



**HAL**  
open science

# Do sanctions work in a crypto world? The impact of the removal of Russian Banks from SWIFT on Remittances

Farid Makhoulf, Refk Selmi

## ► To cite this version:

Farid Makhoulf, Refk Selmi. Do sanctions work in a crypto world? The impact of the removal of Russian Banks from SWIFT on Remittances. 2022. hal-03599089

**HAL Id: hal-03599089**

**<https://hal.science/hal-03599089>**

Preprint submitted on 6 Mar 2022

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

# **Do sanctions work in a crypto world? The impact of the removal of Russian Banks from SWIFT on Remittances<sup>1</sup>**

Farid MAKHLOUF<sup>2</sup>

Refk SELMI<sup>3</sup>

**Abstract:** Russia's invasion of Ukraine triggered a surge of calls for Western allies to completely sever Russia from the global financial system by disconnecting it from the SWIFT payment system. The sanctioning of large Russian banks, coupled with their severance from the SWIFT, will make it hard for banks to receive payments or act as intermediaries. The present note seeks to assess the impacts of the removal of Russian Banks from SWIFT on international remittances to and from Russia. Our results suggest that the economic sanctions imposed on Russia exert an immediate adverse impact on remittances. In the longer-term, there is definitely a high risk posed for global repercussions from this war and resulting sanctions; it seems unlikely their impact will be contained to one country's borders, especially if there is a risk of high inflation and tightening of global financial conditions. With Moscow becoming growingly closed off to the financial world, it appears that Russians are becoming increasingly active in the cryptocurrency market. But with the traceable nature of the blockchain and lack of liquidity, it may be difficult for Russians to use cryptocurrency to evade the bevy of sanctions placed on the country.

**Keywords:** Remittances, War, SWIFT sanctions, Cryptocurrencies, Russia.

**JEL classification :** F15; F24; F22; F33.

---

<sup>1</sup> Contents are solely the responsibility of the authors.

<sup>2</sup> ESC Pau Business School, Pau, France. E-mail: [farid.makhlouf@esc-pau.fr](mailto:farid.makhlouf@esc-pau.fr)

<sup>3</sup> ESC Pau Business School, Pau, France; QNRF, Doha, Qatar. E-mail: [refk.selmi@esc-pau.fr](mailto:refk.selmi@esc-pau.fr)

## 1. Introduction

On 24 February 2022, Russia launched a wide-scale military invasion of Ukraine, marking a steep escalation to a conflict that began in 2014. In response to Russian invasion of Ukraine, the United States, United Kingdom, Canada, France, Germany, and Italy cut several Russian banks from SWIFT (Society for Worldwide Interbank Financial Telecommunication), the international payments system that enables money to travel around the world, in a move to isolate Moscow from the international financial system. Such a move will have direct effects on remittances. Whilst remittances typically rise noticeably during times of crisis, migrants in Russia will have difficulty sending money through the banking system due to the exclusion of Russian banks from SWIFT. Also, the closure of airspace and the stopping of flights to Russia will prevent the sending of money through travelers. This can have a disastrous effect on families who depend on remittances to and from Russia.

In the past few decades, there has been a renaissance in the interest in international migration and migrants' remittances. This particular attention has been triggered by the sharp increase in the remittance flows becoming an important source of foreign funds, and helping to promote economic development for several developing countries (Makhlouf and Kasmaoui, 2020). Given the sharp evolution of these flows, it is not surprising that remittances are growingly perceived by policy makers and practitioners as having a pivotal role in strengthening the development efforts of recipient countries, creating new trade and marketing networks and contributing to technology upgrading. Remittances are considered an important source of financing for most developing countries (Makhlouf, 2013, Ratha, 2013). During previous crises, remittances have demonstrated their resiliency in dealing with unusual shocks (Sirkeci *et al.*, 2012; Makhlouf, 2019), highlighting their countercyclical behaviour; it is the case when the country of origin of the migrants witnessed untoward shocks and when the remittances of these migrants became as consequence a source of finance of this country (Chami *et al.*, 2005). For instance, remittances have increased to Mexico during the uncertainty surrounding the current pandemic crisis (Dinarte *et al.* 2021). It is also largely documented that remittances even increase in times of economic and political crisis. Arguably, Edelbloud *et al.* (2017) showed that remittances are likely to rise after the onset of Arab Spring in Tunisia. This has allowed the Tunisian economy to absorb some of the adverse social and economic effects of the 2010 uprisings. Makhlouf and Selmi (2021) confirm, by delving into the experience of Tunisia, the stable behavior of remittances during troubled political transition.

*The main purpose of this study is to examine the impact of the increasingly complicated Russia-Ukraine crisis and the resulting Western sanctions on remittances.* Sanctions have been widely criticized for being ineffective and dangerous policy tool. By targeting a country's economy, sanctions can aggravate the economic distress. This would exert detrimental consequences on businesses and individuals rather than just applying pressure to the government being targeted. Historically, the U.S. embargo on Cuba was very harmful to the country socio-economically. Likewise, the U.S. sanctions on Venezuela deeply affect its citizens' access to the international and national financial system, already crippled by heightened inflationary pressures and poverty levels. Accordingly, there is persuasive evidence that *sanctions can have adverse impact on economic development, disrupt financial services including trade finance and remittances, and potentially harm welfare in a sanctioned country* (see inter alia: Neuenkirch and Neumeier, 2015; Farzanegan et al., 2016; Gharibnavaz and Waschik, 2018; Farzanegan and Hayo, 2019; Farzanegan and Fischer, 2021). But if the country is deprived of access to the SWIFT interbank system, the temptation could indeed be strong to rely on cryptocurrencies, introduced to the world financial system as a new kind of money and financial infrastructure, outside the control of any central authority. If wealthy individuals are concerned that their accounts may be frozen owing to devastating sanctions on Moscow, they can hold their wealth in Bitcoin in order to be protected from such measures. In 2018, facing rising economic and financial pressures, compounded by sanctions from Western states, Venezuelan authorities have assessed the possibilities offered by cryptocurrencies (Antonopolous et al., 2019). In response to economic sanctions, Russian government has taken action to try to shore up its economy and finances. The Central Bank of Russia (CBR) has doubled its interest rate while trying to stabilize the ruble. Russia, which has been facing a bevy of sanctions since its invasion of Crimea in 2014, has over \$600 billion stockpile in foreign reserves (i.e., money in other countries' currencies and gold). It built up those reserves primarily to help fend off sanctions. Today, by freezing the CBR's assets in their jurisdictions, Russia could have a hard time accessing that money.

In turn, the current set of sanctions packages placed on Russia has yielded to a debate about whether cryptocurrencies, particularly Bitcoin, could be a way for those on sanctions lists to evade the restrictions. This is because Bitcoin and other cryptocurrencies are decentralized, implying they are not issued or controlled by a central entity such as a central bank. In other words, when a cryptocurrency is sent to other users, it does not go through the traditional route of financial plumbing.

In the following section (Section 2), we discuss this option and the number obstacles it may face. Section 3 describes the main remittance sending and receiving countries. Section 4 provides some concluding remarks and economic implications.

## **2. Traditional remittances: Cryptocurrency and blockchain to the rescue**

The countries of Eastern Europe and Central Asia, as well as other developing countries, need their emigrants through their involvement in the transfer of goods, capital and technology to improve the efficiency of their economies. The economic sanctions imposed on Russia including the exclusion of Russian banks from SWIFT and the slowing down of flights may push migrants to use crypto-remittances. Cryptocurrencies are by design a way to circumvent traditional financial institutions. Given this, European Union officials admit that crypto mining and trading could be employed to undermine sanctions on Russia, particularly if we consider that this country is the world's third-largest Bitcoin miner. Iran has already utilized Bitcoin mining in the past to bypass trade embargoes. North Korea and Venezuela have also employed cryptocurrencies -which operate outside the confines of the financial system- to evade sanctions. Arguably, it has been widely documented in the existing literature that cryptocurrencies (in particular, Bitcoin) can serve as a safe haven asset in times of heightened economic and political uncertainties followed by extreme market downturns. In the wake of the global financial crisis, policymakers had faced substantial challenges as the financial markets were in turmoil, credit flows were disrupted, and the economies moved into a deep recession. These considerations have led to a trend towards questioning the effectiveness of standard economic and financial structures which govern the conventional monetary and financial system. In such uncertain circumstances, *cryptocurrencies are leading the charge by providing a completely decentralized secure alternative to fiat currencies during times of economic and geopolitical chaos*. Bitcoin has shown great resilience during periods of turmoil, highlighting its potential hedging and safe haven abilities against global uncertainty. Bouri et al. (2017) claim that the global uncertainty surrounding the 2008 global financial collapse eased the emergence of Bitcoin and strengthened its popularity as both a financial asset and an alternative currency to conventional economies. Luther and Salter (2017) indicate that attention towards Bitcoin rose remarkably following the announcement that Cyprus would accept a bailout in March 2013. Bitcoin has also been reported in countries such as Greece, whose banks are troubled. Other recent studies have analyzed the role of Bitcoin as a hedge against various assets (Popper, 2015) and against commodities (Dyhrberg, 2016).

Even though Bitcoin is still a long way from returning to its November 2021 price record (i.e., above \$68,000), the recent conflict between Ukraine and Russia have once again clearly demonstrated the potential of Satoshi Nakamoto's invention. Unlike the centralized SWIFT network, it is very complicated to censor and/or block decentralized crypto transactions, which would help Russia to circumvent the onslaught of economic sanctions, according to some experts. These sanctions, as well as the pressure on the foreign exchange market (Forex) yielded to a marked decline in the price of the Russian against the American dollar. From around 81 rubles to have 1 dollar before February 24, it is necessary to spend 105 rubles to have 1 dollar on Mars 2, a depreciation of 23% of the Russian currency against the USD. This has led to an increasing demand of Bitcoin on Binance<sup>4</sup> (see Figure 1). However, it must be mentioned here that unlike North Korea, Venezuela and Iran, Russia has been substantially ingrained in the global financial system for decades. It is important to point out that 80% of its daily foreign exchange transactions and half of its international trade are conducted in dollars. It seems hugely difficult to move wide mounts of crypto and convert it to usable currency. In addition, the excessive volatility, the speculation and the multiple unknowns involved in the development of this cryptocurrency forestalls it from being viewed as a well-established hedge and safe haven asset in distressing times (Dyhberg, 2016; Bouri et al., 2017; Selmi et al., 2018 a, b).

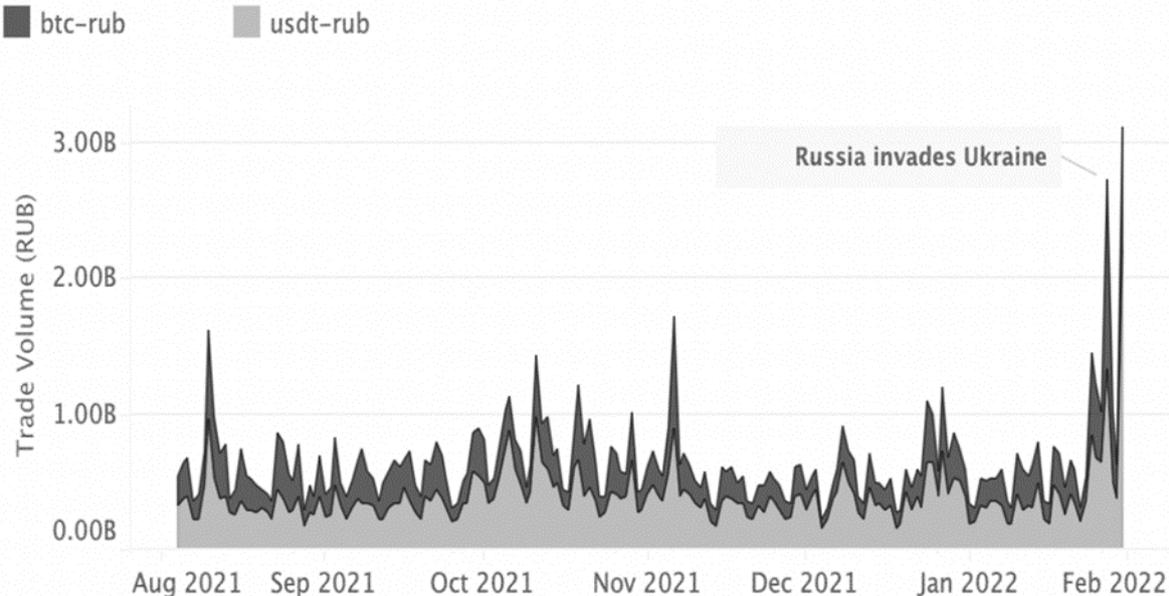
Overall, the cryptocurrency alone will not enable Russia to skirt a barrage of sanctions. It is prominent to recall at this stage that the SWIFT's network connects more than 11,000 institutions and 4 billion accounts over 200 countries worldwide with the goal of instant, frictionless transactions. Every day it processes on average 42 million financial messages that ease transfers of money. Such a kind of scale and efficiency cannot be replicated even by the means of a decentralized financial technology. It must be stressed that every day, Russia conducts approximately 50 billion dollars in foreign exchange transactions, roughly equal to the entire value of all Bitcoin transactions worldwide when volumes hit peak levels. Add to this, in the long term the economic sanctions against Russia will weaken its economy and in consequence the foreign workers. Newly blockchains including Solana for instance, are being introduced in an attempt to handle huge volumes, scale efficiently, and minimize transaction

---

<sup>4</sup> Please note that many major crypto exchanges including Coinbase and FTX do not operate in Russia. Thus, Russians have turned to Binance, which is the world's largest crypto exchange and offers trades between the ruble and Bitcoin.

costs. Nevertheless, from a cost and technological perspective, it will take time before Russia's financial industry ready and able to switch to crypto.

**Figure 1: Ruble trading pair volumes**



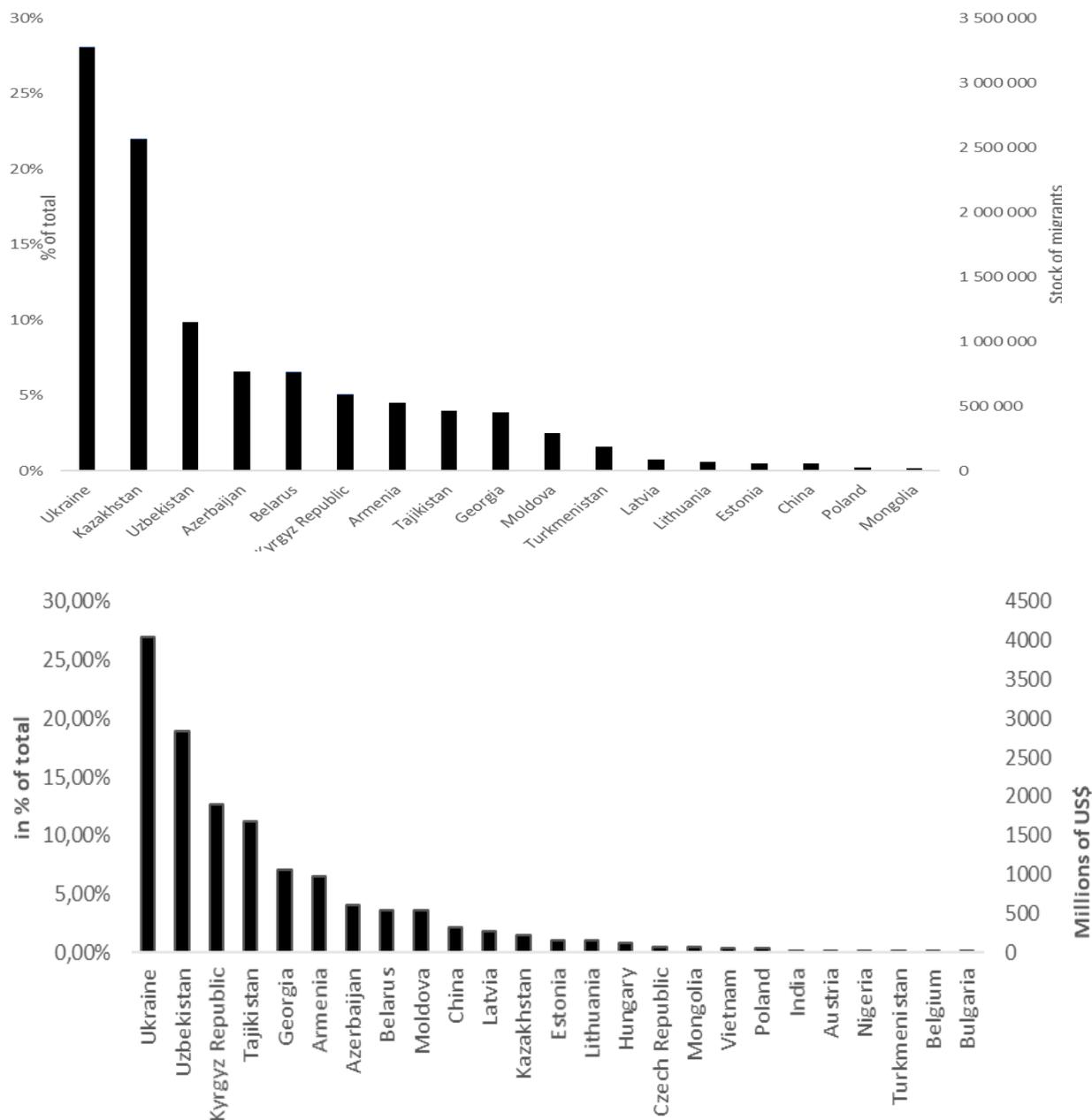
Source: Kaiko trade volume ([Cryptocurrency Trade Data - Kaiko Data](#)).

**3. Remittances and Migration: Some Stylized Facts**

The choice to study remittances from Russia in the current context corresponds to a central objective: to show in a rigorous way the problem of remittances linked to the international economic sanctions imposed on Russia.

According to the data of the World Bank, the stock of migrants in Russia amounts to more than 11 million in 2017. The share of Ukrainian migrants in Russia is the most important, which is around 30% with more than 3 million migrants (Figure2). Other countries also represent a significant share of migrants as shown in Figure 2, namely: Kazakhstan, Uzbekistan, Azerbaijan, Belarus and Kyrgyz Republic. The latter depends on remittances, for example, in 2020 the share of remittances in GDP will be around 30% and more than 75% of remittances to Kyrgyz Republic will come from Russia. With regard to remittances, Figure 2 also shows that Ukraine is in first place with more than 3 billion, followed mainly by Eastern European countries.

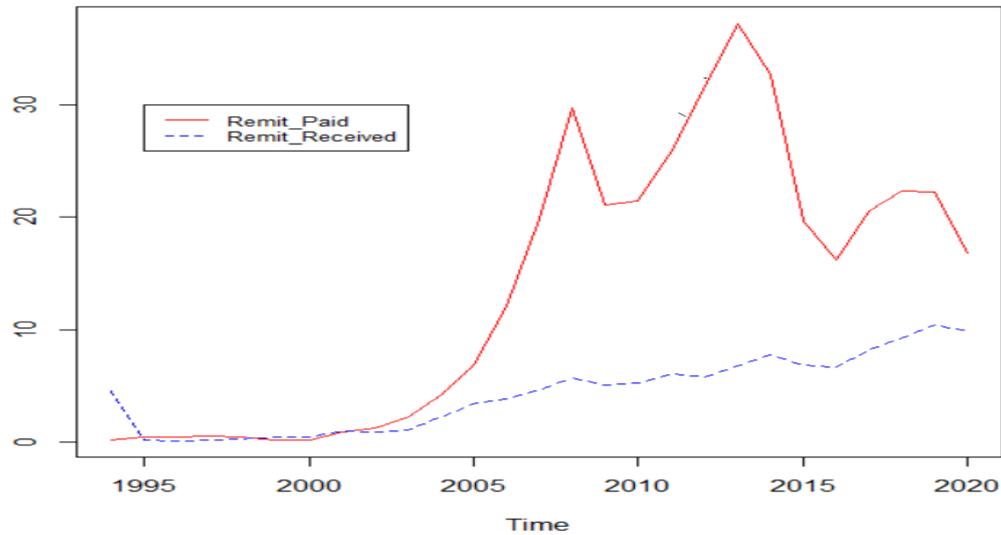
**Figure 2: The Stock of Migrants in Russia and Remittances from Russia in millions of US dollars (2017)**



Source: World Bank.

Figure 3 illustrates the evolution of remittances in billions of U.S. dollars, clearly showing that remittances paid are not linear and have a relatively higher volatility than remittances received. We also clearly note that the peak of remittances from Russia was in 2013 and amounted to \$37 billion. The second peak is observed in 2008 when remittances amounted to \$29 billion.

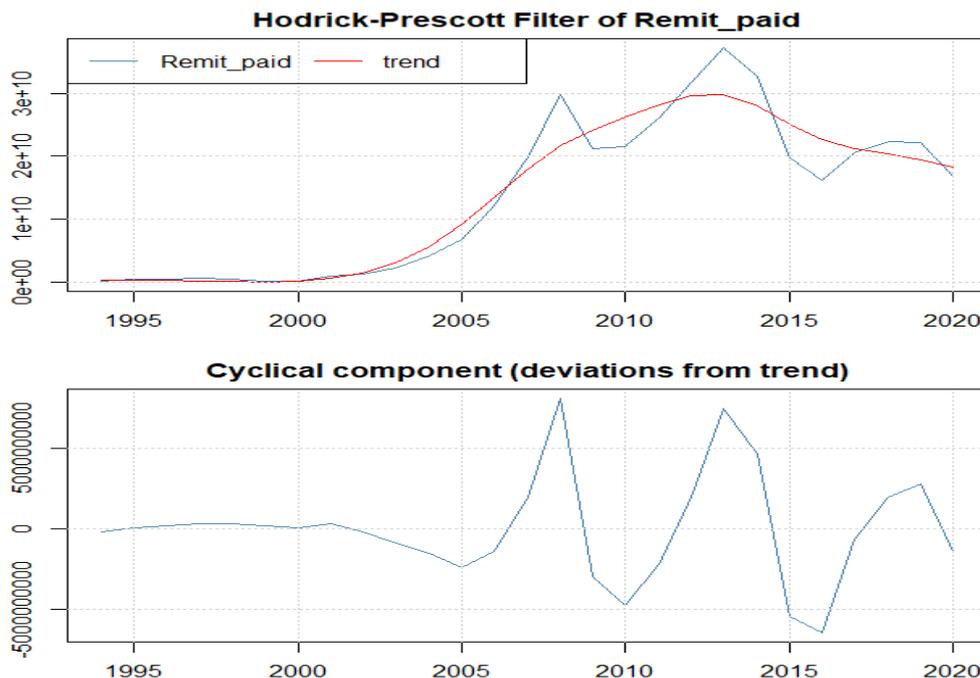
**Figure 3: Remittances in billion (US\$) from and to Russia (1994-2022)**

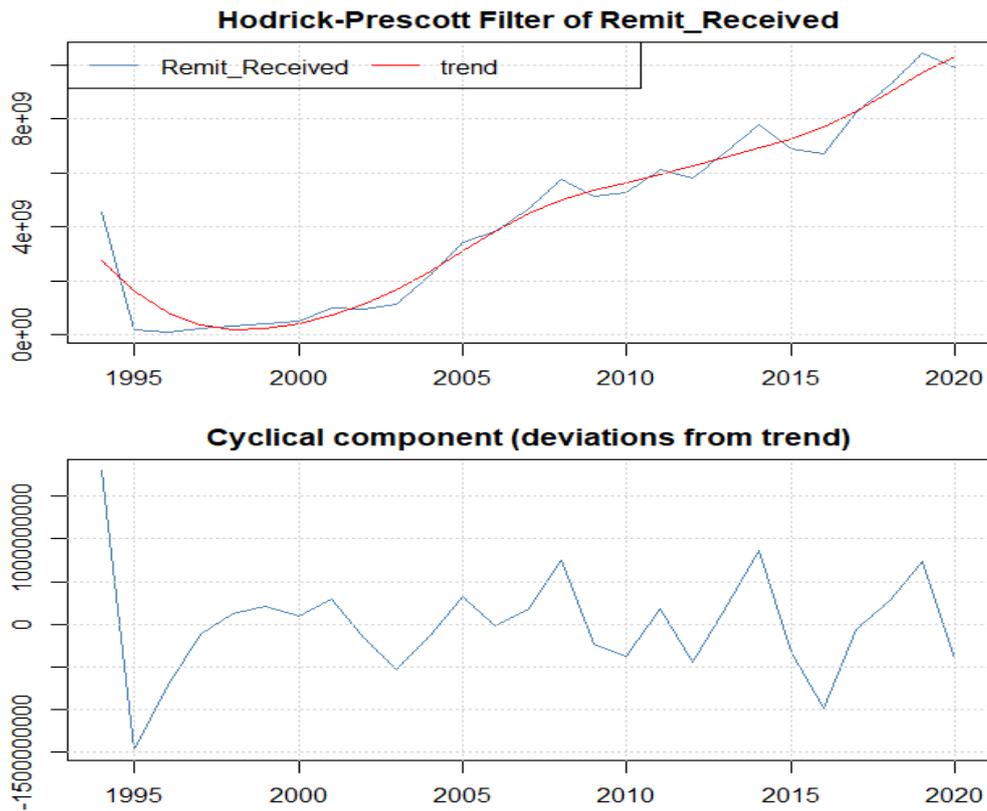


Source: World Bank (WDI, 2022).

Regarding the cyclical characteristics of remittances from and to Russia, Figure 4 reveals that there has been a sharp increase in remittances since the 2000s and this phenomenon is not unique to Russia. In this sense, Makhoulf (2013) argued that this trend is observed in most countries and explains it by the fact firstly that there is more control over remittances after the 9/11 attacks, and secondly by an improvement in the accounting of remittances in the balance of payments.

**Figure 4: Cyclical component of Remittances from and to Russia**





Source: World Bank and authors' calculations.

#### 4. Some concluding remarks and economic implications

The 2022 Russian invasion of Ukraine received widespread international condemnation, including a bevy of sanctions placed on Moscow. The United States and Europe are employing a powerful tool to attempt to push back against Russia, a prompt set of financial sanctions packages meant to shock the country's economy and hamstring its access to financial resources. These sanctions will cause devastating impact that will not be limited to Russia. Through international sanctions, remittances from Russia to developing countries will be reduced or even blocked and this will affect many families. In the opposite direction, the Russian migrants will be cut off from Russia and this may affect their families. This border war, in fact, affects many countries through migration and remittances. International migration contributes to the improvement of living conditions in the countries of origin, it can also contribute to its development. The war in Ukraine will cause losses beyond the conflict areas, especially through remittances. The effects of sanctions on remittances can be categorized into two types: short-term and long-term effects.

Short-term effects are directly related to the fact that banks will eventually be unable to perform their international functions, and this will exert a significant influence on formal remittances. Moreover, the slowdown of international flights to Russia may have an effect on informal remittances. In this context, some financial experts and analysts stated that Russian entities are preparing to blunt some of the worst effects by making deals with cryptocurrencies. But evading sanctions isn't easy as it may be believed. The theory of operating in the face of sanctions by shifting over to cryptocurrencies runs into several limitations when confronted with reality. Russia's size may in fact be one of the major obstacles because large multinationals generating billions in revenue would not be able to efficiently make the switch. Simply, there is not enough volume and liquidity within cryptocurrency markets to meet the daily needs of the Russian economy. Interestingly, the blockchain, the technology behind Bitcoin and other cryptocurrencies, is a public ledger of activity. This means that it is possible to track the movements of funds from one account to another. Also, it is hard to actually buy anything with cryptocurrencies. In fact, the extremely volatile and the speculative behavior of Bitcoin may allow market participants to deal with sanctions in a short time span. But traders, investors and individuals should be mindful that scandals are rampant in the Bitcoin ecosystem. Bitcoin is highly volatile and risky asset, a characteristic that may be taken against Bitcoin, and as being a store of value.

In the long term, economic sanctions will necessarily lead to a decline in economic activity which may adversely affect migrants' work and therefore their remittances. Besides, these developments have major implications not only for Russia's economy but for the world; there is pure contagion if there is a risk of high inflation and tightening of global financial conditions.

Last but not least, it is well known that remittance systems serve the socio-economically vulnerable populations. This means that when they are cut off, real-life suffering ensues. This highlights the utmost prominence to rethink foreign policy when it comes to the financial sector. It seems also important to add that this war will affect migratory movements linked directly to the conflict in the short-term, and in the long-term linked to the harmful social and economic consequences generated by this war. OECD countries should prepare for new waves of migration, mainly from Eastern Europe.

## References

- Antonopolous, P., Nunes, P. dos R., & Cottle, D. (2019). "Circumventing sanctions: Venezuela's turn to cryptocurrencies." In M. S. Bisson (Ed.), *Venezuela in Focus: Economic, Political and Social Issues* (pp. 71-103).
- Bouri, E., Jalkh, N., Molnar, P., & Roubaud, D., (2017). "Bitcoin for energy commodities before and after the December 2013 crash: diversifier, hedge or safe haven?" *Applied Economics*, 49 (50), pp. 5063-5073.
- Chami, R, Fullenkamp, C., & Jahjah, S. (2005). "Are immigrant remittance flows a source of capital for development?" *IMF Staff Papers*, 52(1), 55-81.
- Dinarte, L., Jaume, D., Medina-Cortina, E., & Winkler, H. (2021). "Not by Land nor by Sea: The Rise of Formal Remittances during COVID-19." In Crawford School of public policy, *Australian National University Seminar*.
- Dyhrberg, A. H., (2016). "Hedging capabilities of Bitcoin. Is it the virtual gold?" *Finance Research Letters*, 16, pp.139-144.
- Edelbloude, J., Sers, C. F., & Makhlouf, F. (2017). "Do remittances respond to revolutions? The Evidence from Tunisia." *Research in International Business and Finance*, 42, 94-101.
- Farzanegan, M. R., & Fischer, S. (2021). Lifting of International Sanctions and the Shadow Economy in Iran—A View from Outer Space. *Remote Sensing*, 13(22), 4620.
- Farzanegan, M. R., & Hayo, B. (2019). "Sanctions and the shadow economy: empirical evidence from Iranian provinces." *Applied Economics Letters*, 26(6), 501-505.
- Farzanegan, M. R., Khabbazan, M. M., & Sadeghi, H. (2016). "Effects of oil sanctions on Iran's economy and household welfare: new evidence from a CGE model." In *Economic welfare and inequality in Iran* (pp. 185-211). Palgrave Macmillan, New York.
- Gharibnavaz, M. R., & Waschik, R. (2018). "A computable general equilibrium model of international sanctions in Iran." *The World Economy*, 41(1), pp. 287-307.
- Lucas, R. E. B., & Stark, O., (1985). "Motivations to Remit: Evidence from Botswana." *Journal of Political Economy*, University of Chicago Press, 93(5), pp. 901-918.
- Luther, W.J. & Salter, A.W., (2017). "Bitcoin and the bailout." *The Quarterly Review of Economics and Finance*, 66 (C), pp. 50-56.
- Makhlouf, F. (2013). "Transferts de fonds vers le Maroc, enjeux, comportement et impacts." (Doctoral dissertation, Pau). Available at: <https://scanr.enseignementsup-recherche.gouv.fr/publication/these2013PAUU2004>
- Makhlouf, F., & Mughal, M. (2013). "Remittances, Dutch disease, and competitiveness: a Bayesian analysis." *Journal of Economic Development*, 38(2), pp. 67-71.
- Makhlouf, F. (2019). "Is productivity affected by remittances? The evidence from Morocco." *Journal of International Development*, 31(2), pp. 211-222.
- Makhlouf, F., & Kasmaoui, K. (2017). The impact of oil price on remittances. *The Journal of Energy and Development*, 43(1/2), pp. 293-310.

- Makhlouf, F., & Kasmaoui, K. (2020). "Remittances and business cycle in Morocco." *Economics Bulletin*, 40(2), pp. 1431-1445.
- Neuenkirch, M., & Neumeier, F. (2015). "The impact of UN and US economic sanctions on GDP growth." *European Journal of Political Economy*, 40, pp. 110-125.
- Popper, N. (2015) "Digital Gold: The Untold Story of Bitcoin" London, UK: Penguin.
- Selmi, R. Mensi, W., Hammoudeh, S., & Bouoiyour, J., (2018a). "Is Bitcoin a hedge, a safe haven or a diversifier for oil price movements? A comparison with gold." *Energy Economics*, 74 (C), pp. 787-801.
- Selmi, R., Tiwari, A-K., & Hammoudeh, S., (2018 b). "Efficiency or speculation? A dynamic analysis of the Bitcoin market." *Economics Bulletin*, 38(4), pp. 2037-2046.
- Swamy, G., (1981). "International migrant workers' remittances: Issues and prospects." *Working Paper No. 481, the World Bank*, Washington, DC.