural Resources. The ranking also includes the only representative from South America, which is Petrobras, an integrated corporation located in Brazil.

The states of Western Europe in the general list are also represented only by the integrated corporations Royal Dutch Shell, BP, TOTAL, Eni and Equinor. Companies from China are also on the list. These are the integrated corporations Sinopec and PetroChina, as well as the purely independent company CNOOC. As expected, the list also includes companies from the Russian Federation, which are the integrated oil and gas corporations PJSC Gazprom, PJSC NK Rosneft and PJSC LUKOIL. All of these companies together form the list of the leading publicly traded oil and gas corporations of interest. It is on its basis that the values of the multipliers are then obtained, which characterize the ratio between the indicators of market capitalization and the net income of shareholders in the stock market segment of the industry.

Dynamics of changes in market capitalization to shareholder net income multiples of the leading publicly traded oil and gas companies

The investigated indicator is called the ratio of the company's stock market price to its share in net income in the interpretation that is most widely used in practice. However, this interpretation of the multiplier does not take into account two important nuances. One of them is related to the fact that corporations have also survived in the stock market segment of the global oil and gas industry, which also have preferred shares traded on the exchange in the general structure of share capital in addition to ordinary shares. These companies include Petrobras, Husky Energy, PJSC Surgutneftegas and PJSC ANK

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

[2] Forbes Global 2000. URL: http://www.forbes.com/global2000/list

Bashneft. It is necessary to highlight in this list Petrobras, which usually holds approximately 40–45% of its market capitalization with preferred shares. But the number of various issued series of preferred shares in the total share capital structure of Husky Energy reached five types already in 2017.

Another nuance lies in the fact that ordinary shares in the structure of equity capital of one oil and gas corporation can be of different types. Royal Dutch Shell, PetroChina and Sinopec are good examples of this. The capital of the above corporations is divided into two types of ordinary shares. Royal Dutch Shell shares both types of shares freely on the Amsterdam and London stock exchanges in euros and pounds sterling, respectively. The main trading floor for Type A shares is Euronext in Amsterdam, while Type B shares are predominantly traded on the London Stock Exchange. The number of type A shares is higher, their share accounted for approximately 54–62% of the total number of shares in circulation during the study period.

This specific shareholding structure of Royal Dutch Shell is the result of the merger of Royal Dutch Petroleum from the Netherlands and The "Shell" Transport and Trading from the UK, which was completed on 9 August 2005. But these corporations formed the Royal Dutch/Shell Group of Companies back in 1907. Royal Dutch Petroleum held a 60% stake in the group, with the remainder of 40% held by The "Shell" Transport and Trading prior to the full merger. Corporate shares traded independently on different exchanges, but their market capitalization correlated in much the same way as shares in a single group of companies long before the final merger. In addition, consolidated financial statements were published for a single group of companies. The stock market prices for shares of types A and B differ after the merger, despite the same par value of 0.07 euros, but the difference between quotations itself is usually within the range of 10%.

The situation with the division of capital between the shareholders of PetroChina and Sinopec is somewhat different. The common A shares of both companies are intended for the domestic market and are therefore traded on the Shanghai Stock Exchange. Ordinary shares of type H are designed to attract external players and are listed on the Hong Kong Stock Exchange. Type A shares are traded in yuan, and type H shares are traded on the stock exchange in Hong Kong dollars, although the par value of all types of shares of these corporations is equal to 1 yuan. The basis of the share capital of each company is formed by shares of type A, most of which are not directly, but indirectly, owned by the state through controlled corporations.

PetroChina's A and H shares account for 88.47% and 11.53% of the total equity capital, respectively. 91.41% of Type A shares are not traded, but are held by the state-controlled corporation CNPC, which is 80.25% of the share capital. CNPC also owns 1.38% of H-type shares, which additionally provides the state with another 0.16% in PetroChina's equity capital. However, the price ratio between the two types of stock is not as stable as in the case of Royal Dutch Shell. The external market share price accounted for approximately 50% to 100% of the internal market share price over the period studied.

The proportion between shares of type A and H in the capital structure of Sinopec was 78.93% to 21.07% at the end of 2018. The ratio between the quotes for shares of type A and H for the company varied in a fairly wide range of values within the period covered. The quotations for shares of type H intended for external investors were in the range from 40 to 110% of the stock market price of shares for the internal market of type A.

The number of companies with such nuances in the structure of share capital is relatively small against the background of a rather extensive stock market segment of the global oil and gas industry, but certain difficulties arise with the correct calculation of the ratio of the stock market price of a share to its share in net income in the presence of this specificity. That is why it is advisable to use the variant of the multiplier where the entire market capitalization of the oil and gas corporation is correlated with the net income of shareholders, which neutralizes the possible influence of the listed factors when assessing the value using the comparative approach.

The multiplier expresses the market value of the unit of net income of the shareholders of the company in the specified interpretation. This indicator, in essence, demonstrates the number of years it will take to return the initial investment, provided that there is no control premium at the conclusion of the transaction and all the net income of the corporation's shareholders is then used to pay dividends. All the above statements are valid only if the company constantly generates a fairly stable amount of net income for shareholders, but the oil and gas industry does not differ in enviable constancy of prices for extracted raw materials (*Table 1*).

Within the time frame covered by this study, the oil and gas sector felt the effects of the global economic turmoil of 2008–2009, followed by a period of high oil prices that was very favorable for companies, and also experienced the impact of a protracted industry crisis, the onset of which in 2014 was marked by a collapse oil quotes. The existing dynamics of oil prices contributed to the fact that the multiplier level typical for the entire stock market segment of the oil and gas industry not only changed in a very wide range of values, but even turned out to be on a negative scale of values (*Table 2*). This indicator is actually of little use for assessing the value of oil and gas corporations using the method of industry coefficients used in the comparative approach for this reason.

Such results are mainly related to the dynamics of changes in the net income of shareholders (*Table 3*), while the transformation of market capitalization was significantly inferior to the previous component of the multiplier in its scale, although it was impressive (*Table 4*). Shareholder net income is much more sensitive to low commodity prices than any other financial statement commonly used in the valuation of oil and gas companies on a comparative basis. This specificity is quite clearly manifested when comparing not only with assets (*Table 5*) or net cash from operating activities (*Table 6*), but also when comparing with other indicators formed on the basis of the components of the income statement, such as revenue and EBITDA (*Table 7*).

However, there is still no unified format for presenting revenue in the structure of the income statement in the stock market sector of the oil and gas industry. Therefore, it is

required for a proper comparison with the net income of shareholders to be guided by such a component that can be determined for any of the companies covered by this study. A similar indicator is revenue from core activities, such as the sale of own and resale of purchased stocks of crude oil, gas condensate, natural gas and refined and petrochemical products, which is cleared of all other receipts, royalties, excise taxes, export duties and other taxes, not relating to income tax (*Table 8*).

The reason for such a serious reaction of net income to fluctuations in oil prices becomes obvious already from the formulation of this indicator. So, the net income or loss of shareholders reflects the financial result that remains at the disposal of the owners of the industry corporation from the received proceeds and other income after taking into account all costs, including income tax, and can be used for the subsequent development of the company itself and the payment of dividends. The proceeds from industry companies are formed mainly due to the proceeds from operating activities, which to a significant extent depends on the global oil price environment for corporations with a high degree of vertical integration, where sales are mainly formed from the sale of various petroleum products. But the same cannot be said for the corresponding costs.

Therefore, it is quite natural that the net income of shareholders in terms of its size is seriously inferior to the net revenues from operating activities, even under conditions of high oil prices favorable for the industry, when the activities of oil and gas companies are often quite profitable. And the most impressive difference is in the case of integrated corporations. This ratio is due to the fact that prices for refined products per barrel are usually significantly higher than for crude oil, natural gas and gas condensate. But the dependence of the cost of refined products on oil prices is not so pronounced, which makes the dynamics of net revenues from the main activities of integrated corporations more stable compared to independent companies with a significant change in oil prices.

The impact on net income is amplified by such factors as impairment, revaluation and write-off of assets of oil and gas companies amid low oil prices, in addition to falling revenues. Many corporations in the industry account for such expenses as depreciation, depletion and amortization costs, which leads to a noticeable increase in this component of the income statement (*Table 9*). A good example in this case is Apache, which has seen a sharp jump in total depreciation, depletion and amortization costs at the height of the industry crisis in 2015. A key component of these costs, totaling $25,517 million, was attributable to depreciation, depletion and amortization costs that the corporation itself classified as additional and resulted from a partial write-off of the carrying amount of proved oil and gas reserves as a result of revaluation.

At the same time, Apache cited a part of the costs caused by the depreciation of assets (*Table 10*) as an independent component of the income statement, separately from depreciation, depletion and amortization costs. Almost all of these corporate expenses were related to the impairment of infrastructure for the gathering, transportation and preparation of raw materials. Some of the leading companies in the stock market segment of the industry also report their costs of impairment, revaluation and write-off of various assets outside of depreciation, depletion and amortization expense. Most of these

corporations represent the US oil and gas sector, and the highest values were quite expectedly recorded in the midst of the global financial crisis and the subsequent industry shock, which is also noticeable in the dynamics of the balance sheet valuation of the assets of the companies under study.

The very combination of these two factors is the main reason that the net income of shareholders is much faster than other indicators of the income statement used in assessing value tends to zero or even goes into a negative range of values, turning into a net loss during periods of low prices for oil. Such a wide range of values of the multiplier of the ratio of market capitalization to net income of shareholders arises as a result of this. But the reason for the depreciation, revaluation or write-off of assets can be caused not only by the decline in oil prices, even in the midst of the crisis for the industry. A good example of this is Petrobras, around which a rather serious corruption scandal erupted. This circumstance led to a two-month delay in the publication of the 2014 financial statements and was the main reason for the impressive impairment of assets.

Obviously, other income and expenses that do not directly relate to the main activity for oil and gas companies and are often of a single nature, but are quite noticeable against the background of net proceeds from sales of products or operating expenses of industry corporations, can have a very noticeable effect on the indicator of net income of shareholders. Among these, it is necessary to highlight the expenses of Anadarko Petroleum for $3,930 million in 2011, which the company had as a result of an agreement signed with BP to accept part of the losses and related payments arising after the accident at the Deepwater Horizon platform. These costs were the reason why the indicator of the studied multiplier at Anadarko Petroleum dropped to negative values, although all other competitors noted its positive value in the year when the industry had one of the highest average annual levels of oil prices. However, Anadarko Petroleum received US $1,797 million the following year, following an agreement with Sonatrach that settled a dispute over claims for compensation for the exclusive tax for foreign companies on oil profits in Algeria.

This component of the income statement for Occidental Petroleum in 2014 was a gain on disposal of assets of $2,505 million. The proceeds from the sale ultimately contributed to the formation of net income for shareholders of Occidental Petroleum, despite the impressive loss from asset impairment on the scale of the company. And the overall structure of the 2017 income statement in the case of Marathon Oil was impacted by the cumulative costs of the discontinued oil sands operations in Canada of $4,893 million resulting from the sale of the business. The reason for this result is that the corporation included in expenses from discontinued operations also the cost of impairment of designated assets of $6,636 million, along with other components, and did not indicate them in the structure of the general indicator.

2016 is remarkable for oil and gas companies from Canada. Net income for Imperial Oil shareholders was notably impacted by revenue from the sale of the corporation's Esso-branded retail gas stations and its own aviation business, which together generated approximately $1,671 million. Husky Energy also sold a number of its assets as one of the

measures to improve the company's financial condition. And the funds received from the transactions in the amount of approximately US $1,217 million became the very factor that allowed the corporation to fix the net profit of shareholders, and not the corresponding loss at the end of the year.

BP deserves special attention among the representatives of the European oil and gas sector. BP quite predictably stands out with its negative multiplier value against the background of other studied corporations in 2010, which is favorable for the oil and gas sector. This result is associated with the previously mentioned accident at the platform Deepwater Horizon, where the share of Anadarko Petroleum and Mitsui Oil was only 25% and 10%, respectively, and BP was the drilling operator with a share of 65%. That is why the corporation accounted for and reflected the impact of the accident totaling $40,858 million in operating expenses in its published income statement for the indicated year, which resulted in a net loss to shareholders.

The rather impressive transformation of shareholders' net profit under fluctuations in oil prices or from expenses specific to oil and gas corporations makes it difficult to assess the impact of market capitalization features on the multiplier under study. And one of the clear examples of this is the same accident on the Deepwater Horizon platform, which led to a serious drop in BP's market valuation against the background of competitors, but it was the net loss of shareholders that prevented the influence of this factor from clearly manifesting itself in the multiplier indicator. By the same analogy, it is not possible to trace how the collapse of market capitalization due to the outbreak of the corruption scandal and the increase in the corporate debt burden was reflected at the level of the Petrobras coefficient indicator (*Table 11*). The increase in net debt in relation to equity capital was due to the revaluation of assets and the attraction of substantial sums for the commissioning of a number of expensive construction-in-progress projects.

For this reason, it is very problematic to identify in the indicators of multipliers and how the profitability of oil and gas corporations is reflected in the market valuation (*Table 12*). It is enough to pay attention to the wide range of values for the coefficients of the leading US companies. It is also quite difficult to determine in the multiplier values themselves the influence on the market valuation of such a significant factor in the industry as the availability of proven reserves of crude oil and natural gas (*Table 13*). The low supply of resources is more or less clearly manifested only in Sinopec's indicators when comparing them with the multiples of other companies from China, while it is not possible to reveal such an obvious relationship for Anadarko Petroleum, Apache, Husky Energy and Equinor.

Despite the fact that the specificity of the formation of the net income or loss of shareholders ensures the change in the analyzed multiplier in a rather wide range of values, some characteristic features of market capitalization are manifested in the value of indicators in other corporations in the industry besides Sinopec. Among them are domestic oil and gas companies, which have consistently generated net income for shareholders throughout the study period, like many other integrated corporations. This

circumstance greatly simplifies the identification of the specifics that are inherent in both individual companies and the entire oil and gas sector of Russia.

In this case, it is necessary to highlight the rather sharp drop in the multiplier of PJSC NK Rosneft, which arose after the takeover of TNK-BP in 2013. And the reason for this was the impressive increase in the debt component in the structure of the company's total capital, which was a consequence of the deal. It is for this reason that it is advisable to use the enterprise value indicator in the structure of the coefficient instead of market capitalization in the case of using the studied multiplier in assessing the value. The advantage of this type of multiplier is that the enterprise value indicator contains net debt along with capitalization, which makes it possible to somewhat neutralize the influence of the debt burden on the market valuation of the share capital of an oil and gas corporation (*Table 14*).

The indicators of the leading industry companies in Russia in their totality clearly demonstrate another very remarkable feature, which are the rather low values of the multiples in comparison with the main competitors in the oil and gas sector. This feature manifests itself both in periods that are quite favorable for the entire industry, and in times of crisis. It is the country factor that takes place in such a case, which is associated with a rather low market assessment of the entire stock market sector of the Russian economy. This result is a consequence of the raw material model of the country's development, in which foreign trade and the budget significantly depend on the sale of oil, gas and products of their processing. That is why the Russian economy is seriously influenced by the situation on the world oil market, which makes the entire national economy vulnerable to the imposed sectoral sanctions.

All of the above indicates that although it seems possible to use the market capitalization multiplier to the net income of the company's shareholders when assessing the value, but only as an auxiliary indicator during periods of high prices for extracted raw materials, which are favorable for the entire industry. And only corporations with a similar level of profitability are suitable for the role of an analogue company, which do not have income or expenses that are significant in the scale of the entire revenue and are not related to the main activity in the structure of the income statement. After all, their presence can seriously affect the net income of shareholders, and therefore distort the results of the assessment.

Conclusions

It was found from the results of the analysis that multiples based on the net income of shareholders are of little use for assessing the value of companies in the oil and gas industry using the main methods of the comparative approach.

It was revealed that the key reason for such a limited applicability of these multipliers is the instability of oil prices, on which the net income of shareholders of oil and gas corporations largely depends. It was determined that in the event of a fall in oil prices, in addition to a decrease in net revenue from operating activities, net income can also be

significantly affected by the costs of impairment, revaluation or write-off of assets that industry companies report in the structure of the income statement separately or as part of costs depreciation, depletion and amortization. It has been established that the dependence on oil prices among integrated corporations, which are usually sold based on refined products, is not as strong as among independent companies in the industry.

It has been determined that the use of the studied multipliers is advisable as auxiliary indicators and only in periods favorable for the oil and gas sector, when oil quotes are at high levels, providing good indicators of profitability of corporations in the industry. It was found that non-core business expenses and incomes that arise from court decisions or dispute resolution agreements, the sale of property, plant and equipment and unrelated asset revaluation are likely to seriously affect shareholders' net income. As a result, it was found that corporations with a fairly similar level of profitability indicators are appropriate as an analogue company, for which the structure of the income statement does not contain significant expenses and incomes from non-core oil and gas industry activities in relation to the total revenue that can have a significant impact on the formation of net shareholder income.

Some characteristic features of market capitalization have been identified, the impact of which also affects the value of this multiplier for oil and gas corporations, even though the specifics of the formation of shareholders' net income ensures the change in the indicator under study in a fairly wide range of values. These include the provision of proven hydrocarbon reserves, a low level against the background of competitors in the industry of which has a negative impact on market capitalization and, as a consequence, on the multiplier under study. The increase in the debt component in the structure of total capital also reduces the market capitalization, and therefore it is advisable to use the enterprise value indicator in the structure of the multiplier instead of market capitalization in the event of a significant difference in the level of debt between the assessed corporation and the analogous company. Such a replacement makes it possible to somewhat neutralize the impact of the debt component on the market valuation of the company's share capital.

Table 1
The average price for WTI and Brent crude oil for 1999–2018, USD per barrel

Oil grade	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
WTI	19.34	30.38	25.98	26.18	31.08	41.51	56.64	66.05	72.34	99.67
Brent	17.90	28.66	24.46	24.99	28.85	38.26	54.57	65.16	72.44	96.94
Oil grade	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
WTI	61.95	79.48	94.88	94.05	97.98	93.17	48.66	43.29	50.80	65.23
Brent	61.74	79.61	111.26	111.63	108.56	98.97	52.32	43.64	54.13	71.34

Source: Authoring, based on the U.S. Energy Information Administration data (URL: https://www.eia.gov)

Table 2

Market capitalization to shareholders' net income ratio of the twenty five leading publicly traded oil and gas corporations for 2008–2018

Company	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015	Dec 31, 2016	Dec 31, 2017	Dec 31, 2018
ExxonMobil	8.78	16.72	11.95	9.77	8.68	13.47	11.94	20.06	47.75	17.99	13.86
Chevron	6.19	14.75	9.63	7.84	8.04	11.16	10.96	36.93	–447.95	25.93	13.96
ConocoPhillips	–4.51	15.62	8.58	7.53	8.39	9.46	12.38	–13.03	–17.16	–81.48	11.34
Occidental Petroleum	7.09	22.66	17.60	11.22	13.42	12.82	100.84	–6.60	–94.84	42.99	11.13
Devon Energy	–13.50	–13.35	7.42	5.33	-100.81	–1 254.54	15.54	–0.90	–7.23	24.20	3.29
Anadarko Petroleum	5.44	-227.75	49.66	–14.36	15.56	49.89	–23.88	–3.69	–12.52	–62.44	34.89
EOG Resources	6.82	44.95	144.57	24.29	57.53	20.86	17.31	–8.60	–53.16	24.17	14.85
Apache	35.04	-122.05	15.04	7.59	15.36	15.24	–4.37	–0.73	–17.13	12.33	245.89
Marathon Oil	5.48	15.11	10.24	6.99	13.70	14.04	6.27	–3.87	–6.85	–2.51	10.72
Imperial Oil	9.08	21.83	15.56	11.41	9.62	14.10	11.21	34.06	18.29	66.55	11.70
Suncor Energy	10.38	50.65	16.78	10.64	17.90	14.08	19.74	–25.89	168.71	16.99	18.35
Husky Energy	6.98	18.05	20.16	10.57	14.28	18.12	21.50	–3.66	17.76	22.70	9.73
Canadian Natural Resources	5.29	26.09	28.51	15.83	16.53	17.22	9.98	–51.93	–233.03	22.91	15.28
Royal Dutch Shell	5.95	14.62	10.11	7.46	8.22	14.03	14.42	75.66	50.06	21.44	10.37
BP	6.69	10.96	–36.83	5.26	11.34	6.40	30.89	–14.90	1 147.61	44.36	14.53
TOTAL	8.24	11.12	9.04	7.42	8.24	11.97	27.68	20.54	20.06	16.13	12.05
Eni	6.87	14.77	9.37	8.45	8.53	12.28	43.26	–5.66	–38.05	14.73	12.00
Equinor (Statoil)	8.38	25.16	11.58	6.20	6.42	11.71	19.03	–10.48	–20.34	15.41	9.34
PetroChina	15.49	23.32	14.28	13.11	14.32	10.72	17.67	40.60	177.72	61.68	23.91
Sinopec	18.82	17.61	9.33	8.38	9.46	8.09	15.66	17.70	13.77	13.82	9.86
CNOOC	6.42	16.27	12.85	7.00	9.45	8.90	6.19	14.88	607.09	16.90	9.00
Petrobras	5.41	11.85	11.72	7.73	11.31	8.26	–6.52	–3.07	–13.28	-717.82	11.37
PJSC Gazprom	3.46	5.39	4.59	3.01	2.79	2.80	18.81	3.97	3.59	4.04	2.33
PJSC NK Rosneft	3.26	12.28	6.63	5.13	7.31	4.89	5.96	7.56	23.58	13.92	8.35
PJSC LUKOIL	3.03	6.77	4.93	3.96	4.54	6.01	6.29	5.74	11.89	5.65	5.62
Average value	***7.22***	***2.14***	***16.93***	***7.91***	***8.01***	***–37.52***	***16.35***	***4.99***	***53.85***	***–14.38***	***21.75***

Source: Authoring, based on [24, 25]

Table 3

Shareholders' net income of the twenty five leading publicly traded oil and gas corporations for 2008–2018, million USD

Company	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015	Dec 31, 2016	Dec 31, 2017	Dec 31, 2018
ExxonMobil	45 220	19 280	30 460	41 060	44 880	32 580	32 520	16 150	7 840	19 710	20 840
Chevron	23 931	10 483	19 024	26 895	26 179	21 423	19 241	4 587	–497	9 195	14 824
ConocoPhillips	–16 998	4 858	11 358	12 436	8 428	9 156	6 869	–4 428	–3 615	–793	6 257
Occidental Petroleum	6 857	2 915	4 530	6 771	4 598	5 903	616	–7 829	–574	1 311	4 131
Devon Energy	–2 148	–2 479	4 550	4 704	–206	–20	1 607	–14 454	–3 302	898	3 064

Anadarko Petroleum	3 261	–135	761	–2 649	2 391	801	–1 750	–6 692	–3 071	–456	615
EOG Resources	2 437	547	161	1 091	570	2 197	2 915	–4 525	–1 097	2 583	3 419
Apache	712	–284	3 032	4 584	2 001	2 232	–5 403	–23 119	–1 405	1 304	40
Marathon Oil	3 528	1 463	2 568	2 946	1 582	1 753	3 046	–2 204	–2 140	–5 723	1 096
Imperial Oil	3 168	1 509	2 208	3 315	3 782	2 659	3 263	811	1 612	391	1 696
Suncor Energy	1 746	1 095	3 568	4 233	2 795	3 677	2 327	–1 442	323	3 553	2 414
Husky Energy	3 067	1 354	1 172	2 187	2 030	1 719	1 084	–2 782	687	627	1 068
Canadian Natural Resources	4 073	1 510	1 695	2 599	1 900	2 134	3 387	–460	–152	1 911	1 899
Royal Dutch Shell	26 277	12 518	20 127	30 918	26 592	16 371	14 874	1 939	4 575	12 977	23 352
BP	21 157	16 578	–3 719	25 700	11 582	23 451	3 780	–6 482	115	3 389	9 383
TOTAL	14 738	12 169	14 125	15 884	14 110	11 640	4 244	5 087	6 196	8 631	11 446
Eni	12 282	6 291	8 442	8 876	10 275	7 116	1 567	–9 562	–1 543	4 046	4 724
Equinor (Statoil)	6 182	3 170	6 503	13 147	12 378	6 559	2 949	–4 257	–2 922	4 590	7 535
PetroChina	16 743	15 141	21 138	21 102	18 348	21 270	17 515	5 470	1 133	3 489	7 663
Sinopec	4 356	9 045	10 841	11 621	10 163	10 854	7 594	4 995	6 728	7 842	8 978
CNOOC	6 504	4 320	8 244	11 163	10 225	9 327	9 703	3 125	92	3 793	7 663
Petrobras	17 733	16 823	19 475	20 121	11 034	11 094	–7 367	–8 450	–4 838	–91	241
PJSC Gazprom	25 287	25 776	31 780	40 596	38 937	34 809	2 826	10 799	15 689	12 401	20 962
PJSC NK Rosneft	11 120	6 514	10 400	12 452	11 227	16 652	6 186	4 871	2 984	3 854	7 903
PJSC LUKOIL	9 144	7 011	9 006	10 357	11 004	7 832	4 746	3 995	3 409	7 271	8 913
Average value	***10 015***	***7 099***	***9 658***	***13 284***	***11 472***	***10 528***	***5 534***	***–1 394***	***1 049***	***4 268***	***7 205***

Source: Authoring, based on [24, 25]

Table 4

Market capitalization of the twenty five leading publicly traded oil and gas corporations for 2008–2018, million USD

Company	**Dec 31, 2008**	**Dec 31, 2009**	**Dec 31, 2010**	**Dec 31, 2011**	**Dec 31, 2012**	**Dec 31, 2013**	**Dec 31, 2014**	**Dec 31, 2015**	**Dec 31, 2016**	**Dec 31, 2017**	**Dec 31, 2018**
ExxonMobil	397 234	322 334	364 064	401 254	389 648	438 702	388 382	323 960	374 398	354 550	288 921
Chevron	148 173	154 575	183 183	210 796	210 516	239 028	210 859	169 378	222 630	238 450	207 010
ConocoPhillips	76 673	75 903	97 435	93 687	70 749	86 613	85 037	57 709	62 037	64 611	70 976
Occidental Petroleum	48 607	66 050	79 735	75 992	61 710	75 699	62 119	51 693	54 437	56 358	45 998
Devon Energy	29 058	33 092	33 775	25 054	20 767	25 091	24 974	12 958	23 885	21 735	10 085
Anadarko Petroleum	17 728	30 746	37 795	38 045	37 197	39 959	41 799	24 693	38 435	28 472	21 455
EOG Resources	16 620	24 569	23 225	26 501	32 810	45 835	50 482	38 924	58 304	62 423	50 764
Apache	24 946	34 710	45 593	34 793	30 744	34 017	23 596	16 811	24 068	16 084	9 836
Marathon Oil	19 316	22 104	26 291	20 606	21 677	24 604	19 096	8 523	14 662	14 391	11 744
Imperial Oil	28 780	32 944	34 365	37 838	36 370	37 483	36 568	27 610	29 488	25 993	19 842
Suncor Energy	18 130	55 480	59 873	45 037	50 028	51 755	45 934	37 323	54 535	60 365	44 285
Husky Energy	21 421	24 436	23 627	23 425	29 313	31 413	23 761	10 628	12 719	14 861	10 872
Canadian Natural Resources	21 547	39 399	48 336	41 140	31 408	36 738	33 807	23 904	35 406	43 782	29 020
Royal Dutch Shell	156 327	183 062	203 534	230 561	218 460	229 751	214 484	146 704	229 004	278 281	242 175
BP	141 528	181 709	136 987	135 111	131 319	150 138	116 750	96 591	131 975	150 329	136 324

TOTAL	121 510	135 270	127 687	117 850	116 195	139 309	117 490	104 500	124 270	139 208	137 908
Eni	84 391	92 888	79 092	75 046	87 664	87 384	67 812	54 104	58 724	59 600	56 695
Equinor (Statoil)	51 830	79 776	75 295	81 472	79 408	76 812	56 102	44 622	59 426	70 719	70 389
PetroChina	259 427	353 079	301 897	276 574	262 772	228 028	309 453	222 042	201 295	215 192	183 247
Sinopec	81 973	159 235	101 155	97 332	96 120	87 778	118 952	88 396	92 620	108 356	88 517
CNOOC	41 727	70 268	105 949	78 098	96 660	83 033	60 102	46 488	55 853	64 109	68 960
Petrobras	95 878	199 428	228 322	155 493	124 750	91 669	48 014	25 950	64 256	65 322	81 589
PJSC Gazprom	87 396	139 024	145 808	122 145	108 740	97 295	53 160	42 855	56 312	50 072	48 834
PJSC NK Rosneft	36 229	79 983	68 931	63 893	82 125	81 451	36 885	36 826	70 377	53 634	65 979
PJSC LUKOIL	27 710	47 462	44 405	40 972	49 933	47 051	29 855	22 947	40 538	41 081	50 127
Average value	***82 166***	***105 501***	***107 054***	***101 949***	***99 083***	***102 665***	***91 019***	***69 446***	***87 586***	***91 919***	***82 062***

Source: Authoring, based on [24, 25]

Table 5

Assets of the twenty five leading publicly traded oil and gas corporations for 2008-2018, million USD

Company	**Dec 31, 2008**	**Dec 31, 2009**	**Dec 31, 2010**	**Dec 31, 2011**	**Dec 31, 2012**	**Dec 31, 2013**	**Dec 31, 2014**	**Dec 31, 2015**	**Dec 31, 2016**	**Dec 31, 2017**	**Dec 31, 2018**
ExxonMobil	228 052	233 323	302 510	331 052	333 795	346 808	349 493	336 758	330 314	348 691	346 196
Chevron	161 165	164 621	184 769	209 474	232 982	253 753	266 026	266 103	260 078	253 806	253 863
ConocoPhillips	142 865	152 588	156 314	153 230	117 144	118 057	116 539	97 484	89 772	73 362	69 980
Occidental Petroleum	41 537	44 229	52 432	60 044	64 210	69 443	56 259	43 437	43 109	42 026	43 854
Devon Energy	31 908	29 686	32 927	41 117	43 326	42 877	50 637	29 532	25 913	30 241	19 566
Anadarko Petroleum	48 923	50 123	51 559	51 779	52 589	55 781	61 689	46 414	45 564	42 086	40 376
EOG Resources	15 951	18 119	21 624	24 839	27 337	30 574	34 763	26 975	29 459	29 833	33 934
Apache	29 186	28 186	43 425	52 051	60 737	61 637	55 952	18 842	22 519	21 922	21 582
Marathon Oil	42 686	47 052	50 014	31 371	35 306	35 620	36 011	32 311	31 094	22 012	21 321
Imperial Oil	13 918	16 702	20 561	25 009	29 487	34 989	35 195	31 195	31 024	33 160	30 387
Suncor Energy	26 575	66 670	70 106	73 543	76 770	73 624	68 676	56 021	66 065	71 336	65 661
Husky Energy	21 668	25 135	29 107	31 891	35 288	34 693	33 487	23 886	24 027	26 246	25 820
Canadian Natural Resources	34 845	39 215	42 631	46 498	49 186	48 654	51 892	42 832	43 681	58 879	52 453
Royal Dutch Shell	282 401	292 181	322 560	345 257	360 325	357 512	353 116	340 157	411 275	407 097	399 194
BP	228 238	235 968	272 262	293 068	300 193	305 690	284 305	261 832	263 316	276 515	282 176
TOTAL	164 652	184 041	192 036	212 263	226 711	239 261	229 798	224 484	230 978	242 631	256 762
Eni	162 258	169 312	176 191	184 957	184 242	190 437	177 510	146 748	131 283	137 833	135 537
Equinor (Statoil)	82 645	97 433	109 796	128 257	140 917	145 569	132 702	109 740	104 530	111 100	112 508
PetroChina	174 725	212 397	250 123	304 335	345 063	384 400	393 115	368 647	345 488	368 004	354 392
Sinopec	112 344	128 561	150 264	181 645	201 526	226 972	237 190	222 239	216 031	244 177	232 007
CNOOC	30 292	35 492	49 686	61 053	73 204	102 660	106 833	102 560	91 845	94 865	98 724
Petrobras	125 695	200 270	308 683	319 410	331 645	321 423	298 687	230 521	246 983	251 366	222 068
PJSC Gazprom	243 992	276 523	303 049	338 572	397 335	410 527	269 781	233 966	278 928	316 644	299 558
PJSC NK Rosneft	77 513	83 232	93 829	105 968	127 022	230 314	155 283	132 240	181 842	212 274	189 476
PJSC LUKOIL	71 461	79 019	84 017	91 192	98 961	109 439	111 800	68 886	82 673	90 733	82 515
Average value	***103 820***	***116 403***	***134 819***	***147 915***	***157 812***	***169 229***	***158 670***	***139 752***	***145 112***	***152 274***	***147 596***

Source: Authoring, based on [24, 25]

Table 6

Net cash from operating activities of the twenty five leading publicly traded oil and gas corporations for 2008–2018, million USD

Company	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015	Dec 31, 2016	Dec 31, 2017	Dec 31, 2018
ExxonMobil	59 725	28 438	48 413	55 345	56 170	44 914	45 116	30 344	22 082	30 066	36 014
Chevron	29 632	19 373	31 359	41 098	38 812	35 002	31 475	19 456	12 846	20 515	30 618
ConocoPhillips	22 658	12 479	17 045	19 646	13 922	16 087	16 735	7 572	4 403	7 077	12 934
Occidental Petroleum	10 652	5 813	9 349	12 281	11 312	12 927	11 068	3 351	3 383	4 996	7 669
Devon Energy	9 408	4 737	5 478	6 224	4 956	5 436	5 981	5 383	1 746	2 909	2 228
Anadarko Petroleum	6 442	3 926	5 247	2 505	8 339	8 888	8 466	–1 877	3 000	4 009	5 929
EOG Resources	4 633	2 922	2 709	4 578	5 237	7 329	8 649	3 595	2 359	4 265	7 769
Apache	7 065	4 224	6 726	9 953	8 504	9 835	8 461	2 984	2 430	2 428	3 777
Marathon Oil	6 782	5 268	5 873	6 524	4 017	5 270	5 487	1 565	1 073	2 129	3 234
Imperial Oil	3 483	1 521	3 204	4 415	4 700	3 095	3 797	1 566	1 501	2 202	2 875
Suncor Energy	3 645	2 461	5 481	9 823	8 883	9 495	7 703	4 974	4 230	7 147	7 755
Husky Energy	5 557	1 833	2 701	5 008	5 211	4 367	4 814	2 717	1 468	2 952	3 030
Canadian Natural Resources	5 529	5 556	6 278	6 140	6 235	6 786	7 292	4 070	2 571	5 789	7 419
Royal Dutch Shell	43 918	21 488	27 350	36 771	46 140	40 440	45 044	29 810	20 615	35 650	53 085
BP	38 095	27 716	13 616	22 154	20 397	21 100	32 754	19 133	10 691	18 931	22 873
TOTAL	25 982	17 806	24 710	25 278	29 636	29 613	25 608	19 946	16 521	22 319	24 703
Eni	30 340	16 043	19 634	18 609	16 322	15 127	18 345	12 959	8 088	12 133	15 626
Equinor (Statoil)	14 650	12 637	13 799	18 600	22 995	16 651	28 090	18 822	9 034	14 363	19 694
PetroChina	24 947	38 366	46 912	46 050	38 070	47 355	58 257	40 241	38 227	56 113	51 225
Sinopec	9 907	22 272	25 720	23 905	22 652	24 930	24 244	25 536	30 927	29 221	25 625
CNOOC	8 170	7 744	12 651	18 456	14 858	18 318	17 811	12 365	10 494	14 561	18 018
Petrobras	28 220	24 920	28 495	33 698	27 888	26 289	26 632	25 913	26 114	27 112	26 353
PJSC Gazprom	34 600	29 664	47 909	50 859	47 596	53 404	34 053	27 866	25 905	20 608	23 282
PJSC NK Rosneft	14 393	10 319	15 172	15 749	16 989	37 062	28 902	30 117	10 683	5 851	21 621
PJSC LUKOIL	14 312	8 883	13 541	15 514	18 997	16 449	15 568	11 648	12 402	13 168	14 490
Average value	***18 510***	***13 456***	***17 575***	***20 367***	***19 954***	***20 647***	***20 814***	***14 402***	***11 312***	***14 661***	***17 914***

Source: Authoring, based on [24, 25]

Table 7
EBITDA of the twenty five leading publicly traded oil and gas corporations for 2008–2018, million USD

Company	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015	Dec 31, 2016	Dec 31, 2017	Dec 31, 2018
ExxonMobil	96 449	47 242	67 978	89 087	94 941	74 902	69 213	40 325	30 730	39 168	50 464
Chevron	52 245	30 571	45 048	60 400	59 579	49 955	47 850	25 760	17 353	28 770	40 550
ConocoPhillips	6 179	20 389	29 810	31 691	23 566	23 557	19 415	2 749	4 720	5 216	16 567
Occidental Petroleum	13 779	7 569	10 201	13 932	12 276	15 017	6 523	–4 586	3 218	5 576	9 838
Devon Energy	861	–1 755	8 233	9 459	2 848	3 346	7 904	-17 622	–1 181	3 461	5 739
Anadarko Petroleum	9 238	4 107	6 197	1 224	8 255	6 700	5 350	–4 261	1 362	3 523	6 686
EOG Resources	5 125	2 522	2 479	4 637	4 664	7 273	9 194	–3 371	2 278	4 345	7 921
Apache	8 969	5 789	8 514	12 467	12 393	11 113	7 388	1 405	1 352	3 604	3 760
Marathon Oil	9 205	6 401	8 176	8 050	8 810	8 160	6 569	322	1 525	–2 632	4 084
Imperial Oil	4 905	2 850	3 698	5 085	5 778	4 557	5 273	2 462	3 086	2 247	3 469
Suncor Energy	3 393	3 848	8 398	10 801	11 515	10 801	9 437	4 216	4 872	9 223	8 377
Husky Energy	5 834	3 765	3 830	5 703	5 464	5 247	4 996	2 468	2 729	2 854	3 468
Canadian Natural Resources	8 237	4 975	7 361	7 761	7 333	7 672	8 942	3 712	3 112	6 927	6 906
Royal Dutch Shell	64 645	35 636	51 782	70 052	66 447	56 549	54 411	30 290	33 351	47 718	60 729
BP	46 056	37 723	6 802	50 590	31 889	44 293	20 695	6 308	13 004	23 897	33 499
TOTAL	44 331	33 987	39 980	45 122	44 995	40 645	33 268	25 135	21 807	28 827	33 991
Eni	41 130	32 115	35 522	36 811	40 731	36 230	23 641	12 029	9 389	17 808	20 120
Equinor (Statoil)	31 284	29 360	32 005	44 466	48 254	34 617	28 526	15 836	11 979	22 480	28 880
PetroChina	37 620	34 578	46 333	52 453	53 279	59 461	58 170	43 581	40 961	47 438	53 287
Sinopec	11 855	20 234	25 704	27 939	27 215	30 421	26 972	24 301	28 539	31 205	30 404
CNOOC	9 803	8 232	15 153	19 437	19 640	22 758	22 905	14 415	9 559	15 274	18 543
Petrobras	33 026	29 153	34 526	37 436	26 011	28 263	7 372	6 903	16 330	20 692	28 332
PJSC Gazprom	42 196	40 935	50 377	61 139	61 128	58 494	13 451	19 142	30 248	27 791	35 674
PJSC NK Rosneft	17 839	12 958	18 946	21 364	21 565	32 081	17 775	13 872	14 788	18 854	22 902
PJSC LUKOIL	15 635	13 533	16 162	18 075	18 836	16 463	15 950	10 534	10 076	14 938	16 283
Average value	***24 794***	***18 669***	***23 329***	***29 807***	***28 697***	***27 543***	***21 248***	***11 037***	***12 607***	***17 168***	***22 019***

Source: Authoring, based on [24, 25]

Table 8

Net revenue from core activities of the twenty five leading publicly traded oil and gas corporations for 2008–2018, million USD

Company	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015	Dec 31, 2016	Dec 31, 2017	Dec 31, 2018
ExxonMobil	383 352	240 745	305 460	393 553	385 156	357 017	332 477	209 545	171 608	207 058	246 669
Chevron	243 655	149 811	180 007	228 743	218 214	207 093	187 954	117 895	98 547	122 343	154 035
ConocoPhillips	220 205	133 812	172 648	226 506	54 421	51 529	50 436	28 663	22 954	28 297	35 369
Occidental Petroleum	23 629	14 970	18 561	23 334	23 492	23 706	18 762	12 137	9 813	12 197	17 385
Devon Energy	14 843	7 317	8 749	10 149	8 395	10 127	17 042	12 254	10 230	13 792	10 126
Anadarko Petroleum	13 188	7 464	9 774	12 390	12 083	13 790	15 131	8 933	7 911	10 387	12 244
EOG Resources	6 066	3 632	5 474	8 563	10 560	13 775	15 882	8 235	7 113	10 661	16 404
Apache	11 343	7 994	11 493	15 911	16 085	15 570	13 071	6 101	5 241	5 736	7 133
Marathon Oil	71 646	48 159	66 680	14 433	15 399	14 149	10 440	5 288	3 863	4 190	5 603
Imperial Oil	24 451	19 141	23 609	28 673	29 840	29 424	29 885	18 201	17 428	21 882	24 407
Suncor Energy	13 699	16 689	31 233	38 688	38 368	37 221	34 361	21 106	19 966	25 647	28 251
Husky Energy	20 181	14 409	18 162	22 978	22 529	21 920	21 629	11 828	9 622	14 813	16 311
Canadian Natural Resources	11 565	9 695	12 889	13 564	14 650	15 178	16 260	8 934	7 838	13 273	15 413
Royal Dutch Shell	458 361	278 188	368 056	470 171	467 153	451 235	421 105	264 960	233 591	305 179	388 379
BP	354 617	235 520	291 863	367 237	367 422	372 089	350 610	221 858	182 325	238 433	297 220
TOTAL	223 133	161 568	187 704	215 499	240 525	236 729	212 018	143 421	127 925	149 099	184 106
Eni	150 510	119 897	131 646	141 797	167 854	158 213	133 365	73 749	58 779	80 256	86 816
Equinor (Statoil)	93 154	80 027	89 939	107 731	126 779	101 813	81 640	52 821	45 688	60 971	78 555
PetroChina	138 564	129 435	193 457	275 754	308 707	329 898	334 199	234 006	205 751	278 208	311 272
Sinopec	204 153	177 524	265 148	367 524	413 263	441 438	430 579	274 507	244 905	325 197	385 342
CNOOC	15 049	13 868	23 584	31 369	32 683	40 072	38 287	24 265	19 400	26 672	30 540
Petrobras	117 824	91 536	119 529	145 455	143 717	140 682	142 897	94 518	80 691	86 984	94 832
PJSC Gazprom	110 958	90 802	108 511	131 039	137 814	138 815	85 569	72 283	85 904	92 015	96 816
PJSC NK Rosneft	30 756	25 364	33 764	46 644	48 037	67 768	45 540	39 365	48 370	57 291	62 098
PJSC LUKOIL	72 876	61 551	77 100	98 515	102 669	105 315	109 911	63 814	70 897	84 525	94 712
Average value	***121 111***	***85 565***	***110 202***	***137 449***	***136 233***	***135 783***	***125 962***	***81 147***	***71 854***	***91 004***	***108 002***

Source: Authoring, based on [24, 25]

Table 9

Depreciation, depletion and amortization of the twenty five leading publicly traded oil and gas corporations for 2008–2018, million USD

Company	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015	Dec 31, 2016	Dec 31, 2017	Dec 31, 2018
ExxonMobil	12 379	11 917	14 760	15 583	15 888	17 182	17 297	18 048	22 308	19 893	18 745
Chevron	9 528	12 110	13 063	12 911	13 413	14 186	16 793	21 037	19 457	19 349	19 419
ConocoPhillips	9 012	9 295	9 060	7 934	6 580	7 434	8 329	9 113	9 062	6 845	5 956
Occidental Petroleum	2 710	3 117	3 153	3 591	4 511	5 347	4 261	4 544	4 268	4 002	3 977
Devon Energy	3 509	2 108	1 930	2 248	2 811	2 780	3 319	3 129	1 792	2 074	1 658
Anadarko Petroleum	3 194	3 532	3 714	3 830	3 964	3 927	4 550	4 603	4 301	4 279	4 254
EOG Resources	1 327	1 549	1 942	2 516	3 170	3 601	3 997	3 314	3 553	3 409	3 435
Apache	7 850	5 213	3 083	4 204	7 341	6 700	10 158	29 372	2 618	2 280	2 405
Marathon Oil	2 178	2 623	2 965	2 266	2 478	2 790	2 861	2 957	2 395	2 372	2 441
Imperial Oil	595	747	746	751	764	1 044	945	1 048	1 213	1 731	1 140
Suncor Energy	857	2 204	3 810	3 887	6 477	4 599	5 293	5 420	4 556	4 465	4 206
Husky Energy	1 497	1 725	2 071	2 477	2 591	2 825	3 457	6 246	1 834	2 297	1 899
Canadian Natural Resources	2 192	2 695	4 032	3 545	4 346	4 554	4 207	3 962	3 618	4 134	3 783
Royal Dutch Shell	13 656	14 458	15 595	13 228	14 615	21 509	24 499	26 714	24 993	26 223	22 135
BP	10 985	12 106	11 164	11 135	12 481	13 510	15 163	15 219	14 505	15 584	15 457
TOTAL	8 009	9 626	11 252	9 712	12 567	12 455	19 656	17 729	13 523	16 103	13 992
Eni	9 815	9 813	9 579	9 318	13 561	11 703	11 499	14 480	7 559	8 974	8 001
Equinor (Statoil)	6 143	9 358	8 641	8 569	10 869	11 901	13 643	15 189	11 550	8 644	9 249
PetroChina	13 842	13 511	17 094	21 913	24 179	26 812	29 002	31 242	31 447	36 328	33 793
Sinopec	6 705	7 394	8 942	10 128	11 209	13 338	14 724	14 840	15 630	17 647	16 023
CNOOC	1 474	2 336	4 195	4 849	5 281	9 326	9 394	11 337	9 925	9 415	7 365
Petrobras	5 928	7 188	8 507	10 535	11 119	13 188	13 023	11 591	13 965	13 307	12 028
PJSC Gazprom	6 638	7 314	7 993	8 547	11 002	12 803	8 393	7 069	9 423	10 645	9 328
PJSC NK Rosneft	3 983	4 350	5 597	5 996	7 474	11 977	8 248	6 174	7 946	10 174	9 141
PJSC LUKOIL	2 958	3 937	4 154	4 473	4 832	5 756	8 816	4 816	5 137	5 643	4 939
Average value	***5 879***	***6 409***	***7 082***	***7 366***	***8 541***	***9 650***	***10 461***	***11 568***	***9 863***	***10 233***	***9 391***

Source: Authoring, based on [24, 25]

Table 10

Impairment, revaluation and write-off of assets of the twenty five leading publicly traded oil and gas corporations for 2008–2018, million USD

Company	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015	Dec 31, 2016	Dec 31, 2017	Dec 31, 2018
ExxonMobil	0	0	0	0	0	0	0	0	0	0	0
Chevron	0	0	0	0	0	0	0	0	0	0	0
ConocoPhillips	32 853	0	0	792	680	529	856	2 245	139	6 601	27
Occidental Petroleum	647	170	275	0	1 751	621	7 379	10 239	825	545	561
Devon Energy	10 379	6 408	0	0	2 024	1 976	1 953	20 820	4 975	17	156
Anadarko Petroleum	223	115	216	1 774	389	794	836	5 075	227	408	800
EOG Resources	193	306	743	1 031	1 271	287	744	6 614	620	479	347
Apache	0	0	0	0	0	0	2 357	1 920	1 103	8	511
Marathon Oil	0	0	479	310	371	96	132	752	67	229	75
Imperial Oil	0	0	0	0	0	0	0	0	0	0	0
Suncor Energy	0	0	0	0	0	0	0	0	0	0	0
Husky Energy	0	0	0	0	0	0	0	0	0	0	0
Canadian Natural Resources	0	0	0	389	0	0	0	0	0	0	0
Royal Dutch Shell	0	0	0	0	0	0	0	0	0	0	0
BP	1 733	2 333	1 689	2 058	6 275	1 961	8 965	1 909	–1 664	1 216	860
TOTAL	0	0	0	0	0	0	0	0	0	0	0
Eni	0	0	0	0	0	0	0	0	369	315	1 106
Equinor (Statoil)	0	0	0	0	0	0	0	0	0	0	0
PetroChina	0	0	0	0	0	0	0	0	0	0	0
Sinopec	0	0	0	0	0	0	0	0	0	0	0
CNOOC	226	1	4	3	5	–7	664	424	1 753	1 403	82
Petrobras	519	319	402	0	0	0	16 823	12 299	6 193	1 191	2 005
PJSC Gazprom	0	0	0	0	0	0	0	0	0	0	0
PJSC NK Rosneft	0	0	0	0	0	0	0	0	0	0	0
PJSC LUKOIL	425	381	363	1 663	–30	2 561	1 753	0	0	0	0
Average value	***1 888***	***401***	***167***	***321***	***509***	***353***	***1 698***	***2 492***	***584***	***497***	***261***

Source: Authoring, based on [24, 25]

Table 11

Net debt to equity ratio of the twenty five leading publicly traded oil and gas corporations for 2008–2018, percent

Company	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015	Dec 31, 2016	Dec 31, 2017	Dec 31, 2018
ExxonMobil	–19.49	–0.98	4.9	2.83	1.21	10.38	14.05	20.48	23.37	20.86	18.12
Chevron	–0.91	1.63	–2.73	–4.81	–6.48	2.74	9.65	18	26.82	22.86	16.25
ConocoPhillips	48.4	45	20.62	25.82	37.73	29.59	33.72	56.62	67.66	43.71	28.34
Occidental Petroleum	3.55	5.38	7.8	5.56	15.07	8.22	8.72	21.08	35.29	39.65	34.15
Devon Energy	32.02	42.6	14.36	19.72	32.93	29.06	45.42	153.26	138.27	83.56	38.46
Anadarko Petroleum	43.84	38.23	45.12	69.22	52.34	45.14	39.15	115.55	99.4	104.11	177.99
EOG Resources	17.37	21.12	43.34	34.76	40.92	29.8	21.58	45.91	38.53	34.1	23.38

Apache	22.66	19.14	32.85	23.87	38.89	23.41	40.39	284.88	114.89	91.91	105.05
Marathon Oil	27.56	29.55	16.6	25.2	32.88	32.04	19	32.64	27.28	42.12	33.29
Imperial Oil	–20.2	–3.95	4.38	0.04	7.11	30.81	29.63	35.49	19.36	16.42	17.12
Suncor Energy	49.76	39.22	30.26	18.07	16.91	15.19	18.83	28.83	32.3	28.44	34.38
Husky Energy	7.26	19.68	25.4	11.65	9.88	15.05	19.56	40.31	22.81	16.29	7.38
Canadian Natural Resources	70.69	49.65	40.4	37.28	35.82	37.42	48.38	61.08	63.91	70.52	64.18
Royal Dutch Shell	6.35	18.55	20.87	15.27	10.19	19.36	13.92	16.35	39.3	33.63	25.21
BP	29.73	26.95	29.33	27.85	26	21.11	22.75	30.05	38.7	39.73	44.93
TOTAL	23.66	28.1	26.4	26.76	24.44	25.52	34.59	36.42	32.82	17.26	22.08
Eni	42.53	50.34	51.23	50.65	28.21	35.37	32.26	43.62	40.66	36.11	29.46
Equinor (Statoil)	28.37	40.94	39.89	34.76	17.7	28.02	39.75	60.14	77.32	61.01	43.45
PetroChina	11.71	17.4	20.01	25.65	37.75	39.22	39.6	39.66	35.18	28.7	26.48
Sinopec	66.53	55.8	46.03	44.5	52.38	51.76	53.91	27.8	9.54	9.17	5.96
CNOOC	–3.67	–2.26	–2.88	5.45	0.93	34.4	32.05	39.58	35.76	31.5	29.97
Petrobras	21.74	43.09	28.54	36.24	49.11	66.23	99.28	154.99	126.23	108.43	98.23
PJSC Gazprom	21.98	25.52	13.99	13.92	12.93	11.94	16.81	19.67	17.42	20.62	22.66
PJSC NK Rosneft	58.6	47.98	35.58	27.55	29.91	66.7	105.68	95.77	84.47	101.96	87.81
PJSC LUKOIL	15.04	16.16	14.91	9.37	5.06	11.59	12.97	18.7	13.57	8.21	1.04
Average value	***24.2***	***26.99***	***24.29***	***23.49***	***24.39***	***28.8***	***34.07***	***59.87***	***50.43***	***44.43***	***41.42***

Source: Authoring, based on [24, 25]

Table 12

Return on assets of the twenty five leading publicly traded oil and gas corporations for 2008–2018, percent

Company	**Dec 31, 2008**	**Dec 31, 2009**	**Dec 31, 2010**	**Dec 31, 2011**	**Dec 31, 2012**	**Dec 31, 2013**	**Dec 31, 2014**	**Dec 31, 2015**	**Dec 31, 2016**	**Dec 31, 2017**	**Dec 31, 2018**
ExxonMobil	19.24	8.36	11.37	12.96	13.5	9.57	9.34	4.71	2.35	5.81	6
Chevron	15.44	6.44	10.89	13.64	11.83	8.8	7.4	1.72	–0.19	3.58	5.84
ConocoPhillips	–10.6	3.29	7.35	8.04	6.23	7.79	5.86	–4.14	–3.86	–0.97	8.73
Occidental Petroleum	17.57	6.8	9.37	12.04	7.4	8.83	0.98	–15.71	–1.33	3.08	9.62
Devon Energy	–5.86	–8.05	14.53	12.71	–0.49	–0.05	3.44	–36.06	–11.91	3.2	12.3
Anadarko Petroleum	6.7	–0.27	1.5	–5.13	4.58	1.48	–2.98	–12.38	–6.68	–1.04	1.49
EOG Resources	17.38	3.21	0.81	4.7	2.19	7.59	8.92	–14.66	–3.89	8.71	10.72
Apache	2.46	–0.99	8.47	9.6	3.55	3.65	–9.19	–61.82	–6.79	5.87	0.18
Marathon Oil	8.26	3.26	5.29	7.24	4.75	4.94	8.5	–6.45	–6.75	–21.55	5.06
Imperial Oil	23.28	9.15	11.62	14.65	13.75	8.49	9.7	2.67	5.1	1.18	5.57
Suncor Energy	7.54	2.24	5.1	5.94	3.68	5.05	3.42	–2.54	0.52	5	3.68
Husky Energy	15.57	5.36	4.23	7.23	5.99	5.08	3.32	–10.71	2.82	2.41	4.28
Canadian Natural Resources	12.66	3.78	4.06	5.88	3.93	4.51	7.02	–1.07	–0.35	3.62	3.56
Royal Dutch Shell	9.52	4.36	6.55	9.26	7.54	4.56	4.19	0.56	1.22	3.17	5.79
BP	9.11	7.14	–1.46	9.09	3.9	7.74	1.28	–2.37	0.04	1.26	3.36
TOTAL	9.14	6.87	7.79	7.98	6.37	4.89	1.85	2.24	2.72	3.64	4.58
Eni	8.09	3.73	5.07	4.99	5.51	3.72	0.91	–6.25	–1.13	2.82	3.54
Equinor (Statoil)	8.15	3.21	6.32	11.16	8.87	4.78	2.34	–3.84	–2.73	4.26	6.74

PetroChina	10.15	7.82	9.01	7.44	5.64	5.75	4.51	1.48	0.33	0.95	2.17
Sinopec	3.97	7.51	7.67	6.84	5.3	4.99	3.28	2.24	3.17	3.31	3.87
CNOOC	23.68	13.13	19.36	20.16	15.23	10.61	9.26	2.98	0.09	4.06	7.92
Petrobras	13.89	10.32	7.65	6.41	3.39	3.4	–2.38	–3.19	–2.03	–0.04	3.03
PJSC Gazprom	10.64	10.04	11.01	12.98	10.3	8.93	1.11	4.88	5.6	4.06	7.46
PJSC NK Rosneft	14.6	8.1	11.75	12.46	9.38	9.56	4.28	3.86	1.75	1.91	4.32
PJSC LUKOIL	13.95	9.32	11.05	11.82	11.57	7.52	4.29	5.15	4.12	8.18	11.3
Average value	***10.58***	***5.36***	***7.85***	***9.2***	***6.96***	***6.09***	***3.63***	***–5.95***	***–0.71***	***2.26***	***5.64***

Source: Authoring, based on [24, 25]

Table 13

Years of total proven hydrocarbon reserves of the twenty five leading publicly traded oil and gas corporations for 2008–2018

Company	**Dec 31, 2008**	**Dec 31, 2009**	**Dec 31, 2010**	**Dec 31, 2011**	**Dec 31, 2012**	**Dec 31, 2013**	**Dec 31, 2014**	**Dec 31, 2015**	**Dec 31, 2016**	**Dec 31, 2017**	**Dec 31, 2018**
ExxonMobil	16.02	16.02	15.28	15.16	16.22	16.55	17.44	16.56	13.47	14.59	17.14
Chevron	12.09	11.46	10.46	11.52	11.88	11.82	11.83	11.67	11.71	11.72	11.27
ConocoPhillips	12.32	12.37	10.95	14.19	14.96	15.82	15.84	14.1	11.19	10.02	11.24
Occidental Petroleum	13.49	13.74	12.24	11.87	11.76	12.51	12.94	9.02	10.43	11.82	11.46
Devon Energy	10.2	11.73	12.6	12.51	11.87	11.72	11.21	8.79	9.2	10.86	9.87
Anadarko Petroleum	11.05	10.45	10.32	10.23	9.56	9.79	9.29	6.74	5.93	5.87	6.06
EOG Resources	11.94	13.94	13.82	13.31	10.61	11.38	11.5	10.14	10.47	11.37	11.15
Apache	12.27	11.12	12.3	10.95	10.01	9.53	10.03	7.67	6.87	7.04	7.26
Marathon Oil	8.71	11.41	10.89	12.36	11.7	12.24	13.12	13.81	14.57	10	8.36
Imperial Oil	16.39	26.79	28.39	36.13	40.19	38.31	41.24	34.16	10.61	12.84	30.35
Suncor Energy	22.73	21.34	14.59	17.02	17.45	20.44	20.59	19.29	19.35	17.09	15.36
Husky Energy	7.56	8.7	9.28	9.61	9.76	10.41	10.12	6.73	6.45	10.95	8.4
Canadian Natural Resources	22.07	18.56	18.45	20.71	19.2	19.46	18.08	17.25	19.19	24.42	23.69
Royal Dutch Shell	10.31	12.33	11.8	12.16	11.37	11.94	11.64	10.89	9.87	9.15	8.65
BP	12.92	12.54	12.95	14.08	13.94	15.26	15.24	14.36	14.89	14.05	14.84
TOTAL	12.21	12.59	12.32	13.34	13.5	13.74	14.71	13.52	12.83	12.25	11.9
Eni	10.03	10.18	10.33	12.75	11.51	11.06	11.32	10.73	11.63	10.55	10.59
Equinor (Statoil)	7.93	7.55	7.73	8.04	7.39	7.91	7.62	7.03	6.92	7.07	8.01
PetroChina	18.13	18.24	18.08	17.3	16.59	15.98	15.48	14.35	14.02	13.92	13.67
Sinopec	11.58	11.23	9.87	9.72	9.26	9.52	8.69	7.43	6.37	6.16	6.2
CNOOC	12.95	11.67	9.11	9.61	10.2	10.76	10.35	8.71	8.13	10.3	9.65
Petrobras	12.74	13.17	13.52	13.45	13.55	14.15	13.48	10.34	9.47	9.66	10.02
PJSC Gazprom	32.89	39.46	36.66	36.75	38.22	37.7	40.71	41.86	41.44	36.73	34.28
PJSC NK Rosneft	17.01	17.39	16.52	18.67	19.24	18.56	18.21	18.32	19.25	19.12	19.59
PJSC LUKOIL	23.67	21.24	20.7	21.3	21.13	20.89	20.04	18.61	19.69	19.34	18.6
Average value	***14.37***	***15.01***	***14.37***	***15.31***	***15.24***	***15.5***	***15.63***	***14.08***	***12.96***	***13.08***	***13.5***

Source: Authoring, based on [24, 25]

Table 14

Company's value to shareholders' net income ratio of the twenty five leading publicly traded oil and gas corporations for 2008–2018

Company	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010	Dec 31, 2011	Dec 31, 2012	Dec 31, 2013	Dec 31, 2014	Dec 31, 2015	Dec 31, 2016	Dec 31, 2017	Dec 31, 2018
ExxonMobil	10.61	11.82	8.3	16.66	12.19	9.88	8.73	14.02	12.7	22.23	52.74
Chevron	9.23	10.41	6.16	14.89	9.48	7.62	7.7	11.35	11.74	42.92	–526.51
ConocoPhillips	9.31	13.37	–6.08	21.41	9.82	8.89	10.54	11.14	14.93	–18.12	–23.71
Occidental Petroleum	10.15	11.74	7.23	23.2	18.16	11.53	14.73	13.42	105.79	–7.26	–108.05
Devon Energy	12.98	12.99	–16.03	–16.02	8.03	6.22	-134.82	–1 552.34	21.63	–1.64	–9.72
Anadarko Petroleum	8.79	11.12	7.96	-284.18	61.93	–19.09	20.07	62.2	–28.3	–5.9	–16.47
EOG Resources	12.11	21.22	7.46	48.81	172.17	28.31	67.07	22.95	18.63	–9.92	–58.08
Apache	10.06	14.19	40.29	-132.67	17.68	9.1	21.45	18.74	–6.31	–1.04	–22.23
Marathon Oil	6.33	12.44	7.15	19.53	11.77	8.46	17.5	17.57	7.58	–6.61	–9.09
Imperial Oil	13.2	14.91	8.61	21.59	15.78	11.41	9.93	16.23	12.97	41.46	20.52
Suncor Energy	14.84	18.78	13.77	62.32	19.89	12.26	20.28	15.68	22.65	–31.53	201.92
Husky Energy	12.57	12.59	7.26	20.06	23.52	11.64	15.37	19.92	25.11	–5.56	22.88
Canadian Natural Resources	17.61	19.21	7.9	32.19	33.5	19.06	21.13	21.46	13.54	–78.19	–315.32
Royal Dutch Shell	8.96	8.6	6.26	16.65	11.65	8.29	8.94	16.16	16.03	89.39	66.09
BP	10.7	12.5	7.97	12.61	–44.33	6.47	14	7.57	37.59	–19.41	1 468.26
TOTAL	11.46	9.32	9.34	12.86	10.55	8.9	9.9	14.17	35.05	27.16	25.28
Eni	11.01	10.92	9.01	20.08	13.52	12.55	10.68	16.27	58.2	–8.23	–52.78
Equinor (Statoil)	9.43	12.94	9.79	29.6	13.88	7.43	7.24	14.21	25.93	–16.17	–29.62
PetroChina	1.8	36.35	16.3	24.74	15.62	15.04	17.8	14.15	22.01	53.77	230.97
Sinopec	17.04	35.32	26.17	21	12.02	11.25	13.65	12.54	22.55	23.47	15.22
CNOOC	10.59	17.21	6.28	16.13	12.74	7.2	9.5	10.98	8.21	22.42	821.17
Petrobras	8.09	18.69	6.17	14.26	14.38	10.9	18.78	17.13	–22.19	–15.04	–33.31
PJSC Gazprom	12.45	14.13	4.82	7.14	5.49	3.8	3.71	3.77	29.19	6.62	5.62
PJSC NK Rosneft	31.48	9.08	5.31	15.58	8.49	6.58	9.26	8.72	14.68	15.34	39.02
PJSC LUKOIL	10.29	7.98	3.86	8.06	5.91	4.57	4.87	7.17	8.51	7.81	14
Average value	***11.64***	***15.11***	***8.45***	***1.86***	***19.75***	***9.13***	***9.12***	***–46.59***	***19.54***	***5.12***	***71.15***

Source: Authoring, based on [24, 25]

References

1. Minasyan V.B. [Assessment of risks arising from the use of multiplier technology to assess the shares]. *Finansy: teoriya i praktika = Finance: Theory and Practice*, 2018, vol. 22, no. 3, pp. 124–135. (In Russ.)
URL: https://doi.org/10.26794/2587-5671-2018-22-3-124-135

2. Minasyan V.B., Ivko D.G. [Model risk analysis of multiplier technology applied at stock valuation of Russian companies]. *Finansy: teoriya i praktika = Finance: Theory*

and Practice, 2019, vol. 23, no. 6, pp. 91–116. (In Russ.)
URL: https://doi.org/10.26794/2587-5671-2019-23-6-91-116

3. Usmanova A.S., Nesterenko E.A., Taraskin D.S. [Valuation of public companies in Russia by business sector]. *Vestnik Saratovskogo gosudarstvennogo sotsial'no–ekonomicheskogo universiteta = Bulletin of Saratov State Socio-Economic University*, 2020, no. 2, pp. 103–107. URL: https://cyberleninka.ru/article/n/otsenka-stoimosti-publichnyh-kompanii-rossii-po-otraslyam-hozyaystvovaniya (In Russ.)

4. Ivko D.G. [Estimating Russian company value: Risks related to using the method of market multipliers]. *Finansy i upravlenie = Finance and Management*, 2018, no. 1, pp. 8–22. (In Russ.) URL: https://doi.org/10.25136/2409-7802.2018.1.25448

5. Volkov M.A. [Current issues of fundamental multiples application for high-leveraged companies investment analysis]. *Innovatsii i investitsii = Innovations and Investments*, 2020, no. 3, pp. 31–35. URL: https://cyberleninka.ru/article/n/aktualnye-voprosy-raschyota-i-prakticheskogo-primeneniya-multiplikatorov-fundamentalnoy-stoimosti-kompaniy-s-vysokoy-dolgovoy (In Russ.)

6. Lipatnikov V.S., Kirsanova K.A. [Assessment of the impact of the adverse economic geopolitical environment on the worth of Russian oil and gas companies]. *Upravlencheskie nauki = Management Sciences*, 2018, vol. 8, no. 2, pp. 30–43. (In Russ.) URL: https://doi.org/10.26794/2404-022X-2018-8-2-30-43

7. Gurvits Yu.B. [The development of strategy for stock portfolio optimization in oil and gas sector]. *Vestnik Moskovskogo universiteta. Ser. 6. Ekonomika = Bulletin of Moscow University. Series 6: Economics*, 2017, no. 2, pp. 65–89.
URL: https://www.econ.msu.ru/sys/raw.php?o=39325&p=attachment (In Russ.)

8. Kozlova A.S., Odinokova K.A., Taraskin D.S. [Most popular approaches to valuation of public companies]. *Vestnik Saratovskogo gosudarstvennogo sotsial'no-ekonomicheskogo universiteta = Bulletin of Saratov State Socio-Economic University*, 2019, no. 1, pp. 105–111. URL: https://cyberleninka.ru/article/n/osnovnye-podhody-k-otsenke-stoimosti-publichnyh-kompaniy (In Russ.)

9. Skavysh I.A. [The effectiveness of using industry-specific multipliers versus universal multipliers]. *Finansovoe pravo i upravlenie*, 2017, no. 1, pp. 1–10. (In Russ.)
URL: https://doi.org/10.7256/2454-0765.2017.1.22220

10. Kokin A.S., Oskolkov I.M., Syzganova A.A. [Comparative approach to estimation of cost of stocks of the oil and gas companies of Russia on the basis of the fundamental analysis]. *Ekonomika: vchera, segodnya, zavtra = Economics: Yesterday, Today and Tomorrow*, 2019, vol. 9, no. 1-1, pp. 241–258.
URL: http://publishing-vak.ru/file/archive-economy-2019-1/25-kokin.pdf (In Russ.)

11. Ivko D.G. [Peculiarities of assessing Russian companies' value by using the method of market multipliers]. *Finansy i upravlenie = Finance and Management*, 2017, no. 1, pp. 34–46. (In Russ.) URL: https://doi.org/10.7256/2409-7802.2017.1.22087

12. Khalikova M.A., Belai I.E., Galimzyanov R.N. [The evaluation of a controlling stake of the oil company]. *Internet-zhurnal Naukovedenie*, 2016, vol. 8, no. 3. (In Russ.) URL: http://naukovedenie.ru/PDF/114EVN316.pdf

13. Basiladze G.R. [Comparative analysis of investment appeal of PJSC “Lukoil”, PJSC “Rosneft”, PJSC “Gazprom”]. *Gumanitarnye, sotsial'no-ekonomicheskie i obshchestvennye nauki = Humanities, Social-Economic and Social Sciences*, 2017, no. 1, pp. 145–147. URL: https://cyberleninka.ru/article/n/sravnitelnyy-analiz-investitsionnoy-privlekatelnosti-pao-lukoyl-pao-rosneft-pao-gazprom (In Russ.)

14. Tatarintseva S.G., Samoilov N.A., Udalova D.V. [Financial control of indicators of investment attractiveness of a corporation in the accounting and value model]. *Innovatsionnoe razvitie ekonomiki = Innovative Development of Economy*, 2019, no. 1, pp. 210–216. URL: http://www.ineconomic.ru/sites//field_print_version/jurnal–1–49–2019.pdf (In Russ.)

15. Kozlova A.S., Taraskin D.S. [Methodology for forming securities portfolio based on risk, yield and fair value of the company]. *Vestnik Saratovskogo gosudarstvennogo sotsial'no-ekonomicheskogo universiteta = Bulletin of Saratov State Socio-Economic University*, 2018, no. 1, pp. 104–109. URL: https://cyberleninka.ru/article/n/metodika-formirovaniya-portfelya-tsennyh-bumagna-osnove-riska-dohodnosti-i-spravedlivoy-stoimosti-kompanii (In Russ.)

16. Kuznetsova N.V., Kazantsev L.V. [Formation of investment portfolio of a beginning investor]. *Vestnik Zabaikal'skogo gosudarstvennogo universiteta = Transbaikal State University Journal*, 2018, vol. 24, no. 5, pp. 125–134. URL: https://cyberleninka.ru/article/n/formirovanie-investitsionnogo-portfelya-nachinayuschego-investora (In Russ.)

17. Bessonova A.A., Belousova N.D. [Accommodation of free cash flows of physical persons: deposits and securities]. *Azimut nauchnykh issledovanii: ekonomika i upravlenie = Azimuth of Scientific Research: Economics and Administration*, 2018, vol. 7, no. 2, pp. 48–51. URL: https://cyberleninka.ru/article/n/razmeschenie-svobodnyh-denezhnyh-sredstv-fizicheskih-lits-depozity-i-tsennye-bumagi (In Russ.)

18. Zheleznova I.V. [The stock price dynamic model during share buybacks]. *Vestnik Permskogo natsional'nogo issledovatel'skogo politekhnicheskogo universiteta. Sotsial'no-ekonomicheskie nauki = PNRPU Sociology and Economics Bulletin*, 2017, no. 3, pp. 223–240. URL: https://cyberleninka.ru/article/n/dinamicheskaya-model-tseny-na-aktsiyu-pri-provedenii-obratnogo-vykupa-aktsiy (In Russ.)

19. Ponomareva S.V., Zheleznova I.V. [Features of share buybacks in Russia]. *Vestnik Permskogo natsional'nogo issledovatel'skogo politekhnicheskogo universiteta. Sotsial'no-ekonomicheskie nauki = PNRPU Sociology and Economics Bulletin*, 2017, no. 2, pp. 165–178. URL: https://cyberleninka.ru/article/n/osobennosti-provedeniya-obratnogo-vykupa-aktsiy-kompaniyami-v-rossii (In Russ.)

20. Vasil'eva E.V., Petrova S.B. [Strategic analysis of factors affecting the development of oil and gas corporations in Russia]. *Vestnik Ekaterininskogo instituta = Bulletin of Catherine the Great National Institute*, 2015, no. 2, pp. 8–14. (In Russ.)

21. Eder L.V., Filimonova I.V., Kozhevin V.D. [Efficiency analysis of the Russian oil and gas companies]. *Problemy ekonomiki i upravleniya neftegazovym kompleksom = Problems of Economics and Management of Oil and Gas Complex*, 2016, no. 3, pp. 9–18. URL: http://www.ipgg.sbras.ru/ru/science/publications/publ-analiz-effektivnosti-krupneyshikh-neftegazovykh-kompaniy-046388 (In Russ.)

22. Yurlov F.F., Kornilov D.A., Kornilova E.V., Plekhanova A.F. [Comparative evaluation of efficiency of large companies oil and gas sector]. *Vestnik NGIEI = Bulletin NGIEI*, 2020, no. 7, pp. 83–92. URL: https://cyberleninka.ru/article/n/sravnitelnaya-otsenka-effektivnosti-krupnyh-kompaniy-neftegazovogo-sektora (In Russ.)

23. Shcherbakova N.S. [Assessing the performance of energy companies in today's economic environment]. *Voprosy ekonomiki i upravleniya = Economics and Management Issues*, 2016, no. 5, pp. 119–127. URL: https://moluch.ru/th/5/archive/44/1417/ (In Russ.)

24. Shimko O.V. *Analiz rezul'tatov finansovo-khozyaistvennoi deyatel'nosti vedushchikh publichnykh korporatsii neftegazovoi otrasli posle mirovogo finansovogo krizisa* [An analysis of the results of financial and economic activities of leading public corporations in the oil and gas industry after the global financial crisis]. Moscow, Nauka Publ., 2019, 339 p.

25. Shimko O.V. *Sovremennye osobennosti otsenki stoimosti neftegazovykh korporatsii sravnitel'nym podkhodom: monografiya* [Modern features of valuation of oil and gas corporations by a comparative approach: a monograph]. Moscow, Mezhdunarodnye otnosheniya Publ., 2018, 252 p.

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.