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The weaponization of global payment infrastructures: A strategic dilemma *

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Abstract

The sixth sanction package of the European Union in the context of the aggression against Ukraine excludes Sberbank, the largest Russian bank, from the SWIFT network. The increasing use of SWIFT as a tool for sanctions stimulates the rollout of alternative payment information systems by the governments of Russia and China. This policy white paper informs about the alternatives at hand, as well as their advantages and disadvantages. Careful reflection about these issues is particularly important, given the call for an “Economic Article 5” tabled for the next NATO meeting. Finally, the white paper highlights the need for institutional reforms, if policymakers decide to return SWIFT to the status of a global public good after the war.

1. Background: The exclusion of banks from SWIFT as repeated feature of Western economic sanctions

On 3 June 2022, the European Union has decided to exclude the Russian Sberbank – as well as two smaller Russian banks and one from Belarus – from the SWIFT network, as part of the sixth sanction package during the Ukraine war. Sberbank is by far the largest Russian bank, with about one third of Russian banking assets. Previously, it was excluded from SWIFT sanctions – in contrast to other Russian banks such as the second largest one, VTB – because of EU concerns about the processing of energy payments. Still, even the sixth round of sanctions leaves Gazprombank out (the number 3 of Russian banks), for the processing of the remaining oil and gas payments.

While the expulsion of a Russian bank from the SWIFT network is not new in the context of Ukraine-related sanctions, it is the first major action in this field for quite some time. While the exclusion of

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some Russian banks from SWIFT was part of the third sanction package adopted on 2 March 2022, later packages focused on other types of sanctions against Russia.

The exclusion of banks from SWIFT as part of Western economic sanctions also is not new. Previously, it has been applied to Iran and North Korea as well. However, never before have banks of a comparable size and degree of connectedness with the global financial system such as Sberbank been banned from SWIFT.

The intensification of the utilization of SWIFT as economic weapon in the context of Western sanctions against Russia increases concerns by third parties about the future of global cross-border payment infrastructures. Not only Russia, but also countries such as China and India develop options on how to replace SWIFT in future transactions, leading to a fragmentation of the global payment system. These developments pose a strategic dilemma to European policy-makers. If they continue to utilize SWIFT as an economic weapon, they risk increasing costs for cross-border financial transactions. Moreover, they may even lose the central position of the EU (and the USA) in global financial infrastructures. Without “weaponizing” SWIFT, however, they would forego a powerful instrument for economic sanctions.

In order to support an informed decision in this dilemma situation, this policy white paper elaborates on the advantages and disadvantages of the utilization of cross-border payment infrastructures for economic sanctions. Before doing so, however, we need to understand the functioning of the current infrastructures and their most important alternatives.

2. The existing global cross-border payment infrastructure and the focus on sanctions

The payment process consists of a number of electronic messages between financial institutions, intermediating the process between the originator (the sender) to the beneficiary (the recipient) of the payment (Wong and Nelson 2021). In between the two, there are the originator’s and the beneficiary’s financial institutions (unless both originator and beneficiary use the same institution) and usually some kind of financial infrastructure.

The most simple fund transfer takes place between two customers of the same financial institution: the originator instructs the institution and the institution implements the payment by making entries in its accounting system. If two different financial institutions (usually: banks) are involved, some kind of infrastructure is necessary for the clearing and settlement of the transaction, sometimes also involving a separate financial messaging system (such as SWIFT). Given the high number of daily transactions between banks, the reconciliation of the latter often is conducted via automated

clearing houses, with the US-based CHIPS (Clearing House Interbank Payment System) as the most important netting engine for large value transfers.

Cross-border transfers are more complicated than domestic transfers. Usually, they operate via the system of “correspondence banking”. In the latter relationship, the correspondent bank holds deposits owned by other banks (usually in another country) and is willing to provide services to these banks, including payments. Given that by far not all banks internationally have a correspondence relationship and the number of these banks is declining (many banks are not willing to act as correspondence bank at all, due to the high regulatory costs involved), the actual transfer of funds can take on a chain relationship.

Correspondence banks use SWIFT for the exchange of information. Since the launch of SWIFT in 1977, its main function is to communicate payment instructions across borders, but without the actual clearing and settlement. For this communication function, SWIFT has achieved a globally dominating position for wholesale operations. More than 90% of the \$140 trillion of cross-border transmissions in 2020 – equivalent to 152 percent of global GDP – were signaled via SWIFT (The Economist 2021). However, SWIFT is only the signaling part of the predominant global cross-border payments infrastructure – the other part is the network of correspondence banks, including clearing and settlement via institutions such as CHIPS.

Economic sanctions can target either SWIFT (signaling), or correspondence banking (clearing/settlement), or both. Given that SWIFT is based in Belgium and the most important correspondence banks as well as CHIPS are based in the US, there typically is a sharing of tasks with regard to sanctions between the EU and the US (although the line is not clear-cut – the US have some leverage over SWIFT and the EU also has correspondence banks).

While the exclusion from SWIFT makes international transactions very cumbersome for a bank (it has to resort to alternative modes of communication such as encrypted telegrams or email), the exclusion from correspondence banking with US institutions also is a major restriction, given the centrality of the United States – and of the US Dollar – in the global payment system. Sberbank, for example, already has been blocked from US correspondence banking since April 2022 (but not yet from EU correspondence banking).

The most powerful weapon, however, is the imposition of secondary sanctions on all correspondence banks by the US. This means that not only US institutions are forbidden to act as correspondence banks with the sanctioned country, but also all other – e.g. European or Chinese – banks. In case of non-compliance, these banks may risk their access to the US financial system or very high fines if caught by the US authorities (such as the nine billion US Dollars fine against BNP Paribas in 2014).

Secondary sanctions have been used in case of Iran, by far the most comprehensive sanction case on the cross-border payment process so far, – but not (yet?) in case of Russia. The utilization of this instrument politically would be very controversial and might lead to a confrontation with countries such as China and India, if also imposed in case of Russia.

3. Emerging alternatives for cross-border payments as effect of economic sanctions

Over the last years, we have seen the emergence of alternatives to the predominant global cross-border payments infrastructure based on correspondence banking and SWIFT. On the one side, we are witnessing a number of private-sector driven initiatives to decrease the cost and increase the speed of cross-border payments, particularly by fintechs (Brandl and Dieterich 2021, Westermeier 2020). On the other side, we are observing activities by non-Western governments to set up alternatives to SWIFT and/or the network of correspondent banks. The latter, the focus of our discussion here, has been motivated by the utilization of the payment infrastructure as instrument of economic sanctions during the last ten years.

In 2012, a US-based advocacy group called “United Against Nuclear Iran” started a campaign against SWIFT, arguing that SWIFT’s continued operations with Iranian member banks as well as other Iranian institutions was in violation with sanctions imposed on Iran by the EU and the US (Scott and Zachariadis 2014, 133-135). The US Senate Banking Committee subsequently passed legislation permitting sanctions against SWIFT, if the latter would continue to service Iranian financial institutions. Very quickly thereafter, SWIFT signaled that it would be willing to implement whatever sanctions structure the EU and the US were coming up with. Based on an EU regulation prohibiting the provision of financial messaging services to sanction institutions, SWIFT complied and cut off 24 Iranian institutions from the global financial signaling system in March 2012 (and again in 2018).

After the Crimea annexation in 2014, the US government suggested cutting off Russia from SWIFT. However, SWIFT did not give in at that time. Still, Russia took this episode as a warning and developed its own SPFS (System for Transfer of Financial Messages) for domestic and cross-border use, particularly as the threat resurfaced repeatedly during 2014/2015 (Xu 2020). The SPFS is modelled on the example of SWIFT, runs parallel to the latter and is supposed to step in completely if a Russian bank is cut off from SWIFT, although its technical capacity is more limited. Lately, Russia has intensified its attempts to use SPFS for cross-border payments. According to the Russian Central Bank, 52 banks in 12 states were using SPFS in April 2022 (TASS 2022). The US have called ongoing negotiations to also connect India to SPFS “deeply disappointing” (The Wire 2022).

Far more wide-ranging than the Russian response to the utilization of SWIFT for sanctions, however, is the Chinese one. Since 2015, China has been operating the “Cross-Border Interbank Payment

System” (CIPS). The latter is not a financial messaging system such as SWIFT, but a complete payment system, also incorporating clearing and settlement. It is thus comparable to CHIPS, but uses the Chinese Renminbi. CIPS still uses SWIFT for most cross-border financial messaging, but can also be operated without the latter, if companies have installed the necessary translators for Chinese characters.

So far, the reach of CIPS is rather limited - with about 1,300 participating financial firms, in contrast to 11,000 with CHIPS. CIPS, however, is growing quickly, with an estimated increase of 75 percent in terms of transaction value in 2021 alone (Eichengreen 2021, 4). Correspondingly, China is “astute enough not to challenge SWIFT until the CIPS has matured, but no doubt one day the challenge will come” (Prasad 2017, 116).

However, the core challenge to the Western-dominated global payment infrastructure probably will come from the introduction of networked central bank digital currencies (CBDC), a field where China is a global leader. CBDC-based payment systems will be able to circumvent not only SWIFT, but also the whole system of correspondence banks and CHIPS (Shagina 2022).

CIPS and the development of networks of central bank digital currencies are part of a general shift in China’s global policies during the last years. At the core of the Chinese strategy is the concept of “global connectivity” (Godehardt 2020). In practice, this strategy envisages not only the creation of spatial, but also digital infrastructures centered on China. The Western utilization of payment infrastructures for economic sanctions has given considerable additional impetus to these initiatives.

4. Reasons for the utilization of payment infrastructures as sanction instrument

There are good reasons for the utilization of economic sanctions against a military aggressor, such as Russia in case of Ukraine. Sanctions reduce the resources available for the war effort. They also should make the war-faring government less popular within its domestic society.

Economic sanctions usually do not contribute to killing people, in contrast to the provision of weapons and the training of military personnel. They are also much less costly for the sanctioning country than the utilization of military resources. Moreover, economic sanctions may contain a lower risk for escalation, if compared to military action. This is particularly important if your adversary is a major nuclear power.

Finally, economic sanctions often stay in place after the “hot” military action has ended at least temporarily, because of a ceasefire. While the latter saves lives, it also relieves the aggressor of the need to come to a substantial settlement. Economic sanctions can keep up the pressure to come to a comprehensive peace accord, after direct hostilities have ended.

Economic sanctions can take various shapes, as we are witnessing during the Ukraine war. Some of the most powerful sanctions, however, carry a major risk that they may backfire. This is obvious in case of gas and oil boycotts exercised by states that are heavily dependent on these resources. In this case, boycotting states primarily hurt themselves, not the aggressor, and they may be unable to keep up this type of sanction.

The utilization of financial infrastructures such as SWIFT and the system of correspondence banks has major advantages in this regard. It exercises considerable economic pressure upon the aggressor, while minimizing the self-harm for the impostor of sanctions or for third parties. Correspondingly, the exclusion from financial infrastructures can be a first step in rational sanctioning strategies (Angeloni et al 2022).

Given these advantages, it does not come as a surprise that the utilization of economic infrastructures as weapons has become quite popular during the last years, as “weaponized interdependence”. States with power over important nodes “can weaponize networks to gather information or choke off economic and information flows, discover and exploit vulnerabilities, compel policy change, and deter unwanted actions” (Farrell and Newman 2019: 45).

The utilization of cross-border networks for the exercise of political pressure is neither new, nor a Western preserve (Drezner 2021). For decades, the US have used this instrument, from the Dollar as the backbone of the global financial system to the control over internet protocols. The utilization of energy infrastructures such as gas pipelines by Russia is another case of weaponized interdependence and there are concerns that China is using its Belt and Road Initiative – and its digital infrastructures – in a similar way.

5. Disadvantages of the utilization of payment infrastructures as sanction instrument

The literature on economic sanctions does not only cover their advantages, but also their disadvantages. Sanctions are aggressive acts and violate national sovereignty, just as military attacks do. They can lead to counterattacks (in this case for example a cyber-attack on SWIFT). Their measures take time to have substantial effects and sometimes may be too gentle to have the desired impact on military interventions, particularly if the sanctioned government sees its national security at stake. Very powerful sanctions, in contrast, can hurt weak strata of the sanctioned country over-proportionally and cause mass poverty or even a rise in child mortality (as arguably in case of the extremely comprehensive UN sanctions against Iraq due to the Kuwait invasion 1990).

Sanctions can also increase the societal support for the government of the sanctioned country (“rally around the flag”) or lead to the establishment of an even more aggressive government – as during

the 1930s, where the threat of economic isolation was an important driving force for the strategy of territorial conquest by Germany and Japan (Mulder 2022). Sanctions may also have negative effects on third countries that take a neutral stance in the conflict at hand.

Particularly problematic are sanctions without a clear and well-justified target, i.e. without a reasonable condition to be fulfilled for the sanctions to be lifted automatically (unfortunately, there is considerable ambiguity with regard to this condition in the current sanction regime – a mistake that needs to be corrected very urgently).

The more specific utilization of weaponized interdependence is also not without downsides, next to the danger of misuse by powerful actors. It can lead to havoc in the networks concerned, also inflicting pain on the sanctioning governments and their economies (although these concerns have not materialized in case of SWIFT yet).

The increasing utilization of alternative networks – such as SPFS and CIPS in case of SWIFT – will not only increase the cost of financial transactions, but will also make the fight against money laundering more difficult, given the important role of SWIFT in this regard.

Furthermore, the disconnection of banks from SWIFT will allow the Chinese governments to learn how to deal with this type of challenge, for example in case of a crisis related to Taiwan. Moreover, it might lead to a loss of US deterrence towards Russia and China, if SWIFT disconnection does not have the effects desired by the US government (Smith 2022).

In a more general perspective, the erosion of institutions such as SWIFT may also hurt the US financial system, as “the extension of US infrastructural power abroad diminishes state capacity at home” (Weiss and Thurbon 2018). The core issue here is the importance of a global financial system based on the US Dollar for the financing of the huge US current account deficit (Schwartz 2019).

Between 1999 and 2021, the share of the US Dollar in international reserves fell from 71 percent to 59 percent (Arslanalp et al 2022, 5). Thus, even before the sanctions against Russia, the Republicans’ think tank “Defense Priorities” was “counting the cost of financial warfare” and asked for “recalibrating sanctions policy to preserve US financial hegemony” (Gjoza 2019). The bipartisan think tank “Center for a New American Security” echoed this concern and feared a “move away from dollar-based clearing and payments” (Harrell and Rosenberg 2019). Similar concerns have been voiced by the US Treasury during the Obama, Trump and Biden administrations (Wong and Nelson 2021, 13; Shagina 2022, 3) – but were not heeded.

The utilization of the payment infrastructure as a sanction against Russia may also diminish the soft power of the West – which already has received a battering, due to the refusal of sharing vaccines during the corona crisis. Some powerful countries of the Global South do not share the Western

resolve to counter the Russian attack on Ukraine, as witnessed by the important abstentions in the majority vote condemning the Russian aggression in the UN General Assembly (countries representing the majority of the global population either kept a neutral stance or voted with Russia).

Many Southern countries consider comprehensive economic sanctions against Russia as excessive, since the latter also affect third parties, for example via strongly increasing prices for energy and food. While SWIFT-related sanctions do not directly cause heavy negative effects for third parties (except for payment delays, or an abrupt termination of Russian tourism to some regions, due to the interruption of payments), they may still contribute to the stimulation of anti-Western sentiments, given that SWIFT has become a major symbol for economic sanctions.

6. To weaponize or not to weaponize SWIFT: A strategic decision

In case of the Russian attack against Ukraine, the European Union choice is obvious: it has concluded that the utilization of SWIFT as part of economic sanctions outweighs the disadvantages related to this decision. However, the question will resurface. Given the decreased appetite for overseas military interventions by EU Member States – as witnessed for example in the context of withdrawals from Afghanistan and Mali – it is highly likely that these states may be tempted to deploy the payment system weapon again, particularly if economically more sophisticated target countries are involved.

Actually, former NATO secretary-general Anders Fogh Rasmussen and former US ambassador to NATO Ivo Daalder have tabled a memo for an “Economic Article 5” for the summits of the Group of Seven and of NATO at the end of June (Rasmussen and Daalder 2022). Their basic idea is that NATO should complement the Article 5 mutual defense pledge with an economic version. According to Daalder and Rasmussen, a participating democracy could invoke this article and trigger economic sanctions – e.g. related to the cross-border payment infrastructure – when attacked by an autocracy. Recent tensions between China on the one side and Australia and Lithuania on the other serve as examples to the authors.

In the future, the European Union and the US have to make a strategic choice. They either can treat cross-border payment information infrastructures as a global public good, or use these infrastructures as a weapon in the context of economic sanctions. Both options cannot be combined, because a continuing utilization of SWIFT (and correspondence banking) as economic weapon will only intensify the attempts of non-Western countries to develop alternatives.

While the brutality of the Russian assault on Ukraine weighs in favor of using SWIFT as an economic weapon, there may be equally good reasons to generally forego this option in future conflicts. The

continuing use of SWIFT as a sanctions tool will lead to a decreasing usefulness of the latter, given the increasing emergence of alternative cross-border payment information systems.

Correspondingly, after a peace accord on Ukraine, Western governments might consider a return to the situation before 2012, where SWIFT had not been used as a geo-economic tool. They could issue a decree that they refrain from using SWIFT – and possibly the other parts of the global payment infrastructure such as the system of correspondence banking – as economic weapon in the future.

7. Institutional reforms for SWIFT to become a global public good

In order to regain the trust of the global community into the neutrality of SWIFT, however, we might need institutional reforms regarding the oversight of this body. Currently, SWIFT is organized as a private association with a public oversight structure dominated by the G10 central banks, a Western-only club. Non-Western institutions only participate in the much weaker “SWIFT Oversight Forum”. This situation may not be tenable, if SWIFT is to become a global public good (again).

Another case of transnational private governance, the International Accounting Standards Board (IASB), could serve as a blueprint for a reform of the SWIFT oversight structure towards global accountability. After the Global Financial Crisis – and a growing dissatisfaction with the functioning of the IASB –, the G20 installed a public Monitoring Board and increased the representation of non-Western countries in the bodies of the IASB (Nölke 2015). This may serve as a model for SWIFT as well – if the strategic decision results to forego the global payments infrastructure as economic weapon in future conflicts.

References

- Angeloni, Ignazio et al. 2022. "Designing a Rational Sanctioning Strategy" (SAFE Policy Letter No. 95). Frankfurt: Leibniz Institute for Financial Research SAFE.
- Arslanalp, Serkan, Barry Eichengreen, and Chima Simpson-Bell. 2022. "The Stealth Erosion of Dollar Dominance: Active Diversifiers and the Rise of Nontraditional Reserve Currencies (WP/22/58). Washington, DC: International Monetary Fund.
- Brandl, Barbara, and Lilith Dieterich. 2021. "The Exclusive Nature of Global Payments Infrastructures: The Significance of Major Banks and the Role of Tech-driven Companies." *Review of International Political Economy*, online first.
- Drezner, Daniel W. 2021. "Introduction: The Uses and Abuses of Weaponized Interdependence", in: Daniel W. Drezner, Henry Farrell and Araham L. Newman (eds.) *The Uses and Abuses of Weaponized Interdependence*. Washington, DC: Brookings Institution,
- Eichengreen, Barry. 2022. "Sanctions, WIFT, and China's Cross-Border Interbank Payments System" (CSIS Brief). Washington, DC: Center for Strategic & International Studies.
- Farrell, Henry, and Araham L. Newman. 2019. "Weaponized Interdependence: How Global Economic Networks Shape State Coercion." *International Security* 44 (1): 42-79.
- Gjoza, Enea. 2019. "Counting the Cost of Financial Warfare: Recalibrating Sanctions Policy to Preserve US Financial Hegemony." Washington, DC: Defense Priorities.
- Godehardt, Nadine. 2020. „Wie China Weltpolitik formt: Die Logik von Pekings Außenpolitik.“ SWP-Studie 19, Berlin: Stiftung Wissenschaft und Politik.
- Harrell, Peter E., and Elizabeth Rosenberg. 2019. "Economic Dominance, Financial Technology, and the Future of U.S. Economic Coercion." Washington, DC: Center for a New American Security.
- Mulder Nicholas. 2022. *The Economic Weapon: The Rise of Sanctions as a Tool of Modern War*. New Haven: Yale University Press.
- Nölke, Andreas. 2015. "Rising Powers and Transnational Private Governance: The International Accounting Standards Board", in: Dries Lesage and Thijs Graaf (eds.), *Rising Powers and Multinational Institutions*, London: Palgrave.
- Nölke, Andreas. 2022 (forthcoming). "Goeconomic infrastructures: Building Chinese-Russian alternatives to SWIFT, in: Benjamin Braun and Kai Koddenbrock (eds.), *Capital Claims: The Political Economy of Global Finance*, London: Routledge.
- Prasad, Eswar S. 2017. *Gaining Currency: The Rise of the Renminbi*. Oxford: Oxford University Press.
- Rasmussen, Anders Fogh, and Ivo Daalder. 2022. Memo on an "Economic Article 5" to counter authoritarian coercion. Chicago and Copenhagen: Chicago Council of Global Affairs and the Alliance of Democracies Foundation. http://www.thechicagocouncil.org/sites/default/files/2022-06/CCGA%20Economic%20Article%205%20Brief_vF_0.pdf, last accessed June 23, 2022.
- Schwartz, Herman Mark. 2019. "American Hegemony: Intellectual Property Rights, Dollar Centrality, and Infrastructural Power." *Review of International Political Economy* 26 (3): 490-519.

Scott, Susan V., and Markos Zachariadis. 2014. *The Society for Worldwide Interbank Financial Telecommunication (SWIFT): Cooperative Governance for Network Innovation, Standards, and Community*. London: Routledge.

Shagina, Maria. 2022. *Central Bank Digital Currencies and the Implications for the Global Financial Infrastructure* (FIIA Briefing Paper 329). Helsinki: Finnish Institute of International Affairs.

Smith, Adam M. 2022. "SWIFT and Certain Punishment for Russia? There Are Better Ways to Deter Moscow than Threatening Its Banking Access." *Foreign Affairs*, January 4, <https://www.foreignaffairs.com/articles/ukraine/2022-01-04/swift-and-certain-punishment-russia>, last accessed February 1, 2022.

TASS. 2022. "Some 52 Entities from 12 States Have Joined Russian Analogue of SWIFT, Says Central Bank", <https://tass.com/economy/1439193>, last accessed 27 May 2022.

The Economist. 2021. "The Race to Define Cross-border Finance." October 23rd. <https://www.economist.com/finance-and-economics/the-race-to-redefine-cross-border-finance/21805736>, last accessed December 13, 2021.

The Wire. 2022. "'Deeply Disappointing' if India Joins Russia's Financial Transfer System, Says US Commerce Secy", <https://thewire.in/diplomacy/deeply-disappointing-if-india-joins-russias-financial-transfer-system-says-us-commerce-secy>, last accessed 27 May 2022.

Weiss, Linda, and Elizabeth Thurbon. 2018. "Power Paradox: How the Extension of US Infrastructural Power Abroad Diminishes State Capacity at Home." *Review of International Political Economy* 25 (6): 779-810.

Westermeier, Carola. 2020. "Money is Data: the Platformization of Financial Transactions." *Information, Communication & Society* 23:14, 2047-2063.

Wong, Liana and Rebecca M. Nelson. 2021. *International Financial Messaging Systems*. Washington DC: Congressional Research Service.

Xu, Wenhong. 2020. "The SWIFT System: A Focus on the US-Russia Financial Confrontation." <https://russiancouncil.ru/en/analytics-and-comments/analytics/the-swift-system-a-focus-on-the-u-s-russia-financial-confrontation/>, last accessed 23 November 2020.