Turning point in payments

Global payments is an area which has seen considerable growth in recent decades and is pursuing a trend towards ever greater integration. Along the way, efficiency has been enhanced and risks reduced. But developments that could significantly change the global payments landscape have been under way for some years now. These include the emergence of new forms of money, the advent of new technologies, the entry of new competitors into the market and a heightening of cyber risks. While these developments are capable, on the one hand, of spurring innovation and new additions to the existing market offering, they also have a flip side in that they make the payments landscape more complex and generate frictions and fragmentation.

Russia's war of aggression against Ukraine and the sanctions associated with it have now brought a geopolitical dynamic into play, too. Some sanctions are having a significant impact on payments. The ban on the use of specialised messaging services (such as SWIFT) imposed on selected banks is directly interfering with payments to and from Russia as well as payment traffic within the country itself. Its main aim is particularly to cut affected financial market participants off from international payments. In addition, some participants are subject to full asset freezes, restricting disposals and prohibiting others from making funds and economic resources available to them.

All the same, moves to evade the restrictions have taken hold, including the use of alternative messaging services outside the reach of the sanctions. On top of this, countries that are not participating in the sanctions are drawing payment and trade flows their way, which is further softening the impact of the sanctions. Overall, it appears that while the sanctions have led to a decline in Russia's cross-border payments, the latter have remained largely intact. A substantial portion of the decline in traffic is therefore likely attributable to the indirect effects of the measures imposed on trade in goods, services and financial products.

Taken together, the various factors driving developments, combined with the direct and indirect repercussions of the sanctions as reflected in the ongoing policy debates, could mark the start of a turning point in payments in three respects. First, new forms of money, technology and competitors as well as cyber risks have the capacity to fundamentally transform both national and cross-border payments. Second, the geopolitical situation is likely to lead to fragmentation in cross-border payments. Third, national interests look set to play a greater role when it comes to payments. Regardless of that, policymakers should keep endeavouring to ensure that new technologies in the payments space do not lead to structural fragmentation. In addition, they should continue to do their bit in dismantling barriers hampering the settlement of cross-border payments and, for example, redouble efforts to establish globally harmonised standards and interoperable interfaces going forward. Lastly, regulators need to carry on working together and liaise even more closely, especially with regard to future innovative developments. Irrespective of the individual states' desire for sovereignty in payments, all states should have an interest in preventing risk-enhancing regulatory arbitrage.

Integration and dynamics in payments

Cashless payments are gaining in importance and becoming more integrated, …

Payments is a field of increasing significance and an area that has been following a trend towards ever greater integration for decades. Along the way, efficiency has been enhanced and risks reduced. Another sign of that evolution is the more prominent role being played by international service providers, payment service providers and internet platforms. In the early 1990s, the fall of the Iron Curtain ushered in a new wave of globalisation, leading to a significant increase in cross-border investment, migration, tourism and global trade in goods and services. This also brought with it a greater need for international payment solutions.

… even though the global payments landscape is still highly multi-faceted

That said, the global payments landscape is still highly multi-faceted, being made up of various national payment systems which have developed over the course of time and exhibit their own technical, economic and legal idiosyncrasies. Cross-border payments going from one system to another are usually settled via bilateral relationships between correspondent banks or through money transfer services (such as Western Union and MoneyGram). This still makes for a considerable degree of friction.[1] Those frictions are being steadily – albeit slowly – reduced, however: the harmonisation of messaging standards (e.g. ISO 20022), higher-performance national systems, the use of shared communication networks (e.g. the Society for Worldwide Interbank Financial Telecommunication[2] (SWIFT)) and, in some cases, also of collectively used systems some of which even boast multi-currency capability (e.g. Continuous Linked Settlement (CLS)) are all smoothing the way for payments.

Policymakers as important drivers of efficiency and integration

Impetus and support for these developments is also coming from policymaking quarters. The creation of CLS in 2002, for example, was the banking industry's response to the G10 member countries' strategy for reducing risks in the settlement of foreign exchange transactions, in particular "Herstatt risk".[3] The falling costs of credit transfers made by migrants to family members back in their home countries (remittances) are testament to steady advances in terms of efficiency and security in international payments.[4] Even so, the potential for improvement has yet to be fully tapped in the global payments landscape.[5] This is why the G20 Roadmap for Enhancing Cross-border Payments, endorsed in 2020, establishes targets with a view to harmonising regulatory requirements and increasing data quality where cross-border payments are concerned. There are also plans to expand existing payment infrastructures and develop new ones.[6]

External impulses can cause frictions and fragmentation

However, radical external impulses have been at work on the payments space in recent years. These factors have been driving the debate about the road ahead for both national and cross-border payments. They are a source of uncertainty because the structure of the market may undergo fundamental change, meaning that it is no longer possible to extrapolate on the basis of how things have developed so far. On top of that, new risks may emerge which existing risk management approaches might not be able to fully hem in. If the existing success factors and value chain elements of a product get replaced by different factors and elements, disruptive effects can ensue. At the same time, there is a risk that these sorts of impulses will provoke substantial fragmentation

1 See Deutsche Bundesbank (2022).
2 SWIFT is an organisation which, in addition to operating a telecommunications network (SWIFTNet) for the fast and secure exchange of financial industry messages, also works to further enhance and define messaging standards, including in the payments domain.
3 This is a reference to Herstatt Bank, which closed down in 1974. The term "Herstatt risk" describes what happens when the two payment legs making up a foreign exchange transaction are decoupled on account of time zone differences: parties are exposed to delivery or settlement risk stemming from the danger that one of them could go bankrupt in the time gap between both transactions being settled. According to a survey conducted by the Bank for International Settlements (BIS), however, around one-third of all foreign exchange transactions still involve settlement risk. See Bank for International Settlements (2022).
4 See World Bank (2022).
5 See Deutsche Bundesbank (2022).
6 See Financial Stability Board (2020a).

Functioning of international payments

A number of payment instruments, such as cash, payment cards, credit transfers, e-money and crypto tokens, can be used for cross-border payments. Which instrument is selected depends on the payment service providers available, the currency area in question and user preferences.

The cross-border payment process can be broken down into several phases. The domestic leg of a payment flow is usually based on national payment systems. The cross-border leg can be carried out via correspondent banks, platforms belonging to specialised international providers (e.g. PayPal or Wise) or interlinked national systems. The idea of making cross-border payments via peer-to-peer systems (e.g. public blockchain infrastructures) – even without involving a payment service provider in some cases – emerged around ten years ago and is therefore still relatively new.

Payments from one currency area to another are mostly settled via correspondent banks. Processing is based on accounts that domestic institutions hold with foreign correspondent banks in order to settle payments in foreign currency. Payment orders must be submitted before settlement can take place. From a technical perspective, different communication networks can be used for this purpose, including telephone, fax or email. For reasons of efficiency, specialised messaging services, such as SWIFT (Society for Worldwide Interbank Financial Telecommunication), are used in most cases. The cooperative SWIFT, which was established in 1973, has around 11,000 participants in more than 200 countries. In 2022, it processed an average of around 20 million payment messages per day.[1] Since SWIFT is domiciled in Belgium, it is subject to Belgian law and therefore also to EU regulations. Given its important role in the financial system and the potential adverse impact of a breakdown in global communication channels between financial market participants, SWIFT is jointly overseen by the G10 central banks and the ECB. Many national or regional payment providers also use SWIFT as their communication channel.

In economically highly integrated regions, the idea of using cross-border platforms is also being considered. In the euro area, for example, euro payments can already be processed across borders using TARGET services. Work is underway to expand TARGET services to become a multi-currency system. Such multi-currency platforms are already in operation in South Africa (SADC-RTGS) and in the Arab region (Buna).[2]

1 See Society for Worldwide Interbank Financial Telecommunication (2023).
2 See Bank for International Settlements (2023).

in the existing payments landscape.[7] Such external impulses include, for example, new forms of money, new technologies, new competitors and increased cyber risks.

Disruptive forces in the shape of new forms of money like crypto tokens and stablecoins, …

One example of a new form of money might be crypto tokens.[8] These are digital units of value created by private providers that can be transferred directly between participants over virtual networks. However, their value is usually so unstable that they are ill-suited for use in payment transactions or as a store of value. Rather, they are used predominantly as a speculative instrument and form part of an increasingly complex system of decentralised financial services.[9] Stablecoins take crypto tokens one step further; their value is mostly kept stable by pegs to government currencies and asset backing.[10] However, recent developments have shown that, without a comprehensive regulatory set-up which efficiently curbs the risks to both holders and the ecosystem as a whole, stablecoins' prospects for success are likely to be limited.

Payment service providers are faced with multiple challenges all at once. These alternative forms of money are paving the way for new business cases, and customers open to innovation are keen to make use of those. Yet there is a high degree of risk involved, the margin has to be shared with the new providers, and regulation is still in its infancy.[11] Furthermore, there is the chance that such tokens could crowd out the commercial bank money that has hitherto dominated payments. Only a few institutions are likely to be able to create their own token and bring it to market with a realistic chance of success.[12] The alternative – implementing some kind of digital (tokenised) commercial bank money that would be shared by institutions – does not seem easily feasible in the short or medium term.[13]

… CBDC, …

Another innovative form of money is central bank digital currency (CBDC), which is being pursued, at least as a concept, in virtually all major advanced and emerging economies.[14] The introduction of CBDC may have far-reaching ramifications. The implications of introducing a retail CBDC, available for all to use, are likely to be more wide-ranging than those associated with the wholesale CBDC variant for use only by a limited set of financial institutions. European sovereignty in payments is one argument for introducing the digital euro, the Eurosystem's potential retail CBDC. Certain changes to the market structure as it stands are a natural consequence of this and certainly intentional on the policymaking side, but without a wish to challenge the delicately balanced role distribution between sovereign and private services in the world of payments. CBDC systems could be a boon for cross-border payments if different countries design their solutions to be interoperable.[15]

… new technology such as DLT, …

The need for tokenised money is born of innovations in the field of IT infrastructures.[16] As a driver of innovation in payments – not just in the domestic arena but in international payments, too – distributed ledger technology (DLT) promises two decisive benefits. First, it allows transactions to be settled by independent partners on a shared database. That effectively does away with reconciliation processes. Second, it facilitates the automated settlement of transactions by means of smart contracts.[17] Complex processes, which once required a

7 See International Monetary Fund (2023).
8 See Deutsche Bundesbank (2019).
9 See Deutsche Bundesbank (2021b).
10 Alongside pegs to government currencies (for the most part US dollars) and backing with corresponding reserve assets, some stablecoins seek to limit volatility by being backed with crypto tokens or by relying on algorithmic stabilisation methods; these have yet to garner broad trust in the market.
11 See Financial Stability Board (2022).
12 See Oliver Wyman and JP Morgan Chase & Co. (2022).
13 See German Banking Industry Committee (2022).
14 For an overview, see Richards and Furche (2022).
15 See Deutsche Bundesbank (2022).
16 See Deutsche Bundesbank (2017).
17 Smart contracts are software scripts that automatically execute closed contracts depending on the occurrence of predefined events. They make it possible to simplify fulfilment of complex, recurring contract processes between several partners. As such, they are regarded as a key technology for reducing transaction costs in an economic system based on the division of labour. See Deutsche Bundesbank (2020).

multitude of manual interventions, can thus be handled automatically, potentially saving time and transaction costs. At the same time, the technology carries potential for reducing risks. Ideally, there should be as much flexibility and automation in the flow of money as there is in flows of goods and services as well as information.[18]

Financial institutions are seeking solutions to support the opportunities that DLT has to offer when it comes to money. But uncertainty abounds: the world has yet to see a single major financial market infrastructure operating on the basis of DLT. It would call for adjustments that would need to be implemented throughout the industry and on a global basis; they are complex and come with a hefty price tag in terms of development costs. The existing global networks are private, proprietary solutions that are often difficult to regulate owing to a lack of clear governance. Numerous central banks are currently working on DLT pilots with a view, for instance, to simplifying the process chains involved in the complex business of securities settlement or in international payments, especially banks' multi-currency liquidity management.

… new competitors such as bigtech players and fintech firms …

In addition to new forms of money and new technology, new competitors are also joining the mix, in the form of bigtech and fintech companies. Fintech firms are often swifter and more agile than established financial service providers and are unencumbered by existing business operations and legacy systems. They optimise sub-processes along the value chain and also want to participate as economic players in the payments business. Bigtech firms are amassing considerable market power, allowing them to amortise fixed costs for development much faster than incumbent financial service providers. Moreover, by leveraging their global user base they can roll out many of their offerings in parallel in different markets, even though national specificities generally call for a degree of differentiation. The payments business is thus advancing to become a highly competitive field, in which radical structural changes of the like not seen in decades seem possible.

… and cyberattacks, which have now become a political weapon

Cyber risks are also making waves, representing a threat the dimension of which – both in terms of nature and scope – warrants particular forethought and defensive measures. Cyberattacks targeting payments could also be used as a political weapon, for example. All stakeholders in the payments space must therefore stand ready to face potential aggressors who are state-organised or state-sponsored,[19] have undergone professional training and have substantial resources at their disposal. Adequate safeguards against cyberattacks should no longer be a mere add-on to existing systems. Instead, there needs to be systematic planning and ongoing monitoring of cyber resilience across all product areas and processes, including those of suppliers.[20] When it comes to payments, where the greatest risk lies in the disruption to operational processes, this should see cyber resilience being accorded top priority, even ranking ahead of new product development.

Structural orientation phase in payments

Overall, payments are going through a period of structural adjustment. This applies in particular to international payments. While payments have experienced convergence around the globe in recent years, with a greater willingness to cooperate at the international level, strong external impulses could trigger structural changes that will not necessarily follow the same trajectory.

Sanctions in payments

A strong geopolitical driver has entered the fray in the shape of Russia's war of aggression

18 See Deutsche Bundesbank (2020).
19 The term "state-sponsored" is used to describe situations where there is a loose cooperation between cybercrime groups and governments. Such groups are, to varying degrees, fostered or at least tolerated by state structures; see Federal Criminal Police Office (2022).
20 See Financial Stability Board (2020b).

Invasion of Ukraine met with far-reaching sanctions against Russia

against Ukraine. Extensive sanctions against the aggressor have been enacted by the West with backing from many other countries. Some of these sanctions are having a significant impact on payments. Their direct and indirect repercussions could cause upheaval in efforts to integrate the global payments landscape, which can be held up as a mirror to developments in the geopolitical space. An increase in bilateral and multilateral political and economic cooperation from the mid-20th century deepened international cooperation in the world of payments as well. The responses to Russia's war of aggression against Ukraine and the sanctions imposed in payments mark an important turning point and could severely hamper this development.

Involving central infrastructures and messaging service providers such as SWIFT as a sanction instrument is not a new concept per se. Even though SWIFT did not actively participate in policy responses in the past, citing its neutral position,[21,22] in 2012, its own network's international data traffic with selected Iranian banks was blocked for the first time to implement corresponding sanctions under Belgian and European law.[23,24]

Aim is for sanctions to drive up Russia's economic costs

The payment sanctions adopted since February 2022 in response to Russia's war of aggression against Ukraine introduce a new dimension, however. The G7 countries and the European Union agreed on a series of measures comprising not just diplomatic and economic sanctions but also restrictions in payments and financial markets. The aim of these measures is to significantly increase the economic costs of the war for Russia to "effectively thwart Russian abilities to continue the aggression".[25] The ban preventing certain Russian and Belarusian banks from using specialised messaging services for payment transactions was met with a very large public response.[26] This ban intended to cut off important financial market participants in an industrial country or emerging market economy from international payments for the first time. As at 31 December 2022, ten Russian banks were prohibited from using these messaging services.

Selected sanctions imposed on Russia since the outbreak of the war

Sanctioned banks no longer able to transmit transaction details via SWIFT

The predominant status enjoyed by one particular provider in the messaging services market means that people often talk about "SWIFT sanctions" when in fact, by law, the sanctions affect all messaging service providers in the payments space. Political and public circles have placed high hopes in disconnecting Russian banks because at the time the sanctions were imposed, the communication side of almost all international transactions involving Russia was routed via SWIFT. Thus, the impact of these sanctions would not initially depend on implementation by other countries. Furthermore, SWIFT had been heavily used to settle interbank payments within Russia.

Alternative messaging channels already exist …

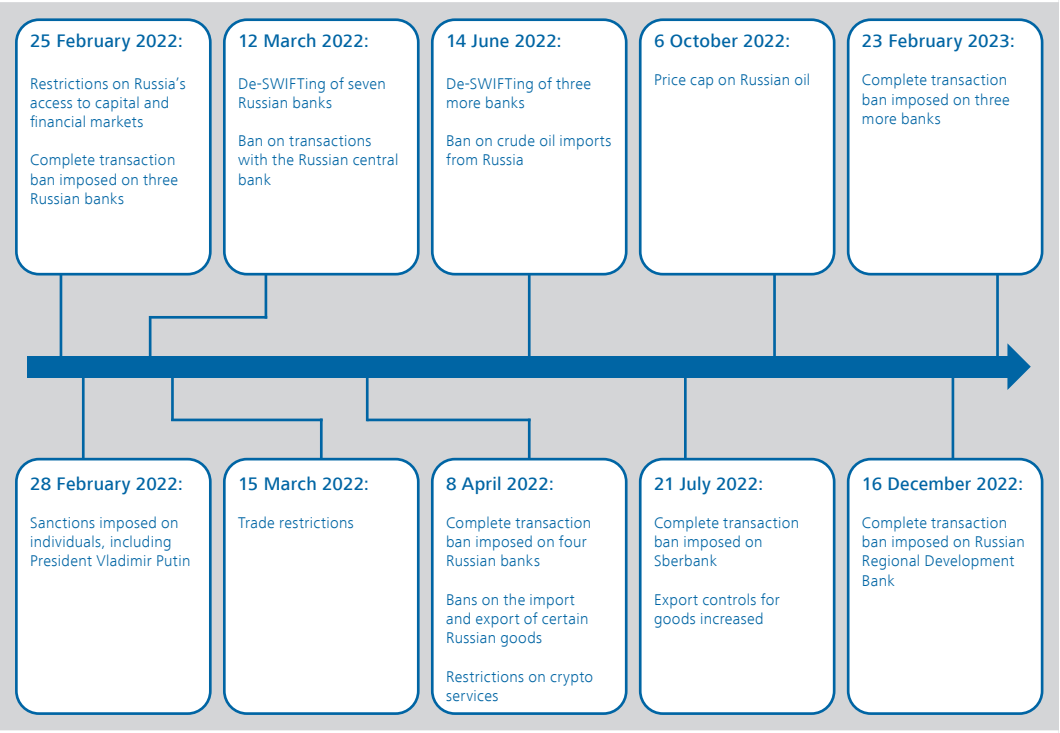
Given that, in such cases, only the transmission or receipt of transaction details using a specialised messaging service provider is made impossible for sanctioned banks, these measures can be evaded[27] at relatively low cost. For example, transaction details can be transmitted via alternative communication channels (e.g. by telephone, fax or email) or by means of non-sanctioned domestic (correspondent) banks that are still linked up to SWIFT.

… or are being created

Another option that is being used is to fall back on alternative messaging service providers, including those in jurisdictions that are not im-

21 For instance, despite a (non-binding) EU resolution, SWIFT did not participate in sanctions following the Russian annexation of Crimea in 2014.
22 See Cipriani et al. (2023).
23 See Giumelli and Ivan (2013).
24 See International Monetary Fund (2023).
25 See Council Regulation (EU) 2022/345 of 1 March 2022, Regulation, EUR-Lex - 2022R 0345 - EN - EUR-Lex (europa.eu).
26 See Council Regulation (EU) 2022/345 of 1 March 2022, Regulation, EUR-Lex - 32022R 0345 - EN - EUR-Lex (europa.eu).
27 The term "evasion" describes legal behaviour by market participants and, taken in isolation, does not constitute a breach of sanctions.

Selected sanctions imposed on Russia since the outbreak of the war



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plementing the sanctions imposed. The Russian central bank has been threatened with expulsion from SWIFT once before – following Russia's annexation of Crimea in 2014 – when it responded by developing a national messaging service provider of its own, Sistema Peredachi Finansovykh Soobscheniy (SPFS).[28] Plus, there are other third countries that operate their own messaging systems,[29] which are partly multi-currency compatible and are used as an alternative to SWIFT.[30] Although the use of such systems by EU banks would not formally constitute an infringement of the law, it would run counter to the objectives of the sanctions.

Transaction bans hit banks harder

Measures that not only prohibit the use of specialised messaging service providers but also impose a broad transaction ban on the respective banks have a much more severe impact. In practice, this means that restrictions on dispositions and prohibitions on making funds and economic resources available are imposed on sanctioned banks. That is to say that these banks' assets in the sanctioning countries are frozen and that there is a blanket ban on providing them with funds directly or indirectly – i.e. to make payment transactions in favour of these banks. These sanctions will only be effective in those countries where the sanctions apply, while SWIFT sanctions will apply to all countries as they are implemented directly by SWIFT.

28 See Bank of Russia (2021a).
29 The People's Bank of China operates the Cross-Border Interbank Payment System (CIPS), which is based on SWIFT standards but does not necessarily use the SWIFT network. The same applies to the Structured Financial Messaging System (SFMS) operated by a subsidiary of the Reserve Bank of India.
30 See Eichengreen (2022) and Reserve Bank of India (2021).

Sanctions on the use of messaging services in payments

Message transmission via alternative systems, especially at national level

On balance, SPFS – Russia's counterpart to SWIFT – has presumably seen significant and growing use for a large proportion of payment transaction messages within Russia since spring 2022. For cross-border payments, however, it is more difficult to switch to alternatives to incumbent providers. Network effects play a key role here, as international partners would also need to be willing to link up to the alternative messaging system and have to make a conscious decision not to comply with the sanctions.

Russia's domestic and international payments largely intact

Russia's domestic and international payments still appear to be largely intact overall. Even so, there has evidently been a decline in Russia's cross-border payments as a result of the sanctions.[31] It is impossible to attribute that decline solely to the sanctions on payments, though, especially since the effectiveness of sanctions in this area depends in part on the number of sanctioned banks. Much of the decline, then, can be put down to the indirect effects that the measures are having on trade in goods, services and financial products. Moreover, evasive action has become commonplace, with signs emerging in recent months that not just the traded goods but also the payment flows with Russia for those goods are apparently being rerouted via third countries that are not actively involved in sanctions against Russia. As a result, evasive transaction flows are still getting through despite the sanctions, and the payment sanctions are losing more and more of their bite as time progresses.[32]

If goods traffic or financial transactions are to continue to be executed with parties sanctioned by other countries, stakeholders will presumably switch to using alternative payment channels and systems. This can be done, for example, by making greater use of payment systems in the importer's or exporter's country or by linking together national payment systems.[33] The avenues being explored also include, for instance, work conducted by the Russian central bank on CBDC.[34]

Implications for policy and payments

Fragmentation and greater national focus as a result of sanctions

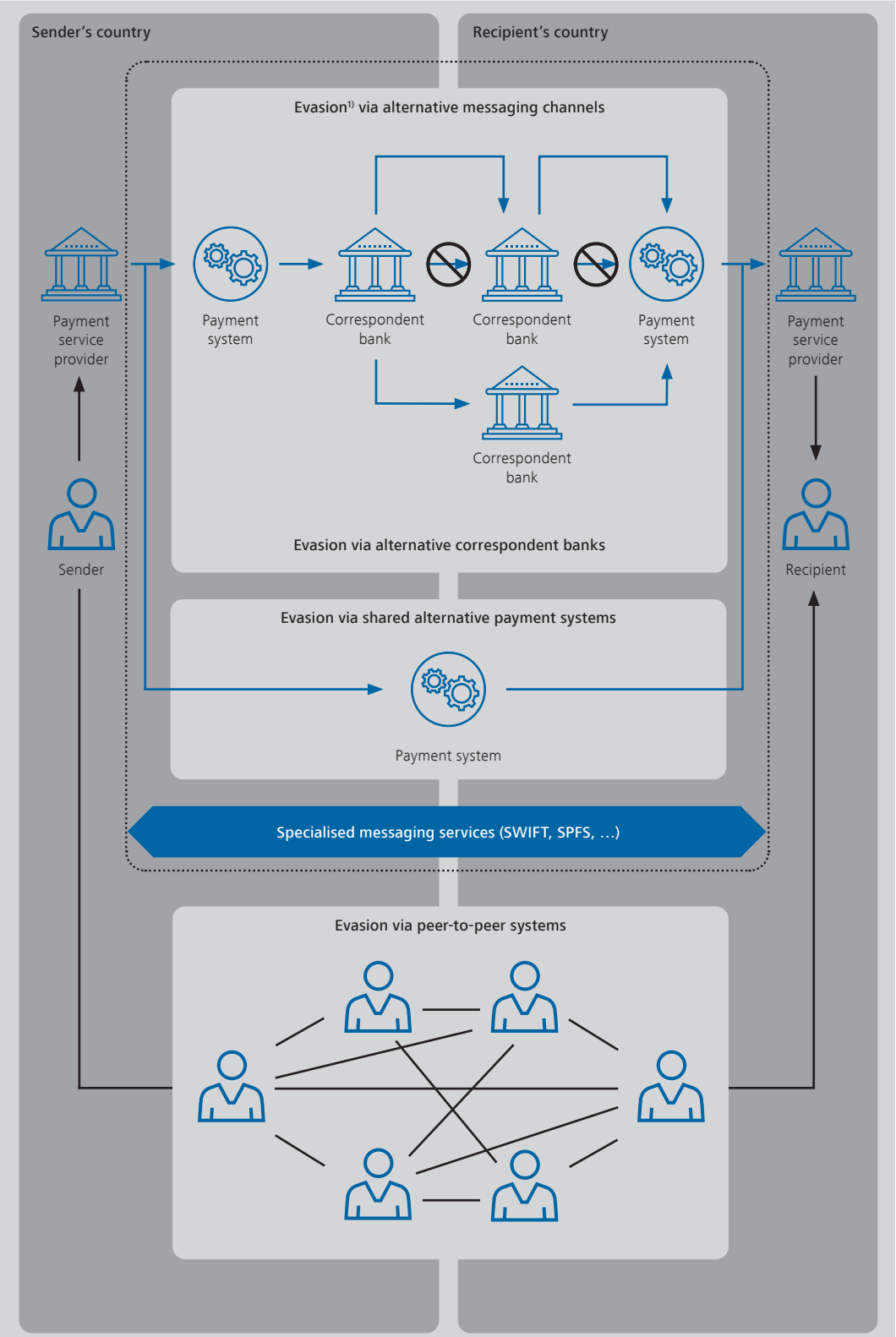
External impulses and geopolitical developments, as well as the responses they provoke, can be a catalyst for far-reaching change in international payments. For instance, new DLT-based settlement infrastructures, coupled with innovative digital forms of money, could rapidly change the face of both domestic and cross-border payments. At the same time, geopolitical tensions could lead to a shift of emphasis in cross-border payments in particular, which, in keeping with the general political debate, could be described for illustrative purposes as a turning point in payments. A tendency to fragment and a greater focus on national interests in payments are plausible consequences. Given the crucial importance of payments for a national economy, this is likely to concern all countries – albeit to varying degrees – irrespective of whether, in the current war, they are the sanctioned aggressor, part of the community imposing sanctions, parties backing or sympathising with one side, or merely bystanders.

Mistrust could lead to a build-up of alternatives in payments

Hence, Russia, too, is responding to the sanctions with efforts to expand its national payment system and intensify its bilateral and regional contacts. It is also looking to open up additional transaction channels by embracing digital money and new technologies. The

31 See Drott et al. (2022).
32 See Cipriani et al. (2023).
33 See International Monetary Fund (2023).
34 Since 2020, the Bank of Russia has been exploring the possibility of introducing a retail CBDC (see Bank of Russia (2021b)). Work on the "digital rouble" has been stepped up as a result of the sanctions imposed. A pilot project was launched on 1 April 2023 and a nationwide roll-out is scheduled for 2024. A digital rouble would reportedly make payments in Russia faster, simpler and safer, reduce transaction costs, improve financial inclusion and strengthen the competitiveness of the Russian currency. There are also plans to explore cross-border functionalities, such as bilateral links to foreign CBDCs.

Sanctions on the use of messaging services in payments



Source: Bundesbank chart based on Financial Stability Board (2020a). **1** The term "evasion" describes legal behaviour by market participants and, taken in isolation, does not constitute a breach of sanctions.

Deutsche Bundesbank

example of Russia could serve as a blueprint for many countries striving for greater independence and sovereignty.

In general, countries could take the precautionary measure of setting up alternatives in payments to give themselves more options to settle the financial leg of trades and financial transactions. Even if they did so, international standards could continue to be applied in proprietary national systems, too. A switch to or the complementary use of other currencies in foreign trade, or even of other forms of money, as well as the use of alternative payment service providers and messaging services are viable options. New technologies such as DLT open up transaction channels that are independent of existing ones. In theory, new providers such as fintech and bigtech firms are also creating additional transaction channels for payments with their platforms. However, these will probably only ever be an alternative if they are located in what the country in question considers to be politically acceptable jurisdictions.

Impact possible on currencies used

These developments could also end up changing the currencies used for invoicing in international payments. At present, US dollar and euro are very heavily used as payment currencies in cross-border transactions, which is why settlement normally also takes place through the corresponding infrastructures in the United States and the euro area. Hence, cross-currency transactions between participants in the European Economic Area (EEA) and non-EEA participants accounted for almost 40% of all payments in TARGET2 in 2021.[35] As alternative payment channels open up, this could usher in a situation where, at the global aggregate level, greater use is made of other countries' currencies and payments worldwide become increasingly fragmented.[36]

Efficiency in payments could decrease, risks could increase

That kind of fragmentation in international payments would be expected to add to transaction costs and settlement times.[37] The economic upside offered by economies of scale and network effects would be left untapped for the most part if, for example, other providers were used to a greater extent alongside SWIFT in international payments in future. In addition, challenges could arise for global liquidity management, with corresponding costs going forward. Overall, fragmentation could make payments more expensive for the economy, and, owing to the added operational complexity, riskier as well. That may well blunt the impact of sanctions in the financial sector.

Global jointly operated payment systems becoming less likely

In light of these tendencies, it is important to ensure that geopolitical tensions do not adversely affect the efforts initiated in 2020 by the G20 to improve efficiency in international payments. This is particularly true of the debate surrounding future settlement infrastructures in cross-border payments. Various models are under discussion, including payment systems developed and operated jointly by several different countries. Recent developments have shown that these present two key challenges in the event of a geopolitical conflict. First, countries could experience disadvantages due to sanctioning or being excluded by the majority of other countries. Those seeing themselves in what might be a minority position would no longer entrust their payments to that kind of system dominated by other countries. Second, the system could be sabotaged by cyberattacks. The more a potential attacker knows about how a system is structured and what protective measures are in place, the more lethal such attacks will be. Governance arrangements alone are unlikely to be able to alleviate any mistrust this might cause. Rather, there needs to be an innate sense of trust, which presupposes an overlapping consensus of political values.

This backdrop makes it all the more important to ensure that globally harmonised standards and interoperable interfaces are in place. For

35 See European Central Bank (2022).
36 This does not necessarily imply that the currencies used will also increasingly serve as a reserve currency.
37 See International Monetary Fund (2023).

International standards and interoperability could mitigate negative consequences

instance, national or international systems can be operated separately but remain technically connected by efficient bridge solutions, thus ensuring that liquidity flows as smoothly as possible. Most countries will probably have little interest, as hitherto, in cutting off their own payments and will probably continue looking for ways to settle cross-border payments as efficiently as possible. After all, this is likely to remain an important prerequisite for participating in world trade.

Sovereignty in payments is part of a state's strategic autonomy

The objective of achieving national sovereignty in economic, infrastructural and security policy matters is now increasingly extending into the realm of payments. In this context, sovereignty refers to a sufficiently strong degree of self-determination or the ability to act independently. Payment transactions may constitute part of the strategic autonomy of a nation state or currency area.[38] On the whole, the notion of sovereignty and an acknowledgement of payment transactions as a critical infrastructure is becoming ever more evident in political communication. Over the past few years, observers have noted an increase in protectionist policy approaches as well as sanctions and exclusions from payment systems, resulting in risks to the availability of payment settlement services (particularly in countries that are highly dependent on a small number of and/or dominant system providers).[39] For example, Russia has been lessening its strong reliance on the international card companies Mastercard and Visa since 2014 by shifting its entire payment processing operations to Russia, and, at the same time, establishing its own national debit card system (Mir).

Accelerating digitalisation driving up importance of sovereignty in payments

The objective of sovereignty in payments is becoming increasingly important as digitalisation accelerates.[40] Digital processes in payments are characterised by strong economies of scale and network effects, which can quickly work in favour of global payment service providers and platform operators. The outcome of this could be dominant market positions, limited competitive intensity as well as lock-in effects due to close ties to the platforms or products on offer. That is why national sovereignty also extends to the independence of private sector providers. If digital money is also tokenised and can be used in integrated digital processes such as DLT, any disruption (e.g. sabotage or sanctions) in the settlement of the cash leg could simultaneously directly impair real economic processes.

European Commission's 2030 Digital Compass initiative

This has spurred the EU, for example, to implement various legislative initiatives aimed at making Europe less dependent on non-European technologies and technology companies.[41] The European Commission's 2030 Digital Compass initiative also calls for the protection of digital sovereignty and for the EU to lead the way in value chains identified as strategically important.[42]

More sovereignty needed in European payments

The Eurosystem's responsibility to ensure stable and efficient payment transactions in the euro area is based on its statutory mandate[43] and makes an important contribution to the stability and integrity of the financial and economic system. However, discharging this mandate means that the ultimate regulatory sovereignty over payments in the euro area has to remain with the competent bodies of the EU, and that the enforceability of these regulations is guaranteed. In the event of a crisis or an attempt to influence operations (e.g. sanctions, sabotage, cyberattacks), being dependent on a third party could compromise the settlement of payments. In the interests of European payments, it is important to reduce such dependence on non-

38 See Deutsche Bundesbank (2021a).
39 See Lagarde (2020).
40 See Balz (2021).
41 These include the Data Governance Act, the Regulation on a Single Market for Digital Services and the Digital Markets Act.
42 See European Commission (2021).
43 At the European level, the Eurosystem has the mandate to promote the smooth operation of payment systems (Article 127(2) of the Treaty on the Functioning of the European Union) and to ensure efficient and sound clearing and payment systems (Article 22 of the Statute of the ESCB). The Bundesbank Act (Section 3) states that the Bundesbank shall arrange for the execution of domestic and cross-border payments and shall contribute to the stability of payment and clearing systems.

European infrastructure providers. In principle, the Eurosystem needs to define which functions in payment and settlement systems must be fulfilled in a sovereign manner.

Private and public sector solutions are the cornerstone of European sovereignty in payments

Yet sovereignty does not necessarily refer only to provision by the public sector. That said, a European payment infrastructure solution operated by the private sector would require the willingness of the European banking sector to cooperate, as well as high initial investment and the use of uniform standards. Efforts to date (such as the European Payments Initiative (EPI)) have not yet been able to achieve product-ready results, but would be a good starting point for a European platform of this kind. In the public sector space, meanwhile, the introduction of a digital euro could lay the groundwork for European payment solutions. This would require a digital euro to be issued on a dedicated and independently controllable infrastructure. Uniform technical standards would enable the market to build pan-European payment solutions on this infrastructure that could have a long-term future as an alternative to non-European CBDCs, stablecoins or other crypto tokens.

On the one hand, CBDC is seen as a way to ensure accessibility for broad segments of the population at the international level, too, through simple, inclusive access based on completely new infrastructures. On the other hand, concerns have also been raised in some quarters about possible macroeconomic consequences, including the possibility of currency substitution in other economies.[44] This may be the case if, first and foremost, countries were specifically to pursue hegemonial strategies. This backdrop suggests that it would be of utmost importance for the CBDC projects of the various countries to be closely coordinated, for mutually agreed principles to be observed and for interoperability solutions to allow for cross-border use without undermining the sovereignty of individual countries. However, the current geopolitical situation is not making these challenges any smaller.

Regulation is becoming more complex

Payment regulators especially must be prepared to face possible fragmentation and other changes. New technologies, new forms of money and new providers, irrespective of whether they operate nationally or internationally, must be regulated in as technology-neutral a manner as possible and with a focus on risks. Moreover, these developments call for more intensive interaction between regulators, given how they could potentially work across national borders. Regardless of any desire on the part of individual countries for sovereignty in payments, all states should have an interest in preventing risk-enhancing regulatory arbitrage. However, the current geopolitical situation makes it more difficult for the necessary technical interaction between the regulatory authorities to take place.

44 See Bank for International Settlements (2021).

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