

MARKET CAPITALIZATION AND ENTERPRISE VALUE OF THE WORLD'S LEADING PUBLICLY TRADED OIL AND GAS CORPORATIONS AS AN INDICATOR OF THE INVESTMENT ATTRACTIVENESS OF DOMESTIC VERTICALLY INTEGRATED OIL AND GAS COMPANIES

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Abstract

Subject. The article considers the market capitalization and the enterprise value of the twenty five leading publicly traded oil and gas companies within 2006 through 2018.

Objectives. The aim of the study is to determine the current level of values of the market capitalization and the enterprise value of the leading publicly traded oil and gas companies, as well as identify the key trends in their changes within the studied period, and identify the 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 determines the changes in the market capitalization and enterprise value of the leading publicly traded corporations in the industry, and identifies the main factors that contributed to the transformation. A decrease in market capitalization was revealed. Comparison of corporations from the USA, Canada, Europe, China, Brazil and Russia shows the country factor impact. The market valuation of independent companies is more affected by changes in oil prices than the capitalization of integrated corporations. Large transactions with assets cause a change in the balance sheet value of equity capital and can affect capitalization. It is established that the period under review is characterized by an increase in the total net debt of companies. This serves as a negative factor for the total market valuation.

Conclusions. The aggregate market valuation of the leading publicly traded oil and gas corporations does not get changed significantly over an extended period. But the industry increases the debt burden, which negatively affects the market capitalization of companies.

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Introduction

It should be noted that representatives of the national scientific school publish a large number of studies that affect certain nuances of financial and economic activities both at the level of individual oil and gas corporations, and across countries or the entire global industry from year to year. Of course, such close attention from the scientific community, which has been maintained for quite a long period of time, only confirms the relevance of this topic. Indeed, the oil and gas industry continues to play an important role in the country's economy, which still has a raw material character. This is very convincingly confirmed by data on the structure of industrial production and exports of goods. Therefore, it is not surprising that the total proceeds from the sale of hydrocarbon resources and products of its processing occupy a fairly tangible component in the revenue part of the Russian budget and replenish the stabilization fund of the country.

Consequently, it is quite natural that the largest oil and gas companies have a significant impact on the entire national economy of the Russian Federation. At the same time, the leading industry corporations have the status of publicly traded joint-stock companies, whose shares are also freely listed on the Moscow Exchange and depository receipts are traded on various trading floors in the US and Western Europe. Then it is obvious that the oil and gas industry also prevails in the stock market segment of the country's economy. Moreover, oil and gas companies in their totality still continue to play a significant role in the global stock market.

At the same time, a characteristic feature of the oil and gas industry is the lack of sufficient stability and predictability of exchange quotations for oil on the horizon even for several years. Of course, two other industry-wide shocks have also occurred this century even before the recent price collapse, which came amid the collapse of a production cut deal between the Russian Federation, Kazakhstan, Azerbaijan and OPEC countries and falling demand amid the pandemic. Undoubtedly, the global financial crisis, as well as the subsequent purely sectoral shock, was accompanied by a long and impressive drop in oil prices (*Table 1*). On the contrary, the time interval between the two shocks occurred was characterized by an increase in oil prices to their highest average annual values. The indicator of market capitalization, which expresses the attitude of investors towards an oil and gas corporation and determines the position of the company not only on the scale of the industry, but also on the entire global stock market, becomes of great importance in such unstable conditions, when it is difficult to predict oil prices even in the medium term. Undoubtedly, the authors pay enough attention to the market valuation of oil and gas corporations, which is confirmed by an impressive number of works that affect the designated topic [1] to varying degrees. Thus, the very formation of the capital of publicly traded companies in the industry is being studied [2].

Researchers in their works identify external and internal factors [3] of market valuation [4]. Of course, scientists identify causal relationships between different factors of the market capitalization of corporations [5]. At the same time, the impact of the unfavorable

economic and geopolitical situation on the cost of domestic oil and gas companies is being studied [6]. In addition, the role of global institutions in the capitalization of industry corporations [7] is assessed in the works. Meanwhile, the influence of various purely industry aspects [8], including the company's intangible assets [9], is also being studied. In addition, a comparative analysis of large vertically integrated oil and gas corporations with shale companies [10] is carried out.

It is natural that the authors study the relationship between market valuation and the dynamics of changes in stock indices [11]. Also, capitalization is studied both in the general analysis of the state of affairs in the oil and gas sector [12] and in relation to pricing in the oil market [13]. Undoubtedly, sufficient attention is paid to market capitalization when developing a methodology and tools for a comprehensive performance assessment [14] from the standpoint of development management [15] of publicly traded oil and gas companies, including in the context of ensuring [16] and assessing [17] their growth. It is clear that there is interest in market indicators from the standpoint of analyzing the quality of management and management decisions [18]. Undoubtedly, market capitalization plays a significant role in determining the premium in mergers and acquisitions of industry corporations [19]. In addition, market valuation is affected when analyzing trading strategies [20]. Quite predictably, the topic of capitalization is also considered as part of the assessment of the investment policy [21] of publicly traded oil and gas companies, including the innovative direction of development [22]. Moreover, a comparative analysis is being carried out [23] and incentive measures [24] are being developed for the investment attractiveness of publicly traded corporations in the industry. Nevertheless, it should be noted that the domestic scientific literature does not adequately cover the topic of determining the characteristic level of market valuation on the scale of the entire industry at a certain point in time, even taking into account the prevalence and demand for economic studies, which to some extent study capitalization of oil and gas companies. Moreover, key trends are not identified and the most important reasons for the ongoing transformations at the level of all publicly traded companies in the industry are also not established. Of course, it is necessary to take into account the complexity of conducting this kind of analysis, which is associated with the need to collect and process an impressive array of data on a large number of publicly traded oil and gas corporations over a fairly long period of time. Meanwhile, only in this case it seems possible to form the most complete picture of the situation with market capitalization that is developing in the industry.

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

It is quite natural that the principles according to which companies are selected for the analyzed list of the world's leading publicly traded oil and gas corporations acquire significant importance in the framework of a comprehensive study. It is also predictable that capitalization should act as the very parameter on the basis of which it is appropriate to rank companies when studying market indicators at the level of publicly traded

corporations in the industry. Nevertheless, there are currently a huge number of companies in the world whose shares are freely listed on various trading floors. But then an important condition for conducting a correct analysis is the proper choice of information sources that will allow in the future to form a reliable list of the largest publicly traded corporations in the oil and gas industry. It is worth noting that the Financial Times Global 500 rating, which was issued until 2015, and the Forbes Global 2000 list that is still published, where there are data on the market capitalization of the largest publicly traded corporations in the world, correspond to this criterion. Therefore, it is expedient to include in the list of leading publicly traded companies in the oil and gas industry analyzed later those that were relatively stable included in each of the then existing ratings throughout the entire period under study.

It was established as a result of a detailed analysis of all ratings issued within the period under study that 25 oil and gas companies quite meet the requirements. The largest number of corporations from this list is concentrated in the United States, which is not surprising, because there are much more companies with a significant market capitalization there than in any other country in the world. Thus, the United States in the general list is represented by independent companies ConocoPhillips, Occidental Petroleum, Devon Energy, Anadarko Petroleum, EOG Resources, Apache and Marathon Oil, as well as well-known transnational integrated corporations such as ExxonMobil and Chevron.

In addition, the purely independent company Canadian Natural Resources and the integrated corporations Imperial Oil, Suncor Energy, Husky Energy in the resulting list belong to another North American country, which is Canada. In addition, one South American company, which is the integrated Petrobras Corporation from Brazil, was also included in the list. At the same time, the independent company CNOOC and the integrated corporations Sinopec and PetroChina are concentrated in China. Royal Dutch Shell, BP, TOTAL, Eni and Equinor, which belong to the category of integrated corporations in the oil and gas industry, are concentrated in Western Europe. All companies from Russia included in the formed list are also classified in the same category, and these are PJSC Gazprom, PJSC NK Rosneft and PJSC LUKOIL. All the listed companies together also form a list of leading oil and gas corporations, on the basis of which the level of indicators characteristic of the industry is determined.

Key aspects of determining the market capitalization of the leading publicly traded oil and gas companies

Of course, the presence of market capitalization in itself is a distinctive feature that is inherent in the oil and gas industry only for publicly traded companies. There are some nuances in this case, which require close attention, despite all the seeming stereotyped and obvious definition of market capitalization. Undoubtedly, the shareholder value of an oil and gas corporation is central to the assessment of all market indicators. Of course, quotes alone are not enough to compare not only oil and gas companies, but also all other

publicly traded corporations, it is also necessary to take into account the number of shares, which is why market capitalization plays such a significant role.

Meanwhile, the market capitalization of any publicly traded company, including an oil and gas corporation, on a given date is the sum of the total value of all outstanding shares as of the close of exchange trading. It should be noted that not all of the securities of the specified type issued and admitted to circulation on the stock exchange are meant as outstanding shares. And those are only such part of them that is not treasury shares and is not at the disposal of the company itself. At the same time, some are limited to issued shares when assessing market capitalization, which can lead to very significant discrepancies in values with a large share of treasury shares. In addition, the nearest of the earlier trading dates should be taken into account in the absence of data on the value of the shares on the desired date, which is usually caused by a break between sessions.

Moreover, a very significant circumstance is that it is required to take into account all available varieties of ordinary and preferred shares of an oil and gas company listed on the exchanges when determining market capitalization. Although such cases are also noted in practice, in which preferred shares are neglected in the assessment of market capitalization. Nevertheless, companies are still found in the oil and gas sector, in the share capital of which there are preferred shares traded on the stock exchange. In fact, such shares are owned by Husky Energy and Petrobras among the companies studied, with a fairly significant component of the total market capitalization of the Brazilian company accounted for by preferred shares. In addition, such shares are contained in the equity structure of PJSC Surgutneftegaz and PJSC ANK Bashneft.

It is noteworthy that different types of shares in the same oil and gas corporation can be traded on exchanges in different countries and currencies, as is the case with PetroChina, Royal Dutch Shell and Sinopec. Then there is a need to convert all values to a single currency, for which the official rates of central banks or information on exchange trading in currency pairs are best suited, but data on depositary receipts for shares is also suitable as an alternative. Undoubtedly, only full compliance with all enumerated particularities within the framework of a unified methodology for determining market capitalization will make it possible to establish key trends not only for individual publicly traded companies, but also at the level of the entire stock market segment of the oil and gas industry.

Changes in the market capitalization of the leading publicly traded oil and gas companies

It was established as a result of the analysis that the total market capitalization of the leading publicly traded oil and gas companies has significantly decreased over the studied period (*Table 2*). Meanwhile, an impressive increase in the market valuation of the share capital of oil and gas corporations was noted immediately before the start of the global financial crisis. But the subsequent drop in market capitalization during the crisis was more significant than the growth that preceded it a year earlier (*Figure 1*). Of course, it has been established that there are a number of particularities at the level of individual

publicly traded companies in the industry with such a pronounced dynamics of changes in the industry indicator.

Thus, a significant pre-crisis increase in market capitalization in the oil and gas industry occurred mainly due to data from independent US companies, as well as corporations from China, Canada, Brazil and Norway. At the same time, the increase in the market valuation of other companies from Western Europe, integrated US corporations and PAO Gazprom turned out to be much more modest. Moreover, the market capitalization of PAO NK Rosneft and PJSC LUKOIL even decreased during a rather successful year for the industry. Meanwhile, it was found that the subsequent global financial crisis led to the most significant reduction in the market valuation of shareholder capital for corporations from Russia, China, Brazil and Suncor Energy, but the decline was not so significant for other companies from Canada. The performance of Western European and US companies withstood the outbreak of the global financial crisis better than others, among which a noticeable drop in market capitalization was noted only for Equinor, Marathon Oil, ConocoPhillips and Anadarko Petroleum.

At the same time, PetroChina Corporation deserves special attention. Initially, only H-type ordinary shares traded on the Hong Kong Stock Exchange, with a total outstanding number of 21,099 million, were presented on the trading floors. The other part of the company's capital was formed by shares controlled by the state and formally not related to traded securities in the amount of 161,922 million shares. But a major change took place in PetroChina's structure on November 5, 2007, when all of the previously unquoted capital was converted into A-type common shares, which remained with the state, while 4 billion shares of their additional issue began to be traded on the Shanghai Stock Exchange. This event led to the fact that the formal assessment of the capital of PetroChina shareholders increased by more than an order of magnitude over the year. For only those types of shares that have free circulation on the stock exchanges are used in the proper assessment of the market capitalization of publicly traded companies.

It was also revealed that the market capitalization of the leading publicly traded oil and gas corporations has cumulatively recovered after the drop caused by the global financial crisis to a mark even slightly higher than the level before the tangible pre-crisis increase in values. It was found that the annual recovery was quite uneven. Companies such as Suncor Energy, Petrobras and PAO NK Rosneft, which experienced some of the largest declines at the height of the crisis, also showed the most tangible increase in market capitalization. Thus, a threefold increase in market valuation in the case of Suncor Energy was helped by the merger with Petro-Canada, which ended in the same 2009. PAO Gazprom and PAO LUKOIL also showed quite good growth over the year. Nevertheless, the market capitalization of the key oil and gas corporations of Russia has not returned to pre-crisis values, but it is especially worth highlighting PAO Gazprom, whose indicator almost halved following the results of the recovery period.

On the contrary, the market capitalization of China's oil and gas companies managed to recover to the primary level in a year, but failed to reach the high values that they had

before the crisis itself. The situation with companies from Western Europe was a little worse, only Equinor had a recovery in capitalization comparable to corporations in Brazil and China. At the same time, the market valuation of Canadian Natural Resources showed a good recovery among companies from Canada, in addition to the already mentioned Suncor Energy, while Imperial Oil and Husky Energy were more like Western European corporations in terms of dynamics.

It is important to note that independent US companies have overcome the crisis decline better than anyone else, among which only the market capitalization of Devon Energy has not reached the high pre-crisis level two years ago. But the recovery of integrated corporations was much worse. Indeed, only the market capitalization of Chevron approached its original level, which cannot be said of ExxonMobil, as well as ConocoPhillips and Marathon Oil, which were still integrated corporations at that time. In fact, the market capitalizations of ExxonMobil and ConocoPhillips fell even during a good year for the industry, only Marathon Oil showed a slight improvement.

As noted earlier, the next few years, right up to the protracted crisis in the industry, were characterized by sufficient stability in the aggregate market valuation of the leading publicly traded oil and gas companies, although the dynamics of changes in the indicators of individual companies could vary quite significantly. Moreover, this period is notable for the highest oil prices. At the same time, the market valuation of ExxonMobil gradually returned to the primary value, and the indicator of Chevron reached the highest mark for the entire period under review. But the market capitalization of ConocoPhillips and Marathon Oil was characterized by very different trends. In fact, the market capitalization of Marathon Oil showed only a slight increase. This, along with a weak post-crisis recovery, was an obvious expression of the company's difficulties, which ultimately contributed to the decision to separate the business by spinning off the refining segment into an independent publicly traded corporation. It is quite expected that the market valuation of Marathon Oil has declined since the split in 2011. A rather similar situation occurred at ConocoPhillips a year later. It turns out that the global financial crisis resulted in such a serious shock for ConocoPhillips and Marathon Oil, which eventually led to such serious consequences for the oil and gas companies themselves.

In addition, among the large independent companies Devon Energy failed to overcome the vicissitudes of the global financial crisis. This was manifested in the dynamics of the market capitalization of the corporation, which continued to decline in the face of high oil prices and regained an insignificant part of its decline only a year before the industry crisis. It's also noteworthy that a similar decline also began for Apache, although the market capitalization of the company had risen noticeably before that. Meanwhile, it is necessary to distinguish EOG Resources from other large independent US companies, which significantly outperformed its competitors in terms of market capitalization growth dynamics during this period. This is due to the implementation by the management of the company over a long period of time of a strategy to purposefully increase highly profitable assets with insignificant costs for hydrocarbon production.

The unity in the dynamics of changes in market capitalization in a favorable period for the industry of high oil prices also turned out to be uncharacteristic for the oil and gas sector of Canada. Thus, only the market valuation of Imperial Oil stood out with sufficient stability of values, and the annual growth of capitalization of Suncor Energy gave way to a decline, after which the indicator won back only part of the losses before the industry crisis. But the market capitalization of Husky Energy rose significantly in a year after a relatively stable two-year period, and remained at about the same level before the industry shock. Meanwhile, a two-year decline in the market valuation of Canadian Natural Resources followed annual growth, while some upward adjustment occurred only before the industry crisis.

Of course, there were also differences in relation to the dynamics of capitalization of oil and gas companies in Western Europe during the period of high oil prices noted after the global financial crisis. It is noteworthy that Royal Dutch Shell had the largest total increase despite the multidirectional dynamics of the indicator. A small overall gain in the case of TOTAL was provided by an increase in market valuation in the final year before the industry crisis, and capitalization had been declining annually until that time. On the contrary, Eni and Equinor had a final decline, although the company from Norway stood out with minor fluctuations in the indicator, and the fall in the value in the very first year after the post-crisis recovery growth ensured a similar result for the corporation from Italy. The situation with the market capitalization of BP deserves personal attention. Indeed, a major accident on the Deepwater Horizon platform occurred in 2010, which caused the company's market capitalization to decline by almost a quarter in annual terms. It is noteworthy that the market valuation of BP did not manage to recover to its previous level before the onset of the sectoral crisis.

At the same time, integrated corporations from China faced a significant decline in their market valuation even in the context of persistently high oil prices for a very long period of time. Sinopec experienced the most impressive drop in capitalization, which occurred immediately after the already mentioned very modest post-crisis recovery in market valuation and offset most of this growth. It is important to note that the acquisition of Nexen, completed in 2013, also contributed to this result.

Meanwhile, the market capitalization of Petrobras is of considerable interest. Thus, a long and impressive decline in the indicator, as a result of which the market capitalization of Petrobras more than halved, followed within a favorable period after a yearly increase. A very similar situation with the market valuation was observed for PAO Gazprom, but the fall itself was not so impressive. And the increase in the capitalization of PAO NK Rosneft in the indicated period was facilitated by the purchase of TNK-BP, but even such a rather large deal failed to return the market valuation of the corporation to the level of values that preceded the global financial crisis. PAO LUKOIL, whose indicator actually returned to the same level as at the beginning of the period of high oil prices after the fall and subsequent growth, was the most stable.

As the analysis showed, the period of high oil prices gave way to an industry crisis, which had a negative impact on the market capitalization of the entire oil and gas sector. Nevertheless, the decline in market capitalization at the level of individual oil and gas companies was very uneven. Of course, the market valuation of most of the leading companies in the US, Canada and Europe has already declined in the same year that the industry crisis hit. The most notable declines among the named corporations were observed in Apache, Marathon Oil, Husky Energy, BP, Eni and Equinor. Meanwhile, market capitalization increased for Anadarko Petroleum and EOG Resources.

At the same time, the growth in market capitalization of integrated corporations from China was even higher, while the indicator of independent company CNOOC decreased significantly. The most impressive drop in market valuation occurred in the oil and gas corporations of Russia and Brazil. It should be noted that the onset of the industry crisis almost coincided with the introduction of sectoral sanctions against the Russian Federation and a major corruption scandal at Petrobras, which led to a revaluation of assets. Of course, all of the above had an additional and very significant negative impact on the market capitalization of these publicly traded oil and gas corporations. Undoubtedly, the next year of the crisis was the most disastrous for the market valuation indicators of all the leading publicly traded oil and gas corporations covered by the study, but Devon Energy, Anadarko Petroleum, Marathon Oil, Husky Energy and Petrobras had the deepest drop, and the capitalization of PAO NK Rosneft demonstrated the smallest decline.

The protracted decline in capitalization was replaced by a two-year period during which there was a partial increase in the market valuation of companies, coupled with a gradual increase in oil prices. But even then there were their own peculiarities. Indeed, the market capitalizations of Chevron, EOG Resources, Suncor Energy, Canadian Natural Resources, Royal Dutch Shell, BP, TOTAL and Sinopec have managed to return to or even surpass their pre-industry crisis levels. Not surprisingly, the takeover of BG Group, completed in 2016, had a positive impact on the market valuation of Royal Dutch Shell. Nevertheless, capitalization growth turned into a decline for ExxonMobil, Devon Energy, Anadarko Petroleum, Apache, Marathon Oil, Imperial Oil, Gazprom PAO, and Rosneft Oil Company PAO in the second year. However, the market valuation of Husky Energy, which showed a rather weak recovery compared to the fall at the height of the industry crisis, is also noteworthy.

It was revealed that the final year within the framework of the studied period for the majority of the leading publicly traded oil and gas corporations was characterized by a reduction in market capitalization. This was also facilitated by the decline in oil prices, which began in October and lasted until the end of the year. The market valuation of independent US corporations Devon Energy, Anadarko Petroleum and Apache, as well as all Canadian oil and gas corporations covered by the study, suffered the most. Meanwhile, the market valuation of ConocoPhillips, CNOOC, Petrobras, PAO NK Rosneft and PAO

LUKOIL increased in one way or another over the year, even against the backdrop of such a trend in the oil and gas sector.

Changes in the enterprise value indicator of the leading publicly traded oil and gas companies

The next most important indicator of the group under consideration is enterprise value. This indicator consists of the sum of market capitalization and net debt and is used to compare publicly traded corporations with different levels of debt in the structure of total capital. Of course, such a high importance of the enterprise value indicator is due to the fact that the investor gets all the total debt, as well as cash and cash equivalents, along with equity when buying a publicly traded corporation. Therefore, the change in the level of net debt is interconnected with the transformation of the market valuation of the share capital of the publicly traded company. It was established as a result of the study that the total enterprise value of the leading publicly traded oil and gas companies only slightly decreased over the studied period (*Figure 2*). Therefore, it seems possible to draw a conclusion about an impressive increase in the debt burden of the publicly traded corporations in the industry. Moreover, it is also noteworthy that the total enterprise value of the largest publicly traded companies in the oil and gas industry changed in a much narrower range of values compared to market capitalization.

Nevertheless, the dynamics of changes in the enterprise value of individual companies in the industry against the background of their competitors in the global oil and gas sector is of the greatest interest. Thus, the situation with the indicators of Anadarko Petroleum is noteworthy. The increase in its market capitalization in 2007 was quite in line with the general trend for leading corporations, while the company's enterprise value of the company even slightly decreased, which did not at all correspond to the dynamics characteristic of most competitors in the oil and gas industry. Meanwhile, Anadarko Petroleum was able to nearly halve its net debt from \$22,500 million to \$11,275 million by selling a portion of its assets as part of a business restructuring during the designated year. It should be noted that such an impressive debt for the size of the share capital of the corporation itself was formed in 2006 as a result of the takeover of Kerr-McGee for \$16,400 million and Western Gas Resources for \$4,700 million.

In addition, the data of ExxonMobil deserve attention, which significantly increased its net debt over the period under review. Net debt of ExxonMobil was initially in the negative range at -\$19,897 million but increased over time to \$34,754 million. Indeed, the final drop in ExxonMobil's capitalization occurred against the backdrop of an increase in the market valuation of the share capital of Chevron and Royal Dutch Shell, and also turned out to be much more significant than the general decline for all the leading companies in the industry and even than the decrease in the indicator for BP, which faced great difficulties after the technological disaster. On the contrary, the enterprise value of ExxonMobil was characterized by a less impressive and smoother fall.

Moreover, the presence of a fairly significant difference between the change in market capitalization and enterprise value of Petrobras can also be traced within the studied period. It should be noted that the market capitalization of the corporation decreased as a result. At the same time, the enterprise value of Petrobras has increased quite noticeably, which is quite consistent with the rapid growth in the balance sheet value of assets against the backdrop of a significant build-up of debt. This was facilitated by an agreement between the company and the Brazilian government to develop a large field, which entered into force in 2010. A rather similar situation was observed with PAO NK Rosneft, which completed the takeover of TNK-BP in 2013. The implementation of this transaction took place with the involvement of a rather impressive amount of borrowed funds for PAO NK Rosneft, which resulted in the final growth of the enterprise value of the company, while the market capitalization of the corporation decreased over the entire period. All of the above allows us to conclude that a serious increase in the total amount of net debt occurred at the level of the leading publicly traded oil and gas companies over the period under study. Without a doubt, this circumstance had a negative impact on market capitalization across the entire global oil and gas industry.

Conclusions

The analysis carried out makes it possible to draw a number of definite conclusions on the dynamics of changes in the market capitalization and the enterprise value of the leading publicly traded corporations in the industry and on the factors that contributed to the transformation. Thus, it was found that the total market capitalization of large oil and gas corporations has significantly decreased within the framework of the entire studied period. This was facilitated by the global financial crisis and the subsequent purely sectoral shock, after which the market valuation of equity capital did not return to its previous level. Nevertheless, significant differences were revealed in the dynamics of market capitalization at the level of individual companies, in the presence of general trends for the oil and gas industry.

Indeed, a clear influence of the country factor is seen from the results of the study, which is obvious from a comparison of corporations in the United States, Canada, Europe, China, Brazil and Russia. In addition, it was determined that the capitalization of independent companies, which often have only a hydrocarbon production segment in their structure, is more affected by a noticeable change in oil prices than the market valuation of integrated corporations with a refining segment smoothing out this impact. Moreover, the relationship between market capitalization and the balance sheet value of equity capital has been established, which is confirmed by the consequences of the implementation of large-scale asset transactions on the scale of the companies themselves. At the same time, it is shown that the period under review is characterized by a significant increase in the total net debt, as evidenced by the increase in the difference between the market capitalization and the enterprise value of the leading publicly traded oil and gas corporations. It was revealed that this circumstance has become a negative factor for the total market valuation of the largest publicly traded companies in the industry.

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	17.9	28.66	24.46	24.99	28.85	38.26	54.57	65.16	72.44	96.94

Continuation of the table

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	50.8	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****The average values of market capitalization and enterprise value of the twenty five leading publicly traded oil and gas corporations for 2006–2018, million USD**

Indicator	2006	2007	2008	2009	2010	2011	2012
Market capitalization	99 491	156 844	82 166	105 501	107 054	101 949	99 083
Enterprise value	107 096	166 501	92 364	120 280	121 805	117 827	116 425

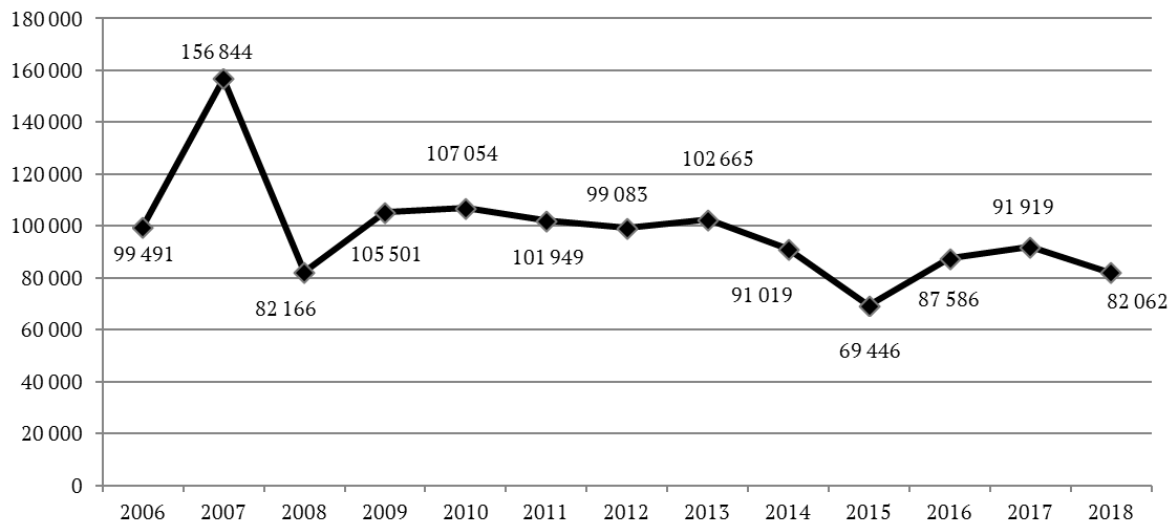
Continuation of the table

Indicator	2013	2014	2015	2016	2017	2018
Market capitalization	102 665	91 019	69 446	87 586	91 919	82 062
Enterprise value	125 756	115 232	93 636	113 234	116 364	103 421

Source: Authoring, based on [1]

Figure 1

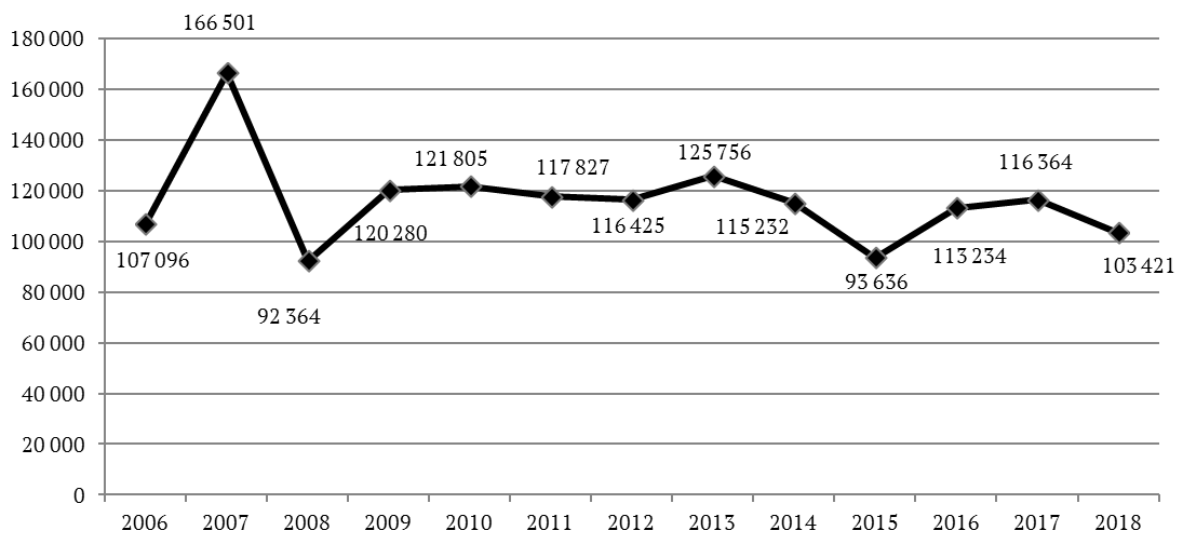
The average values of market capitalization of the twenty five leading publicly traded oil and gas corporations for 2006–2018, million USD



Source: Authoring, based on [1]

Figure 2

The average values of enterprise value of the twenty five leading publicly traded oil and gas corporations for 2006–2018, million USD



Source: Authoring, based on [1]

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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.