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The SWIFT System and Its Role in the 2022 Russo-Ukrainian War

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“No matter what political reasons are given for war, the underlying reason is always economic”

-Alan John Percivale Taylor

Abstract

SWIFT is the most important financial messaging provider all around the world, enabling thousands of institutions in hundreds of countries to reach out each other on its network, in order to send and receive payments related to any cross-border activity. Because of its international recognition and importance, SWIFT bans have been employed to sanction countries whose unlawful behaviours were deemed as particularly relevant and worth to be seriously punished.

SWIFT has been a trending topic in the first half of 2022 (since the outbreak of the Russo-Ukrainian war), and it has played the leading role in many debates. This paper aims at clarifying the crucial function that SWIFT has within the international financial community, investigating the reasons that have made it so popular and explaining how SWIFT sanctions work, why they are employed, and what are their effects on the sanctioned countries' economies. The discussion will focus on the most recent application of SWIFT sanctions, that is, the ban given to Russian institutions in order to try and limit Russia's military invasion of Ukraine. This paper tries to understand why the impact of these sanctions on Russian economy has been dramatically severe, by comparing and analysing data relative to important economic indicators (e.g., GDP, inflation rate…) before and after the imposition of the sanctions.

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Introduction

On February 24, 2022, Russia launched a full-scale invasion of Ukraine, thus exacerbating an ongoing (froze) conflict that began in 2014. As western countries saw this attack as a potentially dangerous threat to the current world order, they decided to impose heavy financial sanctions on Russia in order to punish its unlawful behaviour. Among all the punishments enforced, one in particular drew special attention due to the issues and disputes it sparked. This one sanction was the imposition of a SWIFT ban on many Russian institutions. Because of the importance of SWIFT to the worldwide banking community, and the ramifications of being cut off from the system, the decision to apply such a sanction was initially regarded a very delicate and contentious matter, and many western countries were initially hesitant and dubious. Therefore, it's only natural to question what SWIFT is and why it's so vital to the global economy.

The first chapter aims at conveying the essence of SWIFT. The goal is to explain what SWIFT is, also taking into account the evolution of this company from the very first time it began operations to current days. Quantitative data relative to SWIFT usage are shown and analysed, in order to demonstrate the crucial role that the network plays in international financial relationships. Furthermore, the discussion examines how SWIFT operates and how it is managed, owned, and controlled, aiming at explaining which entities have the power to make decisions over the company's activities, also with respect to the imposition of sanctions.

The last paragraph of the first chapter serves as an introduction to the second one. The second chapter analyses indeed SWIFT sanctions in detail, with an emphasis on Russia. After an overview of the historical background is given, an analysis of SWIFT in the history of financial sanctions is carried out. Specifically, the assessment focuses on Iran: the reasons why Iran was sanctioned with a SWIFT ban are presented, and the impact of such sanctions on Iranian economy is evaluated. Afterwards, the attention goes back to Russia: the concerns initially raised by some western countries are explained, and the short-term effects of the sanctions on Russian economy are assessed. Finally, an analysis of the potential future implications of the SWIFT ban on Russia is given.

Chapter 1: The SWIFT System

The Society for Worldwide Interbank Financial Telecommunications (SWIFT) is a global member-owned cooperative of financial institutions whose primary and most important role is to ensure the secure exchange of proprietary data related to all international monetary transactions carried out between all network participants. More specifically, *"[The] object of the company is for the collective benefits of the members of the company and their affiliates and branches, the study, creation, utilisation and operation of the means necessary for the telecommunication, transmission, and routing of international private proprietary financial messages between the members of the company*[1]*"*. As pointed out by Scott and Zachariadis in their paper "Origins and development of SWIFT", it is important to draw attention to the fact that SWIFT is solely responsible for providing the platform, products, and services that allow member institutions to connect and exchange financial information. SWIFT is not a payment system, nor it is a bank. It does not manage accounts on behalf of its customers, and it does not hold funds. SWIFT does not initiate transfers, nor it clears or settles payments.

Headquartered in La Hulpe, Belgium, SWIFT has 26 offices located in Australia, Austria, Brazil, China, France, Germany, Ghana, Hong Kong, India, Indonesia, Italy, Japan, Kenya, South Korea, Malaysia, Mexico, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, UAE, and the United Kingdom. It spans every continent, serving nowadays not less than 11.000 institutions in more than 200 countries.

1.1 Shareholding Structure and Board of Directors

"SWIFT is a cooperative society under Belgian law and is owned and controlled by its shareholders[2]*"*. The approximately 3500 shareholding institutions are given the power to elect a Board of Directors consisting of 25 independent directors who are tasked with managing the company and ensuring compliance with the SWIFT governance policy in order to maintain the organization's neutral, global character. The SWIFT Board of Directors delegates the day-to-day management of the Company to the Chief Executive Officer (CEO), Mr. Javier Pérez-Tasso.

[1] Organisation Bylaws for Society for Worldwide Interbank Financial Telecommunication (SWIFT), July 14 1972 provided by SRI (Stanford Research Institute), SRI Report accession No. L050042).

[2] SWIFT. "Organisation & Governance"

Nominee rights are assigned to shareholders according to their country's number of SWFT shares (allocated according to the message traffic over SWIFT's network). This seeks to achieve a specific Board composition that accurately reflects SWIFT's messaging user community.

In fact, according to their ranking in terms of number of shares: for each of the top six nations, the shareholders of each nation may collectively propose two Directors for election (the number of Directors proposed in this way must not exceed 12); for each of the ten following nations the shareholders of each nation may collectively propose one Director (the number of Directors proposed in this way must not exceed 10); the shareholders of all other nations may collectively propose up to 3 Directors (according to SWIFT By-laws, as amended by the General Meeting on June 11 2020).

The current composition of the Board of Directors views two directors each from the U.S., the U.K., France, Belgium, and Switzerland. Others are from Russia, the Netherlands, Spain, South Africa, Singapore, China, Italy, Sweden, Luxembourg, Canada, Australia, Germany, Japan, and Hong Kong.

1.2 The History of SWIFT

1.2.1 The General Background

The use, impact and relevance of telecommunications and network innovations in banking can be traced back to the late 1840s, when the newly developed electrical telegraph enabled faster inter-market communications, reducing differences in securities prices between different distant stock exchanges in the United States, thus improving the efficiency of security markets. Further advancements in the field of financial telecommunications led to the creation of the first teleprinter exchange (Telex) network, a system that allowed communications related to the transfer of funds between financial institutions, both domestically and internationally.

Telex's popularity grew quickly because of the opportunity to internationalise transactions it provided. As a result, a significant number of institutions (ranging from banks to stock exchanges, as well as subscribers from other industries) began to join the network, and by the end of the 1970s, there were estimated to be more than one million users worldwide. The Telex network though proved itself to be ineffective in adequately meeting the needs of its large participant base in a timely, cost-effective, and reliable (from a security perspective) manner. Moreover, Telex operated in a non-standardised way: message senders had to describe every transaction in words, which the receiver then had to interpret and perform. This procedure was very likely to generate substantial human error rate and slowed processing times.

While being aware of the potential of the Telex (or of a Telex-like) system, the major financial institutions which managed the network noticed those weaknesses. For this reason, the aforementioned institutions set as a priority the development of a common messaging system capable of increasing the volume of cross-border payments while maintaining – and even improving – transaction speed and reliability. The pursue of this objective paved the way for the SWIFT system to arise and thrive.

1.2.2 The Origins

By 1971, the common willingness to improve and promote the smooth functioning of the Telex network led 68 banks in 11 countries within Western Europe and North America to concretely investigate, by carrying out two feasibility studies, the possibility of setting up such an international communications network. On May 3, 1973, the Society for Worldwide Inter-bank Financial Telecommunication (SWIFT) was founded as a co-operative non-profit organisation.

It was headquartered in Belgium: the choice of this location was driven by Belgium regulatory, legal, and fiscal advantages. By the time SWIFT initiated operations in 1977, 518 institutions from 22 countries were connected to SWIFT's messaging services. The strong collaborative effort of all the participants permitted rapid improvements in the technical network design, allowing the system to run more smoothly as volume of messages sent was increasing.

SWIFT's relevant role was clear from the very beginning. Indeed, by February 1979, the network was processing more than 120000 messages per day. SWIFT provided its members with several advantages including faster messaging, lower costs, higher volumes, more secure and reliable transactions, and standardisation of message formats (standards were developed to enable a common interpretation of data across linguistic and systems barriers as well as the automatic transmission, receiving, and processing of communications between users). For these reasons, SWIFT's popularity grew rapidly and in 1983 the SWIFT community consisted of more than 1000 users from 52 countries. The network also experienced the entrance of the first Asian countries, namely Hong Kong and Singapore. In 1987, SWIFT further expanded the user base by including broker dealers, exchanges, central depositories and clearing institutions.

1.2.3 The 1990s and the 2000s

By the end of 1992, SWIFT membership had risen to 3500 members. With the introduction of the Internet and the ensuing rapid technical progress, worldwide acknowledgment of the network's reliability grew even further.

SWIFT was indeed able to employ the new technologies to improve the delivery of efficiency advantages to its participants. As a matter of fact, by the end of the 90s SWIFT had lowered its prices for its users, increased financial industry automation, and was well prepared for the euro's adoption.

The SWIFT community kept on growing at a significant rate, and by 2009 more than 9000 users from more than 200 countries and territories were connected, exchanging roughly 3.76 billion messages per year. SWIFT continued launching innovative products, increased security and further reduced prices exploiting economies of scale. SWIFT also entered into regional integration projects such as SEPA ("Single Euro Payments Area", a transfer standard used within the European Union aimed at harmonising the way in which cashless payments are transacted between Euro countries) and TARGET2 ("Trans-European Automated Real-Time Gross Settlement Express Transfer System", a payment system owned and operated by the Eurosystem designed to process large-value payments and used by both central banks and commercial banks) in Europe, and opened offices in Brazil, Mumbai, Dubai and Johannesburg.

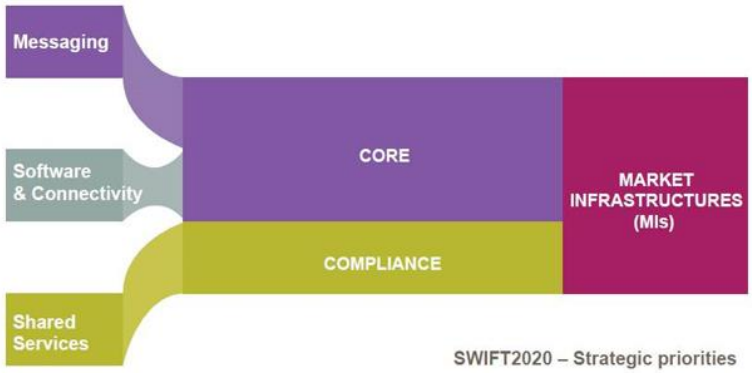
1.2.4 SWIFT Today

In 2014 SWIFT launched its first ever truly local joint venture (SWIFT India) to serve the (huge) domestic traffic of the Indian community. In the same year, a new operating centre in Switzerland added another level of resilience, thereby completing the Distributed Architecture programme[3]. SWIFT also managed to reduce even more the costs of its participants– for instance by reducing FIN messaging prices by 50% between 2010 and 2015.

SWIFT intends to maintain a laser-like focus on its core business while also increasing its financial crime compliance portfolio and Market Infrastructures solutions (consistently with the SWIFT2020 strategy- see Figure 1 below).

[3] *"Under its Distributed Architecture programme, SWIFT introduced two processing zones, the European zone and the Trans-Atlantic zone, with separate operating centres storing the message traffic for each zone. This architecture has allowed SWIFT to increase processing capacity, as well as enhance resilience and security"*. SWIFT. "Intelligent Innovation", Sibos (1 October 2014).

Figure 1- SWIFT2020 strategy "Grow the core, build the future"



Source: SWIFT. "SWIFT2020: from planning to execution

As SWIFT worldwide relevance keeps on being recognised by a significantly increasing number of institutions, at the end of 2020 its community consisted of 11588 institutions. Figure 2 highlights the number of institutions participating in SWIFT, displaying the most relevant countries in terms of participation rate as separate from the "Global" section gathering all the countries (more than 200, including those explicitly listed in the table) hosting at least one SWIFT member. With participation being a widespread phenomenon, it is worth noting that the United States has the most participating institutions (1273), while Europe has the most overall members (3691), accounting for 32 percent of total SWIFT involvement, the highest among all continents (these data are consistent with the founding composition of the network, that featured North American and Western Europe countries).

Because of the huge and increasing number of network users, SWIFT has had to continuously improve its technological infrastructure in order to allow the smooth functioning of the communication system. By December 2020, SWIFT had indeed to be efficient enough to process more than 9.5 billion messages per year with an average of 37.7 million messages per day (Figure 3).

1.3 SWIFT Messaging Services

As previously highlighted, the main and most important role of SWIFT is that of message carrier. SWIFT connects banks, custodians, investment institutions, central banks, market infrastructures and corporate clients, allowing them to accomplish common business procedures such as making payments or settling trades by exchanging structured electronic messages. SWIFT carries out this task throughout its Internet protocol-based messaging platform, SWIFTnet. This single-window environment run on SWIFT's secure Internet protocol network is designed to address the various and sophisticated communications requirements of financial services firms.

SWIFTnet provides for all these specific needs with its four complementary messaging services, namely FIN, InterAct, FileAct, and Browse (also known as WebAccess).

Figure 2- Participation in SWIFT by Domestic Institutions

2020	Total number of SWIFT users	Of which: members	Of which: sub-members
	(units; end of year)		
Argentina	55	19	8
Australia	146	12	73
Belgium	154	26	47
Brazil	115	24	29
Canada	126	17	43
China	540	53	151
France	608	58	105
Germany	583	107	129
Hong Kong SAR	289	24	181
India	123	36	46
Indonesia	85	28	14
Italy	246	61	65
Japan	279	111	74
Korea	120	18	45
Mexico	64	18	16
Netherlands	192	23	41
Russia	314	75	32
Saudi Arabia	79	13	24
Singapore	235	9	150
South Africa	128	10	22
Spain	226	27	56
Sweden	71	9	10
Switzerland	385	93	58
Turkey	69	30	16
United Kingdom	843	95	233
United States	1,273	127	238
Global	11,588	2,372	3,159

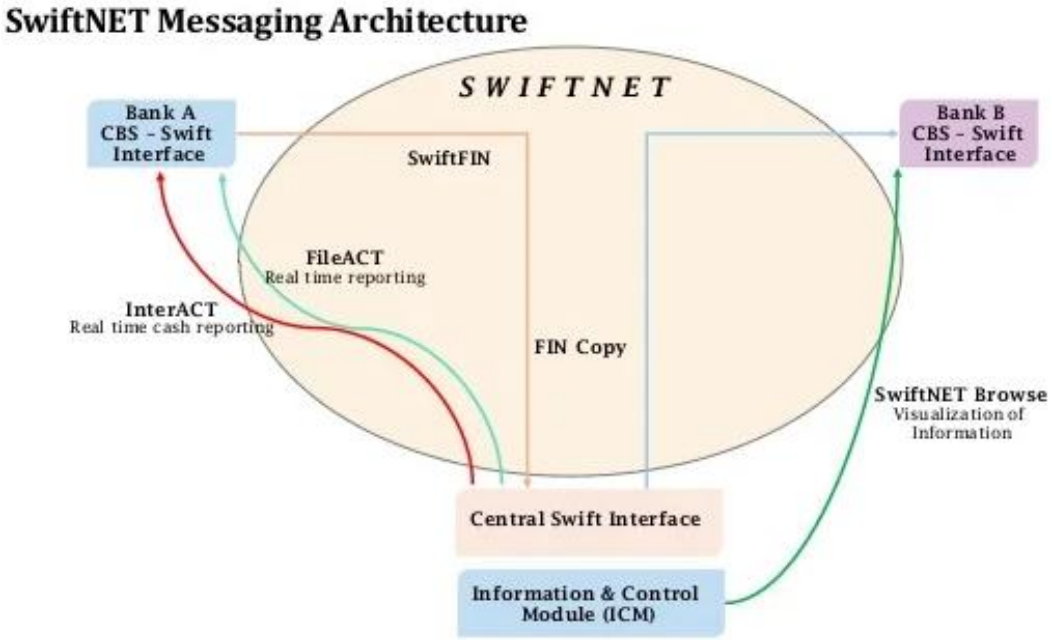
Source: BIS ("Bank for International Surveys") Statistics Explorer: Table PS5

Figure 3- SWIFT message flows to/from domestic institutions

2020	Total number of SWIFT messages sent	Of which: category I SWIFT messages sent	Of which: category II SWIFT messages sent	Total number of SWIFT messages received	Of which: category I SWIFT messages received	Of which: category II SWIFT messages received	Number of domestic messages
	(thousands)						
Argentina	4,600	1,291	69	3,230	736	33	550
Australia	217,152	29,679	10,172	179,867	28,950	12,063	73,951
Belgium	783,903	11,949	6,202	325,916	11,929	7,851	42,310
Brazil	32,289	2,959	372	11,181	2,682	400	324
Canada	111,766	20,911	8,753	103,966	22,580	10,544	21,890
China	60,637	15,363	7,451	83,211	32,497	9,595	6,308
France	426,867	37,988	21,125	575,350	32,984	15,121	99,979
Germany	530,434	69,617	38,048	552,848	66,807	39,367	95,258
Hong Kong SAR	319,981	31,149	18,529	282,839	33,237	23,569	90,769
India	43,415	6,682	1,667	39,158	14,398	3,096	2,488
Indonesia	38,847	3,542	768	26,063	3,935	390	5,801
Italy	143,121	15,313	5,390	138,286	17,987	4,657	33,177
Japan	219,715	12,617	8,119	141,692	12,213	10,374	37,645
Korea	83,209	9,050	2,527	65,617	7,009	1,721	8,687
Mexico	25,936	4,698	764	19,439	4,454	2,052	3,440
Netherlands	118,856	11,336	5,119	165,904	11,330	2,132	43,411
Russia	142,809	96,689	1,767	135,304	94,991	2,513	111,943
Saudi Arabia	25,337	11,096	456	16,531	2,930	577	3,483
Singapore	141,179	17,834	9,268	143,098	14,859	8,187	42,098
South Africa	142,711	10,584	3,679	132,263	11,838	4,681	92,456
Spain	133,436	12,034	7,125	105,569	12,535	5,247	21,060
Sweden	129,897	11,001	5,155	112,665	13,363	6,540	25,846
Switzerland	238,005	18,806	7,586	343,034	17,605	6,870	52,667
Turkey	56,337	8,882	2,962	41,096	12,041	2,718	9,572
United Kingdom	1,559,173	188,718	71,737	2,164,575	175,426	50,871	490,312
United States	1,879,599	188,572	79,491	2,215,205	182,726	108,624	895,566
Global	9,526,542	1,130,142	407,599	9,526,542	1,130,142	407,599	2,631,484

Source: BIS Statistics Explorer: Table PS6

Figure 4- SWIFTnet with its four messaging platforms



Source: SlideShare. "An introduction to SwiftNet"

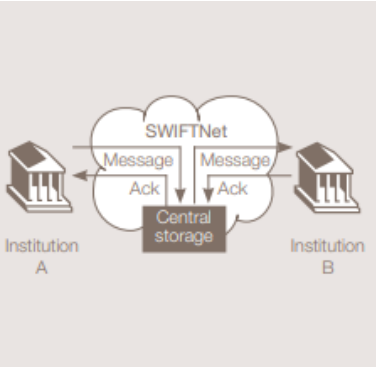
1.3.1 FIN messaging

FIN is the longest established and core messaging service offered by SWIFT. It enables the exchange of messages formatted with the traditional SWIFT MT standards (a standard used for international payments, cash management, trade finance and treasury business, which is widely employed and accepted by the financial community). FIN permits financial institutions to send and receive messages on a message-per-message basis. As it works in store-and-forward mode, it guarantees an easy exchange of messages with many correspondents at a time, and to reach those institutions that may not be online at the time of transmission as well, thus removing the necessity for the online presence of the correspondent at the moment in which a message is forwarded (the message is indeed automatically delivered as soon as the recipient is ready to receive it).Therefore, FIN provides an ideal way to send individual instructions, confirmations, and reports to large numbers of institutions, regardless of their geographical locations or time zones.

FIN also offers additional important functionalities, namely: *user-selectable priority*, that allows senders to flag a message as important thus fostering a prompt response by the receiver; *delivery notification* and *non-delivery warning* make the sender able to keep track of the status of their messages; *online retrieval* offers users the possibility to retrieve all FIN messages they exchanged within the previous 124 days; *user broadcasts* permit to create broadcast messages to be sent to all other FIN users (or to a group of them); *FIN copy* empowers users to fully or partially copy selected FIN messages to a copy destination (T-Copy).

In addition, their delivery to the intended destination can be made conditional on approval by the copy destination (Y-copy). This feature is frequently used in relation to high-value payments clearing systems.

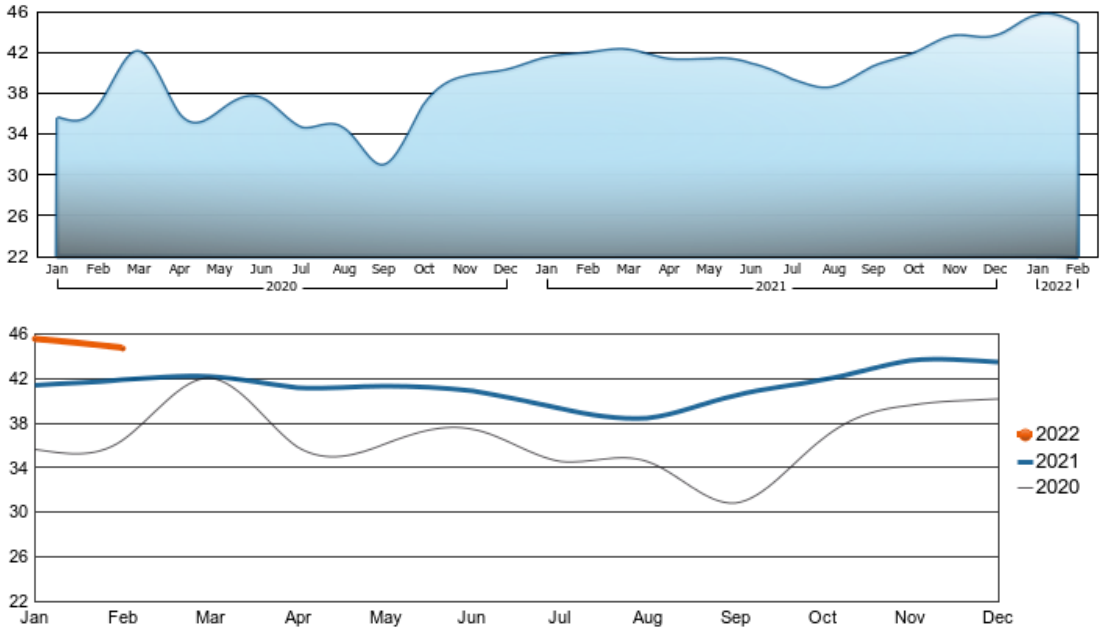
Figure 5- The store-and-forward mode



Source: SWIFT. "SWIFT messaging services", 2011

The global importance of FIN messaging can be demonstrated by looking at the daily flow of FIN messages in all markets (gathering payments, securities, and treasury markets as specified by SWIFT). Figure 6 shows the average volume of messages exchanged in 2020, 2021 and the first two months of 2022. The trend is clearly increasing; in fact, by February 2022 SWIFT is processing 45.9 million of FIN messages per day on average, with traffic growing by 8.4% with respect to the same period of 2021.

Figure 6- Average FIN traffic in all markets



Source: SWIFT. "FIN Traffic & Figures"

1.3.2 InterAct, FileAct and Browse services

The InterAct messaging service is similar to FIN in that it is used to convey confidential information between institutions. InterAct though offers an increased flexibility that goes beyond the store-and-forward mode. Indeed, its "Real-time messaging" and "Real-time query and response messaging" permit to contact the recipients that are online at the time of the transmission more quickly and directly than store-and-forward. Moreover, the InterAct service is based on MX message types (expressed in the flexible XML syntax) and developed in accordance with the ISO 20022 standard methodology [4].

FileAct enables financial institutions to transfer freely formatted files (up to a maximum size of 250 megabytes) in a secure and reliable manner. These files encompass a variety of content structures, ranging from bulk payments processing and cheque image transmission, to securities value-added information and very large reports, as well as other business areas such as central bank reporting or corporate-to-bank instructions and reporting.

Browse enables users to browse securely on financial online portals made available by financial institutions and market infrastructures on SWIFTNet, using standard Internet technologies and protocols. It blends the user-friendliness of web technology with SWIFTNet's security capabilities.

1.3.3 Other messaging products

SWIFT messages are widely used to exchange relevant information relative to payments, securities, FX contracts (namely, FX Forwards, Options, NDFs, cross-currency swaps and interest rate swaps), commodities, and Money Market instruments. The importance of the SWIFT network to these channels can be shown by taking the Foreign Exchange market as a case study. The FX market is the most important financial market in the world (the number of daily forex transactions registered in April 2019, according to the "2019 Triennial Central Bank Survey of FX and OTC derivatives markets" was 6.6 trillion). Each year, SWIFT processes more than 200 million MT 300 FX confirmations covering 160 currencies and not less than 1,200 currency pairs. Additionally, more than 70% of all FX confirmations are sent over the SWIFT network [5].

In order to serve all the markets efficiently, SWIFT offers some additional messaging products other than those previously described: namely, SWIFT Go and SWIFT gpi.

[4] ISO20022 is a universal ISO – International Organization for Standardization - standard for the exchange of financial data. It offers richer references and improved payment information with respect to its predecessors, and it widely used by many real-time low and high value clearing systems around the world

[5] Data retrieved on April 14, 2022 in SWIFT. "Messaging solutions for FX and treasury"

SWIFT Go enables SMEs and retail consumers to make low-value cross-border payments that are predictable, safe, fast, and easy, with costs that are transparent up front. "*SWIFT Go is part of our vision to enable anybody, anywhere, to send money instantly and securely around the world" (*Stephen Gilderdale, Chief Product Officer, SWIFT). SWIFT go has significantly improved the capabilities of banks to serve their customers in the rapidly growing small business and consumer segments. Indeed, SWIFT Go accounts for 41 million low-value cross-border payments a year.

SWIFT gpi (Global Payment Initiative) is similar to SWIFT Go in its essence, as it offers the possibility to make predictable, secure and fast cross-border payments. The main difference with SWIFT Go lies in the function served. SWIFT gpi accounts for all kinds of payments (not only low-value ones) occurring in several different market segments: banks, corporates, market infrastructures, capital markets. Currently, more than 4000 financial institutions execute every day $300 billion worth gpi payments made in over 150 currencies.

1.4 The functioning of SWIFT transactions

Because of the large volume of messages sent on its network every day, SWIFT must implement standardised methods to ensure the system's smooth operation, reducing and/or eliminating harmful mismatches and other causes of mistake. For this reason, SWIFT operates in compliance with the International ISO 9362 standard. This standard specifies the elements and structure of a universal identifier code, the Bank Identifier Code (BIC), for all financial institutions, thus making it possible to identify uniquely any member of the network

The BIC code is a uniquely generated string of either 8 or 11 characters, as it is shown in figure 7.

Figure 7- The BIC code

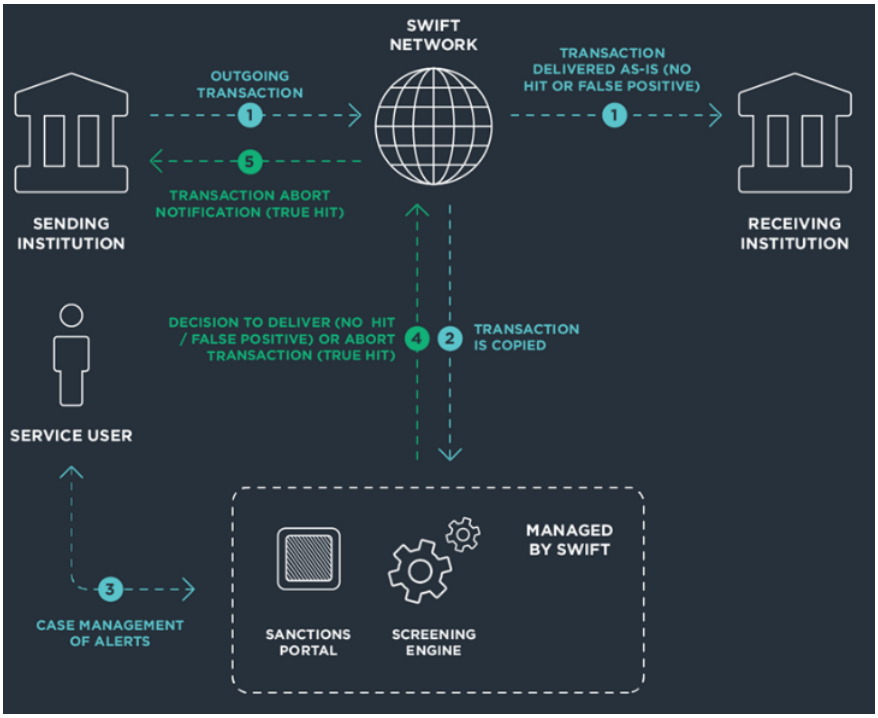
Source: TechnoKD

The bank is identified by the first four characters, the nation by the next two, and the location and status are defined by the last two necessary characters (the second digit of the location code means indeed "active code" i.e., the institution is currently active on the SWIFT network).

The last three characters “DDD” are optional, and their presence indicates a branch office. In order to better deliver the essence of the BIC code, it is possible to proceed with a practical example and look at the identifier of the Italian bank “Banca Mediolanum”. This institution is assigned the standard BIC code “MEDB IT MM 001”. MEDB represents the name of the bank, IT is the code for Italy, MM provides information about the location, in this case being Milan. The three-digit string “001” indicates that this specific code identifies a branch office of Banca Mediolanum, whose head office is characterised by the code “MEDB IT MM” (or equivalently, “MEDB IT MM XXX”).

Any SWIFT message specifies the BIC code of the sender and the receiver. Once the latter is sent a message, it can verify the identity of the former by looking at its BIC code. In this way, both participants involved in a transaction can be sure about the real identity of the counterparty. If both the sender and the receiver agree upon the reciprocal BIC codes, the transaction can be authorised and cleared. Any relevant information about the underlying transaction is sent as a FIN, InterAct or FileAct message, and must is verified by the SWIFT network in order to ensure the highest level of reliability.

Figure 8- Inside a SWIFT transaction



Source: Plaid. “FIN - What is SWIFT?”

1.5 Oversight

"*While SWIFT is neither a payment nor a settlement system, and is therefore not regulated as such by central banks or bank supervisors, it is subject to central bank oversight as a critical service provider. A large and growing number of systemically important payment systems have become dependent on SWIFT, which has thereby acquired a systemic character. As a result, the central banks of the G10 countries agreed that SWIFT should be subject to cooperative oversight by central banks. SWIFT has been subject to oversight since 1998*". These words open the "SWIFT Oversight" section of the "SWIFT Annual Review 2020", making it clear that the Central Banks belonging to the G10 group (composed by the Nationale Bank van België/Banque Nationale de Belgique, the Bank of Canada, Banque de France, Deutsche Bundesbank, Banca d' Italia, the Bank of Japan, De Nederlandsche Bank, Sveriges Riksbank, the Swiss National Bank, the Bank of England and the Federal Reserve System (USA) represented by the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York) together with the European Central Bank do have a crucial role in ensuring the smooth functioning of SWIFT.

It is important to point out that "*central banks are responsible for fostering financial stability and promoting the smooth operation of payment and settlement systems. As SWIFT is a messaging provider and not a payment system, central bank oversight of SWIFT […] focuses on its technical security, operational reliability, resilience, appropriate governance arrangements, and its having in place risk management procedures and controls* [6]". Therefore, the monitoring of SWIFT over those matters that are unrelated with financial stability is not under the competence of central banks. Consequently, central banks have no authority to oversee SWIFT compliance with data protection laws [7]. In 2012, the original arrangement of the overseeing group was reviewed, and the SWIFT Oversight Forum was set up. Oversight activity was then enlarged to a broader number of central banks of major economies: Reserve Bank of Australia, People's Bank of China, Hong Kong Monetary Authority, Reserve Bank of India, Bank of Korea, Central Bank of the Russian Federation, Saudi Central Bank, Monetary Authority of Singapore, South African Reserve Bank, Central Bank of the Republic of Turkey, Central Bank of the Argentine Republic, Central Bank of Brazil, Bank of Spain, Bank Indonesia, and Bank of Mexico. SWIFT's importance in the domestic economies of the newly included countries, whose central banks may have a legitimate interest in (or responsibility for) SWIFT oversight, prompted the extension of the original group.

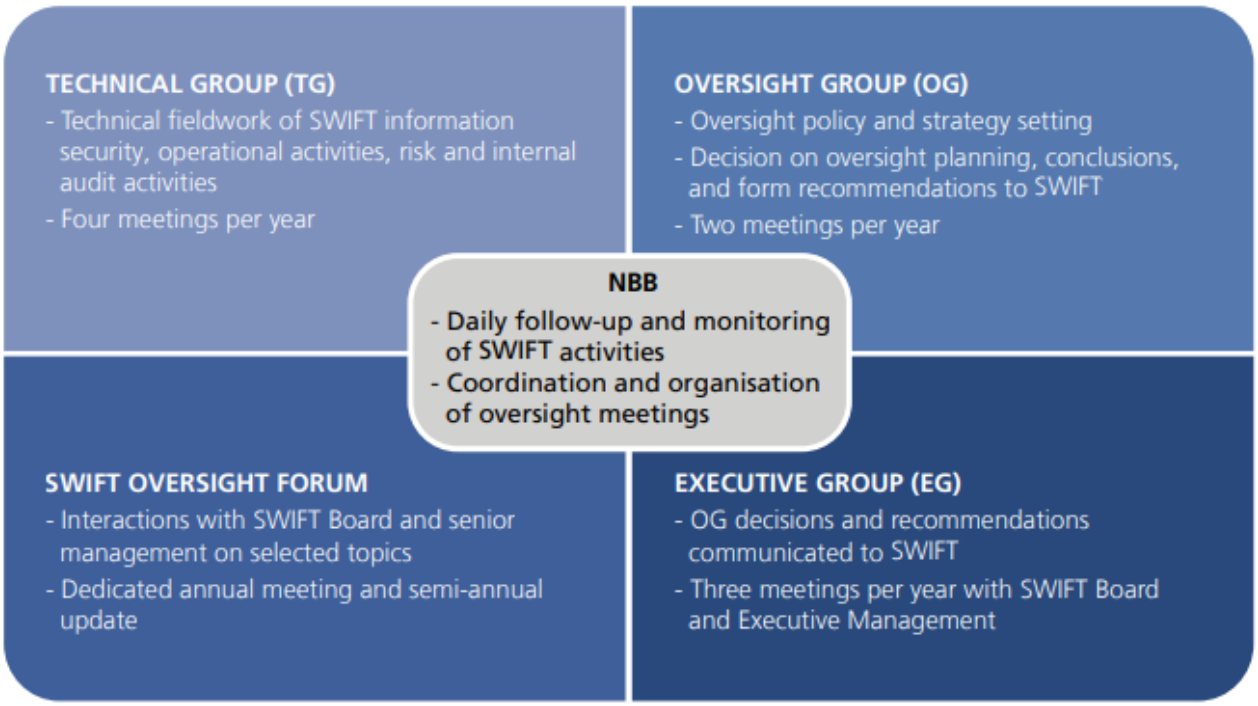
[6] ECB. "Remarks by the European Central Bank on the oversight of SWIFT", 1 February 2007

[7] In 2007, an opinion of the European Data Protection Supervisor (EDPS) found that the ECB should be held jointly responsible for SWIFT's failure to ensure that its co-operation with a secret US investigation into terrorist finances complied with European privacy laws. According to the ECB, the request would go beyond the allocation of legal responsibilities

Regardless of the new arrangement, the G10 group continues to be the last arbiter for critical decisions aimed at ensuring that SWIFT does not jeopardise financial stability and the soundness of financial infrastructures. As SWIFT is incorporated in Belgium, the National Bank of Belgium (NBB) acts as the lead overseer. Its role is to monitor SWIFT by organising trimestral specific meetings; the NBB has the duty to analyse relevant documents and reports (namely, Board papers, security audit reports, incident reports and incident review reports) and engage in constructive discussions with the SWIFT management, in order to assure SWIFT compliance with the oversight objectives (listed in the "SWIFT Oversight Protocol" signed by SWIFT and the NBB and approved by the G10 group) related to security, operational reliability, business continuity, risk identification, and resilience of the SWIFT infrastructure. The NBB shares with the other overseers all information that it deems relevant in order to ensure a transparent cooperative oversight with the other central banks.

Four different task groups with varied scopes have been established to better serve the oversight function: Cooperative Oversight Group (OG), Executive Group (EG), Technical Group (TG) and SWIFT Oversight Forum (SOF). The OG and the TG are made of the central banks of the G10. The EG consists of a sub-group of the G10 representing the four major global currencies, i.e., NBB as chair, Bank of Japan, Bank of England, European Central Bank, and Federal Reserve Board of Governors. SOF is the previously discussed group of central banks established in 2012. The functions of the different groups are synthetised in figure 9 below.

Figure 9- Cooperative Oversight of SWIFT through different international workgroups

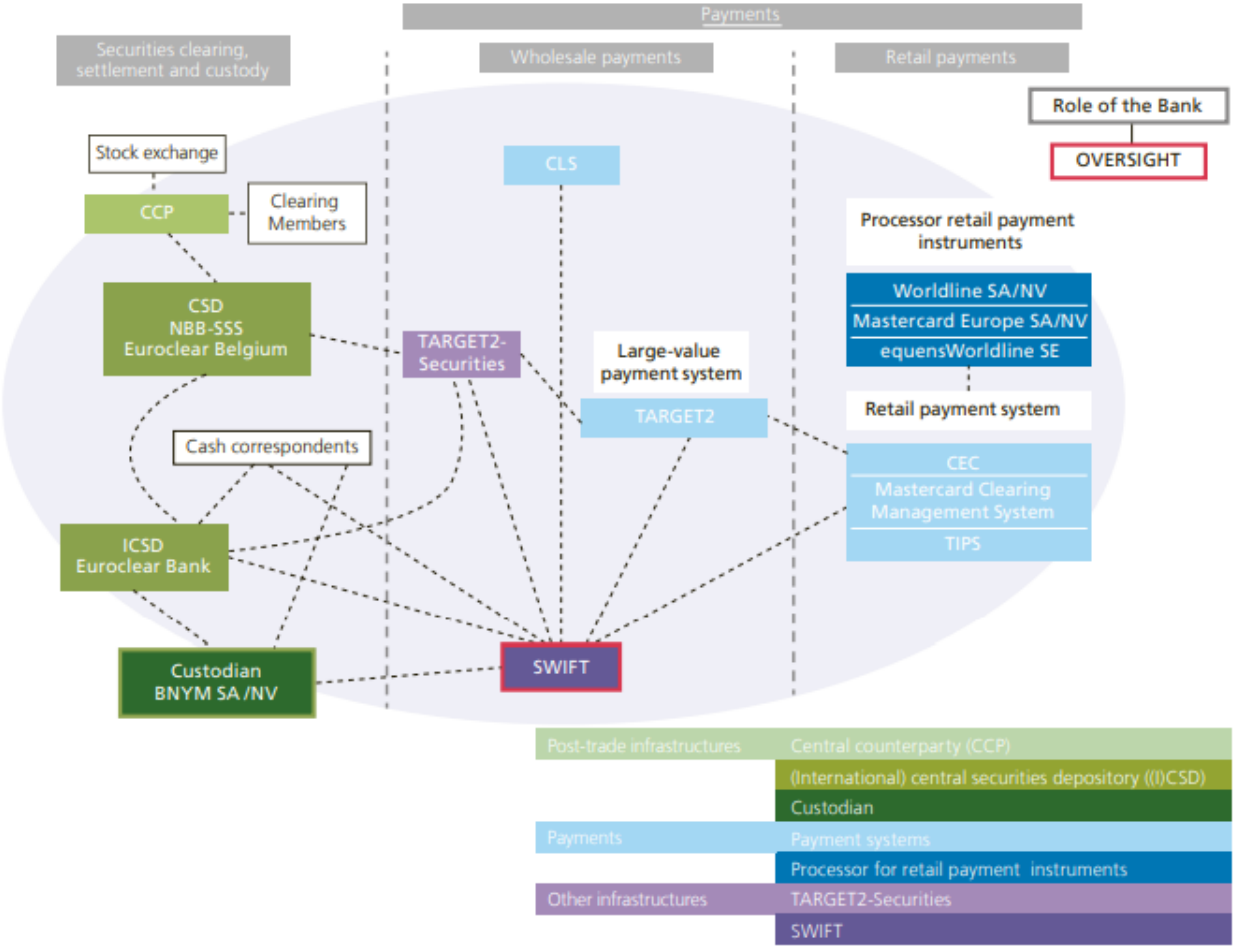


Source: NBB. "Financial Market Infrastructures and Payment Services Report 2021"

The oversight system happens to be very deep and well-structured. The reason why lies in SWIFT's crucial function as a major service provider to financial institutions and market infrastructures in the global financial industry. In fact, the G10 central banks have found out that such institutions and infrastructures systemically depend on SWIFT, so that they have classified SWIFT as "systemically vital".

The critical role of SWIFT in the financial industry is well represented in figure 10.

Figure 10- SWIFT critical role in the financial industry



Source: NBB. "Financial Market Infrastructures and Payment Services Report 2021". Chart 4

1.6 SWIFT and sanctions

SWIFT is governed by its Board of 25 independent directors and overseen by the G10 central banks and the ECB (and after 2012, also by the SWIFT Oversight Forum), with the NBB as the leading overseer. In order to ensure the global financial system's stability and soundness, the Board is committed to engaging in constructive, open, and regular conversation with supervision authorities as well as individual countries.

The pursue of this objective may require the implementation of specific sanctions in case certain financial crime laws are violated by SWIFT users. Moreover, such sanctions may also stem from the violation of general principles of national or international laws.

As a messaging service provider with a systemic global character, SWIFT has no authority to make sanctions decisions. It is solely up to the relevant government organisations and legislators to decide whether or not to impose or withdraw sanctions on particular entities or even countries. The ultimate decision rests with SWIFT (and with its oversight structure) so that, in line of principle, it could deny to sanction (or to lift a sanction to) its targeted user(s). It is important to keep in mind though the neutral character that SWIFT embodies. Because of its neutrality (and in order to be consistent with this intrinsic nature) SWIFT must comply with the judgements made by the reference competent legislator. Further clarifications must be done upon the "reference" legislator. Indeed, as sanctions are imposed independently in different jurisdictions around the world, SWIFT cannot arbitrarily choose which jurisdiction to follow, neither it can comply with all jurisdictions. In order to face this problem, it has been found convenient to identify a single jurisdiction to comply with. Due to the fact that SWIFT is based in Belgium, it has been agreed that it will abide by Belgian legislation. Given that the latter complies with the Law of the European Union, ultimately SWIFT must be compliant with EU regulations. Therefore, all sanctions that are prescribed in EU Regulations must be enacted by SWIFT.

In exceptional circumstances only, when the integrity and the soundness of the global financial system is severely undermined, SWIFT may intervene directly and restrict certain customers' access to the network. "*In an isolated event in November 2018 SWIFT thus suspended certain Iranian banks' access to the messaging system. This step, while regrettable, was taken in the interest of the stability and integrity of the wider global financial system, and based on an assessment of the economic situation" [8].*

[8] SWIFT. "Does SWIFT expel banks?"

Chapter 2: SWIFT and the 2022 Ukrainian war

Because of the crucial role it plays in the international financial system and the fundamental support it provides to the global economy, SWIFT has had a significant importance in responding to some major events, concerning countries like Russia and Iran, that have occurred in recent years. The system indeed has always been taken into consideration when relevant economic sanctions had to be thought and imposed on countries violating important principles of the International Law.

The most recent SWIFT sanctions were imposed in response to Russia's invasion of Ukraine in 2022, while the first ever package of sanctions dates to 2012, to the detriment of Iran.

2.1 Historical background

The Russo-Ukrainian War is an ongoing war that began in 2014. The already tense and compromised diplomatic relationship of the two countries dramatically worsened after the outbreak of the "Maidan Uprising" (a wave of protests initiated by Ukrainian citizens harshly challenging the Ukraine Government decisions to establish closer ties with Russia and to appoint a filo-Russian president, Viktor Yanukovych). This wave of civil unrest culminated in the "Maidan Revolution" (February 2014), which saw President Yanukovych removed from power. In response to the revolution, filo-Russian riots erupted in some parts of Ukraine. Pro-Russian armed groups (unofficial organised groups acting on their own according to the Russian Federation, and Russian invaders according to the Government of Kiev) occupied the Ukrainian strategic territory of Crimea; the Government of Moscow decided to recognise Crimea as Russian territory and reinforced its (official) military presence on the peninsula in order to take control. Other demonstrations by pro-Russian groups in the Donbas region of Ukraine culminated into a war between the Ukrainian military and Russian-backed separatists of the self-declared Donetsk and Luhansk republics. The war then settled into a "frozen conflict", remaining as such until late 2021.

With the increasing expansion of NATO toward eastern Europe and Ukraine considering joining the alliance, a major Russian military build-up occurred around Ukraine's borders. After Russian President Vladimir Putin's requests to limit NATO intervention in eastern Europe were denied, on February 21, 2022, the Government of Moscow officially recognised the self-declared separatist republics of Donetsk and Luhansk, sending armed troops into those territories. Three days later, on February 24, Russia launched a full-scale invasion of Ukraine.

2.2 SWIFT and the War of Crimea

Russia was threatened with a SWIFT ban for the first time after the invasion of Crimea.

Crimea was officially recognised as Russian by the Russian Federation only, while the rest of the world refused to accept the peninsula's accession to the Russian territory as it was part of Ukraine. For this reason, at an international level, Russian occupation of Crimea was deemed illegitimate as it represented a violation of Ukraine's territorial sovereignty. Hence, the West started considering the imposition of sanctions on Russia to punish its unlawful behaviour.

The UK urged European leaders to consider barring Russia from using SWIFT: the Federation massively relied on the system for its cross-border transaction, so that such a sanction would dramatically impact Russia's economy. Indeed, the former Russia's finance minister Alexey Kudrin estimated that the exclusion from SWIFT would cause his country's gross domestic product to shrink by 5%. The cutoff not only would terminate all international transactions, but it would cause a sharp increase in currency volatility and massive capital outflows as well. Russia's Prime Minister at the time, Dmitry Medvedev, stated that a similar sanction would be equivalent to a declaration of war.

Fearing a massive escalation as a result of Russia's withdrawal from SWIFT, western governments chose not to pursue that option and instead imposed other (less severe) economic penalties on Russia.

2.3 The precedent: SWIFT and Iran

Russia's invasion of Crimea brought Western countries to evaluate the imposition of SWIFT sanctions on Moscow. Those precise sanctions were never implemented because they were thought to be far too harsh. The power of SWIFT sanctions indeed had been already proved when, in 2012, several Iranian banks were disconnected from the system.

2.3.1 The reasons behind the sanctions

The removal of Iran from the SWIFT system was designed to hamper Iran's ability to conduct international trade, thus exerting significant pressure on the country's efforts to obtain nuclear weapons. In 2012, the U.S. Department of Defense stated: "*In response to Iran's continued illicit nuclear activities, the United States and other countries have imposed unprecedented sanctions to censure Iran and prevent its further progress in prohibited nuclear activities, as well as to persuade Tehran to address the international community's concerns about its nuclear program.[…] a strong, inter-locking matrix of sanctions measures relating to Iran's nuclear, missile, energy, shipping, transportation, and financial sectors. These measures are designed: (1) to block the transfer of weapons, components, technology, and dual-use items to Iran's prohibited nuclear and missile programs; (2) to target select sectors of the Iranian economy relevant to its proliferation activities; and (3) to induce Iran to engage constructively, through discussions with the United States, China,*

France, Germany, the United Kingdom, and Russia in the "E3+3 process," to fulfil its nonproliferation obligations [9] ". These words capture the uncertainty that existed around the Iranian nuclear programme. Indeed, since it became public in 2002, the International Atomic Energy Agency (IAEA) was unable to determine the real intensions of the Government of Teheran i.e., whether the programme had solely peaceful purposes or if it was meant to develop nuclear weapons. For this reason, starting from 2006, the United Nations Security Council has adopted several resolutions requiring Iran to suspend all Uranium enrichment and processing activities as a precautionary measure. Indeed, such activities could be ambiguously meant both for civilian purposes and to build nuclear weapons.

In November 2011, the IAEA reported "*serious concerns regarding possible military dimensions to Iran's nuclear programme"* (IAEA. 2011, November 8. "Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran"). The publication of this report seriously worried many countries, that thus decided to exacerbate sanctions to Iran (also including the imposition of SWIFT sanctions).

2.3.2 Enacting the SWIFT sanctions

The 2011 IAEA report made it clear to many countries that a swift response to the situation was necessary in order to prevent a potentially significant nuclear threat. After many discussions took place, on March 15, 2012, the EU Council passed the "EU Regulation 267/2012", which prohibited specialised financial messaging providers from providing services to a list of Iranian banks.

As EU legislation is the relevant jurisdiction for SWIFT, the company had to act in compliance with the EU resolution and expelled from the system the 30 EU-sanctioned banks, including the Iranian Central Bank. The aim was to hamper their ability to conduct international business thus further isolating the country from the world economy.

2.3.3 The effects of SWIFT sanctions

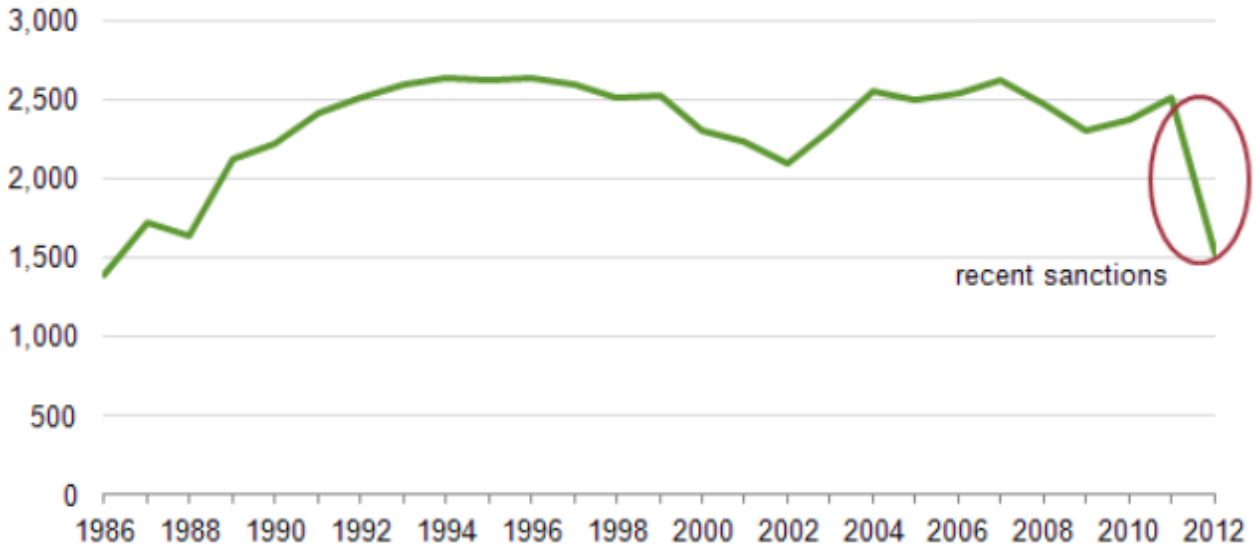
Year 2012 saw for the very first time in history the imposition of SWIFT-related sanctions. Because of their unexpected and unprecedented nature, these sanctions had a significant impact on Iran's economy.

[9] In accordance with the Treaty of Non-Proliferation of Nuclear Weapons (NPT). "The NPT is a landmark international treaty whose objective is to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament" (United Nations, Office for Disarmament Affairs).

After Iranian banks on the EU's blacklist were disconnected from SWIFT, then Israeli Finance Minister Yuval Steinitz expressed alarm about the sanctions, claiming that they would seriously impede Iran's ability to sell oil and import goods, having a dramatic impact on the country's GDP. With oil exports accounting for 80% of Iran's total export earnings and 50% to 60% of its government revenue, it is clear that the limitations to trade represented by SWIFT sanctions would seriously impact the economy of the country. And a drop in oil shipments is exactly what happened as a consequence of the sanctions.

Figure 11 depicts Iran's oil exports between 1986 and 2012, with a focus on 2012. While the trend has been relatively smooth across the time period under consideration, 2012 saw a significant reduction in oil exports, which fell to their lowest level since the beginning of the period (1.5 million barrels per day - a massive decline with respect to the 2.5 million barrels per day exported in 2011). Iran's 2012 net estimated oil export revenue was 69 billion USD, a considerable decrease from the 95 billion USD generated in 2011, just one year before.

Figure 11- Iran's exports of crude oil and condensate (1986-2012)



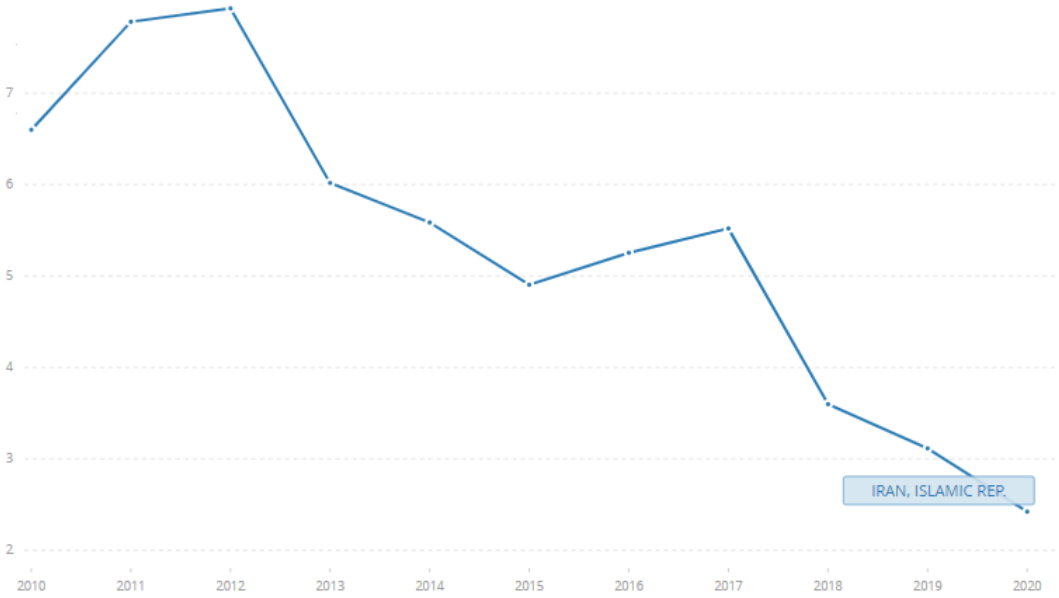
Source: U.S. Energy Information Administration, 26 April 2013. "Sanctions reduced Iran's oil exports and revenues in 2012".
Exports are measured in thousands of barrels per day

As previously mentioned, such a dramatic reduction in one of the main sources (if not the main source) of revenue for Iran significantly impacted the GDP of the country. By using data from the International Monetary Fund's World Economic Outlook Database, Mariam Majd (an Instructor of Economics at Stockton University, New Jersey, USA) empirically analysed the cost to the Iranian economy of the financial sanctions that included the removal of the country from the SWIFT network.

She found out that the total cost of sanctions to Iranian GDP in 2012-2015 was, on average, approximately 60.4 billion USD per year [10].

The overall welfare of the country, represented by the GDP per capita, was affected consequently. Figure 12 provides data relative to the Iran's GDP per capita during the decade 2010-2020, measured in thousands of 2020 USD. GDP per capita declined drastically from $7900 to $4900 during the period studied by Ms. Majd, indicating a considerable overall impoverishment of the country.

Figure 12- Iran GDP per capita



Source: World Bank national accounts data, and OECD National Accounts data files

2.4 2022 SWIFT sanctions on Russia

The full-scale invasion carried out by the Russian Army on February 24 represented the escalation of the ongoing conflict which began in 2014 with the Crimean War. Russia focused indeed its attention and military efforts on a wide area including Donbas (with the self-declared republics of Donetsk and Luhansk), the entire Azov Sea area, and some important and strategic cities such as Lviv, Mariupol, Kharkiv, Odessa and the capital city Kyiv.

[10] Majd, M. (2018). The cost of a SWIFT kick: Estimating the cost of financial sanctions on Iran (Chapter 9). In *The Political Economy of International Finance in an Age of Inequality - Soft Currencies, Hard Landings* (pp. 175-193). Gerald A. Epstein.

The ineffectiveness of the peace talks proposed by the Prime Ministers of France, Germany, and the United States, prompted the West to consider placing important sanctions on Russia in order to punish it as severely as possible for its illegal and anti-humanitarian conduct. Within the set of financial sanctions advanced by the United Nations, some country proposed to exclude certain targeted Russian banks from SWIFT. The strong impact that SWIFT restrictions had on the Iranian economy led major western governments to consider imposing similar penalties on Russia. The proposal was considered a significant countermeasure given the strong reliance of Russian institutions on SWIFT. According to BIS statistics (refer to figures 5 and 6), the 314 Russian SWIFT users account for 3% of the entire system, handling roughly $46 billion worth of foreign exchange transactions per day (80% of which denominated in USD) and exchanging the 1.5% of the overall messages sent. As a result, a SWIFT cutoff would have an even greater impact on Russian economy than what happened with Iran.

The severity of the potential impact on Russia raised some concerns as some countries - Germany, France, and Italy above all – were initially reluctant because of the risks that exclusion from SWIFT would entail.

2.4.1 Risks of exclusion

If the impact of SWIFT restrictions on Russian economy was massive, and the consequences were exactly those that Mr. Kudrin forecasted back in 2014 (that is, a large drop in GDP, increased currency volatility, capital flight and a run on banks reliant on foreign funding), then this situation would represent a serious threat for western countries, and it would jeopardise the financial and geopolitical relationships between Russia and the West.

The first, most direct consequence for the West would be closely related to Russia inability to conduct foreign transactions. This would lead western countries (and Europe in particular) to face a sharp increase in short term costs related to oil and natural gases imports. Russia heavily relies on SWIFT due to its massive hydrocarbon exports: the country is one of the main EU's trading partners, especially for the supply of natural gas (Russia supplies the 35/40% of Europe's natural gases imports). A SWIFT cutoff would make it harder for western governments to pay for their energy supplies and, at the same time, would make Russia reluctant to keep on providing such natural gases to hostile countries. As a result, Europe would face a severe shortage of oil and gas and would need to find alternative trading partners, with serious repercussions on the countries' import costs. Moreover, according to the Bank for International Surveys, European banks are among the biggest creditors to Russia. A SWIFT removal would curb Russia's ability to make repayments on its debt.

To sum up, the first major consequence for western countries would be a worsening of their economies as well.

Such sanctions may also harm SWIFT reputation. The company's own rules provide for the possibility to cut off banks involved in illegal activity, in compliance with EU legislation. But if it was used too frequently to sanction countries, SWIFT could be seen as an instrument of foreign policy. The imposition of additional sanctions could undermine SWIFT's declared neutrality and could represent a dangerous precedent for other countries, that may invoke SWIFT intervention for other conflicts. For example, Palestine asked for the exclusion of Iran from the system within the context of the Israeli-Palestinian conflict: the imposition of SWIFT sanctions on Russia could make the company under serious pressure as countries like Palestine would require a similar treatment. Overall, the EU would be in an awkward situation when deciding whether to support or oppose the aspirations of nations such as Palestine, in light of what happened with Russia.

Another potential risk for the West would be represented by the availability of decentralised financial technology, i.e., cryptocurrencies and the blockchain. Cryptocurrencies are indeed independent from traditional financial institutions, so that Russian banks may start transacting by using such currencies (especially Bitcoin) to evade financial sanctions. There are indeed some remarkable precedents of countries adopting cryptocurrencies to circumvent sanctions: Iran used Bitcoin to (successfully) bypass trade embargoes, while North Korea and Venezuela managed to elude financial sanctions by employing cryptocurrencies. These examples highlight the fact that cryptocurrencies (in particular, Bitcoin) can serve as a safe asset in times of economic and political uncertainties. Furthermore, unlike the centralised SWIFT network, decentralised crypto transactions are difficult to censor and/or block; this would aid Russia in circumventing financial sanctions, rendering western countries' efforts to stifle Russian banks' capacity to conduct foreign financial transactions ineffective.

Last but not least, Russia could adopt countermeasures that would significantly reduce its reliance on western financial infrastructures, thus distancing even more from the West. Indeed, alternatives to the common European Target2 payment system and to SWIFT might be developed both within Russian national borders and in cooperation with other eastern countries (such as China), thus marking an even clearer, more dangerous separation than the already existing one between the East and the West.

2.4.1.1 Alternatives to SWIFT

Since 2014, Russia has been developing multiple safeguards in order to reduce the danger and the economic impact of a SWIFT cutoff, fearing the (unenacted) threat of being kicked off the network after the Crimean War.

The Russian government promoted the introduction of the National Payment Card System known as "Mir", owned by the Central Bank of Russia. Mir is a clearing centre for processing card transactions within Russia, so that if Russian banks were removed from the Visa and MasterCard payment systems, they could still be able to process all domestic transactions. This payment system has been experiencing a significant growth over the last year, so that "*since 2014, Mir's share of operations has grown to 24 percent of all domestic card transactions, with more than 73 million cards using the Mir system issued* [11]".

In 2014, the Russian Central Bank also set up the "SPFS" (System for Transfer of Financial Messages) aiming at replicating the functions of SWIFT. As a matter of fact, SPFS is modelled after SWIFT in that it is designed to take over totally in the event of a SWIFT outage. While the system has so far been limited to use within Russia, the Russian government has been promoting it since its inception, particularly with the BRICS countries. As the reputation of the Russian system was growing, in 2019 Venezuela reportedly has been considering joining it, while Iran linked its newly developed "SEPAM" to the SPFS.

Another alternative to SWIFT would be represented by the Chinese Cross-Border Interbank Payment System "CIPS". Set up in 2015, it is not only a financial messaging system such as SWIFT, but a complete clearing, settlement, and payment system. Despite it still relies on SWIFT for cross-border financial messaging, CIPS can also be operated without SWIFT. A complete switch from SWIFT to CIPS would strengthen the financial ties between China and Russia, weakening at the same time ties between Russia and the western world.

Russia also approved the introduction of the digital rouble (a Central Bank Digital Currency, or CBDC), a digital currency which shares similar features with cryptocurrencies, but with a crucial difference: the CBDC is not a decentralised currency, it is under direct control of national authorities (in this case, under Russian authorities' control). By speeding up the development of the CBDC Russia could be able to perform cross-border transactions under any circumstance, thus containing the effects of SWIFT sanctions, reducing dependence on the USD (the vehicle currency used to denominate roughly 80% of Russian exports) and increasing rouble's global awareness.

[11] Shagina, M. (2021, May 28). *How Disastrous Would Disconnection From SWIFT Be for Russia?* Retrieved from Carnegie Endowment For International Peace - carnegiemoscow: https://carnegiemoscow.org/commentary/84634

2.4.2 Analysis of the risks of exclusion

Following a detailed assessment of the consequences of disconnecting Russia from SWIFT in light of the geopolitical situation, the West decided to include SWIFT sanctions in the package of financial measures to be imposed on Russia. Risks were indeed perceived as acceptable, considering the potential impact that those sanctions could have on Russian economy.

The increase in the short-term costs for energy supplies could be mitigated by renegotiating contracts with other providers such as Algeria, so that the interruption of Russian oil and gas exports could represent a less harmful burden for western economies (at least to some extent).

Cryptocurrencies could represent a concrete way to elude sanctions, still this would be particularly true for countries like North Korea, Venezuela, and Iran (all of which have been subject to SWIFT restrictions) whose economies has always been substantially separated from the rest of the world. Russia, on the other hand, has been a part of the global financial system for decades. It relies on USD to denominate roughly 80% of its daily foreign exchange transactions and half of its international trade. As a result, converting large sums of cryptocurrency into usable currency would be challenging. In addition, due to the excessive volatility, the speculation, and the multiple unknowns that exist around the crypto world make cryptocurrencies unlikely to be perceived as a store of value. In light of these considerations, it can be said that cryptocurrencies alone would not allow Russia to elude sanctions. SWIFT network connects more than 11,000 institutions in over 200 countries worldwide, processing on average 42 million financial messages per day. Moreover, Russia conducts approximately 50 billion dollars in foreign exchange transactions, which is roughly the entire value of all Bitcoin transactions worldwide when volumes hit peak levels. Clearly, such numbers could not be matched by any currently available decentralised financial technology.

Alternatives to SWIFT have been viewed as a less serious and concrete danger, at least in the immediate term. Despite the rapid growth of Mir, it would be almost impossible to rely on it when making payments outside Russia, due to the extremely limited coverage that this system ensures. SPFS currently presents important operational constraints that prevent it from being considered a legitimate, viable alternative to SWIFT. SPFS operates exclusively during weekday working hours (on the contrary, SWIFT is available 24/7), and the maximum message size is limited to 20 kilobytes. Moreover, SPFS numbers are not even comparable with SWIFT: the former hosts roughly 400 institutions, most of which are Russian banks, and has a traffic of 13 million messages. Neither CIPS, a more realistic alternative to SPFS, is perceived as a suitable replacement for SWIFT. Indeed, the share of the renminbi in international financial markets is less than 2 percent of global payments, far behind the USD, the euro, the British pound, and the Japanese yen.

Moreover, CIPS is just about 0.3% of SWIFT size, so that it might become at most a regional alternative to SWIFT. Finally, the digital rouble's ability to offset the consequences of sanctions is debatable, as the Russian CBDC would be difficult to use as a form of payment outside of Russia. Furthermore, this CBDC is only a prototype at the moment.

2.4.3 SWIFT sanctions and consequences

After conducting this risk assessment, western countries actually decided to impose SWIFT sanctions on Russia. On SWIFT official website it is possible to read the following statement: *"In March 2022, pursuant to international and multilateral action to intensify financial sanctions against Russia, specialised financial messaging providers, such as SWIFT, were prohibited from providing services to designated under EU Council Regulation (EU) 2022/345 of 1 March 2022. As SWIFT is incorporated under Belgian law and must comply with EU regulation, SWIFT disconnected seven designated Russian entities (and their designated Russia-based subsidiaries) from the SWIFT network as of 12 March 2022. Additionally, in compliance with EU Council Regulation (EU) 2022/398 of 9 March 2022, SWIFT disconnected three Belarusian entities (and their designated Belarus-based subsidiaries) on 20 March 2022* [12]*"*. The seven banks to which the statement refers are VTB Bank, Bank Otkritie, Novikombank, Promsvyazbank, Rossiya Bank and Sovcombank, as well as VEB, Russia's development bank. These seven banks were selected because of their connections with Kremlin. The "designated Russia-based subsidiaries" are those entities for which the seven banks hold 50% of ownership or more. It is important to point out that this initial ban excluded two of the country's biggest institutions, Sberbank and Gazprombank. These two institutions handle indeed the majority of payments related to gas and oil exports, on which the EU (and certain countries in particular, such as Germany and Italy) relies substantially.

According to a joint statement issued by the United States, the European Commission, France, Germany, Italy, the United Kingdom, and Canada on February 26, 2022, the goal of the SWIFT ban was to cut Russia off from the international banking system, thus impairing the country's ability to conduct international financial operations. Furthermore, according to the President of the European Commission Ursula von der Leyen, the cut off would also block Russian trade by making it impossible for Russian banks to make payments for imports and receive payments for exports.

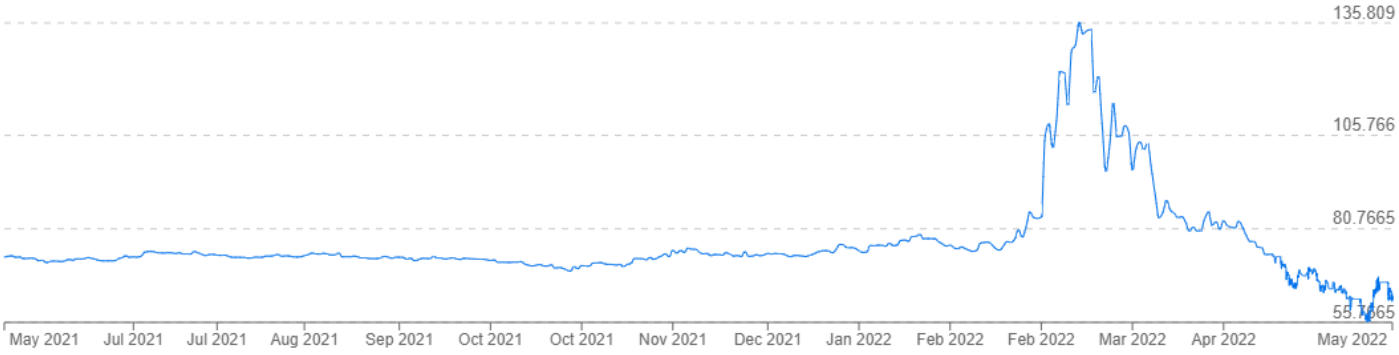
SWIFT sanctions eventually reached the Russian economy, and their repercussions were felt almost immediately.

[12] SWIFT. "SWIFT and sanctions"

They contributed to deny Russian authorities access to much of the country's $630 billion of foreign-exchange reserves and other overseas assets, thus causing a massive reduction in asset prices and a sharp devaluation of the rouble.

Figure 13 plots the one-year USD/RUB exchange rate. After having been roughly constant for several months, it started increasing rapidly by the end of February 2022.

Figure 13- One year USD to RUB exchange rate

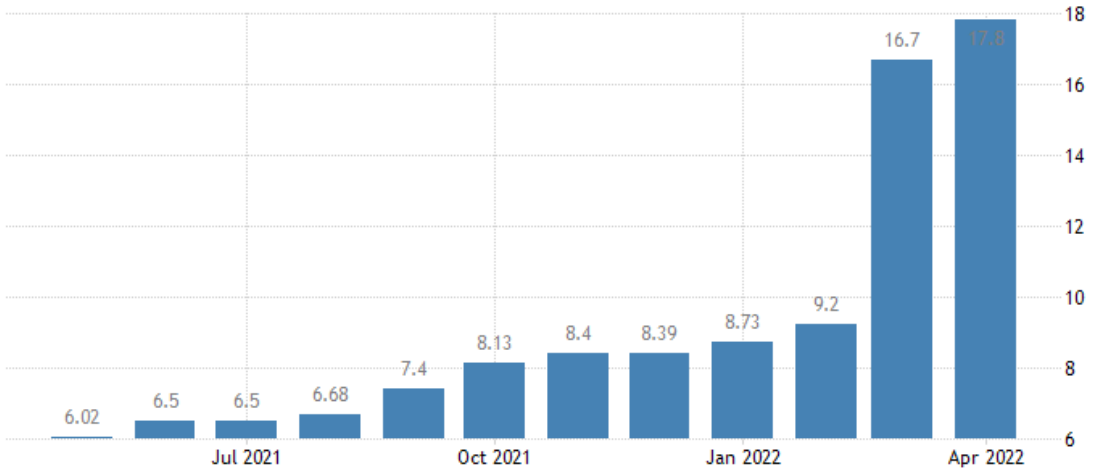


Source: XE.com

The exchange rate reached its all-time peak within the first week of March, that is, consequently to the imposition of the first package of financial sanctions. As a result, borrowing costs skyrocketed (the Russian Central Bank doubled interest rates to 20 percent) and Russian citizens started queuing en masse in front of ATMs trying to withdraw their savings and utilise them to purchase durable assets to protect their purchasing power. People withdrew roughly a trillion roubles, that is, 6.5% of the monetary base.

Another important and direct consequence of the huge depreciation of the rouble, together with the difficulties for Russia to import goods, was a rapid increase in the overall price level, thus resulting in a higher inflation. The price for food and non-alcoholic beverages (the most relevant category of the Russian consumer price index, accounting for 30% of the total weight) experienced a rapid increase since the beginning of the war and kept on increasing because of the sanctions: between March and April 2022, the growth rate of prices for such goods increased from 17.99% to 20.48%. Non-food products and alcoholic beverages prices increased as well. Between February (when inflation was 9.2%) and March (when the sanctions actually entered in force) prices experienced a stunning 7.61% upward jump, the steepest rate of climb since 1999 (as a result of the financial disruption caused by Russia defaulting on its foreign debt in 1998). Inflation was 16.7% in March, and 17.8% in April (as estimated by the "Federal State Statistics Service").

Figure 14 – Annual inflation rate in Russia



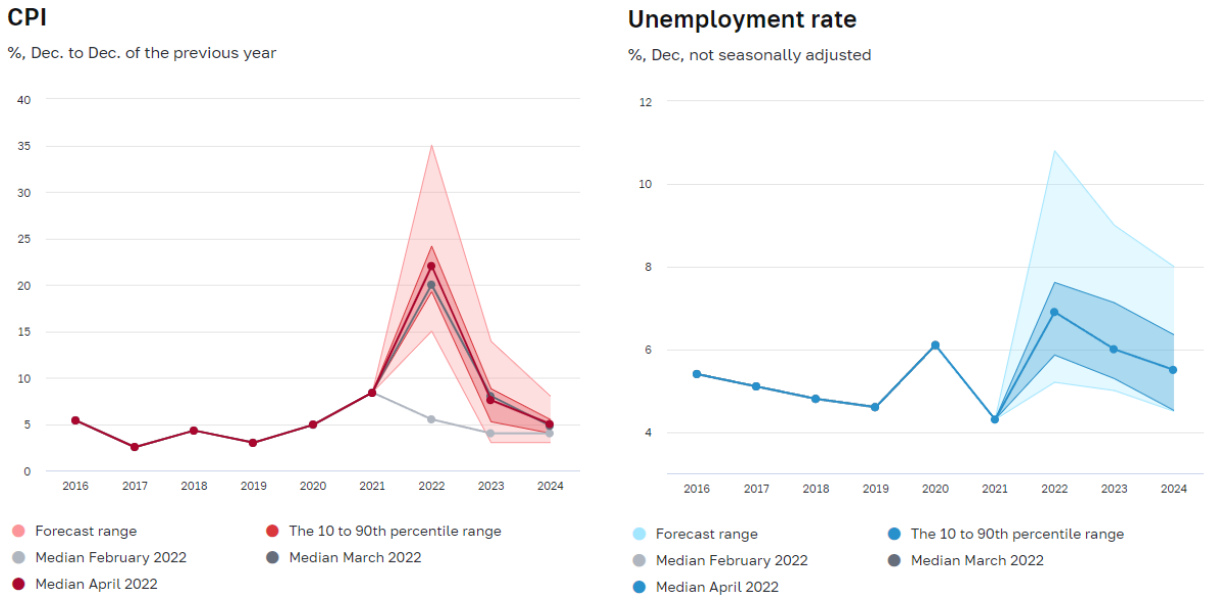
Source: Tradingeconomics.com / Federal State Statistics Service

According to the World Bank, these unprecedented sanctions dramatically hit Russian economy, and the deep recession that began after the imposition of such sanctions has modified the projections on the GDP, expected to shrink by 11.2% in 2022.

2.5 Future projections

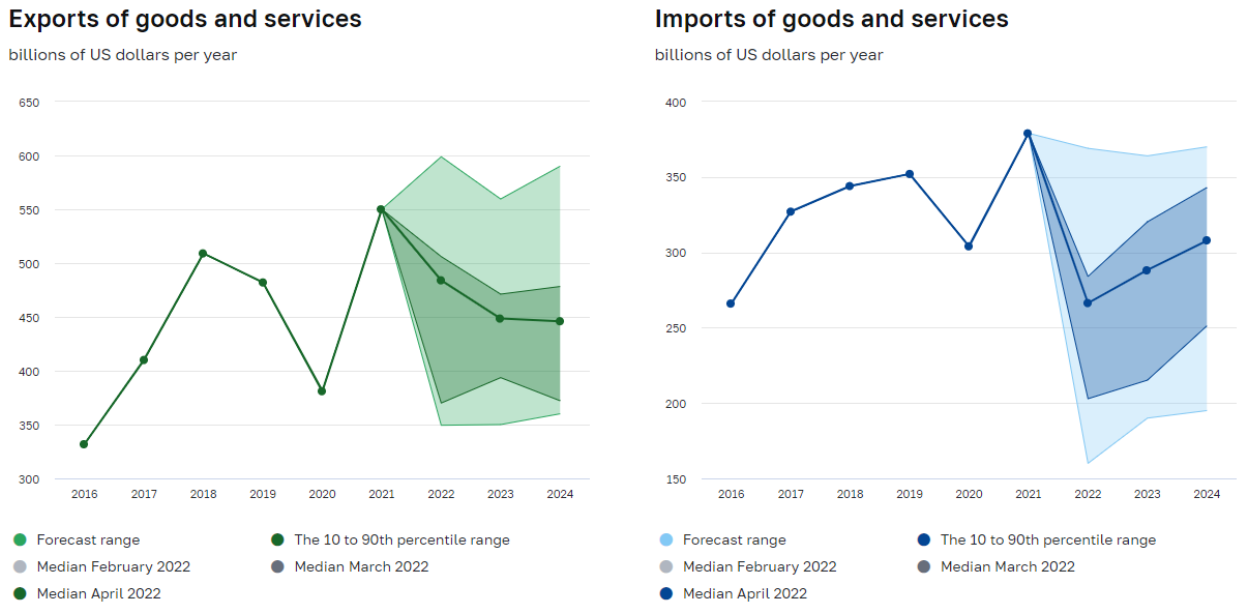
SWIFT sanctions, and financial restrictions in general, have had such an impact on the Russian economy that nearly all analysts have revised their forecasts for Russian macroeconomic variables in 2022, predicting lower GDP, higher inflation and unemployment, and lower exports and imports.

Figure 15- Forecasted Russian inflation and unemployment rate



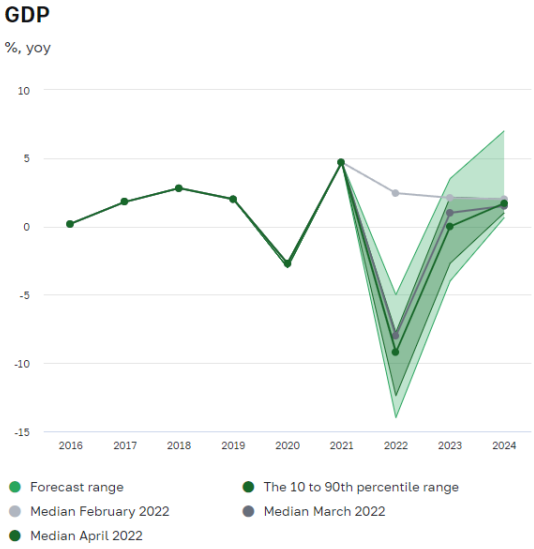
Source: Bank of Russia

Figure 16- Forecasted Russian current account



Source: Bank of Russia

Figure 17- Forecasted Russian GDP



Source: Bank of Russia

Figures 15, 16, and 17 show the results of the "Macroeconomic survey of the Bank of Russia". The survey sums up the projections of 27 different economists from various organisations (including Morgan Stanley, J.P. Morgan, Barclays, and Goldman Sachs as the major western institutions, while the majority of the participants are Russian banks), gathered between April 13 and April 19, 2022. These graphs, which depict some of the most important macroeconomic variables that characterise an economy (such as inflation, unemployment, volume of exports and imports, and GDP) share certain common characteristics.

Because of the significant impact of the financial sanctions, it is feasible to conclude that the overall assessment of the Russian economy for 2022 is negative. By looking at the "Forecast range" for each macro variable, it is possible to notice that it is wide (especially for imports and exports), denoting a high degree of uncertainty around Russian economy. This ambiguity, which stems from the unknown developments of the conflict and the West's subsequent maneuvers, may have positively influenced future estimates, as some figures improve over time: economists expect indeed a slowdown in the inflation rate, a decrease in unemployment and an increase in GDP by 2024. This optimistic view about the future might underestimate the real consequences of the sanctions and may be biased by the assumption that the West will not impose additional sanctions and will relax the existing ones.

It is worth mentioning that conclusions of the survey were reached before the announcement of the EU's sixth round of sanctions. The most relevant penalties related to this package include an oil embargo and a SWIFT ban for Sberbank, the biggest Russian bank. Furthermore, sanctions are not likely to be relaxed and their impact is expected to be extremely severe. Not only does a broad coalition of countries support the sanctions, but the punishing countries also perceive Russia's actions as a threat that must be contained to the greatest extent possible. Therefore, the projections drawn by Russian authorities (i.e., the Bank of Russia) on GDP, inflation, and unemployment, might be unrealistic. On the other hand, expectations on trade activities appear to be concerned about the disconnection of Russia from the global market as a result of the SWIFT ban. The forecast range for exports and imports is the widest among all these key macro variables, highlighting a huge overall uncertainty. Additionally, exports (the median level) are expected to keep on falling rather than improving over time, while imports (at the minimum value of the forecast range) could hit the lowest level since more than ten years. This seems to support what the West aimed at achieving when imposing SWIFT restrictions, that is, isolating Russia from international markets, thus hampering the country's ability to participate in cross-border operations by conducting import and export activities.

To summarise, Russian authorities' optimism may stem from a strong assumption that Russia would adapt to SWIFT restrictions and find a means to overcome them, or from a lack of foresight into the future. Still, it is impossible to deny that the SWIFT ban has proven to be an effective and successful sanctioning instrument, at least in the near term. Furthermore, because of Russia's greater reliance on the international economy, the SWIFT restrictions put on the country were far more effective than the Iranian precedent (and other, less relevant bans on North Korea and Venezuela).

Conclusion

SWIFT is the world's most important financial messaging service provider at the moment. The numbers of its network are currently unmatched by any other similar platform, making it an essential facility for countries that want to conduct cross-border transactions. As a result, not being a member of the SWIFT network is akin to being shut out of the worldwide financial community.

During the 2022 Russo-Ukrainian war, western countries used the critical nature of SWIFT and Russia's significant reliance on it to punish Russia for its illegal behaviour. In order to worsen the strain of the financial sanctions placed on Russia as a result of its invasion of Ukraine, the West discussed and enacted a major SWIFT ban targeting many important Russian institutions (including the country's largest bank). The SWIFT cut off hit Russian economy by isolating the country from the international markets. The goal of these sanctions was to undermine Russia by restricting its access to resources, making it more difficult for the country to fund its military invasion.

As the conflict goes on and its future developments keep on being unknown, the SWIFT sanctions proved to work in the short term. While it is too early to say if these sanctions will be truly effective (in terms of long-term implications on the Russian economy), it is feasible to argue that if they were effective enough to halt Russia's march in Ukraine, they could be utilised in future scenarios (provided that SWIFT maintained or improved its status worldwide).The ultimate goal would remain the same: to attack countries that pose a danger to the established global order.

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