



Riksbank Study

Harmonisation and platform sharing in the financial market

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NO 2 2021, 21 May

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Riksbank studies

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Foreword

It is important for small markets like Sweden not to stand outside the larger markets in an increasingly globalised world. The world is constantly changing and a structural transformation is under way in the area of payment and securities in Sweden and Europe. One reason behind the structural transformation is the objective of completing the Capital Markets Union within the EU. The changes are also a result of technological developments that both enable and create expectations for faster and more efficient payments and transactions. In addition, all this is taking place in a context where financial institutions are already largely moving from national to international infrastructure solutions. Continued harmonisation of the Swedish market's processes with European standards is therefore a necessary step to enable Swedish companies and consumers to access the EU's internal market in the best possible way. The Riksbank fully supports ongoing and future harmonisation and itself plays an important role through harmonisation of its own settlement services. It is also important that market participants prioritise harmonisation work so that its benefits can be realised.

Another step in harmonisation can be platform sharing between central banks. A safe and efficient infrastructure for payment services is costly both to set up and operate, while the marginal cost of adding additional participants or transactions is low. Platform sharing thus brings significant economies of scale, which in turn can increase competition and benefit Swedish society through more cost-effective payments. These advantages are difficult for a small market like Sweden to achieve alone. Platform sharing also adds increased security and continuity resources. However, certain considerations are required if the Riksbank is to share a platform with other central banks, for example how influence and control over the systems are to be exercised. In addition, platform sharing must not restrict the Riksbank's ability to independently conduct its other tasks, such as monetary policy and safeguarding financial stability. These are considerations that the Riksbank is currently weighing up in its ongoing analysis of future payment settlement systems.

The Riksbank's assessment is that the positive aspects of sharing platforms with other central banks are significant and that it is a way to further benefit from the efficiency gains that harmonisation brings. Based on its mission to promote a safe and efficient payment system, the Riksbank continuously works to review its settlement services. The objective is to continue to offer robust, safe and efficient settlement services to the Swedish market as part of the ongoing structural transformation in the payment and securities markets. Consequently, in 2021 the Riksbank will decide on which direction the Riksbank advocates for its future payment settlement system, and how the Riksbank shall provide central bank money for securities settlement going forward.

Executive Board of the Riksbank

Summary

The authors work in the Riksbank's Financial Stability Department and Payments Department.¹

In this Riksbank study, we describe the steps taken so far by both the private and public sectors in Sweden and Europe to harmonise processes, requirements and message formats for payments and the securities market post-trading segment. The term "post trade" refers to activities that take place after ordering and closing in a securities trade and include, among other things, the settlement of the securities transaction. Furthermore, the study exemplifies the opportunities, in the form of platform sharing with other central banks, that harmonisation enables, and discusses what needs to be considered ahead of such a decision.

The services and processes used to make payments in, to and from Sweden are undergoing changes. These changes are not limited to Sweden, but are part of a global structural transformation. Similar developments are also taking place in the securities sector. The infrastructure that forms the basis for making payments and securities transactions must therefore be adapted and developed to be in line with this development.

The Riksbank plays a decisive role in Swedish infrastructure. One of the tasks of the Riksbank is to promote a secure and efficient payment system. This entails, among other things, that the Riksbank provides the central payment system in the Swedish economy, called the RIX system. The RIX services will be supplemented next year with a service for settlement of "instant payments". However, how the RIX system will be provided in the future is a matter that the Riksbank is now investigating. One option being considered is to share technical platforms with other central banks.

As a member of the European Union (EU), Sweden has access to the EU's internal market, which aims at the free movement of goods, services, people and capital. Efficient and secure payments and efficient and secure securities settlement are important in order to take advantage of the potential of the internal market. To develop the internal market, the European Commission has drawn up an action plan for a Capital Markets Union. The action plan includes a series of measures to achieve three key objectives, one of which is to integrate national capital markets so that the internal market is realised. If Swedish practice deviates from established European standards, it makes it more difficult for foreign financial firms to establish themselves in Sweden and offer their services. It would thus counteract the benefits that Swedish consumers can gain from the EU's internal market. For the same reason, it would also be more

¹ The authors would like to thank Mattias Hector, Mia Holmfeldt, Olof Sandstedt and Johanna Stenkula von Rosen at the Riksbank's Financial Stability Department, as well as Martin W Johansson, Helena Tummings and Christina Wejshammar at the Riksbank's Payments Department for valuable comments and help in the work on this report.

complex and costly for Swedish financial firms to establish themselves abroad and utilise the European markets effectively.

In addition to the action plan for a Capital Markets Union, regulatory frameworks and regulations aimed at harmonising operational requirements and processes in the payment and securities sector have been developed within the EU. The harmonisation has also been expressed through a common format for the messages sent between financial agents in connection with, for example, a payment transaction. In addition, parties within Europe, from both the private and public sectors, have agreed on standards for how different processes should be carried out.

The above measures have contributed to increasing the degree of harmonisation rate in the European payment and securities sector. That also lowers the thresholds for cross-border transactions and actors, which contributes to increased competition. Moving the processes of Swedish financial infrastructure systems closer to European and international standards contributes to European harmonisation and also provides good conditions for enabling the Swedish market to use shared technical platforms.

In their role as financial infrastructure providers, central banks are strong and long-term actors who offer services that are competitively neutral. Sharing a platform with other central banks is a way of sharing costs and resources for development, operation and security, thus making efficiency gains through economies of scale. When the services provided are effective and relevant, it makes it easier for financial institutions to fulfil their missions to deliver efficient and secure services at low cost to society. However, the efficiency gains that can be achieved by sharing platforms must be weighed against what platform sharing may entail, for example in terms of changed forms of influence and governance as regards operation and development. Other aspects that are important in the choice of future settlement platforms are related to availability and continuity. In conclusion, platform sharing must not limit the Riksbank's freedom of action in terms of independently conducting its other tasks, such as monetary policy and safeguarding financial stability.

1 Introduction

A central concept when it comes to making a payment (or a securities trade) is settlement. Settlement involves final regulation of commitments between two parties, for example by a bank making a transfer from its account to another bank's account in the central bank's payment system. Securities settlement takes place when sellers and buyers, through their respective banks, transfer securities and money to each other in accounts at the central securities depository (CSD) and central bank. The Riksbank provides a system for settlement of payments between financial institutions. These settlement services are settlement of large-value payments (RIX-RTGS) and, starting in 2022, settlement of instant payments, around the clock, every day of the year (RIX-INST). In addition, the Riksbank provides central bank money for securities settlement through the CSD Euroclear Sweden, which administers Riksbank accounts on behalf of the Riksbank in its technical system, intended for liquidity for securities settlement. An important advantage of this being done by a central bank like the Riksbank is that the credit and liquidity risks in society decrease when central bank money is used for settlement of payments, including securities settlement.²

When payments and transactions in financial instruments are to be settled, the information is sent between financial agents. To enable effective and secure cross-border settlement of payments and securities transactions, it is important that the information is structured in the same way and contains the same type of data. Consequently there have been many initiatives within the financial system in Europe over the past 10 to 15 years, by both private and public sector bodies, to harmonise the regulatory framework and processes, as well as to standardise message formats.

In this Riksbank study, we describe some of the most important European and international initiatives for standardisation and harmonisation both of payment processes and the securities market post-trade processes. The Swedish payment and securities market is in a harmonisation phase that extends over many years, where European standards are either being, or are planned to be, introduced. As regards securities settlement, this Riksbank study can be seen as a follow-up to a previous Riksbank study.³

We also describe what the concept of platform sharing with other central banks means. Sharing a platform means that the Riksbank uses technical platforms owned, operated and used by other central banks, for example for large-value payments, for settlement of instant payments or for settlement of securities transactions. Platform sharing can be a significant tool for achieving the economies of scale that enable efficient and effective provision of settlement services. It is also a further step towards fully achieving the benefits of harmonisation, such as freer movement of capital and lower barriers to cross-border payments and securities trading. However, the benefits of sharing platforms need to be weighed against how influence and control are exercised in such a context. Consequently, we describe both the opportunities and the

² For more information, see Principle 9 in CPMI-IOSCO's Principles for Financial Market Infrastructures (PFMI).

³ H. Hallström and G. Söderberg (2019), "What should Swedish securities settlement look like in future?", *Riksbank studies* no 2. Sveriges Riksbank.

challenges related to this and how they can be weighed against each other in an assessment.

2 Harmonisation of processes for payments and securities

Since the early 2000s, major efforts have been made in Europe by both private and public actors to harmonise the conditions for payments and securities transactions between different countries. It is becoming increasingly important for Sweden to actively participate in the harmonisation work to ensure that the Swedish market remains attractive when in an increasingly integrated European capital market.

When several countries use the same or similar processes and standardised message formats in the areas for both payments and securities, the efficiency of the financial system increases and it becomes easier to conduct cross-border operations. By applying European standards and avoiding nationally specific solutions for payments and securities processes, actors in the Swedish financial system can increase the efficiency of the capital and financial services markets. If cross-border payment flows or post-trade arrangements are ineffective, it becomes more difficult and more expensive to make payments and trade in securities across borders.

2.1 Harmonisation increases the efficiency of the financial system

One reason for why it is important to harmonise processes and formats for payments and securities transactions is that they can be settled in the same way and under similar regulations, regardless of the country or market. Many actors in the financial system conduct business in several different countries. It is therefore an advantage if the processes required for payments and securities transactions are similar, since the actors will then not need to make local adjustments to their systems and processes.⁴ Hence cross-border activity can take place more efficiently and at lower cost. Harmonisation thus facilitates the mobility of capital across borders. This benefits not least smaller actors with fewer resources. But even for consumers of payment services, this can mean that a payment to or from abroad becomes easier, cheaper and faster. For companies, harmonisation can also mean simpler procedures and processes in business outside their own country, which can also lead to a reduction in operational risks. Overall, harmonisation thus contributes to increased efficiency and increased competition in the financial system.

⁴ For a more detailed description of what efficient securities settlement entails, see H. Hallström and G. Söderberg (2019), "What should Swedish securities settlement look like in future?", *Riksbank studies* no 2. Sveriges Riksbank.

The potential benefits of harmonisation can be particularly large in the area of payments and securities, as there traditionally have been significant differences between different countries. In many countries, including Sweden, local variations of processes and of messages sent between actors in terms of both payments and the securities market's post-trade processes have long been applied. However, as more cross-border payments and securities transactions occur, the need for automated processes and international standards has also increased for domestic payments and securities transactions.

The EU is driving harmonisation work

Harmonising rules and practices is one of the cornerstones of the EU internal market. The aim is, among other things, to increase competition and promote innovation, which ultimately brings greater benefit to consumers. However, a transition from national solutions to standardised formats and processes is associated with initial costs in the form of investments and work input. These costs are often direct and tangible, while the gains of harmonisation do not become clear until after a number of years, and sometimes in a less measurable way. This has probably contributed to the work of harmonisation at times being slower than was desirable. For example, many of the barriers to cross-border securities settlement raised in the so-called Giovannini Reports as early as in 2001 are still present (see section 2.3). In recent years, however, harmonisation work in the financial markets has intensified, with several significant advances, not least through the establishment of the Banking Union.⁵

Another prioritised area is the EU Capital Markets Union.⁶ The work began in 2015 and has resulted in a number of measures, but so far has not progressed as far as the European Commission had hoped, as commitment has varied between countries.

In addition to the Capital Markets Union plan, the European Commission works together with the European Central Bank (ECB) to promote harmonisation and standardisation for payments within the EU, for example to make cross-border payments easier and thus also their settlement. It has recently become an issue with a geopolitical perspective, as there is neither a European card infrastructure nor any pan-European "digital wallet".⁷ There is therefore a concern about becoming dependent on what is in practice foreign private infrastructure.⁸

⁵ M. Ehrenpil and M. Hector (2017), "Banking Union – What is it?", *Economic Commentaries* no 5, Sveriges Riksbank.

⁶ European Commission (2020), "A Capital Markets Union for people and businesses - new action plan", 24 September.

⁷ A digital wallet is a form of account where a user's payment information and password can be securely stored, for different payment methods and websites. By using a digital wallet, a user can easily and quickly make purchases with their smartphone, for example.

⁸ European Commission (2020), "Retail Payments Strategy", September 2020.

2.2 Harmonisation in the area of payments

Globally, efforts are under way to identify which changes can lead to faster and cheaper cross-border payments. In 2020, the Financial Stability Board (FSB) published reports on how cross-border payments can be improved.⁹ Faster, cheaper, more transparent and more inclusive cross-border payment services are considered to have great benefits for citizens and economies worldwide. They support economic growth, international trade, global development and financial integration. The FSB produced these reports at the request of the G20, a group consisting of 19 major economies and the European Union, on a roadmap for improving cross-border payments. In co-operation with the Bank for International Settlements (BIS) and its standard setting body, the Committee on Payments and Market Infrastructures (CPMI), the FSB is now working on identifying areas where the public sector can help improve payment systems between countries or remove unnecessary barriers to cross-border payments. The work also includes considering the possibility of developing new multilateral platforms and arrangements for cross-border payments.

Apart from developing new solutions for cross-border payments, work has also been going on for many years to renew and standardise the messages used for financial services through the introduction of a new messaging standard, ISO 20022.

In Europe, the private sector has participated in the work of harmonisation by establishing rule books that detail how payments should be processed, i.e. a description of that standard for different types of payment. A model for creating and managing rule books for euro area payments has been established through setting up the European Payments Council (EPC). The Eurosystem, which provides TARGET2 and TARGET Instant Payment Settlement (TIPS) for settlement of payments, also contributes to the euro area having a harmonised and standardised payment infrastructure.¹⁰

Implementation in Sweden

For several years, Swedish market participants have been working on introducing a common Nordic rulebook for payments. The rulebook is in practice a rule book for each payment type, which is approved and owned by the Nordic Payment Council (NPC).¹¹ It follows the corresponding rulebooks approved by the EPC. The launch of the next version of the rulebooks for Nordic payments is planned for November 2023.

The NPC's rulebook is an important prerequisite for the Project 27 (P27) initiative, which aims to set up a pan-Nordic infrastructure for both national and cross-border payments.¹²

The Riksbank is also taking a step towards European harmonisation through its decision in April 2020 to enter into an agreement with the Eurosystem to use the TIPS

⁹ Financial Stability Board (2020), "Enhancing Cross-border Payments: Stage 3 roadmap", October 2020.

¹⁰ The Eurosystem consists of the ECB and the 19 national central banks that have the euro as their currency.

¹¹ The Nordic Payments Council was established in 2018 on the initiative of the bankers' associations in Sweden, Norway, Denmark and Finland.

¹² P27 Nordic Payments (2021). [online] Available at: <https://nordicpayments.eu/>

platform for settlement of instant payments in Swedish kronor starting in 2022 and to launch its settlement service RIX-INST.

2.3 Harmonisation in the area of securities

Within Europe there has been extensive work to identify and try to eliminate barriers to cross-border securities transactions. In that way, the aim is to create better conditions for an efficient internal market for capital and financial services. The work began with the so-called Giovannini reports produced by an expert group chaired by Alberto Giovannini, set up by the European Commission. The Giovannini Group identified 15 operational, legal and fiscal barriers to integrated financial markets in Europe in the clearing and settlement area and published its analysis and proposals in two reports in 2001 and 2003.¹³ Within the framework of the Capital Markets Union, the European Commission then appointed an informal group of experts, the European Post Trade Forum (EPTF),¹⁴ whose work was based on the Giovannini Reports and it concluded that of the original 15 barriers, only five had been removed. The EPTF also identified further barriers to an effective internal market for capital and financial services.¹⁵

Although much effort was put into developing standards to remove the operational barriers identified by the Giovannini reports, implementing these standards proved to be difficult. The reason was that it required investments to change IT systems and procedures. The introduction, however, accelerated in most EU markets in connection with the Eurosystem's decision to launch TARGET2-Securities (T2S). T2S is the Eurosystem's technical platform for securities settlement and has been in use since 2015.¹⁶ With T2S, the Eurosystem also became the hub of European harmonisation work in the securities area and the work is strongly supported by the EU institutions.

Implementation in Sweden

In 2011 Sweden decided to wait before deciding to use T2S. This also meant that Sweden did not adopt the agreed European post-trade standards, despite the market having made pledges to introduce them. The result is that the Swedish post-trade processes now deviate in several areas from new practices in most European markets. For a more detailed description of Swedish securities settlement, we refer to a previously published Riksbank study.¹⁷

¹³ For more information see Giovannini Group (2001), "Cross-border clearing and settlement arrangements in the European Union", May 2001, European Commission and Giovannini Group (2003), "EU clearing and settlement arrangements", April 2003, European Commission.

¹⁴ European Commission (2018), "Register of Commission expert groups and other similar entities", last updated 12 March 2018. [online] Available at: <https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3394>

¹⁵ For more information see European Post Trade Forum (2017), "Report", May 2017, European Commission.

¹⁶ European Central Bank (2021), "What is TARGET2-Securities (T2S)?" [online] Available at: <https://www.ecb.europa.eu/paym/target/t2s/html/index.en.html>

¹⁷ See H. Hallström and G. Söderberg (2019), "What should Swedish securities settlement look like in future?", Riksbank studies no 2. Sveriges Riksbank.

However, market participants now agree that the Swedish securities market's post-trade processes need to be harmonised with European standards. In 2020 participants in the Swedish financial market worked to develop a plan for how this harmonisation with European standards should be carried out. The work of developing the plan, which was adopted in January 2021, was carried out within the Coordination Forum for Swedish Post-Trade Harmonisation (CoFo).¹⁸ The harmonisation plan will lead to the Swedish market being able to meet the conditions that apply for a T2S connection, should this become relevant. This also means that some of the transition costs that would be linked to a possible connection to T2S will arise already in the implementation work that follows from the harmonisation plan. Important and extensive work is now under way to implement the plan, which extends until 2027/2028. The Swedish CSD is planning for adaptations to European standards and formats for securities settlement, as well as for processes relating to dividends, issues and other corporate actions for securities registered in the CSD's system.¹⁹ The changes will be implemented in cooperation with the CSD participants and affect services, technical systems and procedures. In order for the result of this major transition to be good, it is very important that all actors affected allocate the necessary resources to the work. This applies to both the initial analysis phase and the subsequent work to implement the changes.

The transition work of the securities market will be followed up through the Swedish National Stakeholder Group (NSG).²⁰ The Riksbank will play an active role in the NSG and in its work to coordinate and follow up the harmonisation plan.²¹

2.4 Harmonisation is a continual process

Swedish market participants agree on the importance of transitioning to harmonised processes and standardised formats for the financial market. This is important in light of the ongoing structural transformation described in the sections above and in order to meet society's needs for efficient and secure settlement of payments and securities, even across borders.

However, harmonisation is a moving target. While the Swedish market is now planning for a transition to current European standards, work is at the same time under way to design new European standards. This means that the work of harmonisation will not be finished once and for all when in future the Swedish market starts to apply the standards used today, for example in the area of securities. Continuous commitment is therefore required of participants in both the payment and securities markets

¹⁸ Coordination Forum for Swedish Post-trade Harmonisation (2021), "Harmonisation road map for the Swedish post-trade securities market", January 2021. (Available at the Riksbank's web page)

¹⁹ A CSD operates a settlement system for securities (a settlement service) and at least one more of two services; a notary service, i.e. original registration of securities in an account-based system and a central account management service, i.e. the provision and operation of securities accounts at the highest level.

²⁰ European Central Bank (2021), "National User Groups / National Stakeholder Groups". [online] Available at: <https://www.ecb.europa.eu/paym/target/t2s/governance/html/nsg.en.html>

²¹ NSGs are the standard for how European countries coordinate and follow up their national work on standards in the securities market's post-trade area. In addition, NSGs form a formal link to the work conducted within the Eurosystem forums, such as the Advisory group on Market Infrastructures for Securities and Collateral (AMI-SeCo), which facilitates the ability of Swedish actors to influence the work.

to follow developments and share in the work of designing future standards. It is in the interest of the Swedish market to play an active role in this work, partly to contribute Swedish views, partly because the market's processes and formats must be synchronised with Europe and with other important markets. The Riksbank can act as a catalyst for driving and initiating harmonisation work in co-operation with market participants, since the Riksbank is the operator of the central payment system. The same applies to Euroclear Sweden, which is the operator of the securities settlement system. The Swedish infrastructure systems therefore play an important role in contributing to increased harmonisation and standardisation in European co-operation.

Harmonisation is necessary in order to fully utilise the potential of the internal market. The harmonisation of Swedish financial infrastructure systems' – and their participants' – processes for payments and securities settlement with European and international standards also creates good conditions for the use of technical platforms designed to be used jointly by many actors. In short, harmonisation is necessary to be able to share platforms.

In the next chapter, we describe what it means to share a platform with other central banks and what opportunities and challenges it can entail.

3 Platform sharing with other central banks

The Riksbank is currently reviewing how its settlement services are to be provided in the future, including how the Riksbank shall provide central bank money in Swedish kronor for settlement of securities transactions. The reason is that the area of payments and securities is already changing. As a next step in harmonisation, sharing platforms with other central banks may be an alternative. Infrastructure systems are costly to set up and operate and it may be burdensome if the cost is to be borne by a small number of participants. Sharing a platform is a way of sharing costs and resources for development, operation and security, thus making efficiency gains through economies of scale. In addition, platform sharing can also contribute further to increased mobility of capital, facilitate competition and lower barriers to cross-border activities. However, the efficiency gains that can be achieved by sharing platforms must be weighed against what platform sharing may entail, for example in terms of shared influence and governance as regards operation and development. Nor may platform sharing put any limitation on the Riksbank's freedom of action in terms of monetary policy or financial stability.

3.1 Swedish infrastructure is part of an international context

The Riksbank's system for settlement of payments, RIX, is a financial infrastructure system and the central component of the Swedish financial infrastructure for payments. Thus, it is also a central component in settlement of securities, since a CSD must use central bank money, where practical and available, for settlement of securities transactions.²² In addition to RIX, participants in the Swedish financial system also use other financial infrastructure systems, for example for central counterparty clearing. The infrastructure that supports the Swedish financial market's payments and post-trade functions is a combination of Swedish, European and international service providers. Thus, the Swedish infrastructure for payments is already closely integrated with the rest of the world and it is likely that the development will continue towards a higher degree of integration and internationalisation in the future.

²² This is specified in Article 40 of the EU Regulation No 909/2014 of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories (CSDR).

3.2 The Riksbank is investigating future settlement systems

Systems for settlement of large payments and securities are characterised by large investment costs, both to set up the system and to maintain it. They are expected to last for many years while delivering features that are continuously relevant to users.

As the rest of the world changes and develops, it is therefore important to reassess and decide on what the solutions need to look like in the future. The settlement services must always be as efficient and secure as possible and at the same time need to keep up with developments in society and the needs of the financial system. Such a reassessment is under way now. In this context, the Riksbank is investigating whether technical platforms owned and operated by other central banks can be an alternative to current solutions. More specifically, the Riksbank is investigating whether the Eurosystem's TARGET platforms T2 and T2S can be an option for the Riksbank's future settlement services.^{23 24 25} The Riksbank decided already in April 2020 to enter into an agreement with the Eurosystem to use the TIPS platform for settlement of instant payments in Swedish kronor. With this agreement, in 2022 Swedish kronor will become the second currency, after the euro, to be settled in central bank money on the TIPS platform.

3.3 What does it mean to share a platform with other central banks?

From the Riksbank's perspective, platform sharing means that the Riksbank in its own operations for the payment system in Swedish kronor, RIX, will use technical platforms that are owned, operated and used by other central banks. In practice, this means that the Riksbank enters into an agreement with the central bank or banks that own and operate such a technical platform. The Riksbank thereby outsources certain tasks carried out on the technical platform of the other central bank or banks. At the same time, the Riksbank continues to be the provider of a payment system. For the participants in the Riksbank's payment system, RIX, the Riksbank would still be the contracting party and responsible for ensuring that the services are performed, regardless of which technical platform is used. This can be compared with the current situation, where the Riksbank has similarly outsourced Riksbank liquidity settlement accounts for securities settlement, but in this case to the Swedish CSD, which is a private actor.

²³ T2 is the Eurosystem's forthcoming real-time gross settlement system (RTGS) for large payments. It is planned to put the T2 into operation in November 2022 and it will apply the ISO20022 message standard. For more information, see European Central Bank (2021), "T2-T2S consolidation: what is it?". [online] Available at: <https://www.ecb.europa.eu/paym/target/consolidation/html/index.en.html>

²⁴ Sveriges Riksbank (2021), "Report on the Riksbank's future settlement service", last updated 12 May 2021. [online] Available at: <https://www.riksbank.se/en-gb/payments--cash/the-payment-system---rix/study-of-the-riksbanks-future-settlement-service/>

²⁵ Sveriges Riksbank (2021), "Harmonisation of the financial infrastructure", last updated 12 May 2021. [online] Available at: <https://www.riksbank.se/en-gb/financial-stability/the-financial-system/the-financial-infrastructure/harmonisation-of-the-financial-infrastructure>

A requirement for sharing a technical platform with others is that everyone who wants to use the platform applies the same processes and communicates in the same format, that is, act in the same way. In other words, harmonisation as described in previous chapters is a requirement for platform sharing, while platform sharing can also improve the conditions for obtaining as much benefit as possible from the work of harmonisation.

The Eurosystem's technical platforms are examples of platform sharing

The Eurosystem has a strategy that enables its technical platforms to be used also by central banks outside the Eurosystem. The collective name for the Eurosystem's technical platforms is TARGET Services and they currently consist of the platforms TARGET2, TARGET2-Securities (T2S) and TARGET Instant Payments Settlement (TIPS). TARGET2 is used for settlement of large-value payments, T2S for settlement of securities transactions and TIPS for settlement of instant payments. Settlement on all platforms is between financial institutions and in central bank money.

In January 1999, the Eurosystem launched TARGET, the first payment settlement system in euro. The system linked the national RTGS structures that already existed. This decentralised structure was replaced in 2008 by TARGET2 which offers a harmonised settlement service on a common platform. Settlement services are offered via the respective national central bank and payments in euro flow between participants in the Eurosystem's different central banks. The demand for faster payments, where the payment reaches the recipient in just a few seconds, then prompted the Eurosystem to develop a platform for instant settlement of payment transactions, TIPS, which was launched in November 2018.

T2S has been used for settlement of securities transactions since 2015. In order for securities settlement to take place in an efficient manner, there are both central bank accounts and securities accounts on T2S. This means that the central securities depositories have outsourced securities accounts and settlement to T2S. In the beginning, only transactions in euro were settled, but in 2018 the Danish krona was also added to the platform. Currently, 21 CSDs from 20 European countries use T2S. As of September 2023, it is also planned that securities from another Nordic neighbour, Finland, will be settled on the T2S platform.

In November 2022, there will be a technical consolidation of TARGET2 and T2S, which means that TARGET2 will then be replaced by a new system called T2. In addition, T2, in the same way as T2S and TIPS, will also be possible to use for settlement of payments in currencies other than euro.²⁶ In November 2023, a new collateral management system will also be launched under the name Eurosystem Collateral Management System (ECMS).²⁷ ECMS will replace the current collateral management systems of the national central banks included in the Eurosystem.

²⁶For more information, see European Central Bank (2021), "T2-T2S consolidation: what is it?". [online] Available at: <https://www.ecb.europa.eu/paym/target/consolidation/html/index.en.html>.

²⁷ European Central Bank (2021), "What is the Eurosystem Collateral Management System (ECMS)?". [online] Available at: <https://www.ecb.europa.eu/paym/target/ecms/html/index.en.html>.

3.4 The objective is stable, secure and efficient settlement services

The Riksbank's assessment of whether it is appropriate to share platforms is based on the objective of being able to offer stable, secure and efficient settlement services also in the future. The Riksbank needs to ensure that these objectives and requirements are achieved regardless of which technical solution is chosen.

Continuity and security are fundamental requirements

Operational reliability, stability, accuracy and availability are fundamental requirements that must be placed on such a critical national system as the RIX system. For example, an operational interruption risks rapidly disrupting large parts of the financial system. Continuity solutions where continued access to the settlement service is secured in the event of any production disruptions is therefore an important aspect in ensuring continuity of the system. It is particularly important to have a high level of cybersecurity in order to avoid attacks and disruptions. In order to protect the systems, the system owner must constantly be at the forefront of development, especially in terms of technology and competence.

Long-term perspective, predictability and relevant services are important aspects

A financial infrastructure system is not something that you change or replace haphazardly, because it is complex and plays a central role in the financial system. The solution chosen should therefore be able to work for a long time. The development cycle of the system should also be predictable, in that the system is developed in line with the transition of the rest of the world to new standards and other general changes. However, a long-term perspective and predictability must not mean that the system becomes static. Instead, it must be possible to adapt it to demands and challenges that change over time, in line with the ongoing structural transformation in the area of payment and securities, where new technology and digitalisation increase the rate of change. This may include, for example, new services that benefit from common functions on central platforms.

One example that illustrates how the systems can be developed to keep pace with changes in the rest of the world is the ongoing investigative work carried out by the Riksbank and the ECB linked to the TIPS platform. The work aims to analyse whether the TIPS platform could be used for the settlement of instant payments between different currencies. Initially, the focus is on settlement between Swedish krona and euros, but with the possibility of further expansion into other currencies.²⁸ This could create better options for payments between different European countries and currencies. For example, it could be an alternative to using cards.

²⁸ Sveriges Riksbank (2020). "The Riksbank and the ECB are starting a joint study on instant cross-currency payments", *News item* October 2020.

It must be possible to use the RIX services in a competitively neutral way

In the choice of platform solution, it is important to take into account the ability to provide competitively neutral RIX services. In addition, the Riksbank needs to factor in that solutions chosen to provide central bank money for settlement purposes are effective. For example, if there is demand from more than one CSD to settle with Swedish central bank money, the Riksbank should be able to meet it both effectively and in a competitively neutral way. Competitive neutrality in this respect means that the Riksbank cannot reject an application for access to central bank money in Swedish kronor for securities settlement if the CSD meets the Riksbank's stipulated requirements.

Cost effectiveness is another important aspect

In order to achieve cost-effectiveness, the Riksbank must endeavour to keep down costs for RIX and RIX services, and ultimately costs for payments and securities settlement in Swedish kronor. Cost-effectiveness is important for the participants in the system because the costs of settlement services are distributed among the participants. All major changes in financial infrastructure are associated with major costs. Therefore, the Riksbank needs to consider possible future cost effectiveness from a long-term societal perspective. Individual actors will be affected by changes in the payment infrastructure, as this means transition costs. The goal is to achieve a long-term cost-effective situation.

3.5 Opportunities and challenges of platform sharing

When considering platform sharing, the Riksbank needs to assess the opportunities and challenges together. The benefits of platform sharing in terms of economies of scale should be weighed against the challenges platform sharing brings. The assessment of whether platform sharing is a desirable alternative or not is largely linked to the time perspective that is set, the view taken as regards the need for change and the evaluation of the possibilities of direct influence over operation and development.

Regarding the time perspective, it is important to realise that financial infrastructure systems are characterised by high, fixed costs and shows significant economies of scale. The fixed costs of building, maintaining and operating the infrastructure are high, while the marginal cost of processing an additional transaction or another participant is low. This means that the average cost per transaction falls with an increasing number of transactions. A country with a small currency like the Swedish krona cannot on its own achieve the same economies of scale that can be achieved in a system with a larger number of transactions. Sharing a platform with other central banks makes it easier to reach these economies of scale. The same reasoning can be applied to the possibility of developing new functionality – the more who share the cost, the lower the cost per participant or transaction. This is relevant not least for costs related to maintaining a high level of cybersecurity. Sharing a platform also enables central banks to share a larger resource pool for cybersecurity work, for example. Costs for changes resulting from structural transformation arise even if you choose to con-

continue with existing solutions. Therefore, the costs associated with a transition to platform sharing need to be compared with what it would mean to remain with national solutions, with development costs distributed among fewer participants.

If the Riksbank were to use T2S, the way in which the CSD chooses to adapt its infrastructure system is also important, so that this change will be effective from a holistic perspective. The background is that if T2S is used for settlement of securities, there will be additional transaction costs from T2S for activities outsourced by the CSD. It is therefore important that the CSD can reduce other costs to at least the corresponding extent, in order to avoid increasing the total cost.

Sections 2.2 and 2.3 above describe that in Sweden, work is under way in both the payment market and the securities market post-trade area, where the participants are changing to processes and formats that are harmonised with the European standards. The Swedish market will thus increasingly move closer to the rest of Europe, which is logical in view of the fact that Swedish financial institutions are already active and conduct business in markets other than the Swedish. Platform sharing would mean that the Swedish market is moving in tandem with how other European markets are changing and updating processes and formats, which could provide coordination benefits.

Platform sharing could also contribute to increased competition in securities settlement. In a previous Riksbank study it was found that if the Riksbank uses T2S, it would enable more than one CSD to offer services for securities settlement in Swedish kronor.²⁹ This would require that the CSD has outsourced securities accounts and settlement to T2S. If more than one CSD can offer services for settlement in Swedish kronor, it would improve conditions for competition between CSDs, which is in line with the intention of the EU Central Securities Depositories Regulation. A bank could use the same liquidity settlement account in Swedish kronor for settlement of securities transactions at several CSDs, which means that liquidity does not need to be split for settlement on different CSD platforms.

A completely different aspect is linked to the Riksbank's and the market's ability to exercise influence and control. Sharing a platform with other central banks means that decision-making processes change. If it were to use T2, the Riksbank would not have the same direct influence as it formally has now over the system supplier of the RIX system. Instead, the influence would be exercised by the Riksbank participating in working groups, committees and joint decision-making bodies, which involves processes other than the current ones where the Riksbank has a direct contracting relationship with its system supplier. A shared platform normally also means that the operation is run by others. This means that it is important to verify that, for example, continuity solutions correspond to the Riksbank's requirements and that the operation is carried out in accordance with Swedish protective security legislation. However, also as regards influence and control, it is important to consider the alternative to platform sharing. Even in the current RIX system, the Riksbank does not have full

²⁹ See H. Hallström and G. Söderberg (2019), "What should Swedish securities settlement look like in future?", *Riksbank studies* no 2. Sveriges Riksbank.

influence over the development of the system - influence is limited by the system supplier's capacity and availability. As one of several customers, the Riksbank shares the supplier's resources with others, with limited influence over the order of priorities.

It is also crucial that platform sharing with other central banks does not limit the Riksbank's freedom of action in terms of monetary policy or financial stability. The Riksbank must be able to exercise its mandate regarding oversight of the RIX system, even if the payment system is provided on a platform shared with other central banks.

4 Concluding comments

In an increasingly globalised world, it is important for small markets like the Swedish not to stand outside the larger markets. Therefore, it is important that the Swedish market's processes continue to be harmonised with European standards so that Swedish companies and consumers can best benefit from the EU's internal market. It is also important that all parties in the Swedish financial system, including the Riksbank, contribute actively to driving this harmonisation and integration forward.

Harmonisation also makes it possible for the Riksbank to share a platform with other central banks, which can improve the conditions for Sweden to benefit as much as possible from the work on harmonisation. Platform sharing can effectively contribute to the free movement of capital, facilitate competition and lower barriers to cross-border payments and securities transactions. In addition, the Riksbank and the Swedish market will have greater opportunities to participate in the contexts where much of the European work relating to infrastructures for payment services and future standards is conducted. The introduction of a new system or a new platform, however, entails transition costs for the participants. Some of these transition costs associated with the possible use of T2S will materialise already as part of the implementation of the market's harmonisation plan.

Sharing a platform is a way of sharing the burden for development, operation and security with other central banks, thus achieving efficiency gains through economies of scale. However, the advantages of a shared platform, such as greater resources and more participants sharing the costs, must be weighed against shared influence and control. Sharing a platform with other central banks means that decision-making processes change. For example, if the Riksbank switched to using T2, it would mean that the Riksbank's influence would be exercised in working groups, committees and other decision-making bodies, in the same way as the Riksbank now does for the TIPS platform, rather than through direct contact with the system supplier. In terms of control, it is of the utmost importance to ensure robustness and that the continuity solutions fulfil the requirements. It is also crucial that platform sharing with other central banks does not limit the Riksbank's freedom of action in terms of monetary policy or financial stability.

But even if there are such aspects to consider before taking a final position, overall, platform sharing has many positive aspects. There are therefore good reasons to investigate whether this is an alternative for the Riksbank's settlement services in the future. This is why the Riksbank is now investigating whether the Eurosystem's T2 platform could be used for settlement of payments in Swedish kronor and also whether T2S could be the platform where the Riksbank provides central bank money for settlement of securities going forward. The Riksbank has carried out two market consultations regarding payment and securities settlement in order to gather further input to its analysis. In 2021 the Executive Board of the Riksbank will decide on the approach the Riksbank will advocate for its future payment settlement system, and how the Riksbank shall provide central bank money for securities settlement going forward.

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