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Article

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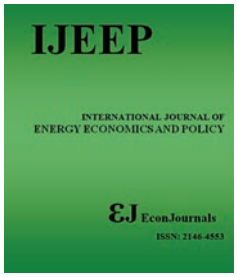

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Establishment and Marketing of New Oil Benchmarks in the Structure of Global Oil and Oil Products Mercantile Trade: The Russian Case

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ABSTRACT

The organization of oil and oil products stock trading that requires for independent national price indicators establishment, will promote the formation of a fair prices for energy commodities, the extension of influence of the national currency on the global market and the decrease of impact of external fluctuations of global economy. In this article, the authors review the possibility of inclusion of new oil benchmarks in the structure of the global oil and oil products mercantile trade. In particular, the Russian case is the major research subject, and the assessment is made for the purpose of strengthening the country's leverage over free market prices and in the interests of the state budget and national companies. Special attention is also given to the analysis of the contemporary contract structure of the global oil market and imposed risks. The authors develop the methodological framework for oil and oil products price indicators calculation and the suggestions about the promotion and marketing of Russian oil benchmark on the international level.

Keywords: Oil, Oil Products, Mercantile Exchange, Benchmark, Global Oil Market, International Relations
JEL Classifications: F13, N70, O24, Q41

1. INTRODUCTION

Financial markets are significantly cut off from real physical oil markets in the ratio of real production and supply volumes with futures trading volumes. The futures trading volumes often exceed by hundreds of times both their actual deliveries and the actual oil production volume. The latter is an important factor. It does not give an objective assessment of demand and supply level, which, first of all, forms the price, since low production volume is not able to generate all the "virtual"S demand.

Oil price fluctuations lead to contradictory economic assessment of investment projects and incredible loss when oil companies provide the short-term supplies. In this case, benchmark recognition provides the independent pricing at the oil market, stabilizes the national currency, and adds value to countries in the oil and oil products global trade.

Nowadays, modern exchange trade requires new benchmark crudes to guarantee the demand at the market by physical oil supplies. Russia, as one of the oil production leaders, can take part in this process and deliver its benchmark crudes on the world market. At the same time, it is important to ensure all the assumptions for a highly liquid exchange market remain operational.

In spite of the fact that nowadays Russian benchmark crude is not represented in the world oil trade structure, to strengthen the

leverage on the global oil prices it is necessary for country to get involved in the world oil trade structure (Bashera et al., 2012). The assessment of national, thus internationally recognized benchmark, may serve as an effective way to achieve this goal.

This study provides the perspectives of the national oil benchmark establishment in Russia.

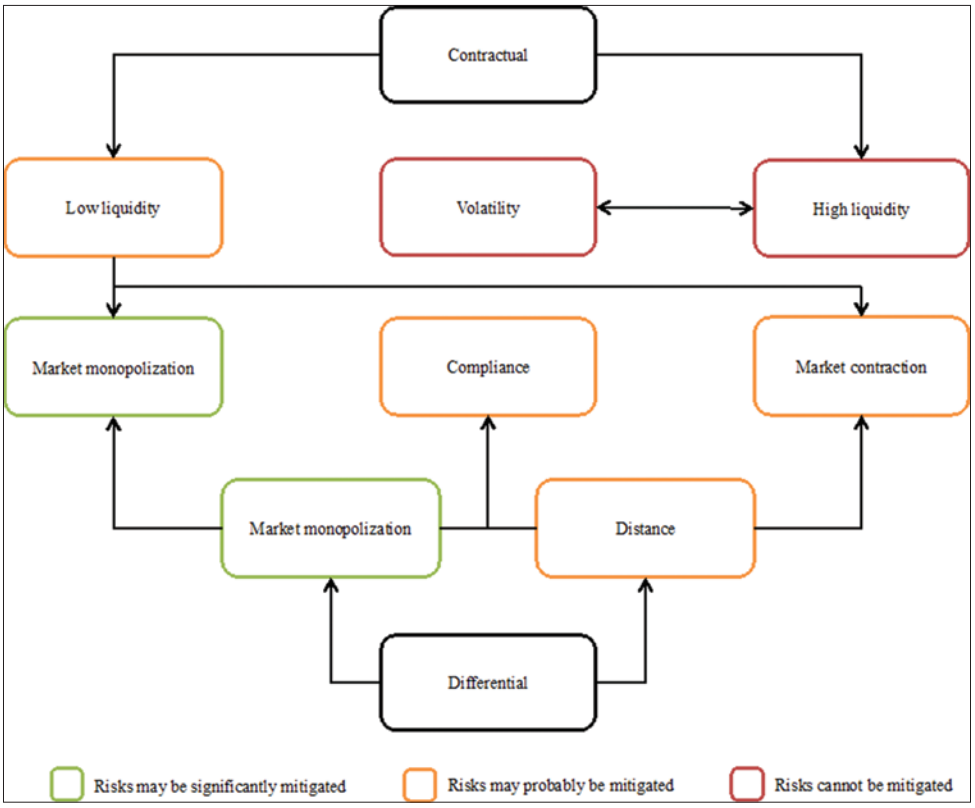
2. LITERATURE REVIEW

Shojai (1995) reports that in the modern oil market framework, countries, with no accepted or internationally recognized oil benchmarks are the parties, which accept the market conjuncture, and offset huge risks on companies and state budget in general. First, these risks are dedicated to the fact that prices cannot be anticipated in short-term period because of the considerable fluctuation at liquid stock exchanges. Figure 1 demonstrates the diagram of risks that arise from the current oil market framework. Some of these risks address all the market actors, yet several (differential) risks can be reflected only in domestic stock exchanges.

In the long run, two fundamental price risk groups are formed for oil industry in Russia. Connecting with potential perspectives, risks can be determined as lower oil prices due to the supply and demand impact. Also risks are associated with the contract structure and differential system of the price calculation for oil in Russia.

1. Risks of oil price reduction in the global market:
   - 1.1 Risks of supply increase. Supply risks for Russia are formed if the additional volume of oil is placed in the world oil market, which can be produced comparably cheaper. In this case the world oil prices may reduce, that will be described as the government revenue and companies' profits losses. Moreover, new Russian projects will not be able to enter the market, because companies are not interested in the non-profitable projects.
   - 1.2 Risks of demand decrease. This may lead to global price decrease: It may either reduce the Russian oil export volume, or to the decrease of the budget revenue. A few economic and energy processes influence the formation of the risks of the demand decrease. In the near future, oil and oil products demand decrease can be explained by:
     - 1.2.1 Low economic growth rates, which show a decline in industrial output, worsening of living standards and reduction of oil consumption in all sectors of the economy;
     - 1.2.2 Energy efficiency technologies and policy development to reduce oil consumption;
     - 1.2.3 Inter-fuel competition development, for example, oil replacement to biofuel, electric power and natural gas.
2. Risks, formed by contractual structure of the world oil market:
   - 2.1 Contractual risks, which are formed by the world oil stock pricing such as risks of volatility and long-term fluctuation oil prices. Taking all this risks, companies are not able to forecast oil prices, what means that it is impossible to calculate investments and returns. Moreover, the fall of the government revenue volume can be caused by significant oil price fluctuation.

Figure 1: Structure of the main risks formed by the modern contractual structure of global oil market



2.2 Differential risks. Europe, being supplied with Urals blend, is the main export direction for Russian oil companies. The price of Urals is determined as the differential of Brent. This way structured Russian export pricing shows that Russian companies depend on both the Brent price fluctuation and volatile short-term fluctuations on Brent/Urals differential. It results into the greater risks when assessing the return on supply.

3. STUDY

Future scenarios of Russian oil and oil products exports differ considerably. At present, Russian oil export tends to show the slight growth since 2013. This is taking place against the backdrop of a global oil demand reduction and an increase in volumes of internal primary processing of crude oil at the refinery.

Geographically, the export represents the following structure. 21.8 million tons of oil the neighboring countries, whereas 220 million tons per year are supplied to other countries, while 68% of the volume is exported west (Europe, including the southern direction to Augusta and Trieste (Italy) and the northern in Amsterdam and Rotterdam (Netherlands)), and 31.4% is exported east (APR, including Japan, China, South Korea).

Most researchers predict that Russian oil export will gradually be reoriented from west to east. This will be caused by the expected decline in European refining and a well-established trend to reduce oil consumption in European markets (Mekhdiev et al., 2017). Nevertheless, in Europe there is a structural shortage of oil refining capacities, which opens up opportunities for Russian suppliers in terms of oil products supply to consumers. The growing oil consumption in China and other developing countries in Asia should lead to increased energy resources consumption, including those supplied from Russia (Tokyo Commodity Exchange, 2017).

It should be noted that the quantitative forecasts differ significantly, since the factors of new participants emergence in the world oil market (such as Iran) are differently taken into account. More factors are the macroeconomic environment impact on the volatility of oil prices and the impact on the national energy policy on both exporting-countries and importing-countries. In this regard, there are significant risks while determining the modalities of bilateral interaction between producer countries and energy consuming countries. In this paper, the forecast of Institute of Energy Studies RAS is used (Makarov et al., 2013).

All scenarios of the long-term development of the Russian oil sector demonstrate the importance of Russian oil in foreign energy markets. At the same time, while the physical export infrastructure of oil products from Russia is formed, the mechanism for oil products trade requires further elaboration, including the establishment of exchange infrastructure.

Based on the existing world exchanges experience, it is possible to single out the basic conditions, which are necessary to form its own benchmark grade and stock market:

- Availability of at least 40 million tons/year of benchmark crude physical supply;
- Stable levels of average annual and daily production to ensure the supplies stability to the exchange;
- Presence of a significant number of buyers interested in the supply of benchmark grade.

Taking into account high indicator of oil production and the only transportation system, it is possible for Russia to create two benchmark grades: ESPO, supplied via the Eastern Siberia – Pacific Ocean (ESPO) pipeline to the Asia-Pacific region, and Urals, supplied to European markets. In general, Russia has several promising ways to develop its own benchmark and its promotion in the world oil trade:

1. Derivation of Urals on the European market via the northern ports agglomeration. In this case, the new contract will have to compete with Brent. It is impossible, however, to exclude a pessimistic development scenario. It can replicate a situation to the withdrawal of REBCO's Russian export oil to the US market, when contracts have not been supported by market participants due to a more convenient trading instrument.
2. Creation of Asian benchmark crude and the market launch to the Asian stock market via the existing exchanges system[1]. For example, the ESPO output to the APR stocks, where competition with other crudes will be minimal due to the low production of its own Tapis and Minas benchmark crudes and not completely formed peg to Dubai/Oman and Brent.
3. Re-linking of Russian contracts to more sulfurous oil, for example, to the Dubai/Oman or ASCI. As it has already been done to ESPO. As a number of Middle Eastern producers in the US market have already demonstrated, to increase the return on Russian export contracts in is necessary to peg Russian oil to alternative crudes. At the same time, this way is unlikely to make a reality as European market has a significant number of refineries designed for the light oil processing. It means that heavy and sulfuric oil will be cheaper than Brent.
4. Establishment of own liquid stock exchange for oil trading. To establish this kind of stock exchange it is relevant to use the principle of consistency, which implies a systematic approach and expects the most favorable situation for proactive setting up. It seems that an artificially created stock exchange that does not have internal and external assumptions for its creation, will not be interesting for long among potential market participants, therefore, will not form an objective quotation, and will not allow to increase neither the profitability of Russian companies nor government revenue and will not reduce the importance of oil market control.

Two possibilities to establish an appropriate stock exchange are automatically indicated by setting up Urals and ESPO benchmark crudes:

- Opening the stock exchange in the Far East with the supply port of Kozmino;

1 Despite potentially low competition with other crudes, this way of creating the benchmark has its shortcomings. In particular, volatility and quality risk show that independent new trading system may reduce the cost of Russian export contracts, even notwithstanding the capacity of the Asian market. On the other hand, Dubai/Oman may be the most competitive with ESPO, in spite of the fact that this oil is produced in a politically unstable area. The potential threat of the sustainability breach of these supplies and prices fluctuation, even in the short term, could reduce its competitive advantages over ESPO.

- Already existing Saint-Petersburg International Mercantile Exchange (SPIMEX) with the supply port of Primorsk (St. Petersburg International Mercantile Exchange, 2017).

However, it is not enough only to issue a benchmark grade on a stock exchange. It is important to attract investors to the auctions in order to form transparent and objective quotes that will become the procurement basis for all Russian oil.

Proceeding all the previous mistakes, it is important to note the relevance of building an accessible transport infrastructure for oil supplies. It is difficult to achieve while all oil produced in Russia are transported via the PJSC Transneft pipeline system or via JSC Russian Railways. Affordable and competitive transport reduces the risk of speculative impact on the price setting by transportation companies, and therefore reduces the monopoly control risk for market participants. At the same time, the experience of Cushing (US) suggests that transport problems at one local point should not affect the value of the whole benchmark crude, and should not affect the cost of oil basket in various geographic regions.

A developed stock speculation market is another prerequisite for exchange functioning. This can get the possibility to trade derivative contracts, where the clearing-house of the exchange provides the guarantee. Market liquidity and the inability to control the price from major players can only be achieved by involving a significant number of players where the large number of medium-sized traders and speculators interested in reselling oil contracts and playing at the price difference. It is necessary to build mechanisms to guarantee and protect exchange transactions and to attract companies to use futures and options as trading hedging instruments, creating demand for the same contracts among the speculators.

At the same time, there is a great risk of this strategy, because a large number of players can create an excessively volatile market that will increase the risks for Russia and its economy. On the other hand, in the absence of speculators, with a relatively small number of the benchmark crude suppliers, there is a great risk of monopoly influence on the price and, as a result, the world community may reject a new benchmark crude. A list and classification of price indicators of the new world oil market is shown in Figure 2.

It is necessary to look at the prospects of creating Russian own spot and stock exchanges with its own benchmarks in both the western and the eastern directions if Russia plans to play a key role in the world oil market and wants to participate directly in global oil pricing. Now the western direction (Urals) seems to be a more achievable and realizable project. It should be noted that Transneft, in conjunction with SPIMEX, is working to set up the Russian export crude sales at direct quotations to indicate them as the international price indicators (price benchmark with stable and uniform quality characteristics) where the company performs technical reconstruction of mixing and compounding facilities for assured oil supplies.

However, the ratio of the trade volume indicators of the world benchmark crudes (WTI, Brent, Dubai/Oman) to the oil demand at the relevant refinery target markets indicates that the benchmark crudes exchange trade covers, on average, 5% of the target market share (6,1% for WTI, 6,8% for Brent, 3,2% for Dubai/Oman). Focusing on the leading benchmark crude shares at their target markets, it is possible to calculate the minimum potential trading volume on the Russian stock exchange: Based on refinery demand, they should reach 9.90-21.05 million tons per year (comparable to Dubai/Oman and Brent, respectively) (Intercontinental Exchange, 2017 and Dubai Mercantile Exchange, 2017). Today the indicator shows 2.05 million tons.

As mentioned earlier, a significant number of participants are required to operate the stock exchange. Currently, in the Russian Federation 299 organizations are involved in the oil and oil raw materials (gas liquids) production, including 117 organizations producing in aggregate 87% of all Russian oil, 179 independent companies producing 10.2% of oil, as well as 3 companies operating under production sharing agreements and producing 2.8% of all Russian oil reserves. Several groups of oil market participants, who may get interested in trading on the Russian stock exchange, can be identified (Figure 3).

Today, the development of trade on its own stock exchanges is the topical issue for the Russian Federation. Main principles of exchange trade, such as: Anonymity of exchange transactions, significant oil products volumes and the maximum possible number of parties from supply and demand should be considered.

In addition, it is also necessary to involve foreign participants in trading, in particular Russian neighboring countries, which export its oil: Finland, Kazakhstan, Belarus, Estonia, Latvia, Lithuania, China, Japan, and Mongolia. It is possible to increase the number of parties on the stock exchange and either to expand the geography of Russian benchmark crude influence by involving non-residents in trading. Moreover, this can increase the influence as a benchmark pricing to ESPO. This can also expand the geography of the exchange operation. Moreover, the increased number of participants may positively influence on the development of forward derivatives market launch and integrate it into the international trading system.

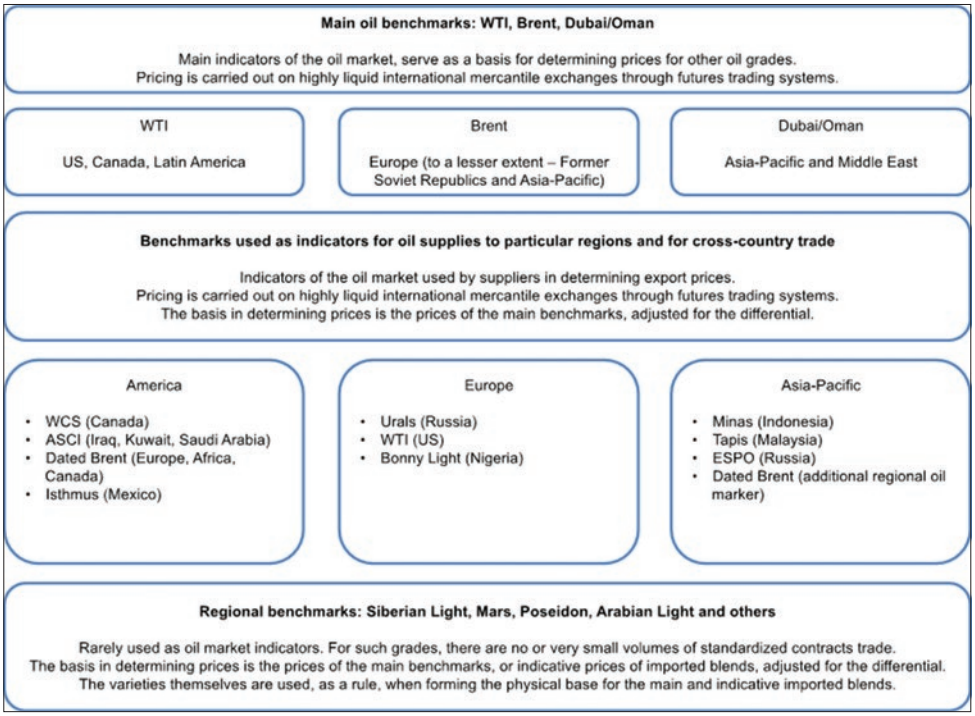
4. DISCUSSION

Direct quotation significantly reduces the possibility for oil price underestimation. It means that trade of for Russian oil futures will favorably affect its value and prevent losses of Russian oil producers from opaque pricing. Moreover, contracts of deliverable nature would give them an additional link to the physical market, and counteract price manipulation. To ensure fair exchange pricing, it should be primarily quoted in US dollars (and further in national currency) and be based on the balance of supply and demand from a large number of international participants.

As for the proposals for creating a new price benchmark based on Russian oil grades in terms of law and legislation, the following issues need to be resolved:

1. To develop regulations for access of foreign oil traders to commodity exchanges (currently only Russian brokers may participate). This participation will increase competition and,

Figure 2: Consolidated list and classification of price indicators of global oil market



as a result, contribute to the growth of price by compressing the existing margins of large oil traders.

2. To develop a supply contract on general terms (taking into account private international law), which will detail the terms of freight, transportation, intermediation, which in turn will make pricing more transparent and make it difficult to manipulate the price.[2]

In addition to meeting all the necessary success factors, creating a transparent pricing mechanism in a highly liquid market by introducing futures trading and other measures in place to create a Russian oil benchmark, it is necessary to pay attention to promotion of Russian marker oil grades. Proposals for promotion and marketing can be presented as follows:

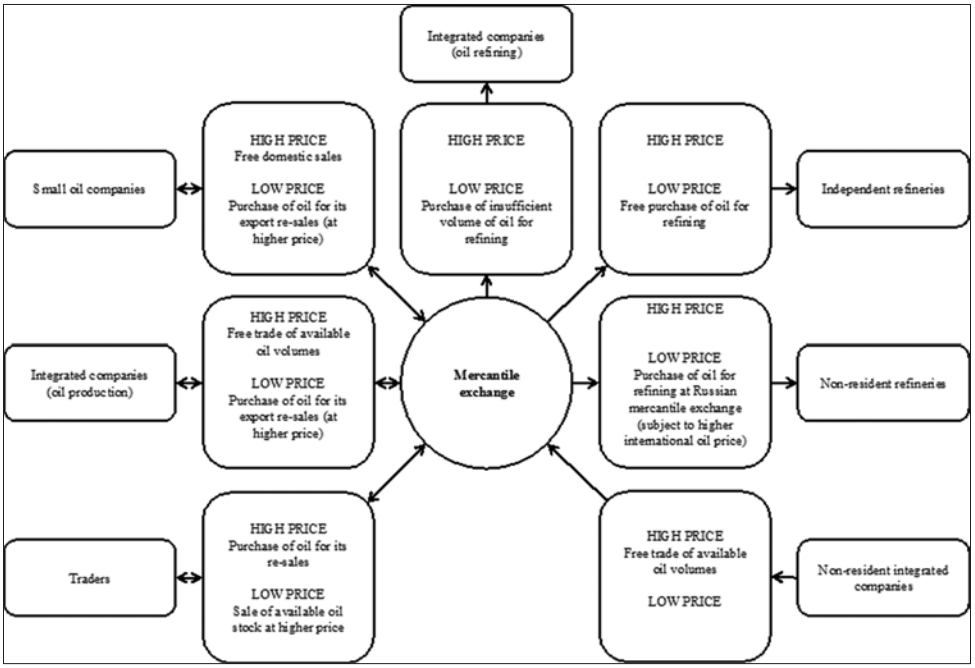
1. Taking into account the geographical aspect. Regardless of the fact that modern oil trading system assumes its physical supply is not more than 5% of the contracts concluded, the marker grades must have a real physical base. In this regard, the unsuccessful experience of REBCO (Russian Export Blend Crude Oil) on the New York Mercantile Exchange (NYMEX) may be indicative. In particular, the reason for this failure was the choice of FOB Primorsk as the terms of delivery of REBCO to the US stock exchange. The only source of oil in the port is the Transneft pipeline, which, despite the reliability of the Russian pipeline system, does not ensure proper diversification of delivery means.
2. Improve the quality of Russian oil. This is mainly about the Urals blend, and this problem may have several solutions, namely:
   a. Allocation of Urals Heavy blend, and "lightening" of the original Urals;
   b. Increase in volume of in-house heavy oil processing (from Bashkiria and Tatarstan), so that it does not increase sulfur content in exported blends.
3. Development of an interaction program between Russian oil companies, with a view to redistributing a part of the production above the norm between those who do not fulfill their quotas for sale of oil at SPIMEX. First, a higher number of market actors will attract even more traders, hedgers and speculators. Secondly, this will reduce the share of large players, which may alienate potential consumers.
4. Carrying out a road show with participation of SPIMEX representatives, clearing brokers, federal executive bodies, oil companies, financial institutions, hedge funds and other international oil market participants.

As part of the development of the exchange trade, the following actions may be considered expedient:

1. Take measures (both regulatory and through price indicators) to increase the volume of trade in oil and petroleum products. Regulatory measures include, first of all, the establishment and expansion of targets for trade volume.
2. At the stage of transition to exchange trading, use the price indicator for oil products in order to ensure timely monitoring and regulation of the market in case of crisis situations and violations of antimonopoly legislation, and stimulate the growth of trading volumes.
3. Develop financial instruments (derivatives). This will attract not only participants of the real market to trading on stock exchange, but also large institutional investors, which will

2 Deliverable futures contracts combine opportunities for physical oil supplies and transparent pricing with flexible options for sellers to identify contractors for deliveries. Russian oil companies, having the opportunity to sell futures, will participate in pricing. Unlike the complex risk structure in pricing based on the Brent formula, the risks involved in bidding for a new contract are clear and easy to manage. In addition, futures is one of the convenient tools for planning the activities and managing the companies' budget.

Figure 3: Aggregated target scheme for domestic oil market spot trading



allow operations to hedge risks for market counterparties, as well as increase the transparency and liquidity of the market.

4. Expand the geography of trade and attract foreign market participants. For the Russian case, in particular:
   a. To attract the Customs Union countries to exchange trade in the Russian market (in the long run, other CIS countries may participate in the event of adopting a certain form of economic interaction that reduces or eliminates customs duties, and, therefore, allows participation in trading on exchange and spot sites at the legislative level to non-residents);
   b. To expand supply bases;
   c. To develop and improve interaction mechanisms (creation of joint trading sessions at Russian and foreign exchange trade platforms, development of derivative contracts for Russian oil products, etc.).

Nevertheless, in addition to obvious advantages the use of mercantile exchange as the main tool for controlling prices of domestic market contains significant risks, such as:

1. Monopolization of the exchange market by leading integrated companies;
2. Appearance of a significant number of speculators on the market, which means that price might be inflated due to inclusion of a speculative component in it, and artificial extension of resale chain (Engdal, 2008);
3. Sharp decline of domestic market price at various supply bases due to high regional concentration of petroleum products' producers, and simultaneous increase in prices on other supply bases due to high regional concentration of petroleum products' consumers, which will inevitably lead to market imbalance.

It is important to take into account that modernization of pricing system should meet not only the concept of "respecting the interests of different groups of players in the commodity market," but also long-term needs of the industry. Exchange pricing does not include market mechanisms to stimulate investment in modernization of the industry, and thus is subjected to rather harsh criticism from independent producers and expert groups that refer to the fact that major vertically integrated companies will dominate the exchange market.

5. CONCLUDING REMARKS

Nowadays, the absence of international recognition of Urals oil blend causes its discount compared to Brent marker, in accordance with the formula developed by international agencies. This preserves the possibility for the latter to manipulate the price of Russian oil. A direct quotation on Urals at exchange pricing, thus, will have a positive impact on the price of oil and will ensure a fair reflection of its quality characteristics on global market.

One key component for oil benchmark formation is physical sufficiency of a particular grade. From this perspective and in the Russian case, the volumes of supplies will be more than sufficient to form physical base of the marker oil, which gives prospects for the formation of marker varieties in both Western and Eastern directions.

In the Western direction, a potential for formation of oil marker on the Russian stock exchange is relatively small. However, its marketing in Europe is an important element to ensure objective and transparent pricing. At the same time, competition with the developed system of Brent trading (in the conditions of demand stagnation in the European market, and against the backdrop of relatively low oil prices) may not allow the new exchange to gather the necessary number of participants from the demand side, which might form an excess of supply, and lead to further decline in prices for Russian oil on the European market.

The rapidly developing Eastern direction is, on the contrary, characterized by a relatively high potential for formation of the Russian oil exchange market. The Russian Far East has access to the growing market of Asia-Pacific countries, and ESPO oil pipeline supplies ESPO blend, which has every chance to gain its niche in the system of world markers. Moreover, experts estimate that up to 20 million tons of oil can be delivered via the Kozmino port and traded on Asian spot sites, which is a very high figure considering the maximum designed capacity of both ESPO-1 and ESPO-2 branches totaling 80 million tons. Additionally, it proves physically possible to supply the marker in a long-term run, considering the plans for the development of oil reserves located in Eastern Siberia and the Far East. The questions that remain in this regard include attraction of investment to form the mercantile exchange site, ensuring logistics, introduction of derivative contracts (with clear control over observance of the rules of exchange trade), and, most likely, involvement of foreign specialists.

While the heterWogeneity of oil grades supplied to the European market is likely to create problems with determination of quality characteristics of the potential marker, the Eastern direction is almost entirely represented by ESPO oil blend. This factor is the basis for assumption that the Eastern direction is more promising in terms of a new mercantile exchange site formation and establishment of a Russian oil benchmark. However, this thesis remains very controversial and, in view of the current dominance of the European markets in the structure of Russian oil exports, cannot be regarded as fundamental.

The complexity of modern oil market structure formation in Russia is due to a number of factors, among which, first and foremost, is remoteness of Russian deposits from global oil trade centers and lack of supply bases (physical points of delivery). At the same time, the regulatory framework established in Russia creates the necessary prerequisites for the formation of exchange and over-the-counter price indicators for the main types of fuel and energy resources. It is an important element for establishment of transparent pricing mechanism, with the latter in a position to provide a relatively more stable position for Russian exporters of oil and petroleum products on European markets.

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