

# Speech



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## The state's responsibility for the future payments market\*

Welcome to the Riksbank and this seminar on payments.

My speech today will focus on how we in Sweden will make payments in the future - and what the state, including the Riksbank, needs to do to ensure the payments are safe, efficient and accessible.

I think most of you know the story. Cash was the dominant means of payment for hundreds of years - until one day it wasn't. Today we almost never pay with banknotes and coins. Instead, we pay by initiating a complex digital process that moves money between different accounts.

This is of course part of the digitalisation of society. It has changed our way of life in many ways - and so of course it also affects the way we pay. The question is whether it matters?

Digitalisation often leads to efficiency, but also creates challenges and problems. This also applies to the digitalisation of payments. Now that cash is less viable in Sweden, it has become more difficult for many people to make payments. Payments have also become more vulnerable to disruption.

So what can the state do to make payments smooth and painless, accessible to all and functioning at all times, even during crisis and war?

The Payments Inquiry was tasked with examining the question of the state's role in the payments market. I would like to take this opportunity to thank Anna Kinberg Batra and her secretariat for their impressive work. The final report, published in March, will serve as a reference for many years to come.<sup>1</sup>

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\* I would like to thank Jens Arnoldson and Anders Mølgaard Pedersen for their help in writing this speech, and Gabriela Guibourg, Lisa Gustafsson, Elin Eliasson, Marianne Sterner and Christina Wejshammar for their valuable input.

<sup>1</sup> See the Payments Inquiry's final report [Staten och betalningarna - Regeringen.se](https://www.staten.se/2023/03/20/staten-och-betalningarna).

The Riksbank and many of you here today had the opportunity to comment on the final report as part of a formal consultation. In our response, we expressed support of the report's proposals. However, we believe that several of them are too cautious and do not address the current situation, where cash payments have rapidly become difficult, or the longer-term challenges of digitalisation.

Because digitalisation will continue. There will be new challenges that the state will have to address. We can try to make our way forward with dipped headlights and hope for the best. However, I and my colleagues on the Executive Board believe that it is better to switch on the headlights full-beam and get a clear picture of what is happening ahead. To be proactive and open to change.

The Riksbank will therefore continue to monitor, analyse and, if deemed relevant, act on technological developments so that we can continue to provide a modern, efficient and secure financial infrastructure in the future. This work also includes work on the e-krona, which I will come back to later in my speech.

But before we consider the future, I want to take a few steps back and reflect on some important issues. Why does the state need to get involved in payment issues at all? And what, according to the Riksbank, are the main challenges of digitalisation?

## Payments are the responsibility of the state

The payment system<sup>2</sup>, like the road network or electricity supply, is part of Sweden's basic infrastructure for which the state is responsible. Everyone who needs to make payments must be able to do so, including those who have difficulty using digital services. Moreover, payments must work even when electronic communications are not available.

But while the state has overall responsibility for the payment system, private actors also have a major responsibility and play a central role. This is because the payment system is entirely dependent on private-public co-operation.

The premise of the co-operation is that the state provides basic infrastructure and sets rules to promote safe, efficient and accessible payments. The private sector offers payment services to its end customers and stands for development and innovation.

However, if market developments lead to safety, efficiency and accessibility being jeopardised, then it is the responsibility of the state to take action. The state has various tools available. One is that it can regulate the market and enforce the regulations. Another is to influence market developments through coordination and dialogue. A third is to offer services in the payment market itself.

Internationally, it is common to delegate the state's responsibility for the payment system and parts of the toolkit to the central bank. This is also the case in Sweden. The Riksbank has a statutory mandate to ensure that the general public

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<sup>2</sup> The *payment system* refers to the actors, processes, systems, regulations, etc. that enable payments to be made. It is sometimes referred to as the *payment ecosystem*.

can make payments under normal conditions as well as in crisis situations and during elevated preparedness.

The Riksbank offers two essential services. Firstly, we supply Sweden with cash. The Riksbank has issued cash to the public for hundreds of years, and the new Sveriges Riksbank Act, which came into force on 1 January this year, has strengthened our responsibility for cash.

Secondly, we are the banks' bank. We offer financial institutions the opportunity to settle their debts to each other via accounts with the Riksbank - for the past 30 years through the RIX payment system. In this way, we eliminate the large credit risks that can arise when financial institutions have claims on one another and therefore strengthen financial stability.

## Digitalisation create new challenges

However, the payment system and the circumstances in which the Riksbank operates have changed fundamentally in recent decades. Basically, this comes back to digitalisation. It has made the world more internationally integrated and erased many of the limitations of physical space. Working, consuming and socialising - much of our lives have been digitalised.

It is not surprising that the demand for payment solutions is moving in the same direction. We want payments to be as quick, easy and cross-border as the rest of our lives.

And the market has to some extent responded to these needs. Today, almost everyone in Sweden can make instant payments to one another digitally via Swish. Cards, ID documents and other things we used to keep in our wallets have for many people moved into their mobile phones. At the same time, we have stopped using cash.

The internet has not only seen an increase in online shopping. We are witnessing the emergence of what is described as the third generation internet - or Web3. In this context, blockchain technology is expected to play an increasingly important role and new types of money and assets are being created, such as stablecoins, various tokens and cryptoassets.<sup>3</sup>

In response, the banking community is discussing how to 'tokenise' bank deposits and securities. This concerns making these assets usable in the new environment. Tokenisation could also facilitate the processing of financial transactions and lead to the emergence of new innovative products.

For most people, digitalisation is positive. It has become easier and more convenient to pay. The cost of payments to society in relation to GDP has also decreased over the last ten years.<sup>4</sup>

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<sup>3</sup> *Stablecoins* are a kind of cryptoasset that are intended to maintain a stable value over time, for instance by being pegged to other assets. *Tokens* usually refers to a representation of other assets on a blockchain, such as currencies or financial instruments.

<sup>4</sup> [Riksbank study, Cost of payments in Sweden.](#)

When we use fewer resources in terms of labour and time to pay, these can be used for other purposes. Productivity is increasing. The economy is growing.

But the fact that payments have become more efficient does not mean that they are as efficient as they could be. Moreover, the efficiency gains have come at some cost to our other objectives - safety and accessibility. Digitalisation has created new challenges - and direct problems. I will spend some of my time here describing five of them.

## Risk of lack of competition

The first problem concerns the conditions for competition in the payments market. Payment service providers can benefit from what are known as network effects and economies of scale. This means that a payment service becomes more attractive the more people that use it. And that the more a payment service is used, the lower the cost of producing each payment.

This can lead to lower costs for users, but also to "winner takes it all" situations, where it is difficult or in some cases impossible for new actors to enter the market. Different parts of the payments market are often dominated by a few large players, and sometimes only one. This risks hampering innovation and increasing costs.

Furthemore, payments almost always involve moving bank money from one payment account to another. As a consequence, some payment services have traditionally only been offered by banks. This is still the case to some extent, although the EU Payment Services Directive has attempted to open up the market to other actors.<sup>5</sup>

Moreover, digitalisation has made the payments market more global. On the one hand, it can increase competition when payment service-offering companies in different countries can compete with one another. On the other hand, it means that global companies with large customer bases and networks can quickly take large shares of new markets and achieve a dominant position.

One such company is PayPal, which earlier this year launched a stablecoin that has the potential to become a widely used payment method.<sup>6</sup> A similar story unfolded in 2019, when the Libra Association announced that they would launch a stablecoin on Facebook's (now Meta) platforms.<sup>7</sup> However, the plan was never realised.

Initiatives like these can make certain types of payment more efficient, but in the long run they can also create private monopolies. This would not only be a competition problem. If global players issue stablecoins, they can collect large

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<sup>5</sup> The EU Payment Services Directive is implemented in the Payment Services Act (2010:751). In June 2023, the European Commission presented proposals to update the regulatory framework. See, for example, the Government Office's [factual memorandum](#) on changes to the regulatory framework for payment services.

<sup>6</sup> [PayPal Stablecoin](#) | [US Dollar Cryptocurrency](#) | [PayPal US](#)

<sup>7</sup> See for example [What is Libra? \(riksbank.se\)](#).

amounts of bank deposits from the public. In the long run, this can lead to marginalisation of the national currency and the loss of effectiveness of monetary policy. There may also be risks in the financial system, both nationally and globally.<sup>8</sup>

## The payments system is dependent on electricity and data communication networks.

The second area where we see challenges concerns the resilience of payments systems to disruption. Digital payments require electricity and telecommunications. We have therefore become more vulnerable to disruptions in the digital infrastructure.

In a situation where we cannot pay digitally, cash can serve as a backup. But this is only true if we already have it available and retailers accept it. Withdrawing cash from ATMs also requires the functioning of electricity and telecommunications.

In recent years, it has become increasingly difficult to see cash as a fallback solution for digital payments. There are several reasons for this. First, much of the cash infrastructure has deteriorated. Second, the public no longer carries much cash in their wallets. And third, many retailers have stopped accepting cash.

However, cards can to some extent be used 'offline', i.e. without telecommunication. Whether this works depends on the card and payment terminal.<sup>9</sup> Most customers do not know whether, or how much, their card can be used offline and it is also unclear who should bear the risks of such a payment.

Finally, it is important to remember that there are other things besides the actual payment that need to work for us to be able to shop. Digitalisation has affected so many other things in stores. There are examples where disruptions in cash register systems have prevented retailers from receiving payments. Despite the fact that the customer had cash and the retailer had goods, they were not able to complete the transaction.

## Inclusion is lacking

The third area, which I really want to emphasise, is the lack of inclusion in the payments market.

For many in Sweden, digitalisation and the difficulties of paying with cash have caused major problems. These may be people who have difficulties in using digital technologies and therefore find themselves in what is known as digital exclusion. Others cannot access the financial services needed to make digital payments. They can be said to live in financial exclusion. There are also people who do not want to pay digitally. Some because they do not want to use private payment services as a matter of principle. Others - and this could be for perfectly legitimate reasons - do not want to leave digital trails when they make payments.

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<sup>8</sup> See e.g. [Investigating the impact of global stablecoins \(bis.org\)](https://bis.org).

<sup>9</sup> See, for example, [Report from the Swedish Payments Council \(riksbank.se\)](https://riksbank.se) (2018) and the Payments Inquiry's survey in [Staten och betalningarna - Regeringen.se](https://regeringen.se).

These are serious problems. Last year, 15 out of 21 county administrative boards assessed that access to basic payment services was not satisfactory for individuals in general.<sup>10</sup> Moreover, Finansinspektionen, the Swedish financial supervisory authority, reported that more and more consumers are experiencing that banks are refusing to allow them to open a payment account or that their payment account has been blocked or terminated.<sup>11</sup>

The Payment Inquiry's survey also shows that there are problems. According to their calculations, around one million adults in Sweden have no mobile or online banking service, leaving them out of much of the digital payment market.

In addition, it can also be quite expensive if you have difficulties with digital tools. Getting help to pay a bill at a branch of a bank where you are a customer can cost as much as SEK 150.<sup>12</sup>

We cannot accept that so many people have difficulty paying and that it is so expensive to get help with making payments. In Sweden, everyone must be able to make payments at a reasonable cost.

## Some payments have not evolved in line with digitalisation

The fourth area concerns payments that have not kept up with the rapid pace of digitalisation.

Here, I am thinking in particular of cross-border payments, which have long been too slow, expensive and complicated - especially to and from non-European countries. Today, it can still take several days for such a payment to arrive, and the cost of the payment is often several per cent of the amount sent.<sup>13</sup>

Cross-border payments are certainly more complex than domestic payments. For example, they require currency exchange and controls in both the sending and receiving countries to prevent money laundering and terrorist financing. However, this does not mean that they have to be as expensive and slow as they often are.

The functioning of cross-border payments is important for an export-dependent country like Sweden. An increasingly globalised labour market also requires the ability to send money between countries as smoothly as possible. This is also illustrated by the record number of displaced people in the world.

Another example is instant payments. For more than ten years, we have been able to use Swish to make certain types of instant bank transfers. But since then, no new instant payment services have emerged.

Here there is a gap between supply and demand. A recently published study by the Riksbank shows that retailers want to see more instant payment solutions

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<sup>10</sup> [Monitoring of basic payment services 2022 | Länsstyrelsen Dalarna \(lansstyrelsen.se\)](#). Basic payment services are defined as payment mediation, cash withdrawals, and management of daily takings for businesses and non-profit organisations.

<sup>11</sup> [Consumer protection report 2022 \(fi.se\)](#).

<sup>12</sup> See e.g. [Cash and postal giro payments | Konsumenternas](#), October 2023.

<sup>13</sup> See, for example, the chapter Cross-border payments in focus in [Economic Review 2, 2022 \(riksbank.se\)](#).

than Swish. They want the money to be in their bank account immediately after the customer has initiated the payment<sup>14</sup>.

This is not an issue for Sweden alone. In October last year, the European Commission presented a proposal for a new regulation to increase access to instant payments in euros. The Commission's proposal was a result of the reluctance of market participants to introduce instant payments.<sup>15</sup>

It is important that Sweden does not fall behind in the development that is now accelerating in the world around us.

## Trust in money can be jeopardised

The fifth and final area is perhaps a little more abstract. These are problems that could arise in the long term if private money takes over completely and state money becomes irrelevant in Sweden. What could this mean for confidence in the monetary system - that is, our money?

Cash is the only state money available to the public that can be used for payments. The ability to exchange private money, such as bank deposits, into cash at any time has historically been important for confidence in money and what we call convertibility between Swedish kronor - that is, money in different bank accounts is worth the same and equals the corresponding amount in cash.

Admittedly, there are institutional arrangements that contribute to this convertibility. The fact that the banks pay each other with money in accounts with the Riksbank - so-called central bank money - means that deposits in Bank A are worth the same as the corresponding sum of money in Bank B. Money deposited in a bank is also protected by regulations and the national deposit insurance scheme.

Some argue that these arrangements are sufficient. But it is a question on which there should be no doubt. The public often withdraws more cash during crises.<sup>16</sup> The fact that everyone can withdraw their money in the form of fully risk-free state money if they so wish can be important for confidence in the whole system.

And even if we trust the system today, we cannot be certain about tomorrow. In the future, there may be new types of private money and regulation may struggle to keep up. If state money is easily accessible and usable in the digital society, it will be more difficult for new unregulated actors to attract customers. In this way, state money can reduce the risk of less reliable money appearing on the market and also protect the integrity of the financial system.

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<sup>14</sup> [The Riksbank's retailer study within the framework of the e-krona project.](#)

<sup>15</sup> The proposal provides that credit institutions offering their customers account-to-account payments in euro should also offer instant payments in euro and that the fee for such a payment should not exceed the fee for a traditional payment. The proposal is described in the Government Offices' [factual memorandum](#) on the Regulation on instant payments in euro.

<sup>16</sup> See, for example, [Cash demand in times of crises \(econstor.eu\)](#) and [Payment Report 2022.](#)

## In the short term, new regulation is necessary

To remedy the challenges and problems I have just described, the state needs to act. The Riksbank and the Payments Inquiry agree on this. However, the Riksbank believes that the state must act both more clearly and more forcefully if it is to lead to real change.

But I will start where we agree. The Inquiry's report mainly proposes new and amended regulations and we support several of the proposals. Let me mention a few that we see as important components to ensure the smooth functioning of the payment system.<sup>17</sup>

Firstly, we need to address the problems of inclusion as soon as possible. Everyone must be able to make payments. This requires a combination of measures. Ensuring that more consumers have access to a payment account, as proposed by the Payments Inquiry, is key. It is a necessary condition for being able to make payments at all in today's Sweden - and ultimately to function in society.

The report also proposes that the state be given greater opportunities to finance initiatives that can help ensure that everyone can pay. The Riksbank supports this. In addition, the Riksbank considers that banks providing payment accounts should offer payment services that are adapted to consumers who have difficulties using digital services. In addition, public authorities may need to help individuals with payments, for example at service centres or citizen advice bureaux.

Second, we need to ensure that the payment system is not vulnerable to disruptions in the digital infrastructure.

This means that there must be access to backup power and redundancy in telecommunications. For example, retailers often make sure they can connect their systems to both fibre networks and mobile phone masts. This way, their cash registers and payment terminals can be online if there are disruptions in one of the communication networks.<sup>18</sup> But even in a situation where telecommunications are completely cut off, we need to be able to make payments. Therefore, payments must also work offline.

Today, the vast majority of people pay by card in physical stores, and as I mentioned earlier, most cards can work offline to some extent. The Inquiry has proposed that the state should act as a guarantor for part of the credit risk that arises when a card payment is made. The Riksbank supports this proposal and sees it as a good starting point for further work.

Moreover, it is not only the payment that needs to work in an offline mode. It is equally important to ensure that retailers can actually sell their goods even if the cash register system is down.

To make this possible, the Inquiry proposes that the Swedish Tax Agency be authorised to decide on exemptions from the Cash Register Act in peacetime crisis

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<sup>17</sup> For a more thorough review, see the Riksbank's [referral response to the report Staten och betalningarna \(SOU 2023:16\) \(riksbank.se\)](#).

<sup>18</sup> [The Riksbank's retailer study within the framework of the e-krona project.](#)



situations and during elevated preparedness. This is particularly helpful for retailers who want to be able to accept cash payments. We also consider this to be a step in the right direction.

However, the Riksbank's and the Payment Inquiry's assessments differ on a central issue concerning the state's role on the payments market. Namely, the need to strengthen the position of cash.

## The measures to protect cash are not sufficient

We still need to be able to use cash in Sweden. Many of the problems I have described today have arisen because cash has been marginalised without sufficiently good alternatives being in place. This is particularly true of the problems of inclusion and the dependence of the payments system on digital infrastructure.

At the same time, the Payments Inquiry believes that talk of the "death" of cash is exaggerated. The Inquiry considers that the statistics are against Sweden being on the way to becoming a virtually cashless society. The Riksbank considers instead that the trend towards a cashless society is clear. There are many statistics that support our analysis. Let me give you a few examples:

- The ratio of cash in circulation to GDP is about 1 per cent. This is a very small proportion by international standards. The corresponding figure in the euro area is around 12 per cent.<sup>19</sup>
- Last year, only 8 per cent of consumers paid for their most recent purchase with cash. Just twelve years ago, almost 40 per cent did so.<sup>20</sup>
- In the last five years, three quarters of all bank branches with cash handling have closed and today none of the major banks has manual cash handling in their branches.<sup>21</sup>

There is very little evidence that the use of cash will increase. Nor is the Riksbank working to try to reverse the trend. Unless we are prepared to make major reinvestments in equipment, premises and infrastructure, it is too late for that.

However, through regulation, the state can ensure that the marginalisation of cash does not continue, at least until we can ensure inclusion and resilience to disruption by means other than cash.

Steering developments in this way is not a new idea. Four years ago, the Swedish parliament, the Riksdag, decided to maintain parts of the cash infrastructure at a certain level. The major banks are now obliged to provide locations for cash withdrawals and deposits of retailers' daily takings with a certain geographical spread. In addition, the Riksbank has been given a clearer remit in the new Sveriges Riksbank Act, which means, for instance, that we have opened new banknote depots around Sweden.<sup>22</sup>

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<sup>19</sup> According to Macrobond data, October 2023.

<sup>20</sup> [Payment habits | Sveriges Riksbank](#).

<sup>21</sup> According to data from Tillväxtverket Pipos Serviceanalys, October 2023.

<sup>22</sup> The banks' obligation to provide cash services is regulated in Chapter 9 of the Payment Services Act (2010:751). The Riksbank's tasks are regulated in the Sveriges Riksbank Act (2022:1568).

However, the availability of cash and the deposit of daily takings are of little value if the cash cannot be used to make payments. For cash to be used in the future, under normal conditions and in crisis and war situations, the Riksdag needs to regulate where and how it can be used.

In Brussels, they have come to a similar conclusion. In June, the European Commission presented a legislative proposal clarifying that with certain exceptions it is obligatory to accept euro cash for payments in euro area countries.<sup>23</sup> Even our Scandinavian neighbours have far-reaching protection for the ability to pay in cash<sup>24</sup>

In Sweden, the legal practice is that certain civil law fees can be paid in cash, such as fees for passports and healthcare. The Payment Inquiry proposes that the general public should also be able to pay taxes and prescription drugs in cash in Sweden.

With such a limited range of uses, cash risks being further marginalised. Network effects work that way - when a payment instrument is not accepted by enough people, consumers stop using it and retailers stop accepting it.

The Riksbank therefore considers that the Riksdag needs to go further. In any case, retailers selling essential goods such as food, fuel and medicines should, as a general rule, be obliged to accept cash.

Establishing such requirements now would probably not significantly interfere with the activities of these retailers as a large majority of them still accept cash. It would be a way to prevent further marginalisation of cash.

Furthermore, the Riksbank considers that consumers' opportunities to deposit cash in a bank account should also be included in the banks' obligation to provide cash services. At present, this possibility is very limited and risks being further eroded.

The Payments Inquiry proposes a new review of the status of cash and the availability of cash services by 2025. There is no reason to wait until then. The trend is clear. In its consultation response, the Riksbank has therefore submitted proposals for the regulation we consider necessary to protect cash.

## **We need to look ahead and use other tools**

As explained, it is necessary to regulate the payments market and it is necessary to continuously adapt this regulation. I'm sure we all agree on that. But regulation also has its limitations.

First of all, it does not address the underlying causes of the challenges of digitalisation. Through regulation, we tend to be reactive rather than proactive. We also risk steering payment market innovations in the wrong direction or slowing them down.

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<sup>23</sup> The European Commission's proposals are described in the Government Offices' [factual memorandum](#) on the EU's legislative package on the digital euro.

<sup>24</sup> See, for example, the Payments Inquiry's survey in [Staten och betalningarna - Regeringen.se](#).

Nor is regulation consistent with the fact that digitalisation is an ongoing process. These developments may accelerate further, for example if the trend towards tokenisation of financial instruments takes hold. One thing we can be sure of is that new challenges will emerge over time.

This suggests that the state must also use its other tools - i.e. influencing developments through coordination and dialogue and providing services itself. It also suggests that the state needs to be forward-looking. Not least because long-term initiatives take time to prepare.

In terms of coordination and dialogue, the Riksbank's focus has been on the modernisation of the banks' payment infrastructure, and in particular Bankgirot. Here it is important for the banks to take responsibility and ensure the proper functioning of the infrastructure both in the short and long term. It is also important that they do not slow down the pace of this work.

The Riksbank must also keep up the pace and have a long-term perspective. I began by talking about the infrastructure services offered by the Riksbank, including the RIX system. It is important that we continue to look ahead, assess future needs and adapt our systems when necessary.

Let me provide a few examples.

I mentioned earlier that instant payments are expected to become increasingly important. To support this development, last year the Riksbank launched a new system for instant payments - RIX-INST. Currently, only Swish offers instant payments in Sweden. With RIX-INST, we have laid a foundation that allows more solutions to be developed.

RIX-INST uses the same platform as TIPS, the European system for the settlement of instant payments in euro. Together with the ECB and the Banca d'Italia, we are also working on a solution for instant payments between different currencies participating in TIPS. Here we are planning a pilot study together with interested banks.

This solution is initially intended for payments between the Swedish krona and the euro. However, several non-euro area central banks have decided or are considering connecting their currencies to the TIPS platform and have expressed interest in the solution we are working on.<sup>25</sup> We therefore foresee the possibility of executing multi-currency payments instantly in TIPS in the future.

Both of these initiatives - RIX-INST and the cross-currency solution in TIPS - are based on the division of responsibilities I mentioned earlier. The Riksbank provides the basic infrastructure and the private sector offers payment services to individuals and businesses.

In this context, we are interdependent. The Riksbank consults the market participants when we are considering major changes to our payment systems. At the same time, we expect the market participants, in accordance with their size and

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<sup>25</sup> These include Danmarks Nationalbanken, see [New payment systems are coming \(nationalbanken.dk\)](https://www.nationalbanken.dk/en/press-releases/2018/09/new-payment-systems-are-coming) and Norges Bank, see [Norges Bank intends to enter into formal discussions with the ECB on participation in the Eurosystem's TIPS service \(norges-bank.no\)](https://www.norges-bank.no/en/press-releases/2018/09/norges-bank-intends-to-enter-into-formal-discussions-with-the-ecb-on-participation-in-the-eurosystem-s-tips-service).

importance, to contribute to the development of the infrastructure and to take a holistic approach.

Looking further ahead, the development of new technologies may lead to changes in the Riksbank's payment systems. For example, many central banks are investigating whether they can use blockchain technology to settle large payments and securities transactions.<sup>26</sup> At present, the Riksbank has no such plans, but we are following the explorative work by other central banks with interest.

I would also like to mention that we plan to review the conditions of access to the payment infrastructure. Here, European regulation has imposed some restrictions that are now being relaxed.<sup>27</sup> The increased availability of the infrastructure for instant payments, among other things, is of great importance for many new payment service providers.

To summarise: if we are to meet the challenges posed by digitalisation, we cannot rely on regulation alone. We must also use other tools that the state, including the Riksbank, has at its disposal. For the Riksbank, this includes adapting our infrastructure services. And in this work, it is particularly important that we are forward-looking.

## An e-krona as part of a long-term solution

This brings me to the last thing I am going to talk about today, namely the Riksbank's work on an e-krona. The need for an e-krona was analysed by the Payments Inquiry. The Inquiry came to the conclusion that an e-krona is not needed in Sweden today, but that the Riksbank should continue to investigate the case for it and return to the Riksdag with an assessment of whether there are sufficient reasons to introduce an e-krona.

So what would an e-krona be? Well, Swedish kronor in digital form issued by the Riksbank, that is, central bank money, and intended for the general public. In that sense, it would be just like cash, state money, but digital, which will allow for a broader set of use cases.

For the record, I would also like to say that the e-krona would not replace cash. This is a common misunderstanding. The e-krona would *complement* cash. The Riksbank will continue issuing banknotes and coins as long as there is demand for them in society.

## Why an e-krona?

What are the advantages of an e-krona? Are there disadvantages and risks we need to take into account?

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<sup>26</sup> See, for instance, [New Technologies for Wholesale settlement - Contact Group \(NTW-CG\) \(europa.eu\)](https://europa.eu/new-technologies-for-wholesale-settlement-contact-group-ntw-cg).

<sup>27</sup> The ability to participate in clearing and settlement systems is governed by the EU finality directive. The amendment to the regulatory framework for payment services proposes a change to the Settlement Finality Directive to allow payment institutions to be direct participants in such schemes. This is described in the Government Offices' [factual memorandum](#) on changes to the regulatory framework for payment services.

These are issues that we have spent a lot of time analysing, both on our own and together with other central banks. And I will give you the conclusion first: The Riksbank sees an e-krona as a possible component in our long-term efforts to manage the challenges of digitalisation. However, that said, there are still issues that need to be investigated before we can make a recommendation to the Riksdag to issue an e-krona.

Let me explain in more detail why we are in favour of an e-krona.

First and foremost, an e-krona would ensure that the public can continue to choose between state money and private money when paying, something that has been possible for centuries. And, as I said before, the ability to switch between the two plays an important role for trust in money. Moreover, easily accessible, attractive and digital state money can reduce the risk of new, less trustworthy forms of private money emerging in Sweden.

An e-krona could also increase competition on the payments market. This is because the distribution of an e-krona, like cash distribution today, would be based on private-public co-operation. The Riksbank would provide the technical platform, while private intermediaries, payment service providers, would develop e-krona services and manage the end-user relation. The Riksbank would have no insight into how end users pay.

An important aspect is that not only banks would be allowed to distribute an e-krona. Other payment service providers would have the same opportunity. This would allow them to offer payment services that they cannot offer today, thereby fostering competition and innovation in the payments market.

An e-krona would also make the payment system more robust. It is based on two assumptions. The first is that an e-krona, like cash, would be a payment method that complements others and can work when other payment methods do not. To ensure this, the e-krona infrastructure needs to be at least partially separated from the rest of the payment infrastructure.

The second assumption is that the e-krona should work offline. This is a design principle that we have tested in our work on the e-krona. Whether this is ultimately the case depends on the technical solution chosen for the e-krona.

And finally, I have mentioned several times today the problems of digital and financial exclusion. If current measures and proposals are not enough to improve inclusion, the state must ensure that everyone can pay.

So what can the state do? One possibility, of course, is to tighten the requirements for payment service providers. Another is to take a more active role and deliver payment services to those who would otherwise be excluded. In both cases, the required payment services could be based on an e-krona.

## What are the downsides?

So what are the possible disadvantages of issuing a digital currency? What are the risks of launching an e-krona in Sweden?

First, launching a new payment instrument is always a challenge. We must ensure that there are incentives for banks and other payment service providers to offer e-krona services and for retailers to accept the e-krona. However, it may still be necessary to regulate who has to offer and accept e-krona in order to create network effects.

Another concern is that the e-krona could affect the banks' business models.

First, the banks' funding costs would increase if the public transfers funds from their bank account to an e-krona. If many were to do so, it could disrupt the stability of the financial system. We take such risks very seriously, and I want to be clear that there are measures to deal with them. One possibility is to introduce a maximum limit on the amount of e-krona you can hold in your account. However, this in turn leads to other disadvantages. The issue is being discussed among central banks and needs to be analysed further.

Second, an e-krona could imply that customers make less use of banks' payment services. Banks then need to make their services more attractive. However, these types of dynamic effects concern me less than financial risks - and I am quite sure that this is the case for the banks' customers too.

## Digital central bank currencies are spreading

Sweden was one of the first countries to start exploring a central bank digital currency, largely due to the early digitalisation of payments here. But today we are far from being alone. According to a survey by the Bank for International Settlements (BIS), around 93 per cent of central banks worldwide are running central bank digital currency projects.<sup>28</sup>

There are also a handful of countries that have already started issuing central bank digital currencies.<sup>29</sup> Others have pilot studies that are substantial enough to resemble a real launch. But among the countries we normally compare ourselves to, none has yet decided to introduce a central bank digital currency.

Other countries' work in this area is also relevant to Sweden. We can learn from one another's experiences. In addition, the potential international role of central bank digital currencies has grown in attention. The idea is that by linking different countries' central bank digital currencies, we can make cross-border payments work better.

The Riksbank has been very involved in investigating this possibility. For example, we have recently carried out a project with Norges Bank, the Bank of Israel and the BIS on this very topic.<sup>30</sup>

When it comes to cross-border payments, the euro area is the most important jurisdiction for Sweden. A significant part of our international trade is with euro

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<sup>28</sup> [Making headway - Results of the 2022 BIS survey on central bank digital currencies and crypto.](#)

<sup>29</sup> See, for example, [Rise of the central bank digital currencies: drivers, approaches and technologies \(bis.org\).](#)

<sup>30</sup> [Project Icebreaker concludes experiment for a new architecture for cross-border retail CBDCs \(bis.org\).](#)

area countries, and other transfers to and from euro area countries are also common. Our work on a cross-currency solution in TIPS, which I mentioned earlier, can be seen in this context.

In the euro area in particular, work on a central bank digital currency - or digital euro as the ECB calls it - is well underway. Some of you may have noticed that a few weeks ago the ECB decided to launch the next phase of its digital euro project which they call the preparation phase.<sup>31</sup> After my speech, Ulrich Bindseil, Head of the ECB's Market Infrastructure and Payments Division, will provide us with a status update on the digital euro project.

In addition, earlier this year, the European Commission presented proposals on what the legal framework for a digital euro could look like - its legal tender status, how it could be used, data protection rules and so on. Ultimately, it will be up to the ECB to decide whether or not to issue a digital euro.

We therefore consider that there are several good reasons to maintain close contact with the ECB in the continued work on an e-krona. For one thing, it will be an opportunity to learn from its work. And for another, it is important to ensure that an e-krona can function together with a digital euro.<sup>32</sup>

So what does this mean for our continued work on the e-krona?

## Work on e-krona must continue

Exploring an e-krona, Sweden has long been at the forefront of work on central bank digital currencies. This has made us a valuable partner in the international work on this topic.

But being at the forefront does not mean needing to be first. On the contrary, for a central bank in a small economy like Sweden's, it can be an advantage to be able to follow developments in other central banks, especially those with large resources.

At the same time, it is clear that the use of cash in Sweden is exceptionally low and continuing to decline. It is also clear that it will take time to develop an e-krona and the regulatory framework it would need to be surrounded by.

The realisation of a digital euro could also affect the decision on an e-krona. The Payments Inquiry made the same point.

If the Riksdag decides that Sweden needs an e-krona, the lead time should not be too long. It is therefore the Riksbank's clear opinion that the preparatory work for the launch of an e-krona must continue - with increased attention directed towards European countries' work on the digital euro.

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<sup>31</sup> [Eurosysteem proceeds to next phase of digital euro project \(europa.eu\)](https://www.europa.eu).

<sup>32</sup> Creating the conditions for interoperability between digital euros and central bank digital money in other currencies is part of the ECB's project, see e.g. [Progress on the investigation phase of a digital euro - third report \(europa.eu\)](https://www.europa.eu).

## Time to prepare for the payments market of the future

To summarise.

Ultimately, it is the responsibility of the state, including the Riksbank, to ensure that payments are safe, efficient and accessible. While digitalisation has brought efficiency gains, it has also created problems that require state action. We must also look ahead and lay the foundations now for the payments market of the future. We need to switch on the headlights full-beam.

First and foremost, the Riksdag should immediately introduce legislation to protect the ability to pay with cash and deposit it in an account. There is neither any reason nor the time to wait for the measures we propose. Doing nothing is also an active choice.

In addition, the public and private sectors must work together to ensure that *everyone* can make payments in normal and crisis situations. The Payment Inquiry's proposal is a good starting point.

Furthermore, the banks must take responsibility for ensuring that privately owned payment infrastructure and services meet today's requirements and expectations. In particular, it requires more payments to be instantaneous and cross-border payments to be faster and cheaper.

The Riksbank will also fulfil its responsibilities. We have laid a foundation for secure instant payments through RIX-INST and are working on a solution for cross-currency payments in TIPS. In addition, we plan to review our regulatory framework to allow more players to access our payment infrastructure.

In addition, the Riksbank will continue its work on the e-krona. The legislative work for an e-krona also needs to be started up. The Riksbank considers that government digital money will probably be needed to ensure that payments in Sweden are safe, efficient and accessible, also in the long term.