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# ***RUSSIA: EXCHANGE RATE MANAGEMENT AND DE-DOLLARISATION***



# RUSSIA: EXCHANGE RATE MANAGEMENT AND DE-DOLLARISATION

by Tommaso Manfè<sup>1</sup>

## *Abstract*

*The Russian financial crisis of 2014-2016, triggered by the international sanctions imposed by the EU and the US and the plunge in oil prices, has shown that the structural inefficiencies of the Russian economy have not been completely overcome. This paper studies the developments in the process of the macroeconomic stabilisation of Russia by examining three different dynamics related to the exchange rate management. The first is the adoption in November 2014 by the Bank of Russia of a free-floating exchange rate, thus abandoning the corridor limiting ruble fluctuations, which stabilises the stream of revenues in rubles of the oil sector and it favours macroeconomic adjustments. Still, the Bank of Russia may benefit from targeted foreign exchange interventions by limiting the excessive volatility of the domestic currency and keeping the ruble undervalued to contain the Dutch Disease that hinders the competitiveness of the non-oil sectors. The second is the approval in 2017 of a strict fiscal rule that constrains the government budget expenditure to a conservative oil price of 40 dollars per barrel and sterilises the remaining oil capital inflows into the National Wealth Fund. The third is the noticeable process of de-dollarisation of the Russian economy, strongly encouraged by the government not only to limit the risks of the US dollar-circuit in a circumstance of increasing political tensions but also to reduce the negative consequences, in case of ruble depreciation, of the borrowing in foreign currency. These reforms are likely to benefit Russian stability in the future, even if the current macroeconomic fragility may not be completely overcome until the diversification of its economy will actually take place.*

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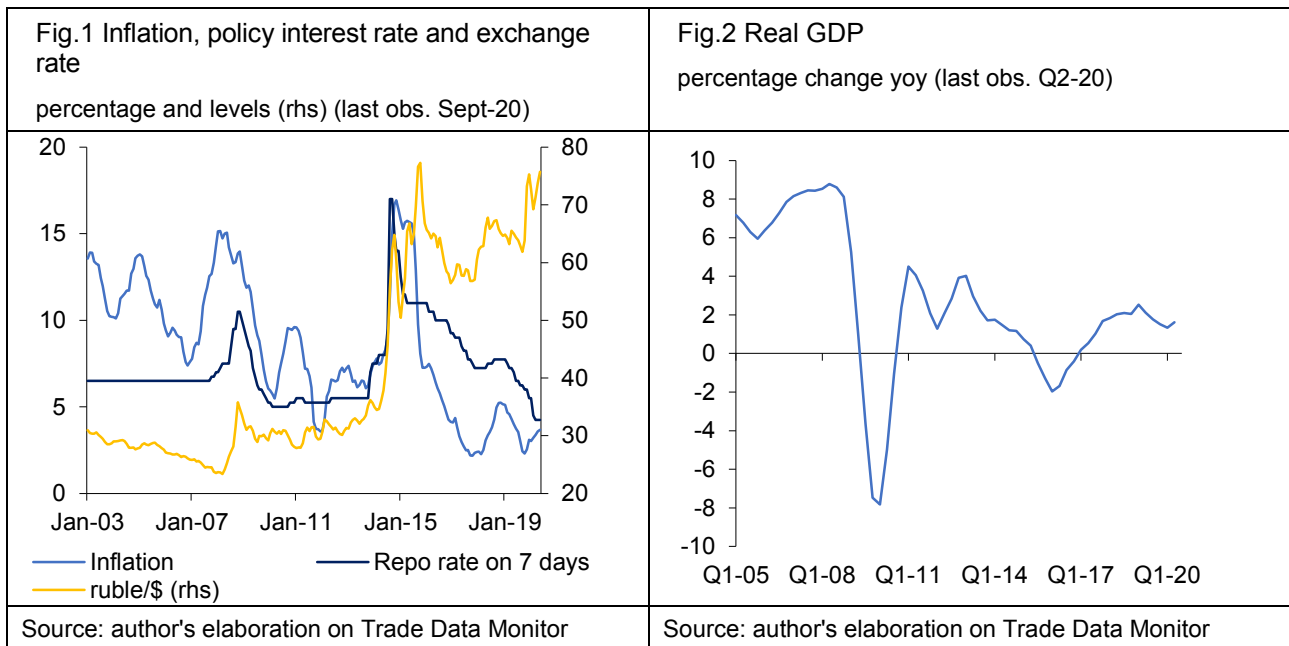
<sup>1</sup> This paper was prepared by Tommaso Manfè under the supervision of Lorena Vincenzi during an internship at Prometeia in the fall of 2020. We thank also Lorenzo Forni, Michele Burattoni, Federico Ferrari and Alfonso Iozzo for their precious contribution and advice.

# 1. MACROECONOMIC BACKGROUND

## 1.1 INTRODUCTION

The path of economic development of the Russian Federation has been highly unstable. Since the collapse of the Soviet Union in 1991, the transition towards a market economy has shown to be particularly challenging, leading to a protracted recession which culminated in the default of the government debt in 1998. Indeed, the real Russian GDP contracted by around 40% in just those seven years, inflation spiked to historical records and political tensions were contributing to the overall uncertainty surrounding the country while the ruble strongly depreciated. However, the advent of the new millennium coincided with a fertile macroeconomic environment, driven mainly by increasing oil prices, and an extensive political agenda of structural reforms that contributed to the high and persistent rise in GDP in the years preceding the Global Financial Crisis of 2008. Such economic measures included a relevant push for privatisation and competition, a liberal tax reform, the development of bankruptcy procedures, an international trade policy to favour export and a general attitude of fiscal discipline to recover investors' credibility.

Nonetheless, Russian economic weaknesses have shown to not be completely overcome. After the GDP contraction (-7.8%) during the Global Financial Crisis in 2008, Russia entered a new period of macroeconomic instability in 2014 after the detrimental impact of the international sanctions combined with the plummet in oil prices. Russia tried to defend the ruble with significant intervention in the exchange market and with a consistent increase in the interest rates to contain the capital outflows (Fig.1). However, the increasing speculation forced the Bank of Russia to let float the national currency before the end of the year, thus abandoning the trading corridor that was targeted by foreign exchange (FX) interventions. From January 2014 to January 2016 the exchange rate moved from 33.3 to 76.6 ruble per dollar (Fig.1) and GDP fell by 1.9% in 2015 (Fig.2).



## *1.2 THE DUTCH DISEASE*

The primary reason underlying the Russian macroeconomic fragility is the heavy reliance on the export of natural resources, primarily oil, gas, and heavy metals, which induces a marked correlation between commodity prices and Russian GDP growth.

For many countries, mineral fuels have demonstrated to be both a resource and a threat for the development of their economy. According to the so-called Dutch Disease concept, the huge development of the natural resource sectors, in the case of Russia prevalently oil, contributes to the appreciation of the national currency, which subsequently weakens the competitiveness of the other sectors, especially manufacturing.

The de-industrialisation resulting from the focus of the national economy on natural resources derives from both the spending effect and the resource movement effect (Corden and Neary, 1982). For example, consider an economy with three sectors: natural resource industry, manufacturing, and services. The spending effect consists in the real exchange appreciation following the jump in domestic income deriving from the boom of the natural resource sector. In a floating exchange regime, the natural resource exports cause capital inflows, which appreciate the national currency. In a fixed exchange rate regime, the conversion of the foreign currency into local currency increases the money supply in the country and the consequent pressure from domestic demand raises domestic prices, especially for the domestic service sector since commodity prices are exogenously set at international level. Thus, both in the case of floating and fixed exchange rate regime a real appreciation occurs, hindering the competitiveness of the manufacturing sector. On the other hand, the resource movement effect refers to the shift in production factors towards the natural resources sector: the increase in energy prices increments the marginal productivity of its inputs of production, including labour, which can thus be compensated with a higher remuneration with respect to the other sectors.

The lack of industrial development constitutes a severe criticality because its presence drives growth through positive externalities, increasing returns to scale, and spillover effects (Krugman, 1987). Indeed, when the natural resource boom occurs and the subsequent worsening of competitiveness of the manufacturing sector causes the transfer of production abroad, the know-how and expertise of those firms are permanently lost. When the resource boom ends, manufacturing does not sufficiently sustain incomes and wages remain persistently lower.

A further drawback caused by the Dutch Disease is that the volatility of natural resource prices hampers investments because of the uncertainty about the future economic condition. Besides, other limitations are related to the fact that these countries are more likely to have a centralised distribution of wealth and political influence which can eventually lead to weak institutions.

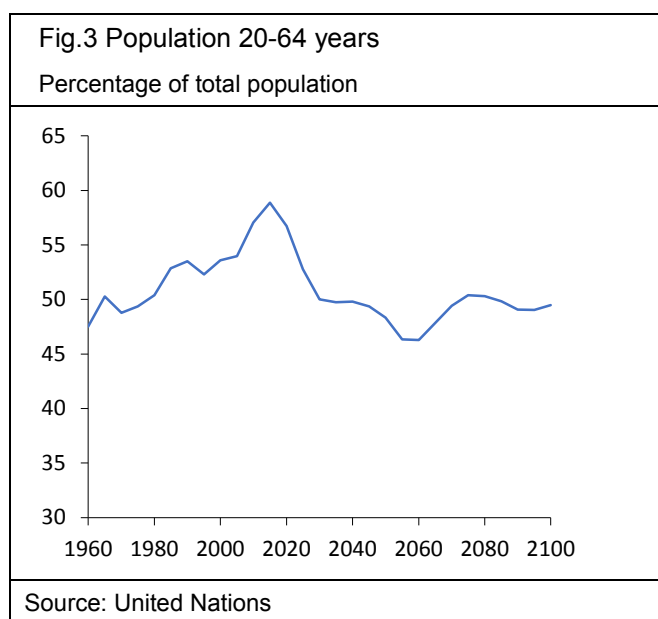
## *1.3 OTHER STRUCTURAL INEFFICIENCIES*

Russia suffers from other structural weaknesses. First, Russia has a poor investment climate. The Heritage Foundation Index of Economic Freedom (HFIEF), which in 2020 collocates Russia 93rd out of 186 countries, outlines the lack of independence of the judiciary system, the issue of insecure property rights, and the pervasive influence of corruption, as also confirmed by the Transparency International Corruption Perception Index (TICPI). In the World Bank Doing Business (WBDB) report of 2020, the overview is more positive, but still relevant weaknesses are underlined: when trading across borders, companies are hampered by long and costly procedures of a magnitude of four times the comparable countries in terms of both time and pecuniary expenses; insolvency procedures are inefficient and have low recovery rates (43%); minority investors have low standards of protection.

Second, Russia does not escape the aging population problem, as many of its trade partners and, according to the United Nation statistics, its working age population has already started to decline (Fig.3). A decrease

in population affects the labour supply and implies additional costs for population ageing. The latter phenomena negatively affect the fiscal sustainability of the public pension and healthcare systems. Such a scenario led the government, in October 2018, to implement a pension reform, which increased working age from 55 to 60 for women, and from 60 to 65 for men. A possible relief could stem from opening the Russian labour market to migrants from other former Soviet Union countries, but this would probably be just a partial compensation.

Finally, the diffusion of state-owned enterprises seems inefficient and excessive according to IMF (2020), especially in some specific sectors. For instance, the five major banks are controlled by the state and thus nudging the banking system towards competition and better governance would improve the efficiency of the sector. Even though the footprint of the state has slightly increased in the last years (Di Bella, Dynnikova and Slavov, 2019), in 2018 the government has launched the National Plan for Promoting Competition which is aimed to address such structural weakness.



## 2. THE SANCTIONS TO RUSSIA AFETER THE ANNEXATION OF CRIMEA

### 2.1 RESTRICTIVE MEASURES

After the illegal annexation of Crimea between February and March 2014, the EU reacted progressively imposing restrictive measures against Russia. The sanctions were agreed in cooperation with the US and were adopted by other major economies like Australia, Canada, Japan, Switzerland, Norway, Iceland, and Ukraine. The restrictions consist of three categories of measures.

The first set regards restrictive measures on Russian individuals and entities deemed to be involved in the annexation of Crimea and destabilization of the eastern region of Ukraine. The legislative text imposes to them visa bans and assets freeze. As of December 2020, the EU has designated 48 entities and 177 individuals (Council Decision 2014/145/CFSP, March 17, 2014).

The second category of restrictions consists of economic sanctions targeting commercial exchanges with Russia in specific economic sectors. Five major state-controlled Russian banks (including Sberbank and Gazprom Bank), three energy firms (Rosneft, Transneft and Gazprom Neft), and three defence companies, likewise their subsidiaries outside the EU, have no access to the EU primary and secondary capital markets. A ban prohibits the import and export of arms, as well as on dual-use goods<sup>2</sup> for military use. Finally, Russian oil producers have limited access to certain sensitive technologies and services that can be used for oil production and exploration (Council Decision 2014/512/CFSP, July 31, 2014). These limitations do not directly concern the gas industry, in which the EU has relevant economic interests to protect.

The third set of sanctions refers to restrictions on economic relations with the occupied Crimea region. The EU has prohibited EU individuals and companies from importing goods, exporting certain goods and technologies, and supplying tourism services to Ukraine's Crimea region. The EU council has also restricted trade and investment in specified economic sectors and infrastructure projects (Council Decision 2014/386/CFSP, June 23, 2014).

In addition, the measures included all the diplomatic sanctions such as the exclusion of Russia from the G8 and NATO cooperation, the suspension of the semi-annual EU-Russia summits and formerly on-going negotiations for the access to Organisation for Economic Cooperation and Development (OECD) and the International Energy Agency (IEA).

The Russian government responded with a set of countersanctions. In March 2014, Russia announced the existence of an undisclosed blacklist of Western officials and politicians. Five months later, an agricultural and food import ban was imposed on sanctioning countries.

After 2014, the political tensions did not cease. In April 2018, the US adopted CAATSA that imposed sanctions on at least 49 Russian individuals and related entities for the alleged interference in the presidential election of 2016. Subsequent actions were taken also with respect to other malicious cyber activities. The EU recently deliberated similar measures.

## *2.2 ESTIMATED EFFECTS ON RUSSIAN ECONOMY*

Several early attempts have been made to quantify the impact of international sanctions on Russian GDP growth. For instance, IMF (2015) estimated that the short-term impact of sanctions was expected to be between 1% and 1.5% of Russian GDP, while the cumulative effect of the long-term GDP shortfall was up to 9% due to lower capital accumulation and technological transfers. Bloomberg Economics (2018) evaluated a cumulative loss of 6 % of Russian GDP for the period 2014-18, which is in line with the previous forecasts of Gurvich and Prilepskiy (2015). Kholodilin and Netsunajev (2016) calculated that between mid-2014 and the third quarter of 2015 the sanctions caused an average reduction of 1.98% of real GDP quarter-on-quarter growth when confronted with the counterfactual scenario of the absence of restrictive measures. The same authors assessed that, instead, the impact EU members growth rate was marginal (-0.02%).

However, more recent results have partly tempered the magnitude of the previous estimates. Recently, IMF (2019) attributed to the role of sanctions 0.2% decline of Russia's GDP growth rate in each year in the period 2014-2018. The computation was evaluated with respect to a counterfactual scenario based on the expectations of the October 2013 World Economic Outlook (WEO). In their assessment, the simultaneous shock of plumbing oil prices contributed to a 0.6% shortfall in GDP growth rate each year. The Center for European Policy Analysis (Snegovaya, 2018) reports that, according to the Economic Expert Group, the negative effects of sanctions on capital inflows into the Russian economy caused by the end of 2017 a

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<sup>2</sup> Dual-use items are goods, software and technology that can be used for both civilian and military applications, such as artificial intelligence, missiles, or nuclear technology.

cumulative Russia's GDP loss of 1.8 percentage points. However, the detrimental effect of sectoral sanctions has declined over time (0.6 percent in 2014, to 0.5 percent in 2015, 0.4 percent in 2016, and 0.3 percent in 2017), because of the decreasing macroeconomic uncertainty and fall in Russia's external debt. Bělin and Hanousek (2020) estimated that in the period 2014-2017 the EU and US sanctions caused a contraction of extraction equipment imports in Russia of just \$1.5 billion, while the Russian countersanctions on food imports led to an 8 times greater drop of trade (\$12.6 billion). Even if the mere loss in trade does not reflect the full effects of the trade restrictions because it does not take into account the total costs inflicted to sanctioned industries, these more recent results suggest that the losses were smaller than initially forecasted, possibly because of the limited retroactivity of Western sanctions, which granted exemptions for export contracts made prior to 2014.

Overall, there is an increasing consensus on the acknowledgment that international sanctions had a non-trivial impact on the Russian economy, even if various estimates support the assertion that such an effect on GDP was probably less than 1% on a yearly basis. Finally, it must also be underlined that the Ukrainian conflict had a detrimental effect also in terms of negative externalities, such as social costs of refugee flows, aids to rebel controlled territories and the long-term inefficiency of the allocation of the fiscal budget towards military expenditure rather than productive investments.

### 3. RUSSIAN TRANSACTIONS WITH THE REST OF THE WORLD: CURRENT TRENDS AND THE EVIDENCE OF THE DUTCH DISEASE

As shown in Fig.4, Russia runs a persistent current account surplus. In 2019, exports, which amounted for €376.9 billion, exceeded imports (€227.5 billion) by €149.4 billion. However, the years following the international sanctions after the Russian military occupation of Crimea caused a severe contraction of commercial trade: from 2013 to 2016, exports collapsed, also driven by the plummet of oil prices (-65.7%), from €395.8 billion to €258.5 billion signalling a reduction of 34.7%; similarly, in the same period imports fell from €237.2 billion to €164.7 billion (-30.6%). The sharper contraction of exports with respect to imports, jointly with capital outflows, triggered the downward pressure on the ruble and the consequent depreciation.

Although the international sanctions caused a slowdown in the levels of commercial exchanges with Russia, the EU remains the primary partner for both imports and exports. China has shown an increasing role in the region, even if the non-participation of Russia from the Regional Comprehensive Economic Partnership (RCEP), signed in November 2020 by, among the others, the Southeast Asian Nations, China, Japan, South Korea, Australia, and New Zealand, could impose a limit in the integration with the Eastern countries. Conversely, the creation of the Eurasian Economic Union (EAEU), signed in 2014 by the leaders of Russia, Belarus, Kazakhstan, Armenia, and Kyrgyzstan, formed an integrated single market of 180 million people and a GDP of over \$5 trillion and could be an area of increasing importance. However, the weight of this region on both Russian exports and imports is currently limited.

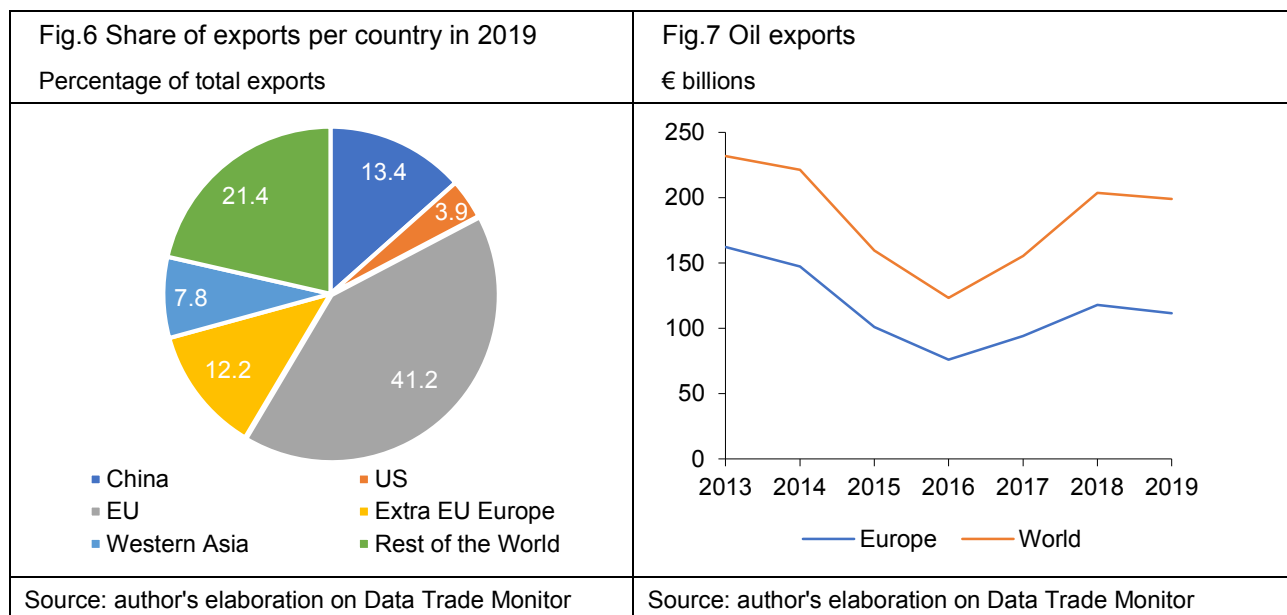
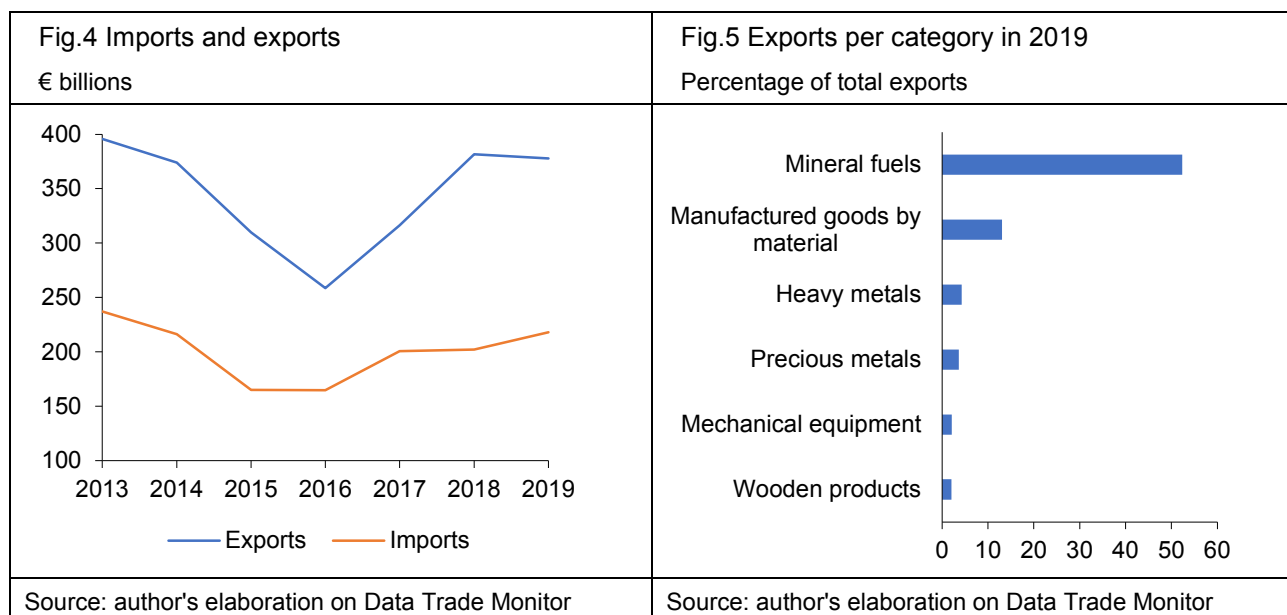
#### 3.1 EXPORTS OF GOODS

Russian exports are mainly driven by natural-resources commodities (Fig.5). Indeed, in 2019, the mineral fuel industry accounted for more than 52.3% of the total exports. Instead, the sale of manufactured goods

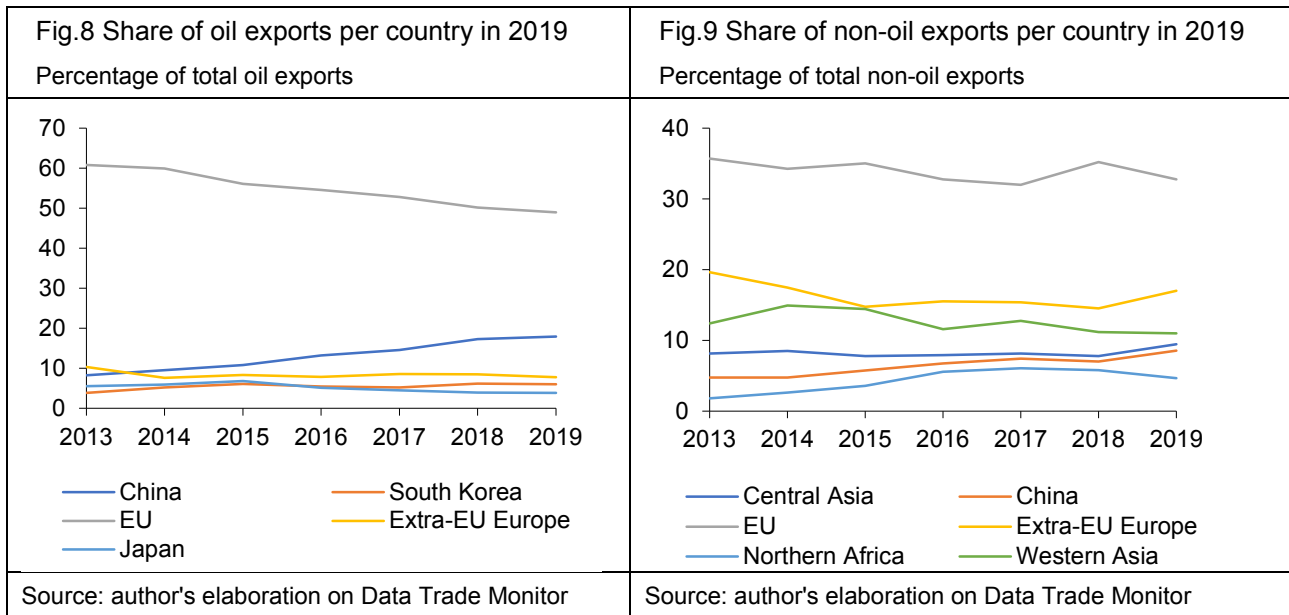


classified chiefly by material<sup>3</sup> weighted for 13%, while the export of heavy and precious metals for 7.9%.

Concerning trade partners, Europe is the most relevant area, as the EU members and the non-EU European countries in 2019 accounted for 42.4% and 12.6% of the total exports respectively (Fig.6). The main importing countries in the region are the Netherlands (€ 40 billion), Germany (€25 billion), and Italy (€12.8 billion). Outside Europe, China is the major trade partner in terms of Russian export (13.2%).



<sup>3</sup> For further detail consult items classified with code 600-699 in [https://unctadstat.unctad.org/en/Classifications/DimSicRev3Products\\_Official\\_Hierarchy.pdf](https://unctadstat.unctad.org/en/Classifications/DimSicRev3Products_Official_Hierarchy.pdf)



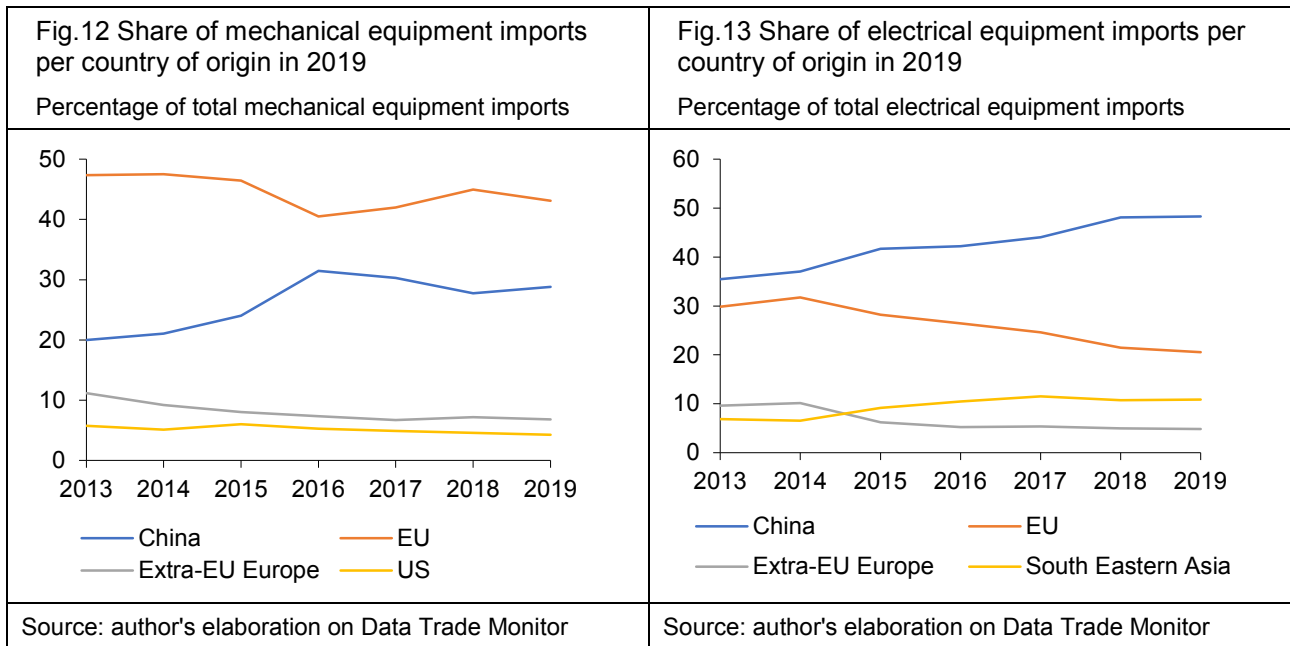
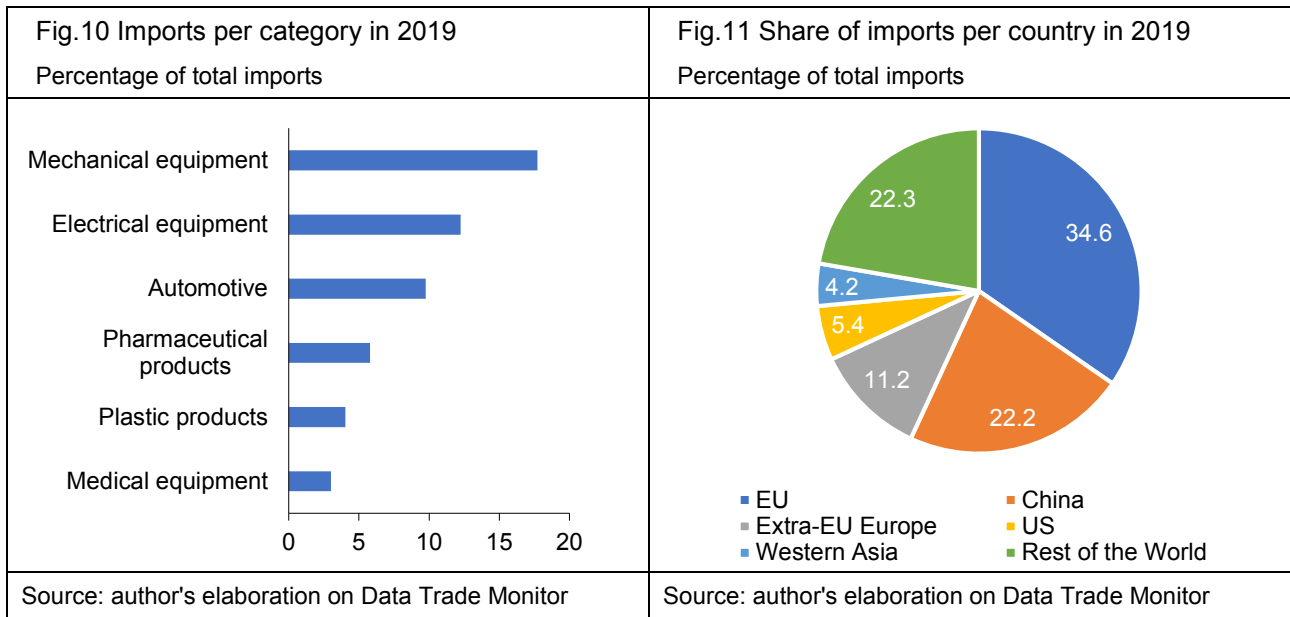
Starting from June 2014, crude oil prices collapsed from 112.7 dollars per barrel to the nadir of 32.05 dollars per barrel in January 2016. Meanwhile, the EU and the US sanctions put a further brake on the Russian mineral fuel exports. Consequently, oil export collapsed from 2013 to 2016 by €108.7 billion (from €232 billion to €123.3 billion), of which €71.2 billion derived from the reduction of oil trade with the EU (Fig.7).

The international trade sanctions played a crucial role also in the rebalancing of partners' share of exports. In the mineral fuels sector, for instance, the EU and China are experiencing opposite trends: the proportion of exported oil and gas in the EU fell from 60.9% in 2013 to 49% in 2019, while in the same timeframe it increased in China from 8.3% to 17.9% (Fig.8). The same pattern is repeated in the other export sectors, in which China, jointly with other Central Asia countries, partly consisting of Eurasian Economic Union members like Kazakhstan and Kyrgyzstan, partly replaced the EU in terms of export (Fig.9).

### 3.2 IMPORTS OF GOODS

The composition of Russian imports is heterogeneous. The most relevant sector is the import of mechanical equipment (17.7%), followed by electric equipment (12.2%), plastic material (9.8%), and automotive components and products (5.8%) (Fig.10).

Similarly to exports, Fig.11 shows that in 2019 the EU is the most important trade partner with a share of 34.6%, while China confirms its emerging influence (22.2%). Indeed, China acted as a substitute for the decrease of European commercial exchanges also in terms of goods imported in Russia. For example, in the imports of mechanical equipment the Chinese market share increased from 20% in 2013 to 31.5% in 2016, while in the same period goods imported from the EU dropped from 47.3% to 40.5% because of the role of international sanctions (Fig.12). The same pattern is repeated for the sector of electric components, where between 2013 and 2016 China and the EU gained 12.9% and lost 9.3% respectively (Fig.13).



### 3.3 BALANCE OF PAYMENT: CURRENT ACCOUNT

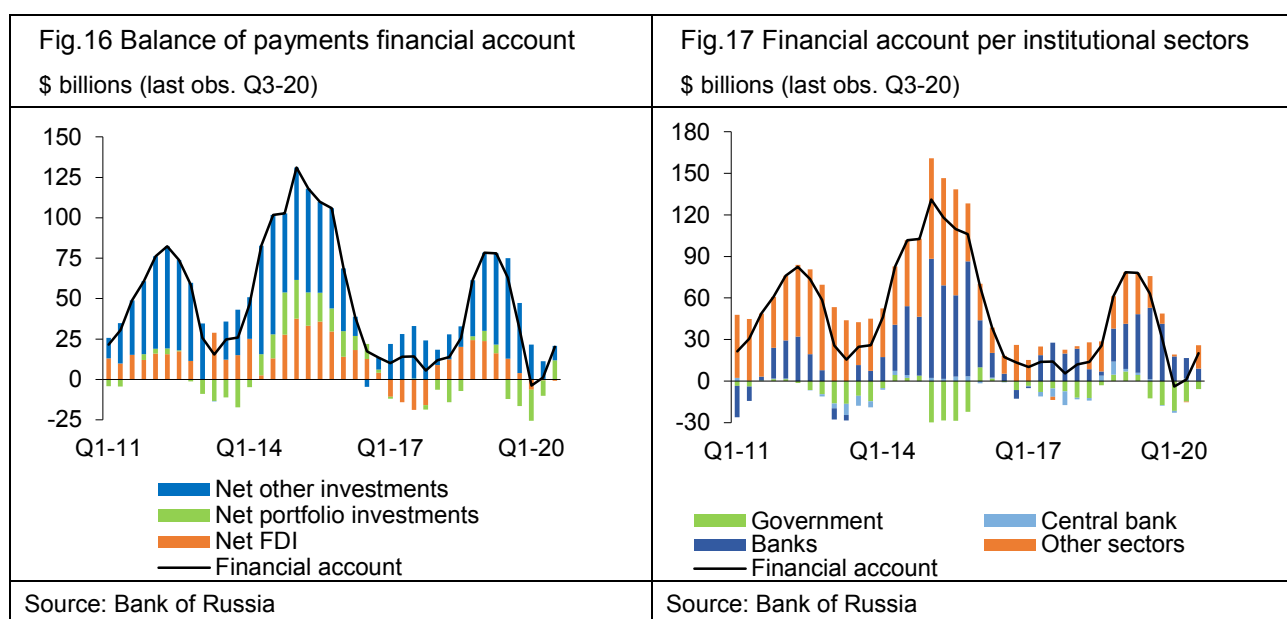
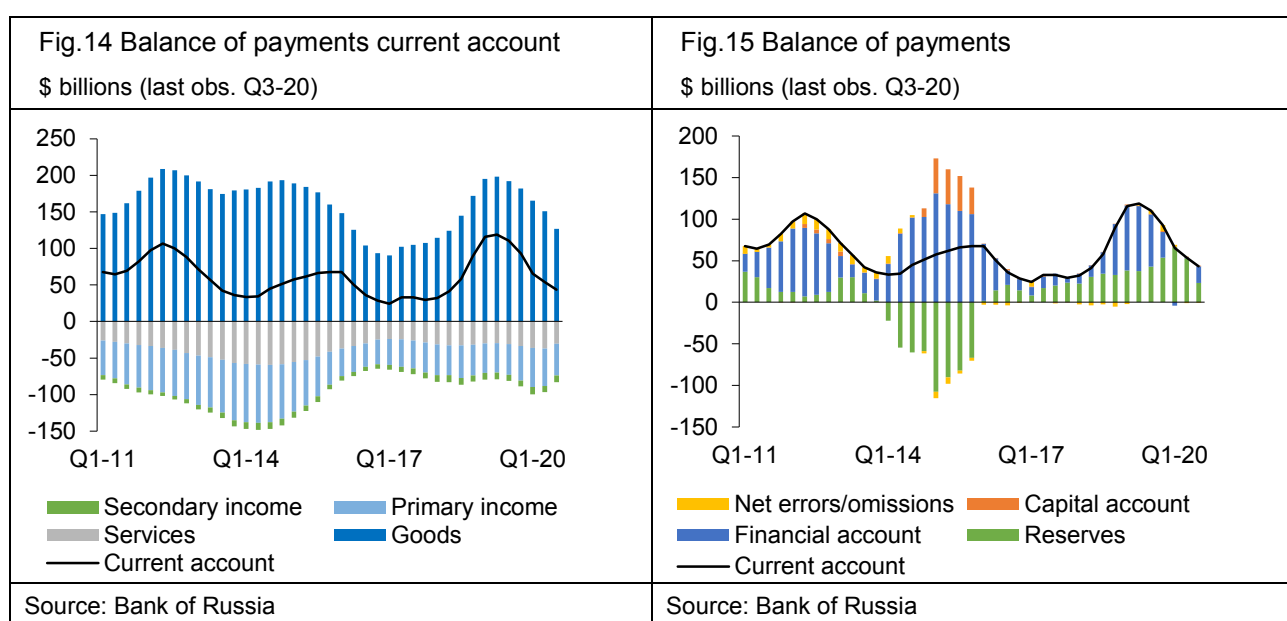
In the third quarter of 2020, the yearly current account amounted to \$43.5 billion (Fig.14). The Russian persistent surplus of the current account is highly dependent on the fluctuations of mineral fuels prices: the reduction of the current account to \$24.5 billion occurred in the first quarter of 2017 was a result of the plunge in crude oil prices protracted for the whole of 2016. Similarly, after the recovery of 2018 and 2019, the contemporary sharp decrease in the current account (-34.1% since the third quarter of 2019) stems from the nadir of oil prices to 26.85 dollars per barrel.

Consistently with the prediction of the Dutch Disease concept, Russia is a net importer of those services which are not limited to local supply only, such as business services (other than transportation), financial services and use of intellectual property rights. Furthermore, Russia records a deficit in primary and secondary income.

### 3.4 BALANCE OF PAYMENT: FINANCIAL ACCOUNT

The Russian economy has demonstrated to be vulnerable to severe capital outflows. In the last decade, the peak has been registered during the crisis of 2014-2016, where in the last quarter of 2014 the capital outflows reached \$79.4 billion. The consequent intervention of the Bank of Russia to sustain the ruble entailed a depletion of \$107 billion of its reserves in 2014 (Fig.15) and of a cumulative quantity of \$146.9 billion when considering the whole period of financial turmoil. The capital outflow gradually diminished since the decision to let the ruble free float in November 2014 till the end of the recession.

Concerning the composition of the net capital flows, Fig.16 indicates that the trade surplus is primarily invested in the category of other investments, which includes loans and trade credits. The net foreign direct investments (FDI) and net portfolio investments are relatively less important and have a more volatile evolution, even if they both tend to direct funds abroad.



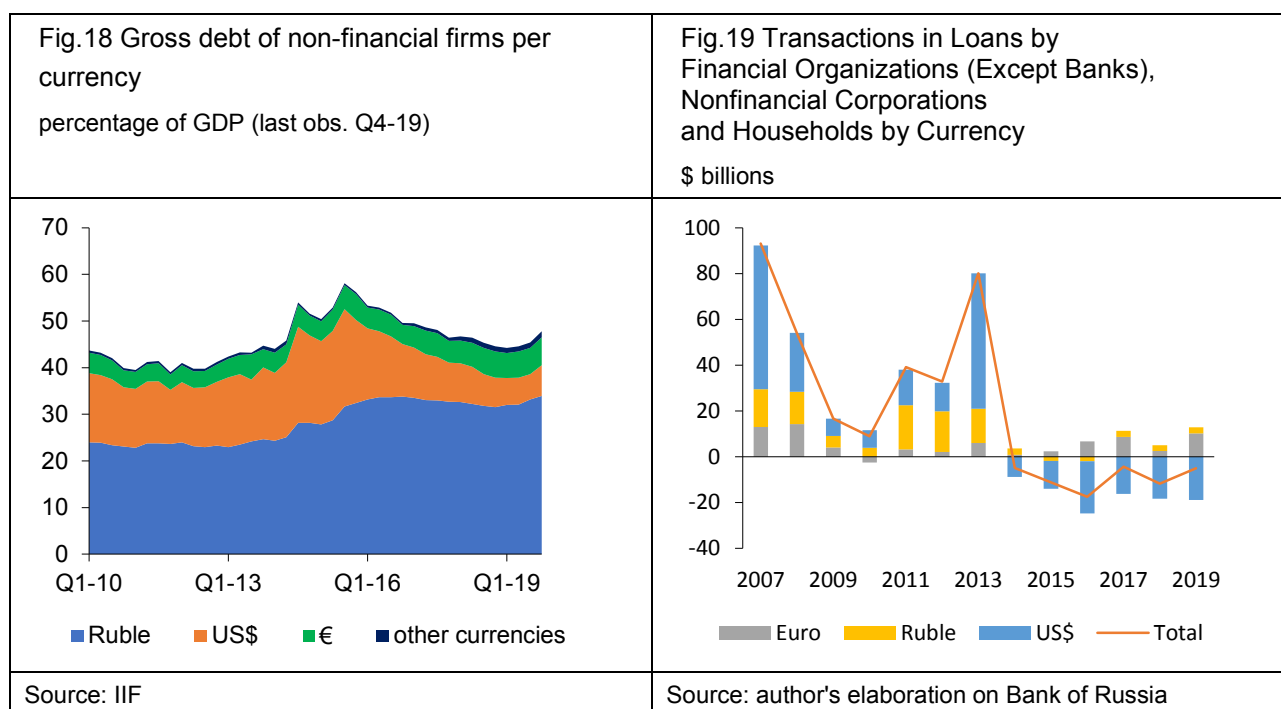
Finally, Fig.17 outlines the financial account balance with the rest of the world by institutional sectors. Banks and the private sector accumulated investments abroad, while the government was a net borrower especially during the 2014 crisis and the ongoing GDP contraction due to the COVID-19 pandemic.

## 4. RUSSIAN DE-DOLLARISATION

The Russian economy has been highly dollarised since the first years of the post-Soviet period when the confidence in the domestic currency waned due to hyperinflation and frequent depreciations. Dollarisation refers to the phenomenon of the pervasive use of US dollars in a foreign country with a different local currency. Such characteristic of the Russian economy is still present, even if in recent years the government has strongly incentivised the process of de-dollarisation, which is observable in the decreased influence of the dollar in both the issuance of new debt, in the settlement of transactions, and in the currency composition of the Bank of Russia’s assets.

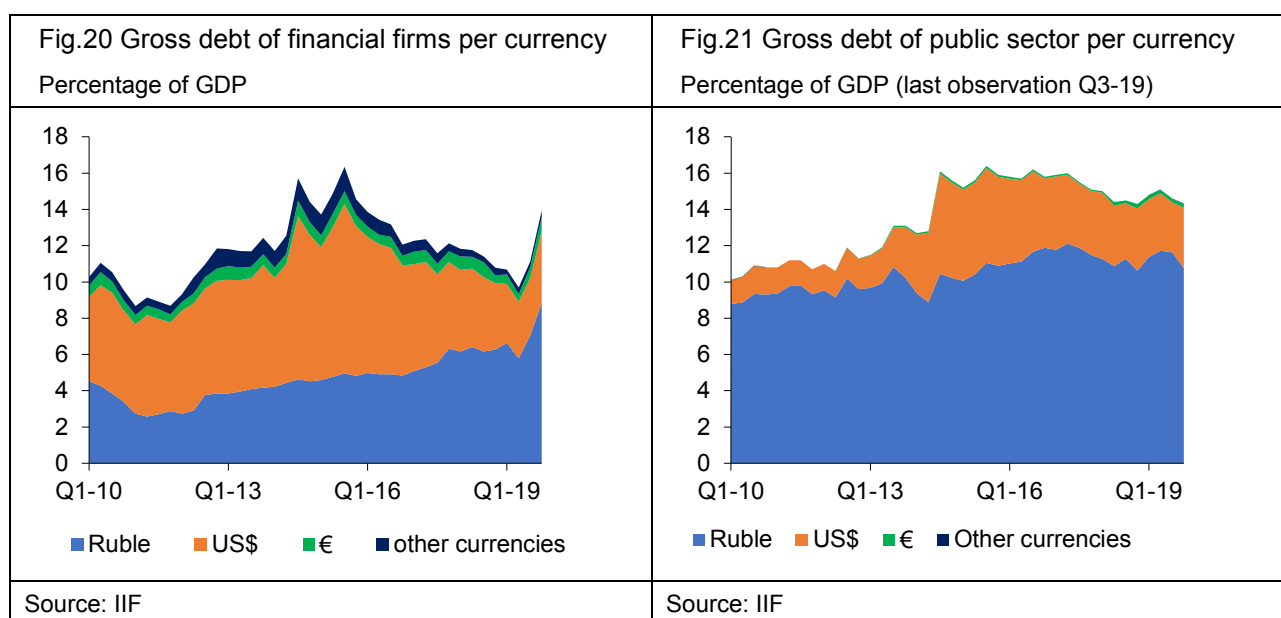
### 4.1 DEBT

As of the first quarter of 2020, Russian total gross debt reached the value of \$1353.8 billion. Non-financial institutions weight for 48.5% of the total existing debt, while households and the financial sectors account only for 20.6% and 15.6% respectively. The government gross debt is 14.3% of the total gross debt and remains limited also in terms of GDP, even because of the constrained opportunities to borrow outside the domestic market for the limitations imposed by international sanctions. Indeed, as of April 2020, sovereign debt amounted to 13.7% of GDP.



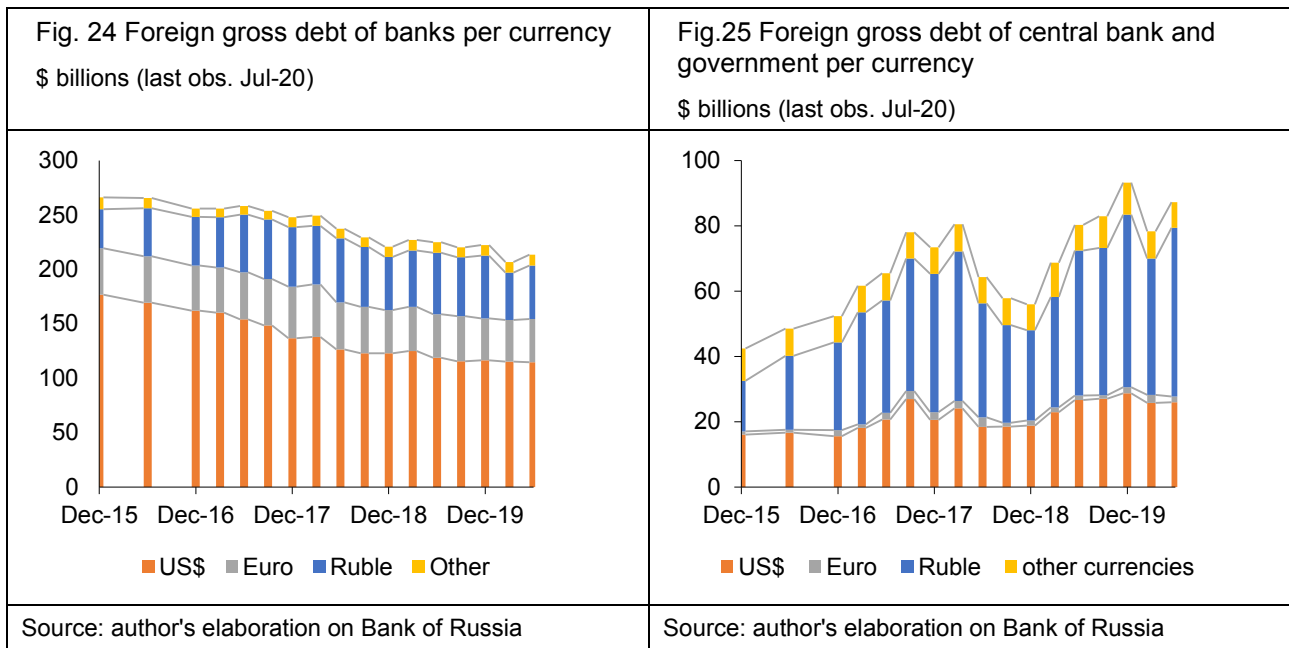
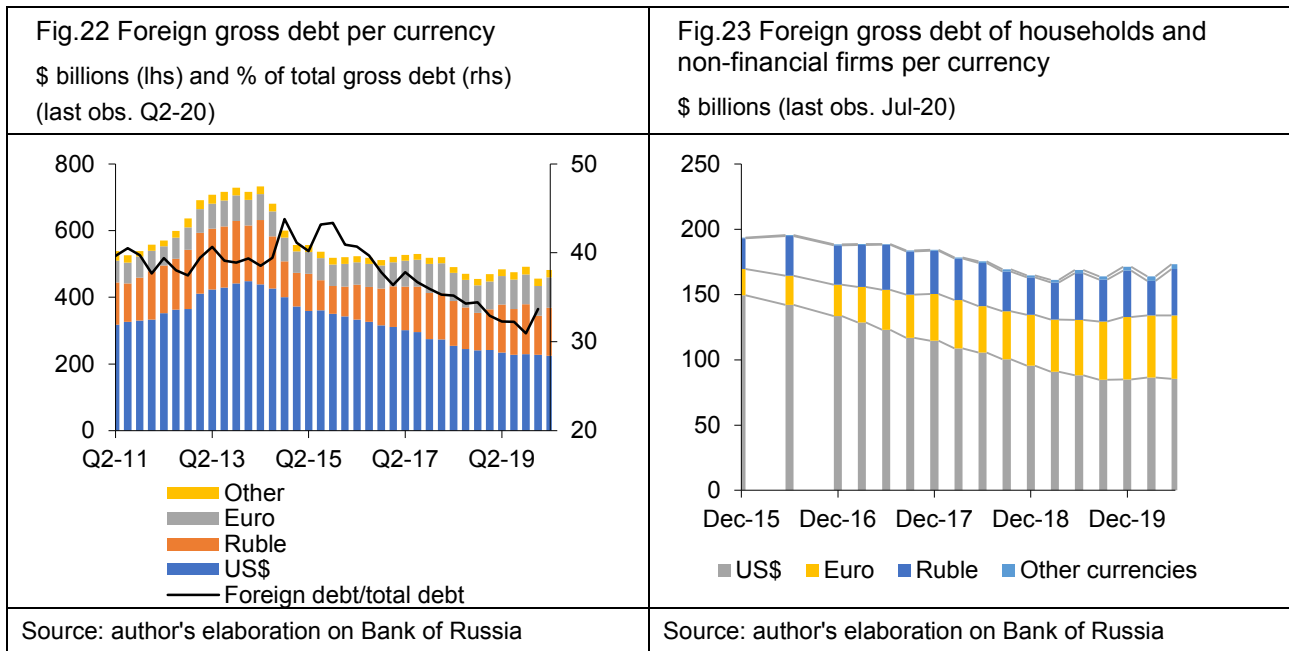
Concerning the currency composition of total gross debt, Fig.18 underlines the opposite evolution of the use of US dollar and euro for the denomination of debt of the non-financial corporate firms. As of the start of 2020, euro-denominated debt (6% of GDP) almost reached the US dollar one (6.6%), even though the use of rubles is dominant (33.9%). Such tendency is confirmed also by analysing Fig.19, which indicates that banks are not rolling over expiring debt in new US dollar-denominated debt, while the issuance of financial obligations in euro and ruble exceeds the repayment of the terminated contracts. The decrease in the relevance of the dollar is evident also for the financial and public sectors in the last 5 years, from 9.3% of GDP to 4% and from 5.2% to 3.3% respectively (Fig.20 and Fig.21).

Foreign investors currently hold 33.7% of the total amount of private and public Russian debt. The peak in absolute terms of gross debt held by foreign investors was in 2014 (\$732 billion), even if afterward there has been a constant decline, likewise to its ratio on total gross debt, showing a process of deleveraging in terms of foreign obligations of the Russian economy.



Such deleveraging in gross foreign debt was not homogenous among the currencies of debt denomination (Fig.22). US dollar-denominated debt decreased from 62.6% (\$448.7 billion) in March 2014 to 46.7% (\$224.7 billion) in June 2020, while debts denominated in euro increased in proportion during the same timeframe from 23.3% (\$166.8 billion) to 29.9% (\$143.8 billion) and obligations in ruble from 10.6% (\$76 billion) to 18.9% (\$91.6 billion). Such data suggest that Russian agents were more adverse in stipulating new foreign debt in US dollars and that they utilised the inflow of dollars from the export of oil to partly repay their exposure. The change towards euro-denominated external debt is particularly relevant for the households and the non-financial private sectors, as shown in Fig.23. In just 5 years, in this sector the euro-denominated debt more than doubled (from \$20.1 billion to \$48.9 billion). Concerning banks (Fig.24), only the use of US dollars plunged, while regarding the government (Fig.25), the ruble had an increasing role.

Combining all these pieces of information, it seems noticeable that in Russia the portfolios of debt are being rebalanced towards other currencies rather than US dollar. To this extent, it is also important to underline that some major banks and oil companies faced persistent sanctions preventing them from US dollar borrowing. In addition, the Russian agents are budgeting the risk of further sanctions and the potential costs of relying on the dollar supply in this situation of political tensions.



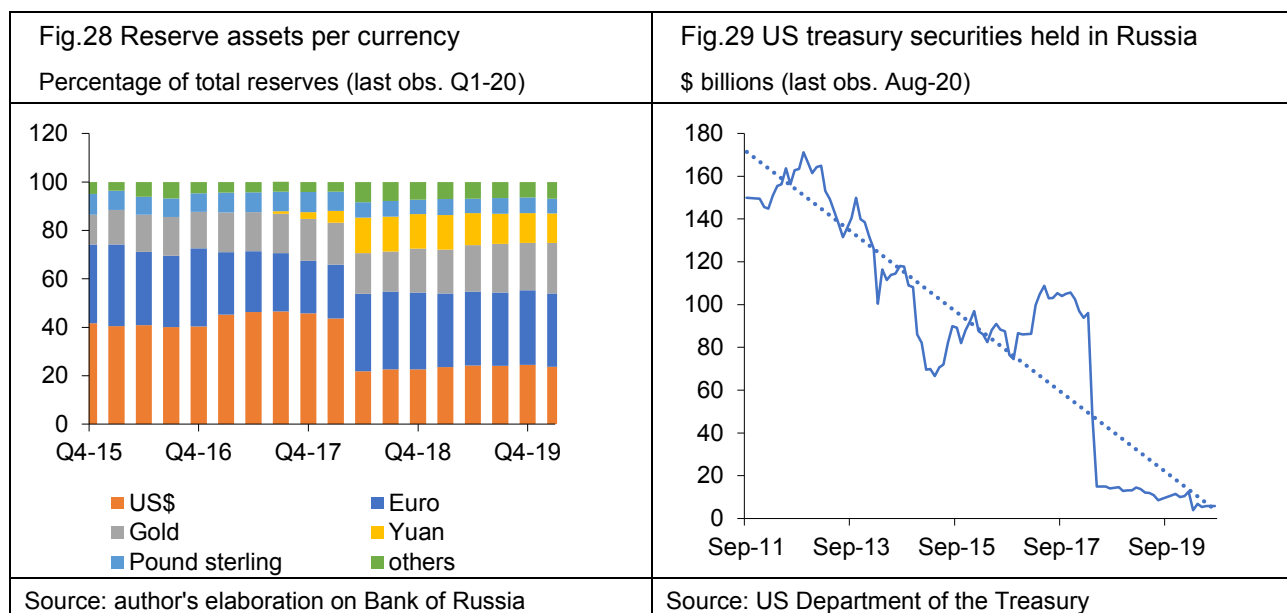
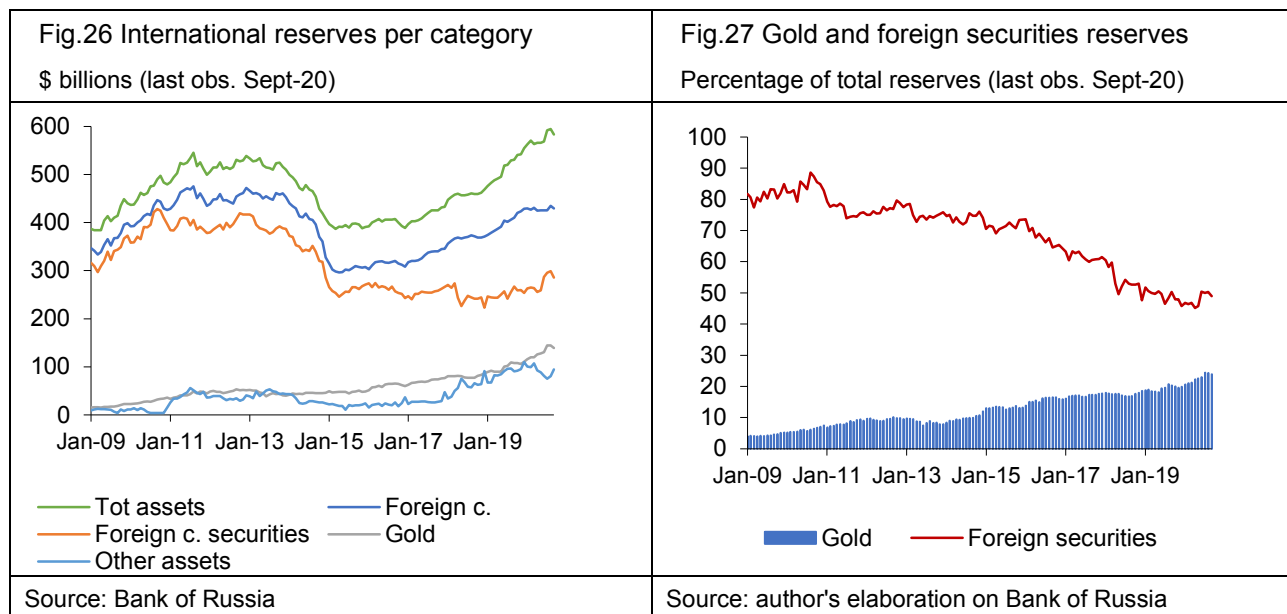
#### 4.2 INTERNATIONAL RESERVES

The Russian financial crisis of 2014-2016 caused a sharp reduction of international reserves of the Bank of Russia to curb the depreciation of the ruble. Indeed, \$146.9 billion of its assets were liquidated for FX interventions, an amount equal 10.7% of the GDP (Fig.26). Afterward, the Bank of Russia has accelerated the rebalancing of its portfolio already underway in the previous years. Indeed, the on-going process of de-dollarisation is not only related to the currency of denomination of debt but involves also the liquidation of US securities by the Bank of Russia.

First of all, as shown in Fig.27, the proportion of gold reserves surged from 4% in 2009 to 23.8% in 2020 with the purchase of more than \$120 billion of gold. At the same time, the portion of foreign securities fell from 81.7% to 48.9%. However, the most relevant part of the reduction of foreign securities happened in the last

two years when the Bank of Russia started to liquidate US securities. Since 2018, US dollar-denominated securities in the Bank of Russia portfolio diminished from 43.7% to 21.8% of total foreign securities in favour of euro-denominated assets (from 22.2% to 32.0%) and yuan securities (from 5% to 14.7%) (Fig.28). The conspicuous sale of US dollar-denominated assets was driven by the disposal of US Treasury bonds. As outlined in Fig.29, in 2018 the US Treasury securities held by Russian residents collapsed by \$81 billion which could be explained by a large sale from the Bank of Russia, the main holder of US securities of the country.

Such a trend is underpinned by the increasing political and commercial tensions between Russia and the US, but also by the importance of the EU in Russian foreign trade and the growing share of China.



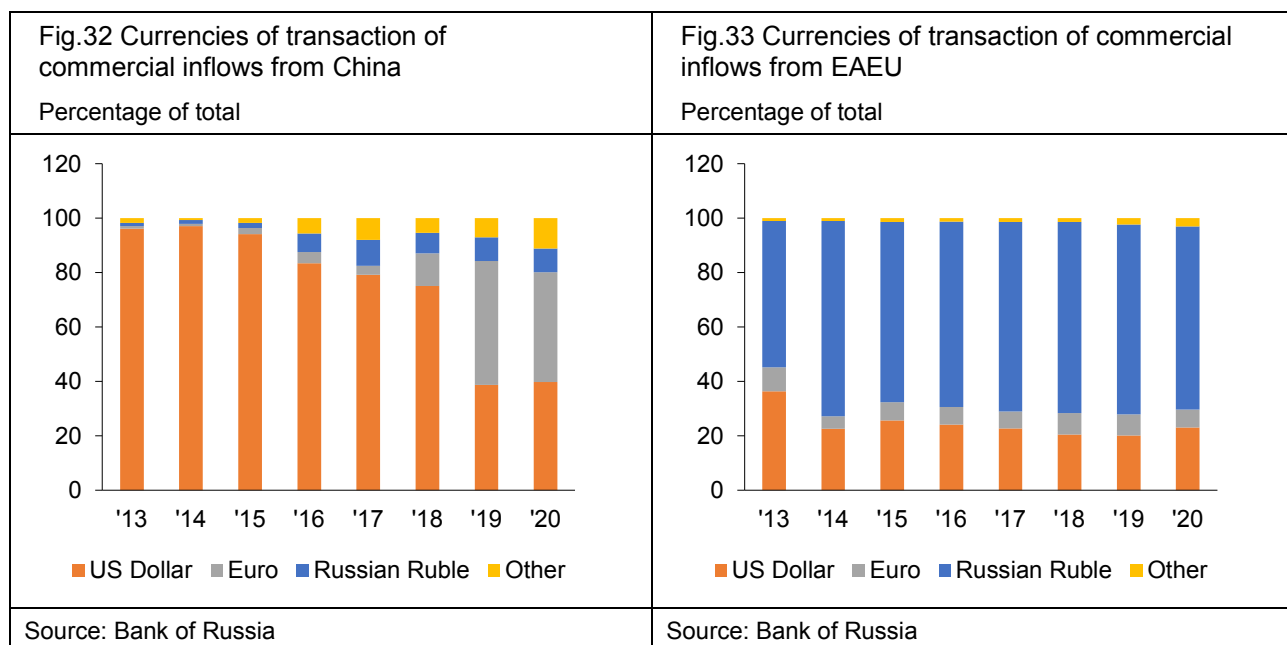
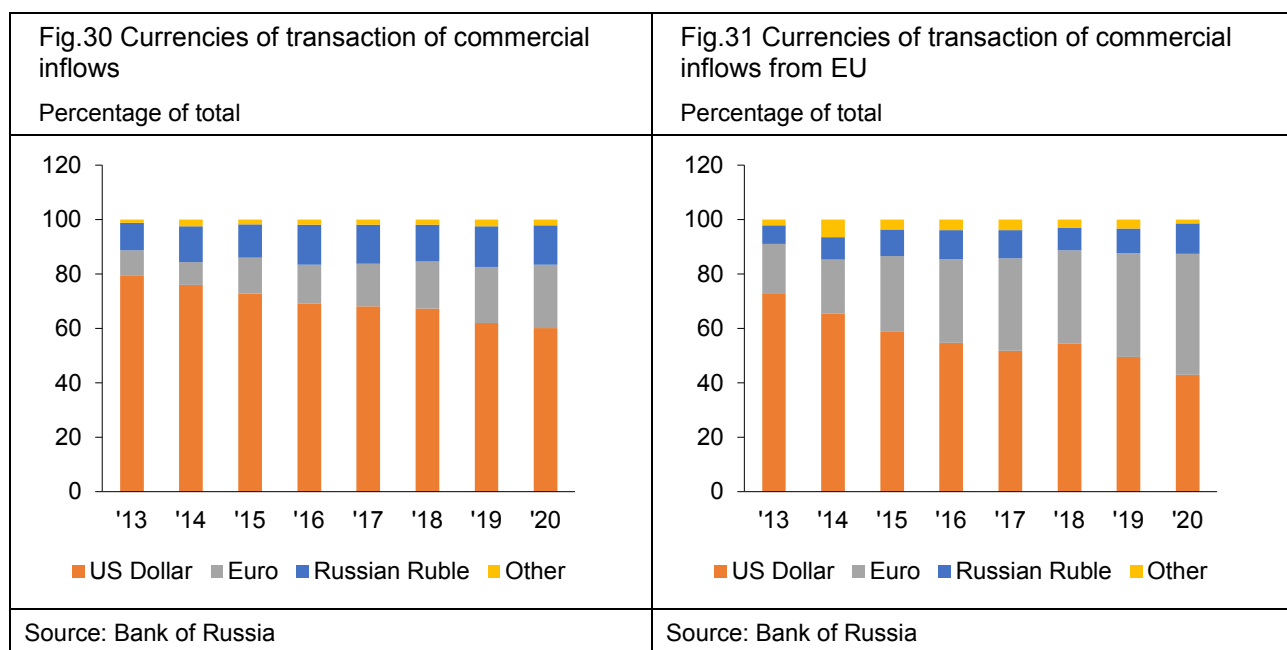
#### 4.3 CURRENCY INFLOWS FROM RUSSIAN EXPORTS

A similar pattern is observable in the currencies utilised for the settlement of the transactions of Russian goods and services. From 2013, the inflow of US dollars deriving from Russian exports plummeted from 79.6%



of total transactions to the current 60.2% (Fig.30). In the same period, inflows in euro passed from 9.1% to 23.3%, in ruble from 10.2% to 14.4%, and in the remaining currencies from 1.1% to 2.1%. Thus, Russia is experiencing a relevant change in currency inflows from US dollars to euro.

Such a trend is driven by commercial transactions with Europe and China, the two main trade partners of Russia. Indeed, as shown in Fig.31, the EU is consolidating the use of its domestic currency in the purchase of Russian exports. As of the first half of 2020, euro is more utilised than US dollar (44.5% and 43% respectively). In 2013, the share was 18% for euro and 73% for US dollar.

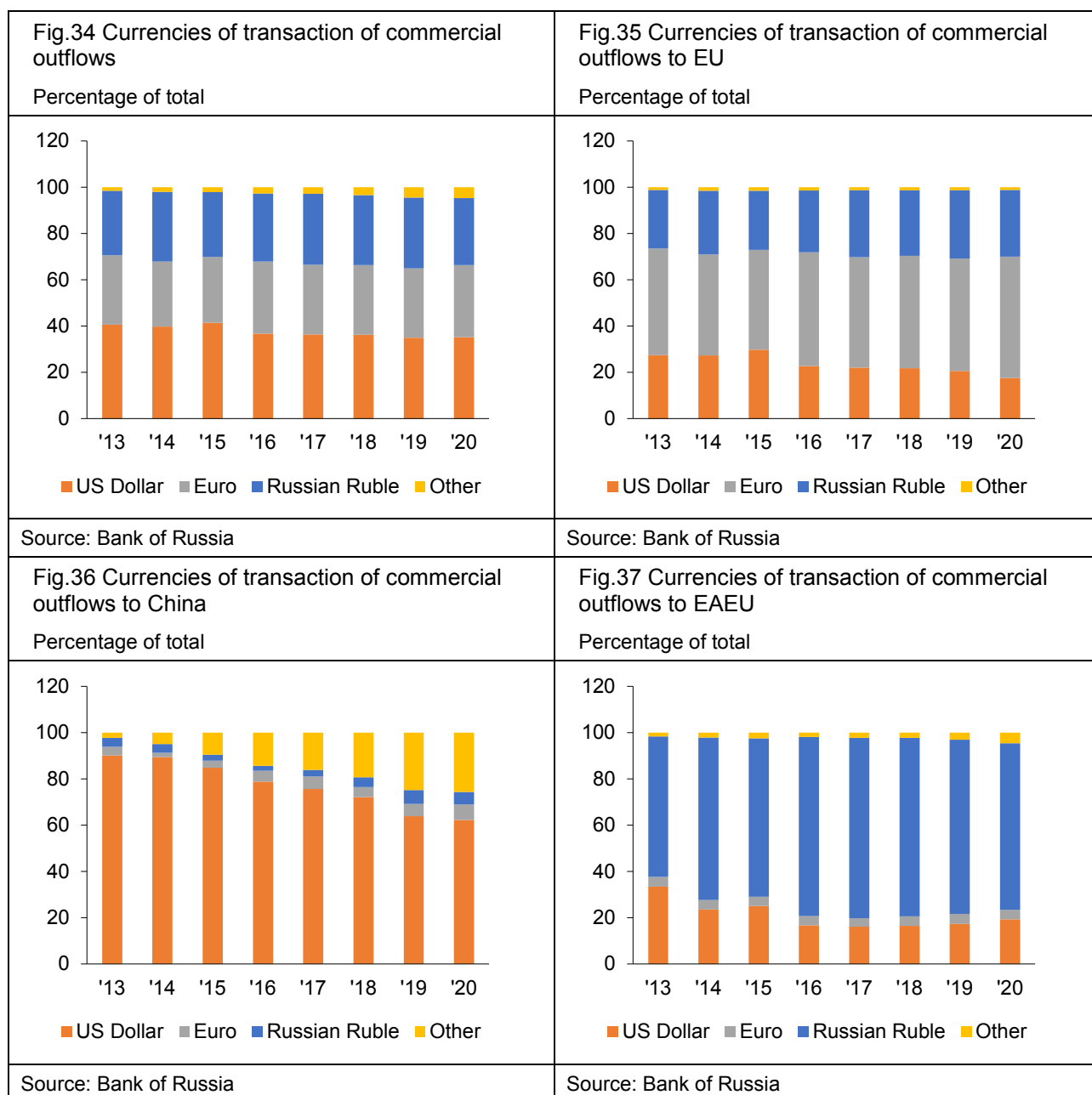


Even more sharp is the reduction of US dollar-denominated transactions in terms of inflows from China. In 2013, 95.6% of the settlements were executed in dollars, while in the first two quarters of 2020 the share dropped to only 39.8% (Fig.32). Euro and yuan now account for 40.3% and 11.1% of the transactions respectively. Thus, Russia-China trade is the area where de-dollarisation is more pronounced.

In fact, an emerging trend is the shift in Russian oil contracts from US dollar to euro, or even yuan. Astakhova, Fabrichnaya and Ostroukh (2019) report that Rosneft, Russia's largest oil company, decided to entirely switch contracts to euros from dollars to avoid the impact of US sanctions. The same authors quote the announcement of Russia's largest producer of liquefied natural gas Novatek to switch to euros most of its contracts for the same reason. The same applies to Gazprom Neft, the oil subsidiary of Gazprom, which in addition implemented the policy of adopting the yuan for the sales to China (Farchy, 2015). Indeed, also China is showing an increasing interest in proposing its currency as an international standard, especially in the oil sector, as testified by the launch in 2018 by the Shanghai International Energy Exchange (INE) of the quotation of crude oil futures contracts in the Chinese currency (Gloystein, 2018).

Concerning the trade with the Eurasian Economic Union (EAEU) members, Russia is imposing the ruble as the primary currency, which now accounts for 67.3% of the currency inflows from Russian exports (Fig.33).

#### 4.4 CURRENCY OUTFLOWS FROM RUSSIAN IMPORTS



Regarding the currency outflow deriving from Russian imports, the settlements in euro were a relevant share also before 2013. Since Russian imports are not related to mineral fuels (historically priced in US dollar, apart from recent trends), such outflows were already more diversified among several currencies. Still, from 2013 the US dollar outflow transactions changed from 40.6% of the total to the current 35.1% (Fig.34). In the same period, euro passed from 29.9% to 31.2%, ruble from 28% to 29%, and the remaining currencies from 1.5% to 4.7%, suggesting an increased role of yuan for example.

When the analysis encompasses the evolution in the individual areas, it is possible to observe a common trend. Both in the EU, China, and the EAEU, the payments in US dollar have fallen. As of the first half of 2020, the Russian disbursements to the EU are for 52.5% in euro, whereas rubles (28.8%) are more influential than US dollars (17.5%) (Fig.35). In China, the request of dollar settlements plunged from 90.1% to 62.2% in just 7 years and was replaced mainly by yuan (from 2.2% to 25.7%) and partly by euro (3.8% to 6.7%) (Fig.36). In the EAEU, ruble-denominated transactions confirmed their prevalence over US dollar (Fig.37).

## 5. THE DILEMMA BETWEEN FIXED AND FREE-FLOATING EXCHANGE REGIMES

### 5.1 HISTORY OF RUSSIAN EXCHANGE RATE REGIMES

The severe fluctuations in the balance of payments due to the high reliance on natural resources have persistently forced the Bank of Russia to intervene in the foreign exchange market to smooth the volatility of the ruble. However, during years the degree of FX interventions have gradually diminished to prepare the switch to a free-floating exchange regime, which was operative starting from November 2014.

Since 1999 the Bank of Russia implemented exchange rate policy under a managed floating exchange rate regime, which allowed tempering the variability of external conditions on Russian financial markets and economy. Starting from 2005, the Bank of Russia set an exchange rate corridor based on a basket of US dollar and euro, consisting of a weight of 55% for the first and 45% for the latter currency. When the exchange rate reached the borders, the Bank of Russia implemented FX interventions to restrict excessive exchange rate volatility.

In November 2014, after a period of increasing speculation on the ruble, triggered by the commercial sanctions and declining oil prices, the Bank of Russia was forced to anticipate the decision to abandon the managed exchange regime, originally set in 2015, and let the ruble float. Indeed, the decision to significantly increase the policy interest rates (which reached a maximum of 17%) and the sale of international reserves to support the ruble was no longer sustainable. From January 2014 to January 2016 the ruble/\$ rate doubled, from 33.3 to 76.6 ruble per dollar.

Still, the Bank of Russia claims that in the case of macroeconomic instability it may intervene in the FX market, as stated in its monetary goals and principles. In practice, the Bank of Russia has continued to operate in the FX market, even if with less magnitude, as the variation of the reserves in the balance of payment of Fig.15 suggests. In fact, after 2016 when the financial turmoil dwindled, the Bank of Russia has intervened buying international reserves to keep the ruble undervalued. IMF (2018, 2019, 2020) estimated that in the last three years the ruble has been constantly kept undervalued till spikes of -20% of differential between the actual REER (real equilibrium exchange rate) and the one implied by fundamentals. Such a policy is in line with the economic theory because helps to prevent the worsening of the Dutch Disease by sustaining the exports of the non-oil and gas sectors. However, in recent months the depreciation pressures caused by the COVID-19

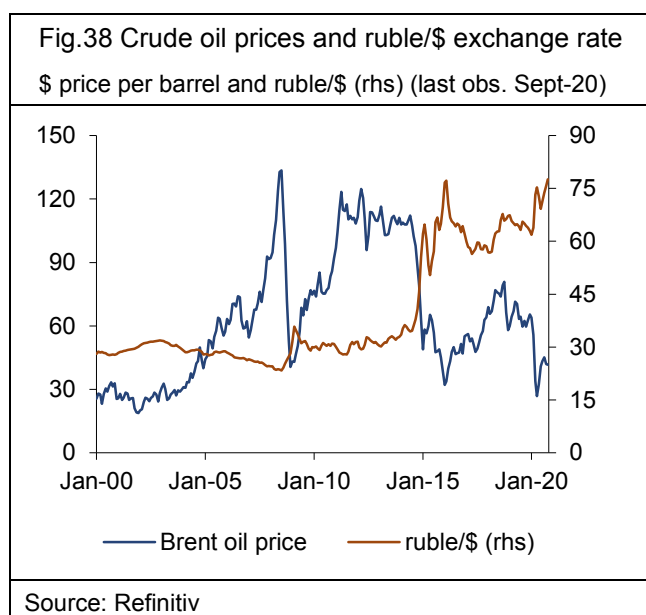
pandemic and the capital outflows from emerging countries, typical of global financial turmoil, reversed the flow of exchange rate interventions by the Russian authorities to a moderate support to the ruble.

## 5.2 THE ADVANTAGE TO FREE FLOAT

The rationale for the adoption of a fixed exchange rate is to temper currency fluctuations with a targeted country, thereby limiting uncertainty and stimulating trade. The policy contributes also to capital inflows since a stable currency decreases the risks faced by foreign investors. Besides, in the case of countries with extremely volatile domestic currencies and where monetary authorities have limited credibility, importing the relatively stable monetary policy of an advanced country helps to maintain inflation under control because it avoids sharp depreciations that lead to strong inflationary pressures. Furthermore, foreign exchange markets are often imperfect: herd behaviour sometimes creates deviations from valuations consistent with the economic fundamentals. For these reasons, many emerging countries have decided to implement a peg with the US dollar, the main international currency, historically used also to price commodities.

However, especially for an oil-exporting country as Russia, the benefits of a fixed exchange rate with the US dollar may be outstripped by its disadvantages.

First, the impossible trinity paradigm states that the adoption of a fixed exchange rate and capital mobility (fully allowed in Russia since 2006) impedes the implementation of an independent monetary policy. Therefore, interest rates cannot be set to meet local necessities. An explicative example is the macroeconomic environment present in the period 2010-14 during a period of high oil prices and extremely low interest rate set by the Federal Reserve, which threatened the overheating of the oil-exporting economies pegged to the dollar. Indeed, the rise of oil revenues and the lowered cost of borrowing boost both spending and inflation thereby potentially causing a vicious circle of further decline of the real interest rate. In addition, Frankel (2008) demonstrates that low interest rates directly induce mineral fuel prices increments, because of the reduced opportunity cost for oil producers of holding inventories and postponing extraction which decrease oil supply. Therefore, in the case of misalignment in business cycles with the main trade partners, a fixed exchange regime can sharpen the pro-cyclicality of oil-exporting economies.



Second, the fact that mineral fuels are typically priced in US dollars does not provide a convincing reason to peg with the US currency (Setzer, 2007). The real fiscal problem of oil-exporting countries is to match their volatile revenues with their relatively stable spending commitments. In this respect, the peg with the dollar does not reduce the volatility of the oil-revenues stream converted in the local currency, while a free-floating regime creates a natural hedge that stabilises such cash flows. Indeed, Fig.38 outlines the correlation between the crude oil price and the ruble/\$ exchange rate. It is noticeable that, after the introduction in Russia of the free-floating regime in November 2014, there was a marked negative co-movement between the two variables. In fact, if the ruble is free to float, the economic theory suggests that a reduction of export prices triggers downward pressure on the ruble because of the decrease of the Russian current account surplus. At the same time, capital outflows, triggered by the consequent macroeconomic uncertainty and possibility of sharp depreciations, could act in the same direction. The subsequent ruble depreciation counterbalances the diminished oil revenues in dollars when they are converted in the domestic currency. Consequently, a free-floating regime smooths the oscillations of the revenues by depreciating the local currency when international oil prices are low and appreciating when they are high.

Third, evidence suggests that the fixed exchange rate may not be the most efficient regime for the control of inflation. When the exchange rate of an oil-exporting country remains fixed, the adjustment in the real exchange rate necessarily will come through variations in domestic prices: an increment in the oil price determines a rise in inflation; conversely, a fall in price implies a period of declining inflationary pressures. However, the adjustment through domestic price is slower than the direct correction from the variability of the nominal exchange rate determined by market values. This slow adjustment may be inefficient also because inflation can develop its own momentum, given that investors forecast future levels of inflation also looking at its current level. On the other hand, a free-floating regime permits to directly pursue an inflation objective by adjusting the interest rates to drive the expected level of inflation to the target. In the case inflation expectations are above (below) the target, the policy rates should be increased (decreased). All these explanations are supported by the research of Svensson (1997) that demonstrated that inflation targeting is the most efficient regime to reduce or eliminate any inflation bias and to increase the likelihood of maintaining low and stable inflation, while conversely, exchange rate targeting leads to higher inflation variability.

Finally, the peg could favour excessive foreign capital inflows and credit expansion. A relevant threat for emerging countries is when debt is issued in foreign currency, especially when the practice of hedging currency risks is not adequately developed— which is frequent since a peg gives a false perception to investors of not facing any exchange rate risk. In such a scenario, devaluations are particularly detrimental to the economy since issuers of foreign-denominated debt face an upsurge in the price of interests and principal repayments in their domestic currency. The consequent increase in non-performing loans, in the case the holders of these obligations are local banks, can eventually transmit the economic shock to the entire financial system.

An important aspect is that the drawbacks do not concern only the peg with the dollar since an ideal peg is difficult to be found. For example, the euro has similar disadvantages compared to the US dollar. Indeed, both countries, especially the EU, are oil-importers, and thus have a higher probability of misalignment with oil-exporters' business cycle. For instance, a shock consisting of reduced oil supply may induce an oil-importing economy to loosen monetary policy, as long as inflationary expectations are contained, to minimise recessionary effects and to support demand for other goods and services. Conversely, an oil-exporting economy may generally prefer a relatively tight monetary policy to offset the expansionary effects of high oil prices.

A hybrid solution could be, as the case of Russia prior to 2014, to set the operational target as basket of different currencies. Such a policy would diversify the exposure to idiosyncratic risk stemming from a particular currency. Many academics have also suggested to directly include the oil price in the basket of the

exchange rate target, because in this case the domestic currency would tend appreciate when oil prices are rising, and the opposite occurs when they are falling. Still, the advantages of a free-floating system may be more significant.

### *5.3 THE NEED OF FX INTERVENTIONS IN THE RUSSIAN FREE-FLOATING SYSTEM*

As predicted by the theory, Russia might have benefitted from the adoption of the free-floating system. Indeed, since November 2014, inflation has been more under control. After the peak of the 2014-2016 crisis, in which the increase in prices spiked 17%, inflation has been maintained low and closer to the 4% target. The implementation of the new regime has demonstrated to be credible in anchoring the expectations of the inflation level, overcoming the typical difficulty in lowering agents' inflation expectations after years of high actual inflation.

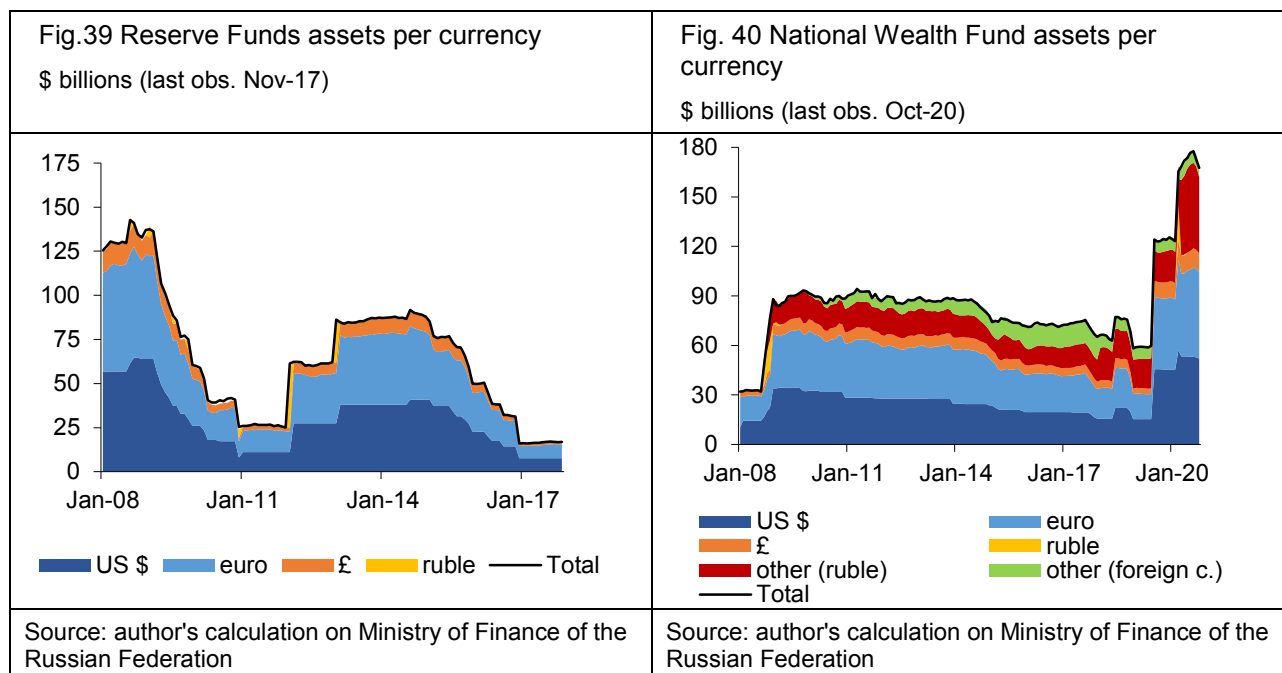
However, the implementation in Russia of a free-floating is not free of any shortcoming. The first concerns the pervasive dollarisation of the Russian economy. Such a characteristic implies that large a depreciation of the ruble is severely detrimental for the Russian issuers of US dollar-denominated debt, who have to repay a higher nominal amount in their domestic currency and thus face an increased risk of insolvency. From an aggregate perspective, the high occurrence of defaulted debtors could transfer the shock to the banking and financial system. The second is that very large swings in the exchange rate can hamper Russian financial stability. Importers exposed to the ruble/US dollar exchange risk may significantly suffer from a sharp ruble depreciation because it constitutes an increase of the input costs or the price of final products. The third drawback is that the Russian economy is likely to take advantage of the undervaluation of the ruble with respect to market fundamentals. In fact, the Dutch Disease hampers the competitiveness of the non-oil sectors and thus a weak ruble could be effective by decreasing the price of Russian goods and services in foreign markets.

Therefore, to contain these drawbacks of the free-floating regime, the Russian economy may still currently require a limited degree of FX interventions. Indeed, the Bank of Russia is likely to have an interest in intervening in the exchange rate markets in case of temporary severe oil price fluctuations and in keeping the ruble moderately undervalued. In the future, the process of de-dollarisation could allow more flexibility for the ruble/US dollar exchange rate. Indeed, the decreased burden of dollar-denominated debt would reinforce the resilience of the Russian economy from dollar appreciations. However, the eventual termination of Russian FX interventions is unlikely to occur till the diversification of the economy will take place.

### *5.4 THE ROLE OF FISCAL POLICY AND STERILIZATION*

An important tool for the fiscal policy of oil-exporting countries is the sovereign wealth fund. Sovereign wealth funds can generally be defined as special investment funds owned by governments to hold foreign assets for long term purposes. Existing examples are the Government Pension Fund of Norway, the Abu Dhabi Investment Authority of the UAE, or the Kuwait Investment Authority of Kuwait. The first Russian sovereign wealth fund, known as Stabilization Fund of the Russian Federation, was established in 2004. Just after four years from its foundation, the institution was replaced by the Reserve Fund, which ceased to exist in 2017, and by the National Wealth Fund, still operative. One of the aims of these institutions, especially for oil and gas exporting countries, is to sterilise foreign currency inflows created by those industries to avoid the appreciation of the domestic currency and thus to preserve the competitiveness of non-oil sectors. Furthermore, other subsequent benefits are the accumulation of a buffer of reserves to finance fiscal spending in times of macroeconomic instability and to invest and transfer income to future generations.

The Reserve Fund, in its period of activity, was aimed as a store of money designed to top up the budget in times of crisis. Fig.39 displays the evolution of its assets among each of the currency denominations. Following the Global Financial crisis of 2008, more than \$100 billion of its reserves were depleted. Indeed, from February 2009 to December 2010 the assets of the fund dropped from \$136.4 billion to \$25.4 billion. Similarly, during the crisis started in 2014, the value of its assets dropped from \$91.7 billion in August 2014 to \$16.7 billion in January 2017. These large sales did not only contribute to fiscal expenditure but also served to contain the depreciation of the ruble: during the same period \$33.2 billion of US dollar-denominated assets were liquidated, while \$34.8 billion was the reduction in euro-denominated ones. Such data suggest that the Russian authorities de facto operated in the exchange rate markets also through the use of sovereign debt funds.



On the other hand, the National Wealth Fund (NWF), which was originally planned to sustain the pension system in the mid-term, from 2017 was re-tasks to include the functions of the Reserve Fund. The current Russian fiscal rule, introduced in 2017, links budget expenditures to a conservative oil price of 40 dollars per barrel, forcing the government to save extra oil revenues in the fund and invest them in foreign assets. The rule also specifies that any additional spending can only be financed from non-oil revenue gains. Once the liquid part of the NWF reaches a 7% of GDP threshold, the government can consider investment options different than low-risk external assets, even if it cannot use the National Wealth Fund resources to finance additional budget spending, unless the oil price falls below the benchmark price. On the other hand, when the fund falls below 5% of GDP, withdrawals will be limited in the following year to 1% of GDP. As shown in Fig.40, the disinvestment of the NWF assets was moderate in 2014-2016 when the Reserve Fund was operative, even if it contributed with \$12.7 billion of sales among all the different currencies in the same timeframe analysed for the Reserve Fund. In the last two years, the NWF accumulated relevant amounts of resources till the apex of \$172.3 billion of June 2020. Since the average oil price in 2019 was 64.2 dollars per barrel, the increase in assets was the consequence of higher oil prices than the budget threshold, while in the first phase of the COVID-19 crisis its assets remained quite stable since economic policy response has been within its macro-fiscal rule framework. However, for 2021 Reuters (2020) reports the willingness of the government of loosening the fiscal rule to allow further fiscal expenditure as a response to the on-going financial recession caused by the pandemic. Thus, considering also the current contingency of low crude oil prices, disinvestments of the fund's assets are likely to be observed in 2021.

A conservative fiscal rule and the sterilisation of excessive oil-revenues through sovereign wealth funds have shown to be effective policies for countries affected by the Dutch Disease. Indeed, the role of monetary policy and exchange rate management alone is limited when tackling the structural weaknesses of an economy. Nevertheless, the combination of these fiscal and monetary policies could help Russia in the path towards solid macroeconomic stabilisation.

## 6. CONCLUSION

While Russia continues to struggle in the solution of its structural inefficiencies, especially the Dutch Disease, the authorities are intervening to improve the resilience of the economic system. In fact, the contingency of international sanctions mainly imposed by the EU and the US and weak oil prices pose a severe threat to the Russian macroeconomic stability.

Since November 2014, the Bank of Russia has adopted a free-floating exchange rate, abandoning the corridor limiting ruble fluctuations. Such a decision seems suited for an oil-exporting country like Russia, since it stabilises the stream of revenues in ruble of the oil sector and it favours macroeconomic adjustments. However, the adoption of the new regime has not prevented FX interventions, since the Russian economy may still benefit from the maintenance of an undervalued ruble to sustain the non-oil sectors and from limiting disorderly market conditions and excessive volatility in the exchange rate. In addition, the strict fiscal rule, linking government budget expenditures to a conservative oil price of 40 dollars per barrel, directs resources to the National Wealth Fund, which in time of low oil prices not only liquidates assets for fiscal spending but also indirectly sustains the ruble in the foreign exchange markets.

Furthermore, even though the plan of industrial diversification does not seem to catch on, the process of de-dollarisation is proceeding rather quickly. Transactions, including those related to oil contracts, are now increasingly settled in euro and even the role of the yuan is surging. A conspicuous quantity of US securities in the balance sheet of the Bank of Russia has been replaced by euro-denominated assets, by a more diversified basket of currencies, and by more gold. The debt contracts, especially in the case of foreign counterparties, but also internally in the case of non-financial firms and household sectors, observe a significant reduction in the proportion of dollar-denominated obligations.

This scenario, if protracted, may propose the euro as the primary international currency for the Russian economy and for targeted central bank FX interventions. However, Bank of Russia may have an interest in containing the excessive pervasiveness of any foreign currency in the domestic economy. Indeed, besides political tension with the US, economic reasons suggest reducing the relevance of the US dollar in the Russian economic system. In fact, the decreased presence of dollar-denominated obligations will allow more flexibility in the management of the ruble/US dollar exchange rate. However, the eventual reduction of the scope of Russian FX interventions is unlikely to occur till the diversification of the economy will actually take place. In the meanwhile, despite the high levels of international reserves and the adoption of an effective fiscal rule, Russia could still be subjected to relatively high ruble fluctuations and overall macroeconomic fragility, especially in the case of persistently low oil prices and prolonged political tensions with trading counterparts.



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