

Risks of the formation of common gas and oil markets of the Eurasian Economic Union in modern conditions

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Abstract. The article identifies, studies and classifies the main risks of forming the EAEU common oil markets, oil products markets and gas markets taking in to account modern political, macroeconomic and technological factors. The analysis of current political, macroeconomic and technological conditions shows that in each of these areas there are risks, the implementation of which leads to a partial or complete cessation of the development of the common EAEU oil, oil products and gas markets. Currently, in the current geopolitical situation, the highest level is characteristic of political risks. In the macroeconomic and technological field, the development of negative scenarios is expected no earlier than in two to three decades.

1 Introduction

The idea of Eurasian economic integration was proposed in 1994 by the President of the Republic of Kazakhstan, Nursultan Nazarbayev. The proposal received the support of the presidents of Russia and Belarus, and in 1995 the Agreement on the Customs Union was signed. The first significant result of the implementation of the idea of integration was the Customs Union (CU) of the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation. Further, from January 1, 2012, the rules of the Common Economic Space (CES) will begin to apply, and, finally, in 2014 a fundamental agreement on the EAEU (hereinafter the Agreement) will be signed. In accordance with the data of the Agreement, the EAEU has common markets for gas, oil and oil products [1].

The trajectory of movement to common markets according to Art. 83, 84 of the Treaty is determined by the following sequence: concept (2016) - program and action plan (2017) - international treaty (until 1.01.2025). Thus, the common markets of oil, oil products and gas will begin to operate normally in 2025 [2]. This means that subject to the final deadlines, the time period from the start of the integration process (1995) to the start of operation of the common oil and gas markets will be 30 years. With such a long implementation period, it is logical to assume that the risks and challenges that exist at the planning stage can differ significantly from those at the project completion stage.

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Moreover, even if we take the date of adoption of the Agreement (2014) as a reference point, then in this case a reassessment of risks is required, since in the period 2014 - 2018. a series of events occurred that significantly affected the conditions in which the energy market of the EAEU member countries functions. It follows that a new risk assessment is required, which will make it possible to draw objective conclusions about the realistic implementation of Art. 83, 84 of the Treaty in the conditions prevailing by the beginning of 2020.

2. State of the EAEU gas, oil and oil products markets

To adequately assess the likelihood of adverse scenarios during the creation of common markets for gas, oil and oil products, it is necessary to take into account the potential of the EAEU oil and gas resources, the geographic location of the countries participating in the union, as well as the general geopolitical situation at the time of the assessment. Consider these issues in this order.

2.1 Oil and gas potential of the EAEU

In the oil and gas sector, the EAEU has significant resource potential. The Eurasian Union accounts for approximately 20% of the world's natural gas reserves and more than 50% of world gas exports. In terms of reserves, production and export of oil, the figures are also significant: approximately 8.2% of world reserves, 14.2% of world production, 18% of world exports [3]. The data presented confirm the high total oil and gas potential of the EAEU, its resource self-sufficiency and the absence of the need for oil supplies from third countries [4]. This fact will undoubtedly affect the stability of future common markets and the picture of risks arising in the process of their creation and functioning.

The high resource potential of the emerging common markets for gas, oil and oil products makes them attractive both for the EAEU member countries and for third countries, but when exploring the prospects of these Union institutions, it is necessary to take into account not only the total proven reserves and the total contribution to world production / export. An important role is played by the distribution of these indicators within the EAEU. Consider country data [5,6].

Table 1. EAEU countries, general indicators of the gas and oil industries in 2017

	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia	EEC
Gas (billion cubic meters)						
Reserves	-	3,0	1500,0	6,0	32600,0	34109,0
Production	-	0,2	33,3	0,03	676,4	709,0
Export (Total)	-	-	15,5	-	224,5	239,7
Export to third countries	-	-	2,0	-	194,3	196,3

Import (Total)	2,7	19,6	4,9	0,2	8,9	36,3
Import from third countries.	0,4	-	2,5	-	-	2,9
Oil and oil products (million tons) *						
Reserves	-	60	3900	11	14100	18071,0
Production		1,6	75,5	0,1	547,5	624,70
Oil export (Total)	-	1,6	60,8	-	254,2	316,6
Oil exports to third countries	-	1,6	60,0	-	235,6	297,2
Export of petroleum products (Total)	-	16,8**	4,8**	0,1**	171,5**	193,2
Oil products export to third countries	-	16,7**	4,6**	0,1**	168,7**	190,1
Oil imports (Total)	-	18,4	0,0	0,1	0,7	19,2
Oil imports from third countries	-	-	-	-	-	-
Import of petroleum products (Total)	0,3**	1,4**	1,8**	1,5**	1,2**	6,2
Import of petroleum products from third countries	0,1**	-	1**	0,6**	1,1**	2,8
* 2016						
** 2015						

The simplest analysis of the data in Table 1 indicates a pronounced uneven distribution of reserves and production capacities for gas and oil production. Brief characteristics of the EAEU participants by these indicators are given below.

2.2. Armenia, Kyrgyzstan, and Belarus

In particular, Armenia does not have gas and oil reserves, does not have processing capacities, and is completely dependent on imports. The Kyrgyz Republic has insignificant oil and gas reserves, with minimal production volumes. In Belarus there are insignificant deposits of gas and oil, although production is insignificant, but more than in the Kyrgyz Republic. With all this, Belarus has a significant potential for oil refining, and takes second place after the Russian Federation in the export of petroleum products to third countries.

2.3. Kazakhstan

Kazakhstan has gas reserves approximately 150 times greater than the reserves of Belarus, Kyrgyzstan, Armenia combined. Kazakhstan surpasses these republics by 60 times in oil reserves. Almost the same is observed with respect to the extraction of these resources. However, with all this, oil refining is not sufficiently developed in the Republic of Kazakhstan. By many times surpassing Belarus in the amount of oil produced, Kazakhstan exports three times less of its refined products. Another important feature of the Republic of Kazakhstan is the wide participation of large foreign companies in oil and gas production.

TNCs Exxon Mobil, CNPC, Total, Chevron, and others hold significant shares in consortia for the development of deposits in the Caspian, Yuzhno-Mangyshlak, Ustyurt-Buzashinsky, Yuzhno-Torgaysky, and Shu-Sarysuysky sedimentary basins. Here, during the period from 2000 to 2016, about 179.8 billion dollars were invested in production and exploration, and the size of annual investments for this period increased 5 times [7.8]. The scale of investments indicates the importance of the Kazakhstani hydrocarbon market (hydrocarbon) for foreign investors [9]. Accordingly, they will actively defend their interests if the development of the common EAEU markets contradicts such interests.

2.4. Russia

Against this background, Russia seems to be the undisputed leader and the main driving force of the EAEU oil and gas market [10]. In terms of reserves, production, export of gas and oil, the Russian Federation is even ten times greater than Kazakhstan, and in the other three countries the ratio reaches two or even three-digit values. In addition to the significant difference in basic indicators, Russia has a fundamental difference from all other members of the EAEU [11]. In Russia, wholesale and retail gas supplies represent a competitive part of the market with a large number of suppliers. Currently, most of the deliveries are carried out at state-regulated prices, but since October 2014, exchange trading in gas has been ongoing. In other EAEU countries, not only supplies, but also transportation, distribution, storage are monopolized. Moreover, in transportation everywhere the owner and operator in one person are the local subsidiary of PJSC Gazprom. This circumstance may become a source of additional risks in the creation and functioning of a common gas market.

3. Risks of the formation of common EAEU oil and gas markets

In the general case, the risks of the formation of common markets for gas, oil and oil products in the EAEU should include events or negative scenarios that can significantly slow down or completely stop the development of these markets. The source of such events and scenarios can be a variety of processes in the field of politics, economics, and technology. Accordingly, for greater analysis effectiveness, it is advisable to divide the whole variety of risks into three categories:

1. Political risks;
2. Macroeconomic risks;
3. Technological risks

Additionally, taking into account the characteristics of the EAEU member countries, it is necessary to highlight the specific risks of exporting countries and energy consuming countries.

3.1. Political risks

Currently, global and regional political processes are a constant source of risks in the implementation of large-scale energy projects. The composition and level of such risks is difficult to predict dynamics, both globally and regionally. The political nature is diverse, therefore various classification options are possible. One of them is the division of risks into levels depending on the hierarchy of factors [12]. In relation to the EAEU, this method gives the following description of political risks.

Domestic political risks caused by the existing political situation in Russia, Belarus, Kazakhstan, Armenia, Kyrgyzstan. In the first two countries, the threat to common markets is the possibility of a sharp change in the political course in the event of the departure of the presidents who have been in power for decades: V. Putin, A. Lukashenko. In Kyrgyzstan, by contrast, the risk is due to the frequent change of power as a result of revolutions. In Armenia, revolutionary events are taking place at the moment, and the question of the political vector remains open so far.

Regional political risks caused by contradictions, conflicts between the EAEU countries and the countries bordering them. Kyrgyzstan has tense relations with Uzbekistan due to water resources, and Kazakhstan has not resolved the problem of border demarcation with Uzbekistan. Armenia is periodically in a state of armed conflict with Azerbaijan, Russia and Ukraine are close to breaking diplomatic relations. Another significant risk is the growth of religious extremism, threatening not only the creation of common markets, but also participation in the EAEU of Kazakhstan and Kyrgyzstan.

Global political risks. In this context, there are risks caused by the nature of relations between the EAEU members and most developed countries of the world community. The level of global risks at the moment has significantly increased due to a sharp deterioration after 2014. relations between the Russian Federation and a whole group of countries, including the United States and the European Union.

In general, the consequences of political risks are significant, but objective conditions reduce the likelihood of such processes in the near future. Currently, Armenia has no alternative to the supply of energy resources, except for the EAEU, a similar situation in Kyrgyzstan with the supply of oil and oil products. In Kazakhstan, the oil and gas business needs a Russian gas transmission network and oil trunk pipelines to supply energy to Europe. Thus, all EAEU countries are objectively interested in developing common EAEU gas and oil markets.

3.2. Macroeconomic risks

Risks of this kind should include a sharp increase and collapse in world oil prices, tensions in the market of oil products and motor fuels, increasing problems of gas supply and transit, and depletion of traditional hydrocarbon deposits [13]. It should also be noted that in the last decade, in parallel with the process of Eurasian integration in the global economy, the green energy segment has been developing intensively. Scientific developments are being actively conducted in this direction, and there is always the possibility of a cardinal breakthrough in the use of renewable energy sources (RES). In the event of the emergence of highly profitable generation using renewable energy sources, all world markets for oil and gas are expected to experience a period of instability with subsequent reformatting.

The next macroeconomic risk factor is determined by the key position of the Russian Federation in each of the EEAS energy markets [14]. Russia is the main producer and consumer of energy resources; the Russian segment of the general oil and gas market is many times superior to all the others combined [15]. Accordingly, any recession in the Russian economy, for example, as a result of sanction pressure will have a significant negative impact on the market as a whole [16].

The second after Russia producer of oil and gas in the EAEU is Kazakhstan. The economy of this republic has its own specifics associated with the significant presence in the mining sector of large transnational corporations. The impact of transnational corporations on the general market can develop in several, including unexpected directions. In particular, in Kazakhstan, in the development and maintenance of oil and gas fields, the practice of creating joint ventures is widely used, not only with transnational corporations (Tengizchevroil, JV Kazgermunai, CCEL (Karazhanbasmunai), PetroKazakhstan Inc., etc.), but also with companies from the USA, Europe, China. Such joint ventures are registered in the Republic of Kazakhstan and can gain access to the common EAEU market. The consequences of such participation are difficult to predict, foreign companies can create fair competition, but they can also take actions aimed at destabilizing the oil and gas industries of the Russian Federation and other EAEU countries.

Another quite unexpected macroeconomic risk is the possible transition to cryptocurrency settlements. According to the chief economist of the Eurasian Development Bank, “from the point of view of macroeconomics, there are risks here - cryptocurrencies undermine the sovereign right to issue and, consequently, the effectiveness of monetary policy” [17,18,19,20].

A common characteristic of macroeconomic risks is the low probability of their implementation in the near and medium term. It follows that the EAEU has time to respond to these threats.

3.3. Technological risks

Technological risks in this article mean the emergence of technologies that can drastically reduce:

1. The need for oil, petroleum products and gas;
2. The need for the transportation of hydrocarbons through existing trunk pipeline systems;
3. The security of information systems involved in the common gas and oil markets.

Consider the technological risks in accordance with the proposed classification. The emergence of technologies that can drastically reduce hydrocarbon consumption is expected, first of all, in the field of green energy [21]. It is important to note that an increase of only 10% - 15% in the efficiency of existing solar panels, solar stations, wind power stations will create conditions for the mass production of electricity based on renewable energy sources. Therefore, even without some breakthrough super technologies, “there are already risks of a more drastic transition to an energy system based on renewable energy sources. The IEA predicts that nearly 60% of all new generating capacity will come from renewable energy sources by 2040, most of which will be competitive without any subsidies” [22,23].

In addition to reducing the need for HCS, improving a number of new technologies can significantly change the need for transporting gas and oil, and reduce the load on gas transmission systems. First of all, such an effect is possible with the advent of commercially successful GTL (“gas to liquid”) technologies [24]. In this case, the transition of all supplies to liquefied gas becomes real, which will radically change the transportation scheme. In addition, one of the applications of GTL is the production of synthetic motor fuel from gas directly in the fields. The massive development of such production will have a profound effect on the structure of the oil and gas industry.

For the efficient operation of common markets for oil, oil products, gas, relevant information systems for the exchange of technological information between oil and gas transmission system operators, exchange trading operators are created [25]. Also, with the help of these systems, monitoring and information support are organized within the framework of the EAEU Integrated Information System (IIS EAEU). The functioning of

such a complex and extended complex is subject to a large number of external and internal, accidental and deliberate threats: failures, errors, hacker attacks, theft and distortion of information. To protect against such risks, in each IIS segment, security subsystems are provided that ensure confidentiality, integrity and availability of data during their processing and storage, as well as during their transmission via communication channels [26,27].

Describing the effectiveness of such protection, it should be noted that the EAEU IIS is being developed on the basis of the existing integrated information system of foreign and mutual trade. The operation of the system allowed to accumulate the necessary experience that helps to create a reliable information security system.

4 Conclusion

The analysis of current political, macroeconomic and technological conditions shows that in each of these areas there are risks, the implementation of which leads to a partial or complete cessation of the development of the common EAEU oil, oil products and gas markets. Currently, in the current geopolitical situation, the highest level is characteristic of political risks. In the macroeconomic and technological field, the development of negative scenarios is expected no earlier than in two to three decades. The dynamics of such processes are much lower than in the case of political risks, which allows us to respond to them in a timely manner.

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