МЕЖДУНАРОДНЫЙ ОПЫТ исследовательская статья

Перспективы торгово-экономических отношений России и Ирана в свете внедрения цифровых технологий: стейблкоин

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Аннотация: В новых реалиях, с учетом примененных санкций против России, необходимо устранять барьеры в международных торгово-экономических отношениях. Санкции против России стали катализатором для формирования новых финансовых систем, международной межбанковской системы передачи информации вне системы SWIFT, создания логистических коридоров, для перенаправления экспорта на юг и на восток. В настоящей статье проанализированы торгово-экономические отношения России с Ираном, перспективы создания платежного средства в виде токена во внешнеторговых расчетах (исходя из того, что Иран – первая страна, которая легализовала майнинг). В Иране добыча цифровых денег считается отдельной легальной отраслью промышленного производства, и страна использует криптовалюту в качестве резерва для оплаты импорта и экспорта. По мнению автора, применение блокчейна в качестве прорывной технологии, способной изменить экономику, является целесообразным и, вероятно, будет расти. В 2022 году число внесенных западных санкций против России превысило количество санкций, примененных против Ирана, а эта республика находится под санкциями около 44 лет и имеет практику внешнеторговых операций криптовалютами. Согласно выводам автора, опыт внедрения стейблкоина в рамках внешнеторговых отношений между Россией и Ираном в перспективе можно использовать в торгово-экономических отношениях с другими странами. Стейблкоины могут улучшить современную инфраструктуру международной торговли. Ключевые слова: Российская Федерация, Исламская Республика Иран, стейблкоин, криптовалюта, золо-

то, экспорт, импорт

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PROSPECTS FOR TRADE AND ECONOMIC RELATIONS BETWEEN RUSSIA AND IRAN IN THE FRAMEWORK OF INTRODUCING DIGITAL TECHNOLOGIES: STABLECOIN

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RESEARCH ARTICLE

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Abstract: New reality, given targeted sanctions against Russia, makes it necessary to remove barriers in international trade and economic relations. The sanctions against Russia have accelerated the emergence of new financial systems, an international interbank information transfer system outside the SWIFT system, and the creation of logistics corridors to redirect exports to the South and East. The article analyzes Russia's trade and economic relations with Iran and the prospects of creating a payment instrument in foreign trade transactions represented by a cryptocurrency (since Iran is the first country to legalize mining of cryptocurrency). In Iran, digital money mining is a separate legalized industry, and the country uses cryptocurrency as a reserve to pay for imports and exports. The author believes that applying blockchain as a breakthrough technology that can change the economy is reasonable and will likely continue to evolve. In 2022, the number of Western sanctions imposed on Russia exceeded the number of sanctions applied against Iran, given that the Republic of Iran has been under sanctions for nearly 44 years and has a practice of foreign trade in cryptocurrencies. The experience of introducing the stablecoin within the foreign trade relations between Russia and Iran can be used in trade and economic relations with other countries.

Keywords: Russian Federation, Islamic Republic of Iran, stablecoin, cryptocurrency, gold, exports, imports **Received:** August 11, 2023.

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Introduction

Under the current sanctions pressure on the Russian economy, it is advantageous to expand trade and economic relations with friendly countries and strengthen the development of the digital economy in foreign trade policy. In this regard, it is necessary to carry out a digital transformation of the state's foreign trade currency policy, bypassing the international interbank system, considering the fact that the Russian banking system is facing problems due to the sanctions and the subsequent disconnection from SWIFT.

Taking into account the logistic chains and the existing and emerging transport corridors throughout the territory of Russia, namely the «North-South», «Transsib», and «One Belt, One Road» transport corridors, as well as the routes connecting the north-eastern provinces of China through the Russian seaports in Primorsky Krai with the ports of the Asia-Pacific region such as «Primorye-1» and «Primorye-2»¹, it is advisable to expand foreign economic activity with the countries directly connected by these lines. Given the strengthening of bilateral relations after the sanctions imposed on Russia, Iran, India, and China are becoming the most attractive partner countries at the current development stage. Of the listed countries, Iran, which has been under sanctions for a long time, is actively using cryptocurrency as a government payment instrument. The author analyzes Iran's digital banking ecosystem, Iranian cryptocurrency foreign trade settlements, and the level of development of digital asset transactions.

The article contains a statistical analysis of Russia's foreign trade turnover with Iran. Given that the United States withdrew some of its sanctions against Iran in 2016², the author examined the volume of trade between Russia and Iran from 2016 to 2021. The Federal Customs Service of Russia, as well as all other government agencies, temporarily ceased publishing statistical data due to the imposition of Western sanctions, and Iran does not make its statistical data publicly available. The author relies solely on the words of the Russian Ambassador to Iran to determine how trade was expected to grow in 2022. Also, most of the information on Iran comes from various open sources and speeches by senior Iranian officials, as Iranian government agencies do not publish statistical information.

In this study, we refer to digital assets as the following instruments:

- cryptocurrency a form of digital asset, a unit of accounting in a decentralized digital payment system;
- stablecoin digital asset that maintains stable value by being connected to various assets (in this work, connected to gold).

The study employs an analysis and synthesis approaches to examine scientific sources and document the digital transformation of Iran's foreign trade exchange policy, circumventing the international interbank system. Topics covered include the role of cryptocurrencies in Iran's foreign trade transactions, the mechanism of remittances between Russia and Iran; the banking system under pressure from sanctions, and analysis of trade turnover between Russia and Iran in light of the country's improved financial and investment climate since 2016, following the partial lifting of US sanctions.

Introduction and role of cryptocurrency in Iran's foreign trade

The first decentralized peer-to-peer payment system using the introduction of public transactions was developed by a person or group of people under the pseudonym Satoshi Nakamoto [Nakamoto, 2008]. The establishment of an electronic payment system based on cryptographic proof using blockchain technology has triggered a rapid development of digital and network technologies. However, the possibility of introducing cryptocurrencies into the state banking system requires the most precise analysis. According to Russian legislation³, the Central Bank of the Russian Federation⁴ defines cryptocurrency as a form of digital currency that has all the properties inherent to currency while accounting is provided by a decentralized payment system, its transactions do not depend on banks, the Central Bank of the Russian Federation is not liable and is not the issuer of it, but allows its use as a means of payment in external settlements⁵.

We should pay attention to the fact that the cryptocurrency market is rapidly growing globally. At the end

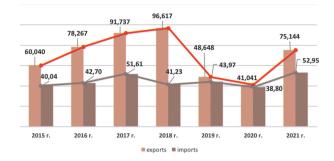
- 4 http://www.cbr.ru/content/document/file/132241/consultation_ paper_20012022.pdf#:K:text = % D 0 % 9 F % D 1 % 8 0 % D 0 % B 5 % D 0 % B 4 % D 0 % B -C % D 0 % B 5 % D 1 % 8 2 % D 0 % B E % D 0 % B C % 2 0 % D 0 % B 4 % D 0 % B E % D 0 % B A % D 0 % B -B%D0%B0%D0%B4%D0%B0%20%D1%8F%D0%B2%D0%B-B % D 1 % 8 F % D 1 % 8 E % D 1 % 8 2 % D 1 % 8 1 % D 1 % 8 F % 2 0 % D 0 % B A % D 1 % 8 0 % D 0 % B 8 % D 0 % B -F % D 1 % 8 2 % D 0 % B E % D 0 % B 2 % D 0 % B 0 % D 0 % B -B % D 1 % 8 E % D 1 % 8 2 % D 1 % 8 B % 2 0 (% D 0 % B -D%D0%B5%D0%BE%D0%B1%D0%B5%D1%81%D0%B-F % D 0 % B 5 % D 1 % 8 7 % D 0 % B 5 % D 0 % B D % D 0 % B -D%D1%8B%D0%B5,%2D%20%D0%B6%D0%B5%D0%B9%20 (%D0%B4%D0%B5%D0%BD%D0%B5%D0%B6%D0%B-D%D1%8B%D0%B5%20%D1%81%D1%83%D1%80%D1%80% D0%BE%D0%B3%D0%B0%D1%82%D1%8B
- 5 http://www.cbr.ru/content/document/file/132241/consultation_paper_20012022.pdf

¹ http://government.ru/docs/all/40601/?page=3

² https://www.govinfo.gov/content/pkg/DCPD-201600020/pdf/ DCPD-201600020.pdf

³ http://publication.pravo.gov.ru/Document/ View/0001202007310056?index=1

Figure 1. Iran's imports and exports from 2015 to 2021 (USD billion)



Source: Author's calculations based on ITC data (https://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1%7c364%7c%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1 %7c2%7c2%7c1%7c2%7c1%7c1)

of 2022, the total capitalization of the global cryptocurrency market was \$829 billion⁶.

In conditions of sanctions pressure, the possibility of introducing cryptocurrency into foreign trade turnover as an alternative digital asset, and the growth of the cryptocurrency market, the country's trade and economic relations are subject to diversification, searching for new solutions to organize exports and imports as well as new means of international payments. Iran has been the leader in the number of Western sanctions for the last 44 years, although there have been periodic increases in sanctions since 2023. The EU has expanded the list of sanctions⁷ to $4,080^8$ as of 2022. At the end of June 2023, Russia has surpassed Iran in the number of imposed sanctions. In summer 2023, the EU adopted the 11th⁹ package of sanctions, and according to the global sanctions tracking database Castellum.ai, there were 13,840 sanctions¹⁰ against Russia, which is three times more than against Iran.

Nevertheless, Iran's practice is quite significant in international trade under sanctions. Before the widespread use of cryptocurrencies, Iran's foreign trade relied on the «Hawala» system, an informal financial and settlement system that transfers funds from one geographic location to another. It is used as an alternative means of money transfer outside banking systems and is based on trust between the parties involved, predomi-

- 6 https://www.coingecko.com/research/publications/2022-annual-crypto-report
- 7 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=O-J:L:2023:0201:TOC
- 8 https://www.statista.com/statistics/1294726/number-of-global-sanctions-by-target-country/
- 9 https://ec.europa.eu/commission/presscorner/detail/en/ ip_23_3429
- 10 https://www.castellum.ai/russia-sanctions-dashboard

nantly in the Near and Middle East. A distinctive feature of the «Hawala» system is that all financial transactions are not documented but are settled based on trust between the parties. The «Hawala» system does not involve a lot of bureaucratic formalities and has a limit for money transfers (usually up to \$100,000). Usually, the transfer takes 48 hours. The «Hawala» system allows transferring money from Iran to a specific country in the Middle East and then transferring it to various banks in Asia, Europe, and the United States [Omarov, 2018].

However, the maximum transfer limit of \$100,000 does not support introducing such a system in largescale trade agreements, and it cannot play a significant role in the growth of the country's foreign trade turnover. We should mention that Iran's trade turnover is increasing¹¹ with the emergence of cryptocurrency and the change in the money transfer system, even though growth and decline are observed in different periods with the introduction of sanctions or their cancellation.

According to the International Trade Centre, Iran's trade turnover since 2016 has increased by about 30% compared to 2015, from \$60.040 billion in 2015 to \$78,267 billion in 2016, given the partial lifting of US sanctions in 2016 (see Figure 1). After the United States unilaterally withdrew from the Joint Comprehensive Plan of Action (JCPOA) in 2018 and reimposed sanctions on Iran's oil, shipping, and banking sectors¹², and SWIFT suspended some Iranian banks' access to its messaging system¹³ in November that year, we see a sharp drop in trade in 2019, estimating \$48,648 billion. We do not include a recession in 2020, as it is a COVID-19 year, and all countries worldwide experienced a recession. In 2021, we see growth closer to 2016 regarding post-sanctions trade turnover¹⁴, despite the US re-imposing sanctions on Iran in 2018. The increase in turnover in 2021 can be traced precisely to the launch of cryptocurrency and its adoption as a legal means of payment in Iran in 2018.

Since 2018, Iran has actively started to change the public financial system. In August 2018, the Central Bank of Iran announced plans to launch a national cryptocurrency connected to the Iranian rial¹⁵. To achieve this, Iran and Russia signed a bilateral agreement on cooperation in the area cryptocurrency at the end of 2018. The

- 12 https://www.eeas.europa.eu/node/49141_en
- 13 https://www.swift.com/ru/node/11306
- 14 https://obamawhitehouse.archives.gov/the-press-office/2016/01/16/executive-order-revocation-of-executive-orders-with-respect-to-Iran
- 15 https://www.coindesk.com/markets/2018/07/26/iran-plansnational-cryptocurrency-as-new-us-sanctions-loom/

¹¹ https://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1%7c364%7c%7c%7c%7cT0TAL%7c%7c%7c2%7c1 %7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1

Russian Association of Cryptoindustry and Blockchain (RACIB) signed the agreement with Iran Blockchain Labs¹⁶, one of Iran's leading blockchain companies responsible for introducing digital technologies into the country's economy. The lab was established with the participation of Sharif University of Technology and the Central Bank of Iran. Since 2019, Iran has started negotiating using cryptocurrency for financial transactions with Russia and seven other countries, including Austria, Bosnia and Herzegovina, England, France, Germany, Switzerland, and South Africa¹⁷. In August 2019, Iran issued a decree stating that cryptocurrency mining is recognized as a legitimate sector of the economy and became the first country to use cryptocurrency as a reserve to pay for imports and exports.

At the end of 2020, the Iranian government changed its position on cryptocurrencies, allowing their usage exclusively for import financing amid increased sanctions pressure on using fiat money. According to the law, cryptocurrencies mined in Iran can only be exchanged if they are used to finance imports¹⁸. The amount of subsidized energy used for mining, along with guidelines released by the Department of Energy, will determine the legal limit on the amount of cryptocurrency each miner can own. Iran has a significant supply of fossil fuels, which are the primary source for electricity used in the energy-intensive cryptocurrency mining process. In 2021, a study by analytics company Elliptic¹⁹ found that 4.5 % of all bitcoin mining is attributed to Iran due to the country's low-priced electricity. The report states that as of 2021, Iran's mining industry used roughly 10 million barrels of crude oil annually, or 4 % of the country's oil exports in 2020. Iran introduced such amendments to prevent money laundering and illegal financing of organizations.

Additionally, Iran's regulatory policy for cryptocurrency mining farms includes mandatory licensing. In this way, the country is struggling with the growing number of miners, as the miners' inflow to Iran is due to subsidized electricity tariffs²⁰. Iranian legislation requires licensed cryptominers to sell the mined coins directly to the Central Bank of Iran²¹.

Money transfer mechanism between Russia and Iran, introduction of stablecoin

In the short term, sanctions have restrictive properties, pushing the country into stagnation, while in the long run, they serve as a catalyst for economic progress. The exchange rate is an essential instrument of a country's macroeconomic policy, given that many economic indicators depend on the level and dynamics of the exchange rate. The exchange rate regime used affects both the choice of economic policy instruments and its effectiveness in general.

For Iran, the imposed sanctions were precisely the catalyst for establishing a separate banking system for international transfers. In this study, we will consider the mechanism of money transfers between Iran and Russia, created to circumvent sanctions, how it is possible to move to cross-border transfers of digital assets within the existing system, and the prospects for introducing cryptocurrency in foreign trade transactions. We should note that, given the sanctions and disconnection from SWIFT, the growth of bilateral trade between Russia and Iran, as well as the creation of new financial instruments, is crucial. This will allow money transfers between the countries and trade using a commonly accepted currency. Thus, we should consider which mechanisms have been and are being created in bilateral relations.

«Mir Biznes Bank», a subsidiary of Iran's largest retail bank, Bank Melli Iran²², has been operating in Russia since 2002, and the Iranian bank is also the sole shareholder. By developing the SHETAB payment system in 2002 and linking this system to the ATM networks of Bahrain, Qatar, and Kuwait in 2008, Iran became the 4th country after America (MasterCard, Visa, and American Express), Japan (JBC), and China (Union Pay) to establish international payment systems. In 2015, Russia became the 5th country to develop the «MIR» international payment system and link it with the banking networks of Armenia, Kyrgyzstan, Kazakhstan, Belarus, and Turkey [Rakhimian, 2020].

Looking at developing foreign economic activities between Russia and Iran, we can note that developing bilateral relations in the banking sector has been actively introduced since 2022.

VTB Bank was the first Russian bank to launch money transfers in Iranian rials at the end of 2022²³. The bank reports that the maximum amount of one transaction is 20 million rubles, but not more than 1 million in dollar equivalent per month, while the commission is 1 % of the transfer amount (minimum 15,000, but not more than 200 thousand Iranian rials). The transfer of funds to the beneficiary's account in Iran shall occurs the next business day. Similarly, Sberbank planned to open «Is-

¹⁶ https://www.rbc.ru/crypto/news/5bec-0e349a7947d73928470c

¹⁷ https://www.tehrantimes.com/news/432400/ Talks-with-8-countries-over-using-cryptocurrency-in-monetary

¹⁸ https://news.bitcoin.com/iran-bitcoin-sanctions-inflation/

¹⁹ https://www.elliptic.co/blog/irans-bitcoin-mining-activity-shows-importance-of-sanctions-compliance

²⁰ https://news.bitcoin.com/iran-licenses-bitcoin-mining-farms-cuts-electricity-tariff/

²¹ https://news.bitcoin.com/iran-crypto-law-miners-bitcoin-central-bank/

²² https://www.mbbru.ru/

²³ https://www.vtb.ru/about/press/news/?id=192703

	Exports	Imports		
2016	1 881 541 482	302 949 259		
2017	1 314 901 473	392 166 355		
2018	1 205 732 946	539 155 287		
2019	1 197 534 857	391 254 313		
2020	1 423 524 863	796 793 983		
2021	3 067 900 000	967 300 000		

Table 1. Russia and Iran's trade turnover (in USD)

Source: Author's calculations based on data of the Federal Customs Service of the Russian Federation(https://customs.gov.ru/folder/511)

lamic windows» in some bank branches in February of 2018. In December, the first office was opened in Kazan under the standards of Islamic finance, based on the observance of the religious requirements of the Shariah²⁴. Private and corporate clients have access to partnership financing products: mudaraba («trust asset management»), halal investment instruments, trade finance, bank guarantees, payment and current accounts, cash and settlement services, etc.

However, despite the financial development between Russia and Iran, there is a severe problem of imbalances in trade and economic relations. Firstly, bypassing SWIFT requires abandoning the US dollar, and in trade between Russia and Iran, the dollar is the monetary base – only after the payment is made, it is conversion into the national currency. Moreover, the unstable ruble exchange rate often causes considerable difficulties and losses for one of the parties to the contract. The next critical issue in the financial sphere associated with trade and economic relations between Russia and Iran is Russia's positive trade balance.

A surplus in the trade balance leads to an imbalance between the rial and the ruble. The volume of trade turnover is near \$4 billion, of which \$3 billion are Russian exports and almost \$1 billion are imports from Iran. This creates a ruble deficit of about \$2 billion (see **Table 1**).

Proceeding from the above, it becomes necessary to establish a new financial system in bilateral relations that can address the issue of currency deficit and include a fixed exchange rate. At the current stage of development, such a system could only use a blockchain and the introduction of cryptocurrency. A cryptocurrency connected to gold is essential to avoid volatility, i.e., a stablecoin, which would solve the problem of both currency deficit and fixed exchange rate through gold security.

When establishing a bilateral financial policy and the transition to cryptocurrency in mutual settlements, it is essential to convert transactions into national currencies at the very beginning. We may note that within the banking, currency, and financial cooperation between Iran and Russia, in July 2022, the Tehran Stock

Exchange started trading on the Iranian rial - ruble currency pair²⁵. We should consider the switch of foreign trade transactions to rubles and Iranian rial regarding the functions that monetary assets fulfill, namely means of circulation, measures of value, and means of preserving value. We can implement these features into a cryptocurrency such as stablecoins, that is, cryptocurrencies that focus on maintaining a stable value against a specific asset or pool of assets. Consequently, the idea of the stablecoin term might be considered analogous to (or originated in) a particular type of money market fund or "constant net asset value" [Hoang, Baur, 2021]. An interesting point is that after the Japanese cryptocurrency exchange Mt. Gox in 2014, governments of different countries divided into three ideological groups: cryptocurrencies are banned in the country; cryptocurrencies are allowed in the country; and the current status of cryptocurrencies and blockchain is undefined [Dorofeev, Kosov, 2019].

Iran is among the group of countries that allow cryptocurrency circulation, while in Russia, according to Federal Law No. 259, "On Digital Financial Assets, Digital Currency and Amendments to Certain Legislative Acts of the Russian Federation", cryptocurrency is recognized as property for particular purposes, but it is not a means of payment, and you cannot pay for goods or services with cryptocurrency in Russia. However, we propose considering cryptocurrency in Russia as a payment system for foreign trade transactions.

In this study, we examine the proposed circulation of cryptocurrency between Iran and Russia, but look specifically at gold-connected stablecoin. Given that currently there are many different cryptocurrencies in the financial market, stablecoins are a segment of the broader low-volatility cryptoasset ecosystem designed to combat the high price fluctuations of unsecured cryptoassets such as Bitcoin or Etherium. We can classify financial assets as a means of diversification, hedge, or safe haven depending on the correlation with other assets either on average or during market shocks. We consider the gold-connected stablecoin, as gold has been extensively researched. The analysis findings of the Dublin Business School [Baur, Lucey, 2010] indicate that gold is a safe haven for equities.

²⁴ https://www.sberbank.ru/ru/person/investments/halal

²⁵ https://ru.irna.ir/news/84825771/%D0%9D%D0%B0%D0%A
2%D0%B5%D0%B3%D0%B5%D1%80%D0%B0%D0%BD%D1%81%D0%BA%D0%BE%D0%B9%D0%B1%D0%B8%D
1 % 8 0 % D 0 % B 6 % D 0 % B 5 % D 0 % B D%D0%B0%D1%87%D0%B0%D0%BB%D0%B8%D1%81%D1
%8C%D1%82%D0%BE%D1%80%D0%B3%D0%B8%D0%B8
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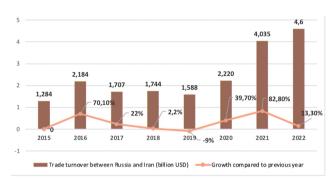
The safe haven should be uncorrelated or negatively correlated only in extreme market conditions. On average, gold can serve a hedging purpose and be a safe haven in extreme stock market conditions. The results of some researches [Kołodziejczyk, 2023; Baur, Hoang, 2021] show that there is nearly always no statistically significant overlap between the returns of stablecoin and the returns of cryptocurrency under both normal market conditions and extreme market conditions. Indeed, this supports the point about stablecoins as an asset that (while remaining connected to the reference currency) does not follow the market trends demonstrated by other crypto-assets.

A group of Chinese researchers, in their paper on stablecoins, discussing whether stablecoins really are a diversifier, hedge, or safe haven from traditional cryptocurrencies, concluded that stablecoins can serve as a safe haven in certain circumstances, and in most of them act as an effective diversifier [Wang, Ma, Wu, 2020]. Following the conclusions above, we should definitely consider the introduction of a gold-connected stablecoin in foreign trade transactions between Russia and Iran in the current development stage, but it is necessary to create our own distinct stablecoin.

Connecting it to gold can provide lower fees and faster transaction processing, increasing the number of international transactions, boosting international trade, and facilitating the development of global payment mechanisms. Stablecoins allow you to make cross-border transactions or pay service fees without the obligatory conversion to your own currency. In this way, stablecoins can contribute to reducing the costs of payment activities, in particular, the transfer and disbursement of foreign funds, reducing the risk of exchange rate fluctuations and, among other things, increasing profitability that improves value chains by automating secondary tasks. Still, you have to be aware of the possible risks in the initial phase.

Technologically, stablecoins are superior to traditional payment systems; they use blockchain platforms, which generally contain information about the sender, recipient, and the transferred amount. Nevertheless, the Federal Reserve Bank of Boston (Boston Fed) and the Massachusetts Institute of Technology's Digital Currency Initiative (MIT DCI) are working together in a multi-year research project known as "Project Hamilton" to provide practical insights into the technical issues and opportunities of a general-purpose central bank digital currency. In testing a central bank's digital currency, the Federal Reserve Bank of Boston revealed at the first stage of their study that blockchain-less payment technology can perform 10 times more transactions per second than high-performance blockchain technology. Streamlining transactions to prevent double-spending on the

Figure 2. Trade turnover between Russia and Iran compared to the previous period



Source: Author's calculations based on data of the Federal Customs Service of the Russian Federation (https://customs.gov.ru/folder/511; data for 2022 are cited with reference to the statement of the Russian Ambassador to Iran: URL: https://digital.gov.ru/ru/ events/42625/?utm_referrer=https%3a%2f%2fwww.google. com%2)

blockchain causes burdens that limit scalability and can hinder fast transactions²⁶.

Another concern relates to gold and its correlation with stablecoins. In other words, stablecoin will be subject to the same volatility as gold. It turns out that this is a weak point in ensuring the stability of stablecoins. To avoid a targeted external attack on the gold exchange rate to increase the cost of transactions and operations with using stablecoin, taking into account the risks of factors affecting the fluctuation of gold prices, the introduction of stablecoin in foreign trade is possible only in case of mutual cooperation, i.e., in the "exports – imports" bundle. In this work, we review the introduction of stablecoin in Russia's foreign trade transactions with Iran, and it is necessary to analyze the trade turnover and export potential of the Russian Federation to Iran and vice versa.

Trade turnover between Russia and Iran

In 2016, the US lifted part of its sanctions against Iran. In this respect, following the improvement of the financial and investment climate in Iran, as well as the removal of restrictions on the supply of equipment and machinery, a sharp increase in trade turnover between Russia and Iran was observed, with the volume equal to 70.1 %. Since 2016, there has been both an increase and a decrease in trade turnover between Russia and Iran, but the highest growth is recorded in 2021, amounting to 82.8 %, or \$4,058 billion (see **Figure 2**). This

²⁶ Lovejoy J., Fields C., Virza M., Frederick T., Urness D., Karwaski K., Brownworth A., Narula N. A High-Performance Payment Processing System Designed for Central Bank Digital Currencies (2022). https://eprint.iacr.org/2022/163

Table 2. Export potential and unrealized exports of the Russian Federation
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N⁰	Product category	Export potential	Actual exports	Unrealized potential	Imports of Iran
1	Crude sunflower or safflower oil	133 mln.	115 mln.	18 mln.	314 mln.
2	Barley	82 mln.	71 mln.	11 mln.	391 mln.
3	Wheat (except durum) and meslin	61 mln.	6,9 mln.	54 mln.	182 mln.
4	Newsprint and uncoated paper (cardboard)	18 mln.	4,7 mln.	13 mln.	160 mln.
5	Chemical wood pulp, soda/sulfate (softwood, (semi-) bleached)	17 mln.	3 mln.	14 mln.	53 mln.
6	Automobile bodies	10 mln.	0	10 mln.	125 mln.
7	Unalloyed unprocessed nickel	6,4 mln.	0	6,4 mln.	15 mln.
8	Isobutylene-isoprene rubber in primary and flat forms	6 mln.	16 USD ths.	6 mln.	7,7 mln.
9	Potassium chloride for use as fertilizer	5,9 mln.	0	5,9 mln.	9,3 mln.
10	Fiberboard and other wood-based materials	5,2 mln.	1,3 mln.	3,9 mln.	78 mln.
11	Mineral or chemical fertilizers	5,2 mln.	6,1 USD ths.	5,1 mln.	7,7 mln.
12	Vehicles for the carriage of persons, not included in other categories	5 mln.	637 ths.	4,4 mln.	935 mln.
13	Sunflower seeds	4,9 mln.	1,3 mln.	3,5 mln.	68 mln.
14	Halogen-isobuten-isoprene rubber in primary forms	4 mln.	0	4 mln.	5,9 mln.
15	Rubber pneumatic passenger car tires	3,8 mln.	4,9 USD ths.	3,8 mln.	114 mln.
16	Foodstuffs	3,6 mln.	53 ths.	3,6 mln.	139 mln.
17	Soya oil cake	3,4 mln.	0	3,4 mln.	645 mln.
18	Flat-rolled products of silicon-electric steel with a width >=600 mm	3,1 mln.	700 ths.	2,4 mln.	21 mln.
19	Oil and gas casing and tubing (OCTG)	3 mln.	0	3 mln.	74 mln.
20	Chemical wood pulp, soda/sulfate (colored, (semi-) bleached)	3 mln.	1 mln.	2 mln.	46 mln.
21	Ferrous rails	2,8 mln.	250 ths.	2,8 mln.	14 mln.
22	Semi-milled and whole milled rice	2,7 mln.	0	2,7 mln.	1 bln.

instability is related to the reimposition of sanctions. On November 5, 2018, the United States returned all its sanctions against Iran. The restrictions affected Iranian oil exports and more than 700 banks, companies, and individuals. This followed Washington's withdrawal from the nuclear deal on May 8, 2018, leaving its future in question²⁷.

In 2016, the trade turnover between Russia and Iran was \$2,184 billion; in 2017, there was a decline, and the trade volume was only \$1,707 billion or a decrease of 22 %. In 2018, we saw an increase of 2.2 %, amounting to \$1,744 billion; in 2019, the re-imposed sanctions immediately reflected in the trade turnover, and there was a decline of 9% – the turnover amounted to \$1,588 billion. In 2020, despite the COVID-19 restrictions, there was an increase in the volume of 39.7 % (amounted to \$2,22 billion), with an increase of \$4,035 billion in 2021²⁸.

According to the International Trade Centre (ITC), we can mention the following products with the highest export potential from the Russian Federation to Iran: crude sunflower or safflower oil; barley; wheat (except durum) and meslin; newsprint and uncoated paper (cardboard); chemical wood pulp, soda/sulfate (softwood, (semi-) bleached); automobile bodies; unalloyed unprocessed nickel; isobutylene-isoprene rubber in primary and flat forms; potassium chloride for use as fertilizer; fiberboard and other wood-based materials; mineral or chemical fertilizers; vehicles for the carriage of persons, not included in other categories; sunflower seeds; halogen-isobuten-isoprene rubber in primary forms; rubber pneumatic passenger car tires; foodstuffs; soya oil cake; flat-rolled products of silicon-electric steel with a width >=600 mm; oil and gas casing and tubing (OCTG); chemical wood pulp, soda/sulfate (colored, (semi-) bleached); ferrous rails, semi-milled and whole milled rice²⁹ (see **Table 2**).

Products with the highest export potential from Iran to the Russian Federation are polyethylene with specific gravity >=0.94 in primary forms; fresh apples; polyethylene with specific gravity <0.94 in primary forms; fresh tomatoes; unglazed ceramic slabs, tiles for paving, fireplaces, decorative tiles, mosaic cubes and similar products not included in other categories; fresh potatoes; fresh or dried dates; automobile bodies; fire extinguisher compounds and charges, loaded fire extinguisher grenades; fresh or dried oranges; unagglomerated iron

²⁷ https://www.reuters.com/article/us-usa-iran-sanctionsidUSKCN1NA0ZR

²⁸ https://customs.gov.ru/folder/511

²⁹ https://exportpotential.intracen.org/en/products/ tree-map?toMarker=j&market=364&fromMarker=i&exporter=643&whatMarker=k

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Nº	Product category	Export potential	Actual exports	Unrealized potential	Imports of the Russian Federation
1	Polyethylene with specific gravity >=0.94 in primary forms	42 mln.	2,3 mln.	40 mln.	329 mln.
2	Fresh apples	37 mln.	24 mln.	13 mln.	436 mln.
3	Polyethylene with specific gravity <0.94 in primary forms	30 mln.	3,6 mln.	27 mln.	253 mln.
4	Fresh tomatoes	22 mln.	15 mln.	7,3 mln.	535 mln.
5	Unglazed ceramic slabs, tiles for paving, fireplaces, decorative tiles, mosaic cubes and similar products not included in other categories	13 mln.	1,1 mln.	12 mln.	384 mln.
6	Fresh potatoes	9,3 mln.	1,1 mln.	8,2 mln.	157 mln.
7	Fresh or dried dates	9,2 mln.	5,9 mln.	3,3 mln.	33 mln.
8	Automobile bodies	7,5 mln.	0	7,5 mln.	993 mln.
9	Fire extinguisher compounds and charges, loaded fire extinguisher grenades	4,9 mln.	154 ths.	4,7 mln.	213 mln.
10	Fresh or dried oranges	4,4 mln.	3,5 mln.	872 ths.	268 mln.
11	Unagglomerated iron ores and concentrates (except burnt iron pyrite)	4,3 mln.	242 ths.	4 mln.	493 mln.
12	Confectionery of sugar, not containing cocoa	4,1 mln.	388 ths.	3,7 mln.	181 mln.
13	Polyethylene/polypropylene bags and pouches for packaging	3,6 mln.	1,6 mln.	2 mln.	91 mln.
14	Fresh aubergines	3,6 mln.	2,5 mln.	1,1 mln.	18 mln.
15	Rods and bars of iron or unalloyed steel	3,5 mln.	1,2 mln.	2,3 mln.	206 mln.
16	Surfactants and detergents	3,5 mln.	5,3 ths.	3,5 mln.	174 mln.
17	Fresh plums and thorns	3,5 mln.	1,3 mln.	2,2 mln.	51 mln.

ores and concentrates (except burnt iron pyrite); confectionery of sugar, not containing cocoa; polyethylene/ polypropylene bags and pouches for packaging; fresh aubergines; rods and bars of iron or unalloyed steel; surfactants and detergents; fresh plums and thorns³⁰ (see **Table 3**).

Studying the list of products with the highest export potential between Russia and Iran, we can conclude that, given the recent sanctions against Russia, it is appropriate to redirect the exported goods, especially the commodities with high export potential, to Iran and India.

Based on World Bank data, Iran's tariff policy has seen a decline in the applied weighted average tariff rate³¹. In 2019, it was 15.4 %, while in 2020 it constituted 12.1 %. Given that tariff policies are harmonized and obstacles are partially removed, such as lower tariff rates, it is relevant to pay attention to Iran's Free Trade Zones. Such zones have no tariff barriers, such as value-added tax (VAT) services, thus facilitating the export of goods to the country.

The crucial area of Iran's economic policy, simultaneously for developing and overcoming the sanctions regime, is free and special economic zones (FEZs and SEZs, respectively). Currently, Iran has seven FEZs (Keshm, Kish, Chabahar, Anzali, Aras, Arvand, and Maku) and 16 SEZs [Vakhshiteh, Lapenko, 2022].

Among the seven operating FEZs, Anzali takes a particular place. This zone is a strategic starting point for cooperation with all countries that are fully or partially participating in the North-South international transport corridor project. It will become the primary center of Iran's trade with the countries of the Caspian region. The territory of FEZ "Anzali" includes the port of Anzali, which engaged in a significant volume of imports of goods from Russia.

The creation of the North-South International Transport Corridor has contributed to an increase in the volume of trade turnover both with Iran and through Iran's FTZs and ports. Trade turnover between Russia and India has also increased, as the North-South ITC reduces delivery times by half compared to the Suez Canal, which contributes to higher numbers of perishable goods transported. The transit time for cargoes from Russia to India using the North-South ITC land route can take about 23 days, while the Suez Canal route takes up to 45 days³².

Along with the reduced transport time, as mentioned above, the "Iranian rial-Russian ruble" currency pair

³⁰ https://exportpotential.intracen.org/en/products/analyze?toMarker=j&market=643&fromMarker=i&exporter=364&whatMarker=k

³¹ https://data.worldbank.org/indicator/TM.TAX.MRCH.WM.AR. ZS?end=2020&locations=IR&start=2003&view=chart

³² https://eng.rzd.ru/en/11268

started trading on the Tehran Stock Exchange as part of the agreement between Iran and Russia on developing currency and banking cooperation³³ and is currently traded on the stock exchange, providing mutual trade turnover. We can see stable trade in national currencies. By launching trading in the rial-ruble pair, Iranian exporters can offer Russian currency at an agreed rate on the market, similar to the dollar and euro. Also, longterm plans for developing cooperation with Iran include the signing of an oil and gas swap exchange agreement³⁴.

Firstly, the basis for promoting trade and economic relations between Russia and Iran is the diversification of financial instruments via the introduction of stablecoin. Secondly, another important factor is developing the North-South ITC and logistical work as part of reconstruction and construction to double the cargo capacity of ports by at least two times. Thirdly, the reorientation of sanctioned product groups to the Iranian market is one of the key factors. These are the processes that will allow for increasing trade turnover significantly. We should note that Russia is currently finalizing rules that will give Iranian cargo ships the right of passage on inland waterways on the Volga and Don rivers³⁵.

In 2022, Russia has become the leading foreign investor in Iran, investing \$2,76 billion in the country's economy. According to the Minister of Economy and Finance of Iran, Ehsan Khanduzieto, this amount represents twothirds of all foreign funds invested in the country during the fiscal year³⁶. We should make a correction that in Iran, the fiscal year starts on March 21 and lasts until March 20³⁷ of the next year, and in the Russian Federation, it corresponds to the calendar year and lasts from January 1 until December 31.

Conclusion

Financial markets and the diversity of financial instruments have grown steadily in both volume and value. The increasing interdependence between

- 33 https://www.cbr.ru/eng/press/event/?id=13998
- 34 https://www.vedomosti.ru/business/articles/2022/10/06/944280-rossiya-i-iran-zaklyuchat-dogovor
- 35 https://www.bloomberg.com/graphics/2022-russia-iran-trade-corridor/?leadSource=uverify%20wall
- 36 https://www.ft.com/content/c43f7f85-87c3-49f6-85cb-446d1de2bfc6
- 37 https://blog-pfm.imf.org/en/pfmblog/2016/10/the-timing-ofthe-governments-fiscal-year

markets and assets creates a potential demand for a safe haven. Although gold is often associated with asset safety, we are not aware of any studies that have tested this hypothesis. Research results have shown that gold, on average, can serve a hedging purpose and be a safe haven in extreme stock market conditions. Comparing currency and gold, we suggest connecting the stablecoin to gold based on its low volatility.

The cryptocurrency transfer system is convenient by several criteria: a facilitated transfer option and absence of regulations governing the system. The introduction of stablecoin for foreign trade activities requires the state to establish a supervisory institution under the Central Bank's control. An institution that will operate outside the traditional banking system and provide digitalization, regulate the remittance system, and create rules for cross-border money transfers to prevent the transfer of funds related to crimes (smuggling, tax evasion, customs fraud, etc.).

A supervisory body is also needed to oversee the circulation of the stablecoin to avoid speculative demand, such as the buying demand to resell in anticipation of an increase in the gold price. In other words, we should carefully create the procedure of repurchasing gold by stablecoin holders; otherwise, we might have a situation where Russia's gold reserves may decrease. For stabilizing the exchange rate, a centralized reserve to guarantee rate-based exchange is imperative.

Stablecoins are currently quite popular, as they are digital units of value that rely on stabilization instruments used to maintain a fixed value against one or more official currencies or other assets (in this study, such as gold), but they are still in the early development stages. First, there is a need to understand how this cryptocurrency functions; secondly, we need a pilot project, including a specific product, performing a transaction only with a stablecoin and designed for trade between Russia and Iran.

Banks have to address possible risks, like the technological barrier to fast transactions. The author suggests introducing stablecoin only in foreign trade turnover, considering the risks associated with factors influencing gold price fluctuations. At the current development stage, the introduction of stablecoin is possible only through mutual trade, i.e., in the "export-import" connection, avoiding exchange rate fluctuations and limiting criminal transactions.

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