



Short Communication

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Change of Crude Oil Shipping Patterns due to the Ukraine - Russia War



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Abstract

In the last 12 months the World's international relationships had changed significantly due to the Ukraine-Russia war. One of the most influenced parts of the world economics, the oil sector, was affected by means of changing the regular trading patterns. Asia became a most preferred destination for the Russian crude oil due to the sanctions, imposed by the G7 and EU. The newly introduced price cap of the crude oil originating from Russia, established the Russian Federation's transition towards Asian market. Besides the trackable oil flows, a tremendous amount of crude oil is being transferred off the coast of European borders and a Russian "shadow fleet" is being developed. What is the impact of the war on the oil sector, how the shipping patterns are changing and what are the expectations in the next months, are the subjects to this article.

Keywords: Crude oil; Shipping pattern; Oil flow; Price cap; Asian market; Sanctions; Ghost fleet; Ship-to-ship operations; Import; Export; Discount

Introduction

One year on from Russia's invasion of Ukraine, the global energy landscape has changed dramatically. Regions around the World have experienced soaring prices that have hit consumers hard, all against a geopolitical backdrop with energy security at its heart. What's more, the World's dependence on fossil fuel consumption, including the price and resource volatility that entails, has come into sharp focus. Oil prices are back to pre-war levels with the exception of diesel, although even these have drifted much lower from last summer's historical highs. World oil supply looks set to exceed demand through the first half of 2023, but the balance could quickly shift to deficit as demand recovers and some Russian output is shut in.

Groupe G7 and EU Price Cap on Russian Crude Oil

Once Russia invaded Ukraine, EU, USA and all other developed countries commenced their efforts to breakdown all their relations with the Russian Federation, in order to restrict the Russian economics by means of sanctions. Huge number of foreign companies left Russia, ceased all Russian commodities and services. The situation with the fossil fuels, especially crude oil and petroleum products, was a little bit more complicate and delicate. The western countries and oil companies preferred a smoother withdraw from the Russian energy supplies, in order to avoid slumping the economy and increase the prices significantly. The transition and legalization of all sanctions took more than 8 months and gave the

final results in the end of 2022. On December 3, 2022, G7 members officially set the long-awaited price cap on Russian oil prices at \$60 per barrel. This upper price limit applies to all types of crude oil that originate in or are exported from Russia. The price cap was established in close cooperation with the so-called "Price Cap Coalition" and comes into force on the 5th of December 2022. The decision defines the conditions under which an exception applies and introduces a transition period of 45 days for ships carrying crude oil originating in Russia, purchased and loaded on the vessel prior 5th of December 2022 and chartered to be unloaded at the final port prior 19th of January 2023. As the price cap details may be revised periodically in order to adapt to the market situation, the decision also establishes a transition period of 90 days after any change in the price cap to ensure consistent application of the price cap by all operators.

On the 4th of February 2023, a price cap was also introduced for Russian oil products transported by sea (such as diesel and fuel oil). This decision aims to hit Russia's revenues even harder and will reduce its ability to continue the war in Ukraine. In addition, the goal is to stabilize global energy markets, benefiting countries around the World, according to the European Commission. Even prior to the official sanctions of G7 and EU, the Western big oil companies and importers avoided direct purchase on Russian oil, on one hand to not worsen their reputation, and on the other hand to not face any difficulties concerning the insurance of

their cargo and vessels. An example is Royal Dutch Shell, which it was strongly criticized for the purchase on Russian discounted oil in March 2022.

Impact of the Price Cap on the Crude Oil Shipping Patterns

After entering into force, the price cap for the Russian crude oil, we can face some changes in the crude oil shipping flows. Aggregate flows of Russian crude rebounded to a five-week high of 3.6 million barrels a day in February 2023 [1-4].

There is an increase in the import of Russian oil extracted from the Arctic. An example of this is crude oil originating in the port of Murmansk, which is drastically changing its direction. Prior to the war, the port exported mostly to the European markets and a small part to the USA, while the Asian countries were not included in the destinations. Once the military conflict commenced, the situation underwent significant changes - oil flowed with final destination the Asian market, while the quantity for Europe was reduced drastically. In addition, there is no oil originating from port of Murmansk with destination USA since the war commenced. The downgrade in export to Europe continues until December 2022, when the entire amount of oil is directed to Asia [4-8].

Exports to Mediterranean countries slipped back to an average of 167,000 barrels a day in the February, falling for a second week in a row. Turkey was the only destination for Russian seaborne crude into the Mediterranean but flows there aren't reaching the heights they reached in September and October. Despite not being a part of European sanctions on Russian crude exports, Turkey has not remained a significant lifeline for Moscow since the EU import ban came into effect on Dec 5.

Flows to Bulgaria, now Russia's only Black Sea market for crude, rebounded from the previous week's low, rising to 125,000 barrels a day. The country secured a partial exemption from the EU's crude import ban, which should support inflows now that the embargo has come into force.

When reporting ship traffic, there is an increasing percentage of ships traveling with an unknown destination entered into the ship's AIS. On the one hand, ships carrying an average of 603,000 barrels per day indicate Port Said or Suez in Egypt as their destination, and their final destination is expected to be India. On the other hand, 813,000 barrels of oil are bound for Gibraltar, Malta or an unknown port, and most of these cargoes will be heading to the Suez Canal again in the direction of Asia.

Crude oil Flows in Baltic Sea underwent some tremendous changes. According to the official data, no longer EU countries are importing oil from Baltic Sea region, while prior to the war the quantity of oil with destination Western Europe was near 1,2 million barrels per day. In spite of the following statement, the reality is far away from the official statistics. The reasons for that is the increased number of Ship-to-Ship operations worldwide. They are being conducted off port of Ust Luga in Baltic Sea, off Ceuta in

Mediterranean, off the Greek coast near Kalamata, off Malta, off Gibraltar and also off Yeosu, South Korea in the Far East.

Russian Response on the Sanctions

Ship-to-ship transfers of cargoes in the Mediterranean continue apace. This has been most visible off the Spanish north African city of Ceuta and off the Greek coast near Kalamata. At least 30 cargoes have been transferred between ships in those two locations since the beginning of the year. Twelve more Aframax tankers that loaded in the Baltic since late January look likely to transfer their cargoes to other vessels in the Mediterranean, based on their destination signals. The main reason for those sophisticated and dangerous operations is the opportunity to change the country of origin of the crude oil, once the fossil fuel is being transferred and blended between two oil tankers.

A huge part of the tankers, taking part of those ship-to-ship operations, are part of the growing "shadow fleet" of the Russian Federation. The commodity giant Trafigura estimated in February that there were about 600 shadow, or "dark," vessels: 400 carrying crude oil and 200 transporting refined fuels. Some were used previously to trade oil from sanctioned Iran and Venezuela, according to EA Gibson Shipbrokers. Maritime data tracker Vessels Value counted more than 100 oil and fuel tankers sold often at exorbitant rates to undisclosed buyers in 2022. Many ships were acquired by undisclosed entities based in locations such as Dubai, Hong Kong, Singapore and Cyprus. An unusual number of Russian-flagged vessels switched their flags to other countries after the invasion of Ukraine.

Increase of Russian Crude Oil Flows towards Asian Market

Along with the volatility in the crude oil prices, the shipping routes for the Russian seaborne crude oil underwent some significant changes. As a response to the increasing pressure and sanctions from the Western Countries, the Russian Federation is trying to transfer its crude oil exports to the Asian market. Only 39% of the Russian crude oil export was shipped to Asia in 2021, but that amount was increased in 2022 significantly. According to the Russian news agency TASS, the Chinese import on Russian oil rose 8.2 % in 2022 to 86.24 million tons, compared to 79.6 million tons a year ago. This information is also confirmed by the statistical bulletin of British Petroleum.

India is also strongly buying from the cheap Russian crude oil. Indian's increase in Russian oil imports is even greater than Chinese. According to the latest data, India imported 1.2 million barrels per day of Russian oil for December 2022, reporting 33 times increase, compared to December a year ago. While China regularly imports from Russia before the invasion in Ukraine, the situation in India is a little bit different. Prior to the war, the main source of crude oil were Iraq and Saudi Arabia. Notwithstanding the change of shipping patterns and the noticeable growth of Russian oil in Indian oil storages, the Gulf countries also increased their export

to India, compared to previous months. Imports from Iraq rose by 7% and reached 886 thousand barrels per day, while those from Saudi Arabia rose by 12% and reached 748 thousand barrels daily.

Although Russia had already redirected big part from their export from the West to the Asian markets, the future prospects are not as bright as they expected. As per the official statistics prior to the war, Russia is more dependent from the EU and USA, than Europe and USA are dependent from Russian. According to the data for 2021, Europe imported 138.7 million tons of crude oil from Russia in comparison with total imports equaled to 467.7 million tons. On the other hand, the Russian oil that was exported from the country was 263.3 million tons, or summarized, Russia exported 53% of its oil production to the EU, while the percentage of Russian oil imported into the Union was just under 30 %. For petroleum products, the values looked similar - 75.9 million tons of Russian derivatives were transported to the European market out of a total of 140.7 million tons of exports, or 54%, while total European imports equal 197.5 million tons, or just 38% were with Russian origin. It is important to say that the USA is also a relatively large market for Russian petroleum products, with 22.6 million tonnes shipped to USA, or 16% of total Russian production.

As a result of the above-mentioned data, it is impossible China and India to compensate the lost European and American markets. After the end of COVID-19 restrictions in China, the country's opened her economy, and this led to the purchase of large quantities of oil and derivatives from Russia. The uncertainty surrounding the Price Cap Coalition's sanctions currently puts Chinese companies and refiners in a wait-and-see position to fully determine whether or not these sanctions would bring negatives to them as well. Saudi Arabia remains the main importer of oil and products to China with 87.5 million tonnes, followed by Russia, Iraq and the UAE.

It is important to say that the quantities of Russian oil, bought by China and India, were purchased with significant discount,

as the Russian oil grade "Urals" is now trading with the largest discount relative to the value of grade "Brent". The difference in the price is equivalent to 35 dollars, while bearing in mind, that "Urals" and "Brent" were traded on almost equal prices prior to the war. As expected, India and China are taking advantage of the Russian oil price cap and securing supplies at even lower prices.

Conclusion

As a conclusion we can summarize, that the global market underwent significant changes in the past 12 months. The volatility in trade and prices demonstrated, that all established international connections and trading patterns are not constant, and they are subject to many changes. As a result of the war in Ukraine, many well-known crude oil flows ceased, and others increased their intensity. An already established scheme with "shadow fleet" and huge number of STS operations is now in force, recalling the memories, concerning the Iranian and Venezuela's crude oil embargo. What will be the final result of the conflict and how the world economy will adapt is subject to many hypothesis, but the exact answers are yet unknown, due to the uncertainty in global relations.

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