

Идентификация рисков российской нефтегазовой отрасли

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Аннотация

Данная статья дает общую картину текущей ситуации в российской нефтегазовой отрасли. Идентификация рисков российского нефтегазового сектора осложняется статистическими особенностями и информационной асимметрией. Для этого сектора были определены четыре основные группы рисков (операционные, финансовые, стратегические и риски, связанные с законодательным несоответствием). Целью данной работы является анализ текущего состояния нефтегазовой отрасли России в условиях сильной волатильности цен на нефть и постоянно усиливающейся санкционной политики США и стран Европейского Союза. Методология исследования основана на системном подходе к оценке состояния нефтегазовой отрасли России.

Ключевые слова: российская нефтегазовая отрасль, отраслевые риски, финансовые риски, операционные риски, стратегические риски, энергетический рынок, санкции, цены на нефть, мировая энергетика.

Oil and Gas industry risk identification

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Abstract

This paper is a compilation of information that give a general picture of the current situation of Russian oil and gas industry. The risk identification of the Russian oil and gas sector is complicated by statistical peculiarities and information asymmetry. The four major groups of risks have been identified for this sector, adding up to 10 risks overall. The aim of this paper is to analyze the current state of the oil and gas industry of Russia in the conditions of falling oil prices and sanctions policy. The research methodology is based on a systematic approach to assessing the state of the oil and gas industry of Russia.

Keywords: Russian oil and gas industry, industry risks, financial risks, operational risks, strategic risks, energy market, sanctions, oil prices, world energy.

Introduction

With rising global energy demand, the oil and gas industry has a wide range of challenges and opportunities. The energy industry is highly sensitive to U.S. sanctions due to the petrodollar being the single most important currency in global trade. Washington is able to exert significant influence by limiting access to the dollar through its financial institutions.

Russia is one of the world leading countries actively producing and supplying hydrocarbon crude. Accordingly, the oil and gas industry plays an important role in the formation of budgets of the Russian Federation budget system, providing a flow of a large part of their income. In the conditions of instability of the market commodity of the raw markets and uncertainty of the prices of hydrocarbon crude such dependence of budgets on an oil and gas complex increases risks of non-execution expense commitments of public-legal entities in case of reduction prices mined minerals.

The main threats are also accustomed to the main oil and gas companies. These risks are purposefully identified in the second chapter. Risk assurance needs to tackle such issues as Business Controls, Performance, Information Security, Internal Audit, IT Risk development.

1) Oil and Gas Industry Description

According to the BP Energy Outlook for 2018, Russia is project to remain the largest energy exporter in 2018 and beyond. By 2040, it's predicted Russian energy products will account for 5% of global demand.

In oil, production has been reaching post-Soviet highs across the last decade – and that includes being affected by an OPEC-led global supply cut.

According to BP Statistical Energy Review 2018, Russia's production, export, and provable reserves look like:

- production: 11.2 million bpd (12.2% of global total);
- exports: 8.6 million bpd (12.7% of global total);
- reserves: 106.2bn barrels (6.3% of global total).

Natural gas activity is much the same: huge reserves and enormous exports:

- production: 635.6bn cubic metres (m³) (8.2% of global total);
- exports: 215.4 bn m³;
- reserves: 35 trillion m³ (18.1% of global total) [1].

International credit rating agency Moody's has made a positive forecast towards Russia's oil & gas performance. Higher exports and production volumes point towards increased revenues for top Russian players, such as Gazprom, Rosneft and Lukoil [2].

Access to finance has been a big issue since sanctions came into place. With the US lobbying for a tightening of such measures, the industry seems to be resilient to the latest American sanctions.

2) Sectorial (Industrial) Risk Identification

In this chapter all possible risks of oil and gas industry will be described. Nowadays, PJSC «Gazprom» faces a lot of problems that should be solved as soon as it is possible. Otherwise, the company can start operating worse and worse from day to day.

As for industrial risks, the following ones can be distinguished:

2.1) Operational risks.

2.1.1) Geology [3].

This risk comes from the fact that oil and gas are buried deep in the bowels of the earth. The discovery of oil fields, the collection of data about the occurrence of oil reservoirs, the properties of oil and associated fluids, the construction of high-quality geological models depend on the ability to interpret information obtained by the remote method.

The cost of drilling one exploration depends on its location and can vary from less than \$ 1 million near the existing infrastructure to more than \$ 100 million in a remote offshore zone. In this case, the probability of success is always less than 1.

2.1.2) Lack of well educated staff [4].

The problem of the lack of highly qualified personnel remains relevant regardless of the economic situation. As the economy recovers, the industry will have an increasing need for highly qualified specialists, the lack of which can lead to a delay in the implementation or cancellation of projects, a decrease in productivity and an increase in operating expenses. The problem under

consideration is highly relevant for many NNKs against the background of their expanding production activities and entering new markets.

In developed countries, many of the leading engineers, senior managers and other professionals are nearing retirement age. However, there is no absolute certainty that among the younger generation there will be a sufficient number of specialists capable of taking their places. According to statistics published by universities in Europe and the USA, today there is a tendency to reduce the number of applicants entering engineering and geological and physical specialties. At the same time, educational institutions in developing countries produce a record number of such specialists. It should be borne in mind that they will need many years of practical training in the course of professional activity in order for their level of training to meet the needs of the industry in the 21st century.

2.1.3) Poor infrastructure [5].

Outdated oil and gas infrastructure can not only jeopardize the company's operations, but also have a negative impact on its perception of society, as well as on business relations with partners. For example, the wear and tear of shelf oil and gas infrastructure objects makes it necessary to organize continuous monitoring and control over their condition, as well as maintenance and repair work. At the same time, older refineries face great difficulties in complying with environmental legislation requirements. Despite the understanding by industry participants of the urgent need to modernize outdated infrastructure and the amount of capital required for this, the risks that oil and gas companies will have to face in the event that no action is taken in this direction are obvious. Financial assistance and support from the state is possible only for new projects, but the main burden of their implementation will be borne by individual companies.

2.1.4) Competition from new technologies, including alternative fuels [6].

On the one hand, achievements in the energy sector, including the development of microenergy and the construction of houses that are neutral in terms of greenhouse gas emissions, will contribute to the revision of the structure of relations between consumers and producers, as well as the transformation of the energy market as a whole. It is expected that in this particular market gas demand will grow most dynamically. In addition, the continuous improvement of technologies based on the use of fuel cells and biofuels, makes them increasingly competitive in the fight against traditional fuels from the point of view of everyday use.

On the other hand, the sector of the alternative sources of energy is developing rapidly that may lead to rejection of gas and oil in the nearest future. That is why oil and gas companies should think about decrease in the emission of harmful elements (like CO₂) or different kinds of trash in rivers and forests.

2.2) Financial risks.

2.2.1) Price fluctuations [7].

Oil companies and investors cannot influence most economic features. For example, oil demand, oil prices, equipment costs, exchange rates, inflation.

Periodically, these parameters change in unpredictable ways. Changes may reduce the attractiveness of oil production projects or lead to their negative profitability.

Unpredictable change in oil prices is a characteristic feature of the oil business. This is the main source of uncertainty in the oil industry with significant investment risk. The basis of oil pricing is the law of supply and demand. Almost all countries are oil consumers and about 40 countries are its producers. Any change in the behavior of producers or consumers of oil leads to a change in equilibrium and, accordingly, the price of oil. The diagram below, which presents a graph of changes in oil prices from 1998 to 2017, clearly shows how much the price can change.



Fig. 1. Dynamic of Brent prices over 1998-2018

2.2.2) Worsening of financial conditions of the oil and gas companies [8].

Against the background of current trends in the global economy in many developing countries, there has been a sharp decline in budget revenues from the implementation of public investment programs, as well as tax revenues. In this regard, it is expected that oil and gas companies will continue to face increased tax rates and other fiscal measures. Perhaps, international oil companies will have to reconsider the terms of cooperation with national oil and gas companies, while in new business models the focus will shift towards national interests.

2.3) Strategic risks.

2.3.1) Limited access to oil and gas fields [9].

Many oil and gas fields are located in hard-to-recover areas (tar sands in Canada, deposits in the Arctic, and deep-water deposits). This not only significantly increases the cost of exploration and production, but also leads to an increase in risks associated with the need for additional investment.

Perhaps more importantly, companies will face a number of political factors that could potentially limit or even deprive them of access to such deposits. The instability of the political situation and the nationalization of natural resources in developed countries can cause disruptions in their supply.

Meanwhile, competition for access to new fields among international and national oil companies is expected to increase. Unlike international oil companies, national enterprises have a number of significant advantages: support from the government and public investment funds, as well as geographic proximity to the markets of Asian countries with developing economies. It will also be a source of additional significant risks for international oil companies.

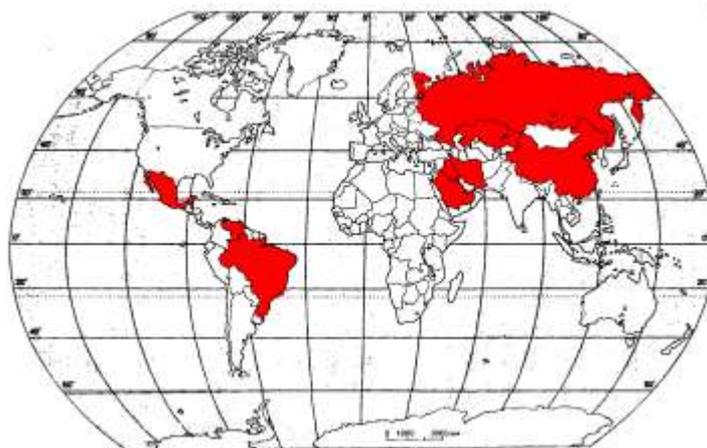


Fig. 2. Oil and gas fields

2.3.2) The work in unexplored fields [10].

First of all, this is due to the gradual shift of the attention of industry participants towards the development of fields located in adverse environmental conditions (such as deep-water deposits, as well as deposits of the Arctic shelf). In many cases, the implementation of such projects requires the use of completely new technical solutions and operational strategies, as well as the organization of special training and support for personnel directly involved in oil and gas production facilities. In terms of costs, as well as the degree of danger to humans, the development of such new mineral deposits is far ahead of the cost (as well as the scale of possible negative consequences) of field development in the past, thus expanding the list of risks faced by oil and gas companies. In addition, there is no certainty that in the future prices will remain at a level that justifies such significant investments.

2.4) Risk of non-compliance.

2.4.1) Ecological risk.

Oil and gas companies are under scrutiny not only from the state. Today, enterprises in this industry are facing with growing pressure from shareholders, requiring the disclosure of information about environmental risks. In connection with the environmental catastrophe caused by the oil spill

in the Gulf of Mexico, some investors expect full disclosure of the threats posed by offshore drilling and the possible environmental consequences of offshore drilling, as well as measures implemented in oil and gas companies to prevent similar accidents, minimizing their consequences and managing relevant risks.

For instance, the countries of the European Union (EU) have identified a number of environmental objectives and standards, according to which, among other things, it is planned to reduce carbon dioxide (CO₂) emissions by at least 20% by 2020. In addition, initiatives are being implemented in the EU (for example, the European CO₂ trading system) aimed at encouraging a shift from fossil-fuel-based energy production to renewable energy. China has introduced a number of environmental standards aimed at reducing greenhouse gas emissions and encouraging the use of atomic energy, as well as energy from renewable sources.

2.4.2) Uncertainty about energy policy [11].

In many large oil-producing countries, energy policy is constantly changing. The uncertainty of the energy policy reduces the effectiveness of planning activities, the formation of an investment strategy and ensuring resilience to changes in demand and supply. This, in turn, increases the likelihood of supply and demand imbalance due to the slowdown in investment.

Moreover, Energy Policy Uncertainty reduces the effectiveness of activities for planning activities, the formation of an investment strategy and ensuring resilience to changes in supply and demand. This, in turn, increases the likelihood of supply and demand imbalance due to the slowdown in investment. In general terms, the lack of certainty about the upcoming changes in legislative and regulatory requirements will negatively affect the future development of the industry and make it difficult to make long-term investments.

Conclusion

To conclude, the above mentioned risks have always been the major ones for Russian oil and gas sector, primarily, due to a tough pressure of foreign governments and international policy. The uncertainty is never going to lose its actual meaning for every day operations. Ecological risks so far have an increased importance, since the rests of mineral resources are badly tackled and quickly removed in the race of countries to own the biggest piece of the world's power. Finally, it is of vital necessity to remember all the risks that have hidden threats to the profits and performance of the company.

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