ENSURING TECHNOLOGICAL SOVEREIGNTY AND INDEPENDENCE OF THE FINANCIAL INFRASTRUCTURE, THE CASE OF CHINA

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Abstract

For many years, the dollar has been considered the major currency for international settlements. However, nowadays, we observe the opposite trend of a gradual de-dollarization virtually all over the world. As the share of China's economy in world GDP grows and its national currency becomes more significant in world trade, the need to adapt the world monetary system to new realities has become especially relevant. Transactions in national currencies in foreign trade reduce the dependence of countries on the situation on international monetary and financial markets, especially in a tense geopolitical environment. For Russia, it is fundamentally important to ensure the development of its own financial infrastructure and its technological sovereignty. The article provides a fundamental analysis of the current state of Russia's scientific and technological potential, outlines the prospects for increasing the share of foreign trade settlements in rubles and achieving national technological sovereignty, and also presents the experience of promoting the RMB on international financial markets.

Keywords

Foreign companies, technological sovereignty, internationalization of the RMB, financial infrastructure, world monetary system, the People's Bank of China, settlement and clearing centers, de-dollarization.

According to the Skolkovo Foundation and Skoltech, from the spring of 2022 on they started losing foreign clients. Skoltech lost a dozen commercial contracts with Philips, Bosch and other American and European companies for which the university developed various technologies and products. The loss of cross-border contracts will have an impact on both the university's revenue and its ability to build competencies. According to Skoltech management, in medicine the United States and Europe are on a completely different level compared to Eastern or Russian companies. Apart from that, several members of academic and professor staff quit their jobs at the university, in particular due to the fact that the professional community of the Massachusetts Institute of Technology received a circular prohibiting any cooperation with Russian researchers.

In March some of the foreign industrial partners refused to work with the Skolkovo Foundation. The status of foreign industrial partners implies financing of research activities at Skolkovo, the use of technologies, startups, etc.

At the same time, in the second quarter of 2022 the number of applicants for the resident status at Skolkovo turned out to be close to record-breaking. The total revenue of resident companies, along with the volume of investment, grew by about 15% in the first half of the year. 80% of Skolkovo residents operate only on the Russian market; the others, on the markets of friendly countries, which is connected, among other things, with Russia's goal to gain technological sovereignty, develop 5G and 6G mobile telecommunications equipment.

To support technological sovereignty, it is also important to ensure the independence of the financial infrastructure so that foreign investment can freely flow into the innovation sphere.

From this perspective, China's experience in promoting the RMB for international settlements and investments presents some interest.

Today, China is the world's leading economic power. According to IMF data, China accounts for 15% of world GDP. Over the past decade, China has made notable progress in internationalization of the RMB. Today, the RMB is among the reserve currencies of the IMF.

China is the world's largest manufacturer and exporter of goods and services with impressive results in technology.

Few countries have managed to achieve a full-fledged international status for their currencies. The degree of currency internationalization is determined by the size of the economy, the degree of confidence of international counterparties and the maturity of the financial market. Today, the only alternative to the US dollar as an international currency is the euro, which has taken some of the dollar's share in international settlements, central bank reserves and international borrowings.

The process of strengthening China's economic position is accompanied by calls for the need of reforming the existing world

monetary system (WMS). The global financial crisis of 2007–2008 highlighted the shortcomings of the modern WMS and revealed the need for its adaptation to the new aspects of the world economy, taking into account the balance of power between leading economies.

China's best practices may be of interest in terms of ensuring the independence of Russian players in the international high-tech market from the financial infrastructure and currencies of third countries. By the way, the share of settlements in national currencies (RUB- and RMB-denominated) between Russia and China for goods and services is steadily growing.

The process of internationalization of the RMB required a number of administrative and regulatory reforms to be implemented. They were expected to bring political and economic benefits to China, as well as to its foreign counterparts.

The use of the national currency in the innovation sphere and foreign investments raises the status and strengthens the country's role on the world stage. The use of the national currency facilitates the international economic expansion of MNCs. A state that supports innovative projects and provides financing in the national currency is now able to influence trade partners and borrowers.

With transactions available in the local currency, foreign innovative companies get easier access to the market. At the same time, the interest of international innovative investors in the domestic market is growing. Under the dominance of the US dollar, international innovation activities and related investments are directly dependent on companies' access to dollar liquidity and the international financial infrastructure. National currencies provide innovative companies with alternative methods of payment, reducing their dependence on third countries.

The United States has repeatedly used the international financial infrastructure for political purposes, imposing restrictions on China, Russia and other countries.

The use of the national currency eliminates foreign exchange exposure associated with exchange rate fluctuations. With no need to hedge foreign exchange risks, investors incur lower costs.

China started taking the first steps to expand the circulation of the RMB in international payments more than 15 years ago.

Under a program launched in 2002, qualified foreign institutional investors were admitted to the Chinese stock market. A year later, the People's Bank of China (PBC) assigned the first clearing bank for RMB settlements abroad. Hong Kong then allowed RMB deposits, foreign exchange transactions, RMB debit and credit cards for individuals.

In 2005 the Chinese authorities adopted a managed floating exchange rate regime for the RMB, moving away from a fixed exchange rate against the US dollar. PBC started to determine the official exchange rate of the RMB against major currencies based on trading on the

inter bank market.

This was followed by the announcement of a quota program for qualified Chinese institutional investors, allowing investments in RMBdenominated bonds and money market instruments of foreign issuers.

2007 saw the first foreign issue of RMB-denominated bonds. The People's Bank of China then entered into a currency swap agreement with the Republic of Korea.

In 2009 a pilot project was launched to use the RMB for cross-border settlements in Shanghai, a number of regions, as well as in Hong Kong and Macau.

In 2010 under the Chiang Mai Initiative China entered into currency swap agreements with a number of Asian countries, including Japan, the Republic of Korea and 10 ASEAN countries.

In the same year, the Moscow Exchange and the China Foreign Exchange Trade System (CFETS) began trading the RMB-RUB currency pair. A year later, the People's Bank of China allowed Chinese companies to engage in foreign direct investment in RMB.

In 2012 the RMB exchange rate fluctuation limits were expanded and the total volume of currency swap agreements doubled. Trading started in the RMB/JPY and RMB/AUD currency pairs.

In 2014 Shanghai Free-Trade Zone was launched and the RMB exchange rate fluctuation limits were expanded. Trading started in the RMB/GBP and RMB/EUR currency pairs.

The following year, foreign central banks, sovereign wealth funds and international financial institutions were admitted to China's domestic bond and currency markets. The first stage of the Cross-Border Interbank Payment System (CIPS) was implemented in Shanghai.

London began to develop as an overseas RMB clearing house along with Hong Kong. England issued the first RMB-denominated bonds.

In 2016 China expanded the access to its bond market for investors. In October 2016 the RMB entered the IMF Special Drawing Rights basket (IMF SDR).

In 2017 a settlement and clearing bank for RMB-denominated transactions was opened in Moscow and New York. The People's Bank of China unfroze the quota program for Chinese institutional qualified investors to invest in RMB-denominated securities of foreign issuers.

In the process of internationalization of the RMB China started creating so-called settlement and clearing centers. The first of these were opened in Hong Kong and Macau, followed by more than 20 similar centers.

Settlement and clearing centers provide market players with RMB liquidity. Hong Kong maintains its position as the main overseas RMB settlement center with a share of about 70%.

Since 2008 the People's Bank of China has entered into currency swap agreements with financial regulators in a number of countries.

Agreements were concluded with the European Central Bank, Great Britain, Australia, Canada, Brazil, Switzerland, Russia, Thailand, Mongolia, Pakistan, Sri Lanka, Ukraine, Kazakhstan, Tajikistan, Uzbekistan, Qatar, UAE, South Africa, New Zealand, Turkey, Chile, Hungary and other countries.

For a currency to be considered international, certain criteria must be met. SWIFT distinguishes the following phases of currency internationalization: its use in trade financing, in foreign investments and as a reserve currency.

The IMF characterizes a freely usable currency as follows: it is widely used to make payments for international transactions and widely traded on the principal exchange markets.

Today, the RMB meets all of the above criteria: it is used in trade financing, foreign direct and portfolio investment and also as a reserve currency.

In 2013 the RMB became the world's 8th most used currency.

In 2018 the share of the RMB in the total settlements of Chinese counterparties with foreign countries increased to 16.8%, reaching 5.11 trillion RMB (761 billion dollars).

According to the IMF, the central banks of 60 countries have included the RMB in their foreign reserves.

The euro currently accounts for about 21% of central banks' foreign reserves. In 2018 its share in the foreign reserves of central banks of other countries grew due to a decrease in the share of the US dollar down to 61.7%. In particular, in 2018 the Bank of Russia sold assets worth of more than 100 billion dollars. In the same year, the People's Bank of China reduced dollar investment by 60 billion dollars.

At the same time, the RMB is not actively traded on the main foreign exchange markets, significantly lagging behind the dollar and euro by transaction turnover.

There's hardly any widespread use of the RMB for international transactions. In April 2020 its share in international settlements was only 1.66%. At the same time, about 36% of international contracts were EUR-denominated.

In order for a national currency to be widely used by external counterparties, it is necessary to have a large domestic market and manufacturing capabilities, a developed financial market, the country must secure a significant share in global trade and there must be no restrictions on the movement of capital and currency exchange. The national currency exchange rate should be stable and inflation should remain at a low level.

China does not fully meet the conditions listed above. China is the leader in world trade, has strong manufacturing capabilities and a large domestic market. Despite its size, access for international investors to China's financial market is restricted.

The Chinese stock market is huge and continues to grow. It has a

number of high-tech companies. At the same time, the share of foreign investors in this market is only a couple percent.

Building relations with states that are interested in reducing the dependence on third-country currencies can provide a stronger position, in particular, in terms of ensuring technological sovereignty.

The development of fintech, digital banking, digital platforms, and ecosystems (in the case of China, based on Alipay and WeChat Pay) will also contribute to the implementation of the above task.

According to a 2018 survey by the Asian Banker, most of the respondents, banks and companies, increased the share of RMB settlements and planned to continue doing so in the future. The main driver in this process was the reduction of transaction costs, as well as a possibility to negotiate more favorable conditions with counterparties.

At the same time, there was an increase in the volume of RMB-denominated foreign financing, in particular, by issuing bonds, as well as some growth in the volume of RMB deposits opened outside of China. The inclusion in the SDR basket has given new impetus to the use of the RMB. Increasing the openness of financial markets through the use of quotas for foreign investors has also had a positive impact. According to the survey, more than one half of foreign and about a third of Chinese companies plan to increase the amount of RMB-denominated foreign assets in the future. More than a third of Chinese companies have plans to issue RMB-denominated bonds in foreign markets.

An increased share of the national currency in international transactions also has a number of negative consequences, in particular, lower competitiveness of domestic producers, higher volatility in the foreign exchange and financial markets and changing conditions for financing.

A higher demand for the national currency from international investors may put pressure on its exchange rate, making domestic products less competitive on the global market. As a result, production facilities may be transferred to other countries, increasing the unemployment rate. The influx of foreign capital from outside and its outflow when the economic situation changes increase volatility on the domestic stock and currency markets, which poses a threat to the financial stability of the country's economy.

Raising funds in traditional currencies can take place on more competitive market conditions, both in terms of cost and maturity dates of borrowings, however, in some areas that enjoy state support and special economic privileges, the opposite effect is also possible.

The internationalization of the national currency requires the authorities to liberalize the national economy, remove trade and foreign exchange restrictions.

An increased use of the national currency in international investment in innovation not only leads to technological sovereignty, but also enhances

the country's international prestige among investment partners, reducing the vulnerability to countries that use their financial infrastructure for political purposes.

In August 2022 Russia became the third most active country by RMB use in international payments. Given the increased risks associated with transactions in USD and EUR, the importance of the RMB in Russian financial transactions and investments will grow.

The Russian financial authorities struggled with the dollarization of the national economy for many years. Various measures were introduced to reduce the share of foreign currency on the balance sheets of credit institutions and companies.

Today, additional incentives are not required. Russian importers and exporters, financial organizations and investors are independently moving away from using currencies of unfriendly countries. Keeping account balances in such currencies has become too risky. At the moment, the only serious alternative to RUB-denominated investments is the RMB.

On the Russian exchange market of «soft» currencies of friendly countries the RMB is the undisputed leader. The RMB liquidity is at an acceptable level. According to the Central Bank, in recent months RMB trading accounts for up to 26% of foreign exchange transactions. The RMB/RUB currency pair at the Moscow Exchange has more than once exceeded the dollar and the euro by daily turnover.

Additionally, there are financial instruments for local investments in RMB. Companies such as Polyus, Metalloinvest, and Rosneft have already issued RMB-denominated bonds. The Russian Ministry of Finance has repeatedly announced plans to place RMB-denominated OFZ government bonds on the Moscow Exchange.

According to SWIFT, in August 2022 Russia accounted for 4.27% of foreign RMB transactions. For comparison, the UK for 5.75%. Hong Kong is traditionally the undisputed leader (with a share of more than 70%). This means that Russia has become an important offshore RMB hub. It is worth reminding that since 2003 China has opened more than 20 such centers. Moscow became a RMB center only in 2017.

For many years China has been promoting international payments in its national currency and has achieved notable success in this area. However, the RMB's share in the world is relatively small and does not correspond to the country's place in the world economy. It accounts for only 2.31% of world settlements. For comparison: the US dollar accounts for 43%; the euro for 35.5%.

For Russian importers and exporters and the high-tech goods market, RMB settlements are expensive, inconvenient and unusual. China has a multi-level currency control system. The RMB is present on two markets: the onshore CNY, circulated in China, and the offshore CNH, used in international transactions. The onshore RMB can be converted into foreign currencies only under export-import contracts. Russian

companies can receive CNY from their Chinese counterparties in payment for goods and services or make settlements in CNH through offshore centers. Today, China is calling upon its major trading partners to create a RMB cross-border settlement area as an alternative to the international monetary system based on the US dollar.

Using the RMB is certainly a more acceptable option compared to the risk of transfers block or suspension by banks of unfriendly countries. Despite Russia's significant place in the use of the offshore RMB in the world, the «yuanization» of foreign trade and financial relations is not that significant and does not have major consequences. At the same time, faced with the risks associated with foreign financial infrastructure, the priority task for Russian importers and exporters is to undertake continuous efforts to persuade foreign counterparties to switch to direct settlements and investments in RUB. This is the way China uses the RMB.

REFERENCES

- 1. RBC. Skolkovo and Skoltech: We Keep Forgetting That We Are No Longer the USSR. URL: https://amp.rbc.ru/rbcnews/interview/technology_and_me dia/15/08/2022/62f2a5ca9a7947785cd167d1 (Accessed: 22 December 2022).
- 2. Frankel J. Internationalization of the RMB and Historical Precedents // Journal of Economic Integration. 2012. Vol. 27(3). pp. 329-365.
- 3. Krasavina L.N. Reforms of World Monetary Systems: Retrospective and Current Analysis // The Russian Journal of Money & Finance 2018. $N^{\circ}4$. p. 124.
- 4. The Bank of Russia. Interaction with Foreign Financial Market Regulators. URL: https://www.cbr.ru/about_br/ip/irfr/ (Accessed 28 December 2022).
- 5. International Monetary Fund (IMF). Currency Composition of Official Foreign Exchange Reserves (COFER). URL: http://data.imf.org/?sk=E6A5F467-C14B-4AA8-9F6D-5A09EC4E62A4 (Accessed 03 January 2023).
- 6. The People's Bank of China (PBoC). Statistical Releases 2018. URL: http://www.pbc.gov.cn/en/3688247/3688975/4505202/4505217/index. html (Accessed 04 January 2023).
- 7. International Monetary Fund (IMF). Article XXX of Agreement of the IMF. URL: https://www.imf.org/external/pubs/ft/aa/index.htm (Accessed 08 January 2023).
- 8. SWIFT Watch. RMB Tracker 2020. URL: https://www.swift.com/our-solutions/compliance-and-shared-services/business-intelligence/renminbi/rmb-tracker (Accessed 09 January 2023).
- 9. The People's Bank of China (PBoC). Financial Market Statistics 2018. URL: http://www.pbc.gov.cn/en/3688247/3688975/4505202/4505217/index.html (Accessed 11 January 2023).

- 10. International Monetary Fund (IMF). World Economic Outlook 2023. URL: https://www.imf.org/en/Publications/WEO (Accessed 13 January 2023).
- 11. SWIFT Watch. RMB Tracker 2022. URL: https://www.swift.com/our-solutions/compliance-and-shared-services/business-intelligence/renminbi/rmb-tracker (Accessed 15 January 2023).
- 12. Bahaj S., Reis R. Central bank swap lines // Discussion Paper. -2018. Vol. 18(6). pp. 57-66.

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