

# Payments Report

2025



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## Payments Report

The Payments Report describes and analyses developments in the payments market over the past year. It presents the Riksbank's assessments and policy stance in the area of payments. The aim is to disseminate knowledge and to contribute to debate, and make it easier for external parties to monitor, understand and evaluate the Riksbank's work on payments. Between the years 2019 and 2022, the report was published annually at the end of the year. From 2024 onwards, it will instead be published in the spring. No Payments Report was published in 2023.

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This report is intended primarily to be read digitally at [riksbank.se](https://www.riksbank.se).

# The Riksbank's responsibility for payments

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The Riksbank's objective is for payments in Sweden to be safe, efficient and accessible. Payments shall also function in peacetime crisis situations and states of heightened alert. The Riksbank takes an economic perspective and provides solutions and acts where it is difficult to attain the objectives without central government involvement.

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## **The Riksbank's mandate in the area of payments**

According to the [Instrument of Government](#), the Riksbank shall promote a well-functioning payments system. Pursuant to the [Sveriges Riksbank Act](#), the Riksbank shall “contribute to the stability and efficiency of the financial system, including the ability of the public to make payments”. The Riksbank shall provide a system for the settlement of payments, contribute to the availability of cash to a satisfactory extent throughout Sweden, and ensure that the public can make payments in peacetime crisis situations and states of heightened alert. The Riksbank may, with the consent of the Riksdag, issue digital means of payment.

## **The following objectives guide the Riksbank's work on payments**

*Payments shall be safe.* The payments system shall be stable, resilient to disruptions in normal times and able to function in peacetime crises and states of heightened alert. It shall be possible to use multiple payment methods so that payments can be made even if there is a disruption in any part of the payments system. Protection against fraud shall be high. The payer and payee shall be confident that the payment will be received and that the cash received is genuine, and that identity data and card details are not disclosed and used by unauthorised persons.

*Payments shall be efficient.* The costs to society, including energy consumption, for different methods of payment shall be low. Fees shall be transparent and payments shall be quick and easy. There shall also be healthy competition between operators offering payment services. This means, among other things, that the payments system shall be accessible to different types of operator who want to offer payment services.

*Payments shall be accessible.* It shall be possible for everyone in Sweden to pay at a reasonable cost. Users shall have good access to payment services and there shall be different payment methods to choose between, depending on the situation and conditions.

The objectives of safe, efficient and accessible payments can sometimes be reconciled, but they also in conflict with each other.

## **The Riksbank's role in the payments market**

The Riksbank takes an economic perspective and provides solutions and acts where it is difficult to achieve safe, efficient and accessible payments without central government intervention. The payments market is characterised by economies of scale and network effects, which can lead to a high degree of market concentration and a lack of competition and innovation. The characteristics of the payments market also mean that accessibility and resilience may be too weak without central government involvement. The Riksbank therefore needs to take an active role in the payments market. The role of the Riksbank depends on changes in the world around us and how well the market itself can fulfil society's need for safe, efficient and accessible payments.

In some cases, this involves the Riksbank **providing services**, either on its own or in cooperation with private operators, such as finalising payments between participants in the RIX payments system. In other cases, the Riksbank acts as a **catalyst**, enabling coordination, dialogue and creating conditions for private services and solutions. The Riksbank can also act as a standard setter. In addition, the Riksbank takes part in the **design of regulations** nationally and internationally. The Riksbank also oversees financial infrastructures and other key players in the payments ecosystem and monitors developments on the payments market.

## Conclusions and recommendations

The digitalisation of the payments market has helped make payments faster, more convenient and cheaper for most people. At the same time, these developments have also brought challenges. Measures need to be taken to strengthen preparedness and reduce exclusion so that everyone can pay, even in the event of crisis or war. Furthermore, innovation and competition in the payments market can be improved.

The central government is responsible for payments in Sweden being safe, efficient and accessible. Therefore, the state needs to act by setting a framework for the market and taking measures that solve immediate problems.

The pursuit of safety, efficiency and accessibility in the payments market can sometimes go hand in hand, but there can also be conflicts between these objectives. For many years, efficiency has been the priority; today, safety and accessibility are at least as important. The Riksbank makes the following assessments of what needs to be done to achieve a better functioning payments market:

### **Banks and other payment service providers need to make payment services more inclusive and continue to modernise their infrastructure**

- The payments market needs to become more accessible. The Riksbank considers that the banks need to ensure that more people have an account, for example by offering accounts with limited functions to a greater extent. This is also in line with the fight against fraud, as accounts with certain restrictions and extra protection can make things more difficult for criminals. Banks' services also need to be better adapted to the different needs of their customers, not least with regard to people experiencing digital exclusion.
- Bankgirot and the banks have extensive and urgent work ahead of them to modernise and streamline the Swedish infrastructure and services for batch payments – for instance, payments of bills and salaries. Modernisation and streamlining also include implementing international standards such as ISO 20022, complying with new regulations and ensuring the resilience of the infrastructure in a more uncertain geopolitical environment. This work needs to be done openly and in close contact with both the authorities and the infrastructure's end users – both with regard to planning and implementation.
- The Riksbank expects more banks to start offering their customers new instant payment services soon. This applies in particular to the major banks. Swish payments have long been the only type of digital payment that reaches the recipient instantly. In autumn 2024, the Riksbank enabled banks to offer additional services to Swish, through changes to the underlying infrastructure. So far, only a few minor initiatives towards new services have been taken. Just over half of the small businesses that took part in the Riksbank's survey think it is important that customer payments are received directly into the account. At the same time, the risk of certain financial crimes is increasing as more payments become instantaneous. This means that the control mechanisms of payment service providers need to be further strengthened.

- Sweden is a small, export-dependent country and functioning cross-border payments are essential. Geopolitical developments are to some extent slowing down global initiatives in this area. Swedish authorities, banks and payment infrastructures should therefore work actively to improve the conditions for cross-border payments where there are possibilities to do so. The Riksbank therefore considers that banks and payment service providers using RIX for instant payments should join the TIPS cross-currency service as soon as possible, which from October will enable payments between different currencies.

### **The Riksbank needs to continue developing its mission on payments system preparedness**

- Preparedness efforts need to be developed and intensified to ensure that the public can make payments under normal conditions as well as in the event of a peacetime crisis and heightened alert. The cooperation between the Riksbank and the actors in the Civil Preparedness Payments collaboration structure plays an important role here. The Riksbank has begun a review of existing regulations in the contingency planning area, with the aim of expanding the group of companies covered by the regulations and setting new requirements.
- The Riksbank considers it necessary to increase the possibility of making payments even in the event of major disruptions in data communication. This is particularly true for payments by the public for essential goods, such as food, medicine and fuel. The Riksbank's objective is that, by 1 July 2026, it shall be possible to make card payments offline for the purchase of essential goods in the event of disruptions lasting up to 7 days. Several of our Nordic-Baltic neighbours have already implemented or are in the process of implementing this option. This possibility should apply to all cardholders over the age of 18 with cards from the banks covered by the Riksbank's contingency regulations. To achieve this, the Riksbank has brought together the relevant actors in its preparedness work to find practical solutions regarding technology, rules, processes, agreements and risk allocation.
- The Riksbank will also continue to strengthen preparedness in its own operations, for example in the supply of cash and by opening more banknote depots where companies can easily collect and deposit cash. Having such stocks of cash in more locations across the country reduces both the costs for companies and the risk that cash would be difficult to use in the event of a disruption. The Riksbank will review further measures to support the distribution of cash throughout the country.
- Pursuant to the Sveriges Riksbank Act, a company that conducts operations that affect the availability of cash in Sweden shall inform the Riksbank if it intends to cease these operations. The Riksbank plans to produce regulations in 2025 that clarify this information obligation regarding, for example, the content of the information and requirements for when it is to be provided.

- The Riksbank needs to take an active role in ensuring that a broad societal perspective permeates the design of the payment infrastructure. This means enabling the influence of various interests in the RIX payments system and helping to ensure that the privately-owned infrastructure is designed to take into account all of the important social functions of the payments system.
- To ensure a safe, efficient and accessible payments system, the Riksbank must monitor developments in the entire payments market. The Riksbank's statistics on, and analyses of, the various parts of the payments market will be further improved. Where necessary, the Riksbank will initiate a dialogue with relevant actors to raise issues and strengthen collaboration. In addition, the Riksbank must communicate these insights to the Riksdag and the Government so that the necessary measures can be taken in time.

**The Government and Riksdag are recommended to introduce rules to protect the status of cash and to promote greater price transparency**

- The Riksbank recommends that the Cash Inquiry's proposal that certain public and private agents be obliged to accept cash should be implemented. A clearer and increased responsibility for banks to provide appropriate and customised cash services for companies should also be implemented. These measures are necessary to maintain the cash infrastructure in Sweden and to ensure that cash can continue to function as a means of payment.
- Cash is needed so that everyone can pay, as well as to provide an additional means of payment in the event of crisis or war. At the same time, cash is used for criminal purposes. Efforts to combat financial crime therefore need to be balanced against the need for a payments system that is accessible to all. As part of the fight against money laundering and other criminal activities, the Riksdag and the Government should consider introducing a general upper limit for cash purchases, as in many other EU countries.
- It is important for businesses to know and understand the cost of their payments. Despite this, almost a third of the small businesses that responded to the Riksbank's survey on payments said that they did not know what their payments cost. To attain healthy competition in the payments market, there is a need for greater transparency on the charges for different payment services. Consumers also find it difficult to compare the services offered by banks and payment service providers. The Riksbank therefore considers that the Government should commission the Swedish Competition Authority to investigate the pricing of payment services and the information about them, and to propose measures to strengthen competition on the payments market aimed at companies



# 1 Trends on the payments market

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The global payments market has been transformed by, among other things, technological innovation and changing consumer behaviour. The use of cash is continuing to decline both in Sweden and abroad, and more and more countries need to take action to address this trend. Initiatives to link payment systems across national and currency borders are ongoing. At the same time, the deteriorating geopolitical situation risks contributing to fragmentation of the global payments market.

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## 1.1 The Swedish payments market is almost entirely digital

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The payments market in Sweden is almost entirely digital. Card payments are the most common method of payment, and more and more people are paying by mobile phone. Cash use is continuing to decline, with about one in ten purchases made with cash. In a survey by the Riksbank, around 70 per cent of small businesses say that they accept cash, although there are major differences between different sectors.

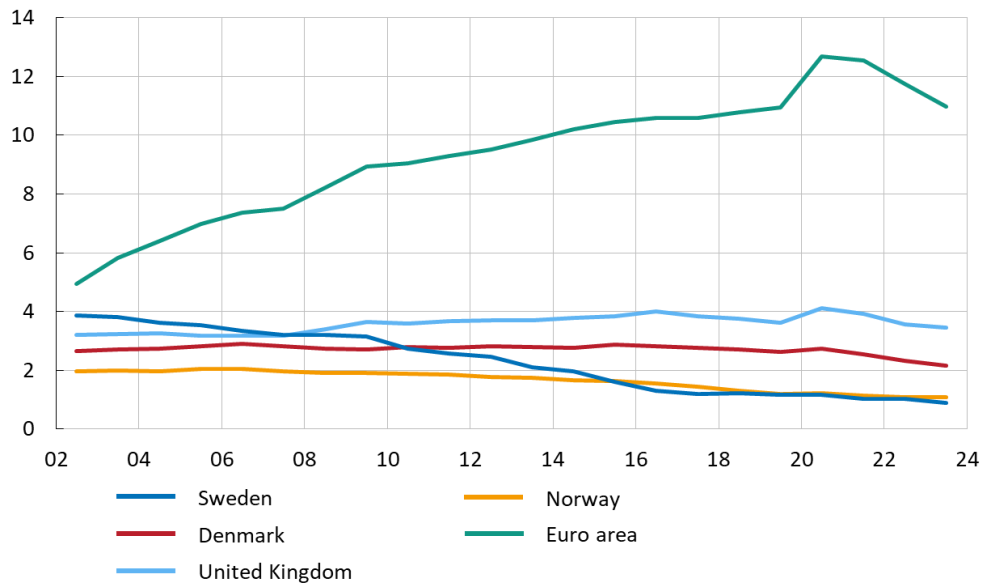
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Digital payment methods are becoming increasingly common in Sweden, and the use of cash has been declining for a long time. Sweden, together with Norway, has the lowest amount of cash in circulation as a share of GDP in the world (see figure 1). Other countries have higher cash levels, although the overall trend is downwards.

**Figure 1. Sweden has a low level of cash**

Cash in circulation as a percentage of GDP



Source: Macrobond.

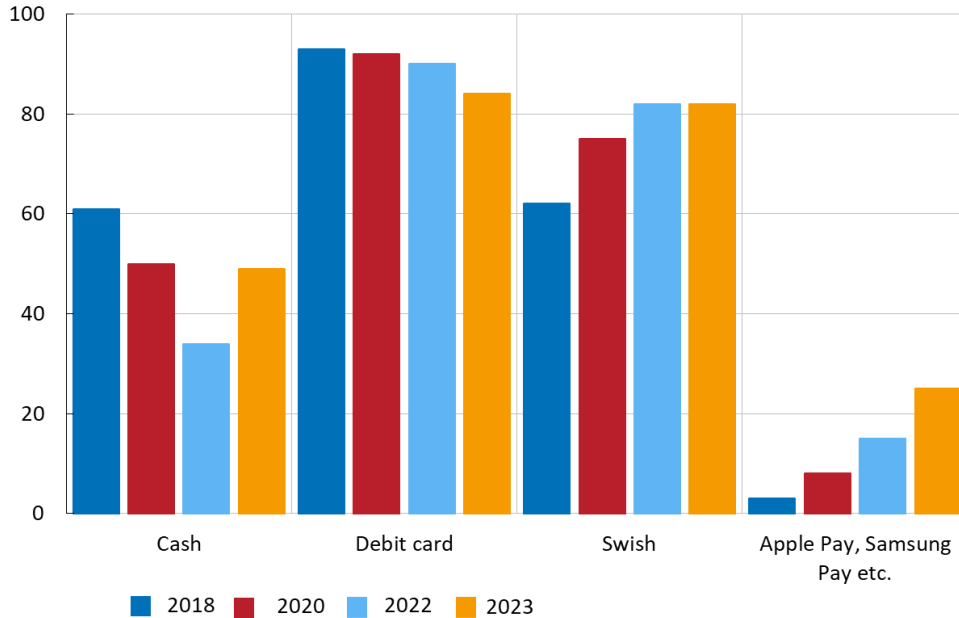
The trend towards more digital payment methods accelerated during the pandemic and has continued since, according to a [report](#) by the Bank for International Settlements (BIS). The demand for fast and secure digital payments has increased and instant payments are becoming ever more common. A [study by the European Central Bank \(ECB\)](#) shows a similar trend in the euro area, where consumers are increasing the use of digital payment methods and decreasing the use of cash. The trend is also fuelled by a shift from buying in physical stores to buying online. However, cash is often used for smaller purchases, under 50 euros, in shops in the euro area.

### Card payments most common but mobile phone payments on the rise

The vast majority of payments in Sweden, measured in terms of the number of transactions, have been made by card for many years. In the survey [Payment habits of Swedish people](#), debit cards were the most common payment method followed by Swish, see figure 2. Services that integrate cards into mobile phones are also becoming more common, leading to a decrease in the use of physical cards. Examples of such services are Apple Pay and Samsung Pay.

**Figure 2. Most common to pay by card and Swish**

Percentage of respondents who have paid by each payment method over the past 30 days.



Note. Several responses were possible.

Source: The Riksbank.

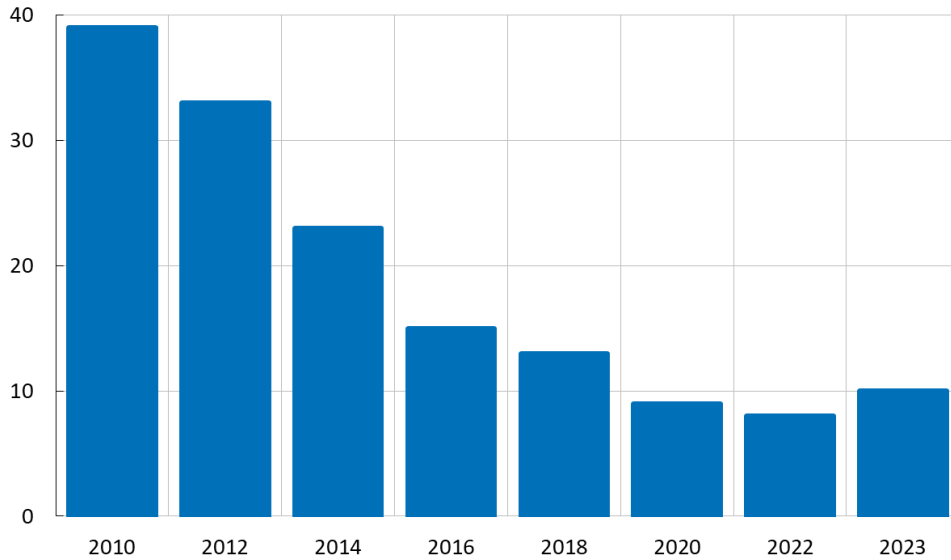
According to the report [Sverige betalar 2024](#), 51 per cent of Swedes use their mobile phone to pay in stores if the option is available. The share has increased by more than 10 percentage points since the same survey from the previous year. Of those who pay with their mobile phone in shops, half mainly use Apple Pay, one in five Swish and one in ten Samsung Pay.

### Cash use continues to decline

About one in ten in-store purchases is made with cash. The percentage of people reporting that they paid with cash for their last in-store purchase declined sharply between 2010 and 2020, levelling off in the 2020s and increasing slightly in 2023 (see figure 3). The 2024 Payments Report emphasises that one possible explanation for the increase in 2023 could be that individuals used the cash buffers withdrawn in the context of Russia's full-scale invasion of Ukraine the year before. At the same time, other data show that cash use continues to decline, such as the amount of cash in circulation and cash withdrawals, see figure 1 and figure 4.

**Figure 3. Only 10 per cent paid cash for their last in-store purchase.**

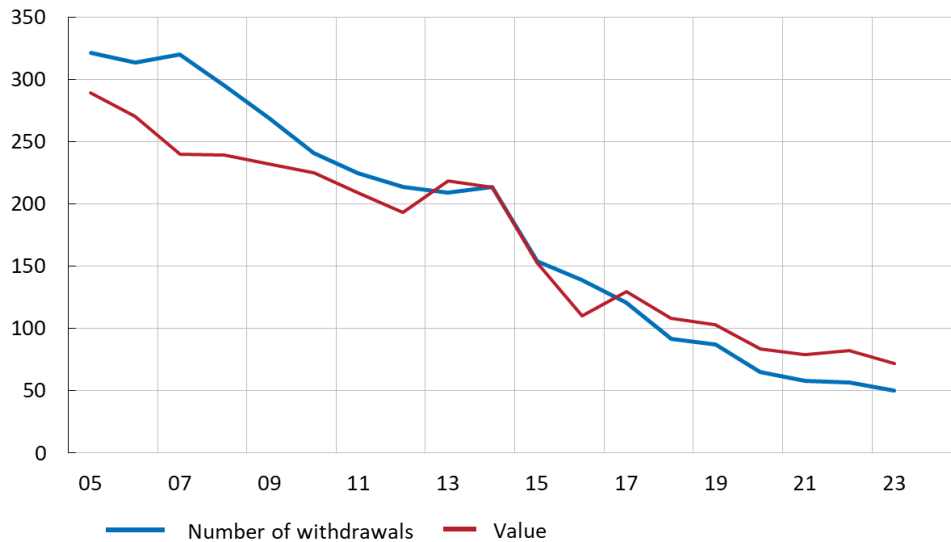
Percentage of people who paid cash for their last in-store purchase.



Source: The Riksbank.

**Figure 4. Cash withdrawals continuing to decline**

Cash withdrawals, number of millions of transactions and transaction value in SEK billion



Source: The Riksbank.

One of the reasons for the decline in cash usage over the past 10 years is the early development of instant payments by Swedish banks through the Swish payment service. In many cases, cash payments between individuals have been replaced by the payment service. Swish was launched at the end of 2012 and the number of payments made via the service has increased significantly since then. The service has evolved from private-to-private payments to include payments in e-commerce, physical trade and to the public sector, for example for tax payments. By the end of 2024, more than

345 000 businesses and almost 9 million individuals were connected to Swish. The large changeover of banknotes and coins in 2015-2017 has also been [cited](#) as an explanation for Sweden's low amount of cash in circulation.

In other countries, the use of cash is not as low as in Sweden, although the declining trend is common to most. In the euro area, cash remains the most common method of payment in physical stores in 14 out of 20 countries, according to an ECB [report](#). About one in two in-store purchases is made with cash in the euro area, but the share varies from 67 per cent in Malta to 22 per cent in the Netherlands. Furthermore, just over 40 per cent of payments between private persons in the euro area are made in cash, but here too there are large differences between Germany, with the highest share at 74 per cent, and Finland, with the lowest at 19 per cent.

## 1.2 Small businesses' views on payments

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According to the Riksbank's survey, card payments are the most commonly accepted payment method among small businesses. The companies included in the survey have a large share of their sales to private individuals. Both Swish and cash are accepted by seven out of ten small companies. Furthermore, the survey shows that many of the smaller companies prefer card payments, when the payment should be fast and smooth and to minimise the administrative work for the companies. At the same time, getting the payment directly into the account is important for every second small company.

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## FACT BOX – Survey on small businesses' views on payments

There is no comprehensive picture of the payment methods companies accept from their customers and their attitudes towards payments. The aim of the Riksbank's survey is to increase knowledge of important payees in the payments system, namely small businesses in the retail trade and restaurants and hairdressers. The Riksbank therefore commissioned the research company Origo to conduct a survey on payments in autumn 2024. The survey asked questions around payment methods accepted, cash acceptance, contingency preparedness aspects and costs of payments.

The survey was sent to small businesses with 0-49 employees and a turnover of at least SEK 500 000 per year. The survey targeted eight sectors in retail and service industries as well as hairdressers and restaurants. One of the retail sectors analysed was the retail sale of essential goods (food, fuel and medicines). The survey covered payments at physical points of sale and not e-commerce. 1,553 companies responded to the survey, which was conducted between 9 September and 1 November 2024. See also "Small businesses' views on payments" for further information.

### **Card payments are the most accepted payment method among small businesses**

The payment methods accepted by most businesses for customer payments are Mastercard and Visa card payments. This is followed by Swish and cash payments (see figure 5). Payments by invoice are also accepted by a large proportion of businesses.

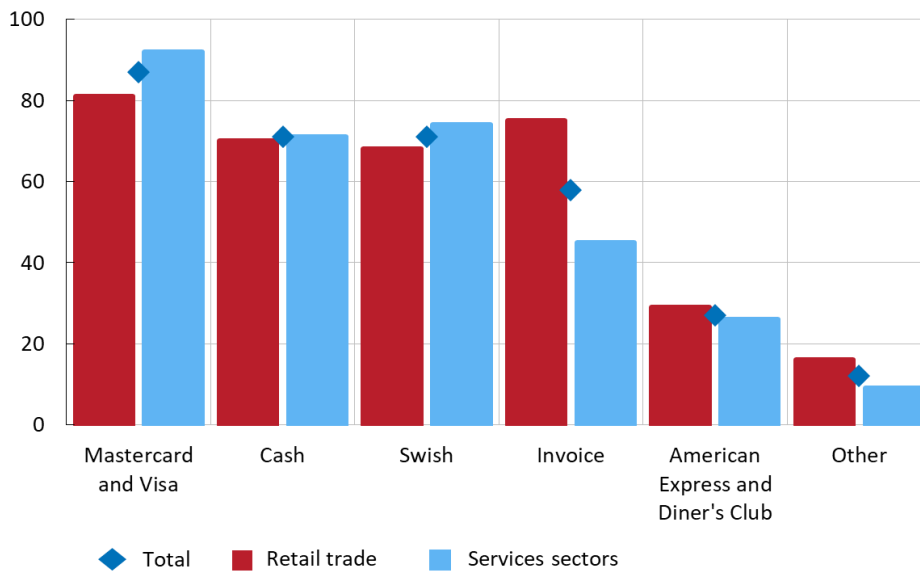
There are variations between retail and service businesses (restaurants and hairdressers). For example, the acceptance of Mastercard and Visa card payments is higher among hairdressers and restaurants compared to retail businesses. On the other hand, invoice payments are accepted by significantly more retail businesses than hairdressers and restaurants.

Furthermore, the acceptance of Swish payments is high among companies with small average purchases and highest among those with average purchases up to SEK 200. But acceptance is also high among companies with average purchases up to SEK 5,000.



**Figure 5. Card payments are the most commonly accepted payment method**

Percentage of respondents who accept each payment method



Note. Card payments with Mastercard and Visa are the most commonly-accepted payment method. The fact that a relatively large proportion of businesses do not accept card payments may have several explanations. For example, one response option was missing where only "card" was a choice. However, this does not exclude the possibility that there may be businesses that only sell on invoice or only accept Swish or cash. The answer option "other" refers to both payments via Klarna in-store and Qliro in-store as well as an open answer option.

Source: The Riksbank.

The survey results for the retail sector show that a relatively high number of businesses accept Swish at physical points of sale. The proportion accepting Swish varies between just over 50 and just over 70 per cent in the different retail sectors, and on average Swish is accepted by just under 70 per cent of companies. Swish payments are thus accepted at about the same rate as cash in the physical retail sector.

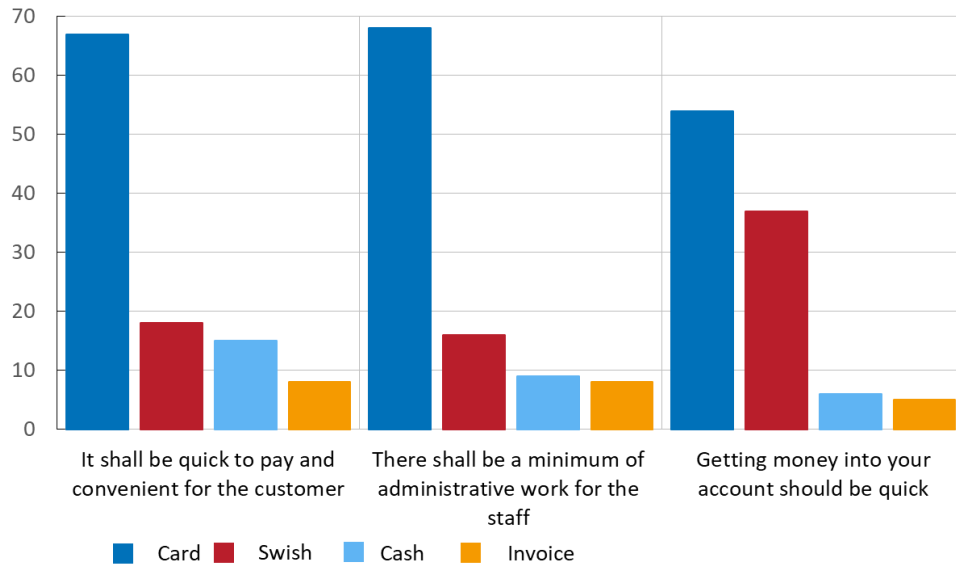
### Many companies prefer card payments but want to receive the money directly

A majority of companies favour card payments based on the following three criteria (see figure 6):

- It must be possible for the customer to pay quickly and conveniently.
- There shall be a minimum of administrative work for the staff receiving the payment.
- The company shall receive the money into its account quickly.

Swish is the second most common payment method preferred by companies on all three criteria, although the shares are significantly lower than for cards for the first two criteria. However, many companies cite Swish as the preferred payment method for getting money into their accounts quickly.

**Figure 6. Card payment is preferred from three aspects**  
 Percentage of respondents who prefer each payment method



Note. Respondents could enter several options, and therefore the sum of the percentages per question may exceed 100 per cent.

Source: The Riksbank.

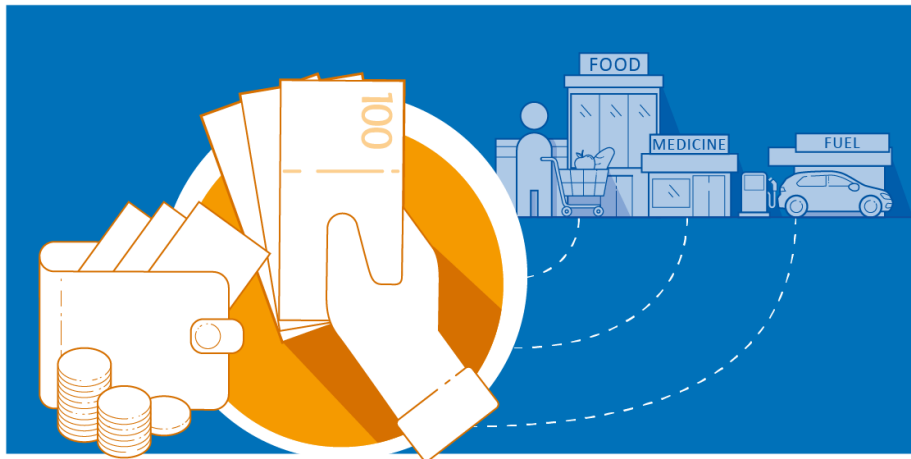
Every second company answered that they strongly agree with the statement that it is important to receive the payment immediately instead of after 1-3 days. Only 8 per cent said they disagreed with this statement. A payment via Swish means an immediate transfer of the money. Card payments normally take one banking day to reach the recipient, but sometimes they can take up to 3 days.

### 1.3 Many small retail businesses have stopped accepting cash

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Around two thirds of the companies in the Riksbank's survey accept cash. However, there are major differences between sectors. Many of the companies that stopped accepting cash have done so in the last five years, mainly because of the security risks associated with cash handling. However, the Cash Inquiry proposes the companies selling essential goods should be obliged to accept cash.

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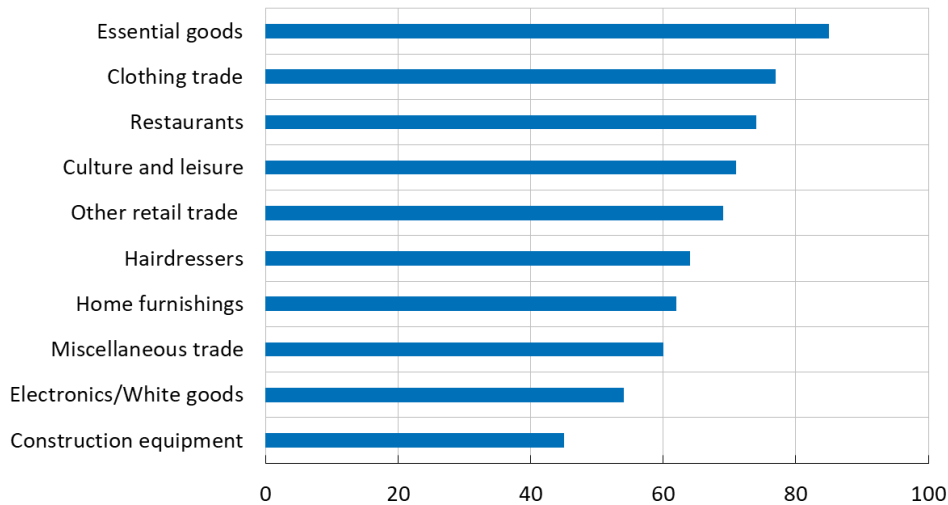


#### **Cash acceptance differs widely between sectors**

71 per cent of businesses in retail, as well as restaurants and hairdressers accept cash. However, there are major differences regarding acceptance of cash between sectors in the retail trade. Significantly more businesses selling daily consumer goods accept cash than those selling durables. Cash acceptance is highest in the retail of essential goods, where 85 per cent accept cash, followed by clothing retailers (see figure 7). Retail sales of building materials have the lowest cash acceptance rate at only 45 per cent.

**Figure 7. Wide variation in cash acceptance across industries**

Percentage of respondents who accept cash



Source: The Riksbank.

In the service industries, a higher proportion of restaurants than hairdressers accept cash. Businesses with customers spending up to SEK 1,000 on average are more likely to accept cash than other businesses. Cash acceptance then declines as the size of average purchases increases.

The most important factor for businesses to accept cash is that customers demand it. Additional reasons that many companies cite as important are that they want to include certain customers and be prepared for crisis and war.

In the [Swedish Trade Federation's annual survey](#) among its members, cash acceptance was 91 per cent in 2024, in other words, significantly higher than the 71 per cent that, according to the Riksbank's survey, accept cash in retail. It is difficult to know exactly what explains the difference of 20 percentage points, but the Swedish Trade Federation's survey is only aimed at their members, while the Riksbank's survey is a random sample from all companies in the respective industry.

### **Security risks the main reason why businesses stopped accepting cash**

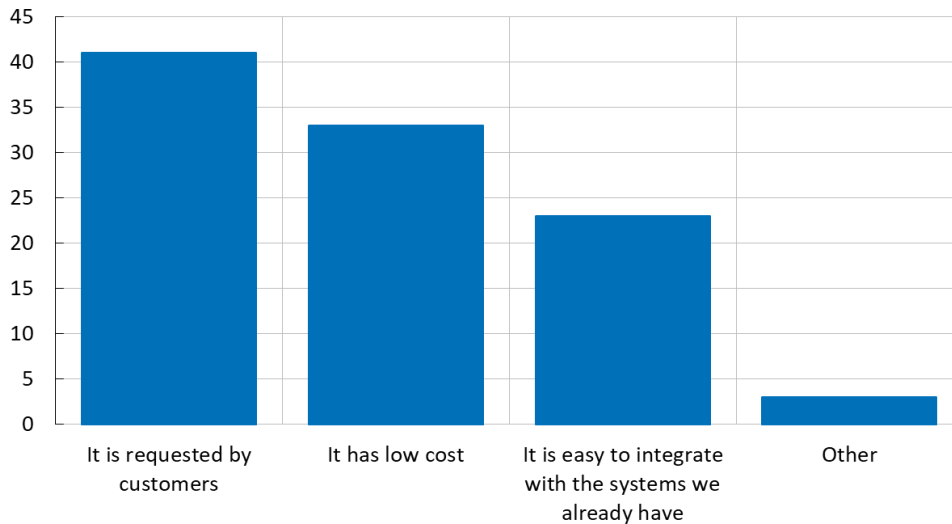
Of the businesses that do not accept cash, over 40 per cent have stopped accepting it in the last five years. 40 per cent say they have never accepted cash. The main reasons for not accepting cash are the security risk, followed by the time needed to handle cash and finally difficulties in depositing the daily takings. Hairdressers are more likely to cite safety as a reason than other businesses.

Just over a third of businesses report that one payment method has seen a significant decrease in the past year. Of these, 90 per cent say that cash payments have decreased, which is in line with general trends such as cash withdrawals and previous surveys on retail payment behaviour aimed at individuals.

The most important factor for companies to start offering a new payment method is that it is requested by customers (see figure 8). Another factor highlighted is that it has a low cost, and that it is easy to integrate with companies' existing systems.

**Figure 8. Customer demand is key to accepting new payment methods**

The most important factor to start accepting a new payment method, per cent



Note. Other refers to an open answer option.

Source: The Riksbank.

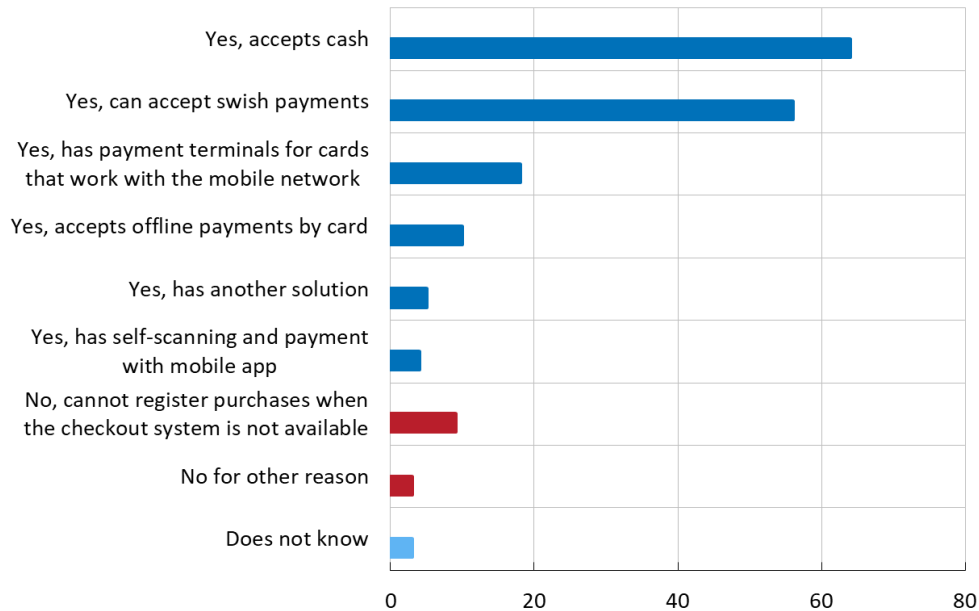
**Few small businesses say they can accept offline payments by card**

Digital payments depend on the functioning of electricity supply and data communication. When a payment is executed despite the unavailability of at least one actor involved in the payment, it is referred to as being made offline. The most common way for businesses to receive payments in a situation where normal communications are not working is cash, closely followed by Swish payments (see figure 9). However, a prolonged disruption where electricity or digital communications are out would make it difficult to use Swish and also cards, as the infrastructure for both these payment methods depends on functioning electricity and data communications. Read more about offline payments in Chapter 2.1.

Around one in five businesses say they can charge when their usual communications are down because they have payment terminals that work with the mobile network. Just over 10 per cent of small businesses say they can accept offline payments by card. A smaller proportion of businesses say they cannot charge at all if their usual communications do not work. 9 per cent say they cannot charge because they cannot register purchases when the POS system is not available and 3 per cent give another reason.

### Figure 9. Few small businesses say they can accept offline payments by card

Percentage of respondents who stated that they can and cannot receive payments when communications are not working



Source: The Riksbank.

### Small businesses have difficulty estimating the cost of receiving payments

Companies' perceptions of the costs of accepting payments vary, and many find it difficult to estimate how much of their annual turnover is spent on this. Almost one in three companies said they did not know. The companies that assess the cost respond as follows:

- 25 per cent estimate the cost at between 0 and 1 per cent of annual turnover.
- 31 per cent estimate the cost at between 1 and 2 per cent of annual turnover.
- 10 per cent estimate the cost at more than 2 per cent of annual turnover.

### The Cash Inquiry proposes that food, medicine and public charges can be paid in cash

The [Cash Inquiry](#) proposes an obligation to accept cash for essential goods. This means that it shall be possible to pay for these goods, which include food and pharmaceutical products, in cash. It shall also be possible to pay so-called public law fees in cash, such as health care charges, vehicle inspection, passport and driving licence fees. The report proposes a number of conditions for the cash obligation requirements. For instance, it will only apply to manned sales outlets between 06.00 and 20.00, and larger companies with an external audit obligation, which means a turnover of over SEK 3 million per year. However, a consumer shall not be able to demand to pay more than 0.1 per cent of the price base amount per purchase in cash. This corresponds to SEK 5,880 in 2025.

To enable cash recipients to deposit cash into their accounts, the report considers that banks shall offer appropriate and customised overnight deposit and exchange services at reasonable prices. This is in line with the report the Riksbank submitted to the Inquiry – see more in Chapter 2.1. In addition, the report proposes that consumers shall also be given the opportunity to deposit banknotes in their accounts. Read about the Riksbank’s views on the Inquiry’s proposals in Chapter 3.1.

## FACT BOX – The Cash Inquiry

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As a result of the rapid digitalisation of the payments market and the low use of cash, in January 2024 the Ministry of Finance commissioned an investigator to review the position of cash in society. The [mission](#) included highlighting the current possibilities to pay with cash for essential goods and the availability of cash services in cities, urban areas and also sparsely-populated and rural areas. The inquiry was also tasked with identifying which are the services, products and geographical areas where cash plays a particular role, including during times of peacetime crisis, heightened alert and ultimately war. Where necessary, the inquiry should consider measures to strengthen the availability of cash payments and cash handling for essential goods (including groceries and fuels).

A final report was presented on 19 December 2024.



## 1.4 Global trends in the payments market

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Cash use is declining in many parts of the world, and more and more countries need to take action to address this trend. Digital payments are gaining ground, not least through instant payment systems. To make cross-border payments more efficient, efforts are under way to link payment systems across national and currency borders. At the same time, the deteriorating geopolitical situation is contributing to a fragmentation of the global payments market. Work is also under way on various forms of central bank digital money around the world, with an increasing focus on central bank money for financial institutions, known as wholesale CBDC (Central Bank Digital Currency).

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### Measures taken to address the decline in cash use

The global payments market is characterised by faster and more efficient payments driven by technological developments. Individuals and businesses increasingly expect payments to be made anywhere, anytime and reach the recipient immediately. In many parts of the world, cash payments are being replaced by cards and mobile payments. In the [euro area](#) and the [USA](#), cash still plays an important role, but the share of digital payments is increasing rapidly, see Chapter 1.1. Several countries have introduced, or are considering introducing, various forms of measures to ensure access to cash and increase cash acceptance in commerce.

## FACT BOX – Many other countries are introducing cash-related regulations and agreements

In some countries, initiatives have been taken in the form of regulations or voluntary agreements to strengthen the public's ability to pay with and gain access to cash.

The possibility to pay with cash is already regulated in Norway and Denmark. There, traders are obliged, with certain exceptions, to accept cash payments. Similar requirements are being considered for euro cash payments in the euro area.

Access to cash services is also under discussion, or has been regulated, in several countries. In Norway, banks are obliged to allow customers to make deposits and withdrawals in cash, in accordance with customers' expectations and needs. Under a bill proposed by the Dutch Ministry of Finance, banks in the Netherlands shall maintain a basic infrastructure for cash withdrawals and deposits throughout the country.

In the United Kingdom, the Financial Conduct Authority has proposed that a number of designated banks assess the availability of cash, taking into account the conditions in the area – for example, the demographic composition. If banks recognise the need for cash, they should offer it. Banks are also not allowed to close bank branches that handle cash without first replacing them with other cash services.

In Australia, the Australian Bankers' Association, banks and retailers have agreed on a support package for the country's only cash-in-transit company, which had previously conducted operations that were not financially sustainable. The support package represents a commitment by the parties to develop a long-term and sustainable solution for the cash-in-transit operations.

### **Cross-currency and cross-border payment systems are interconnected**

Many central banks and market participants are exploring how to use and link national payment systems to improve and streamline cross-border payments. This applies in particular to instant payment systems. The aim is to reduce costs, speed up payments and increase the possibility of cross-border payments. An example of such work is [Project Nexus](#), developed by the Bank for International Settlements (BIS). Project Nexus creates a platform that simplifies interconnection between payment systems, reduces costs and enables cross-border payments within 60 seconds. Another initiative is the [European Payments Initiative \(EPI\)](#), which in 2024 launched the Swiss-like service [Wero](#). The ambition is to create a pan-European payment solution for instant payments between individuals in the euro area. In the Nordics, [Vipps MobilePay](#) enables payments between some of the Nordic countries via mobile phones, while the ECB's [TIPS platform](#) is being developed to offer instant payments in euro and other currencies, read more in Chapter 2.2.

## **Polarisation and fragmentation in the global payments infrastructure**

A more polarised geopolitical situation, with tensions between countries and economies hampering international cooperation, counterbalances the increased harmonisation and interconnection of payment systems. Standardisation efforts in, for example, the global SWIFT system for cross-border and cross-currency payments are challenged by other regional systems and solutions.

In both Africa and the Middle East, there are regional SWIFT-like systems. Since 2014, Russia has operated its own payment infrastructure – the System for Transfer of Financial Messages (SPFS). The member banks of the Russian system are mainly from the former Soviet Union as well as a few other countries such as Iran and China. The system allows Russia to continue trading and making financial transactions despite sanctions. In the BRICS countries, discussions are underway to develop financial infrastructure for cross-currency payments that are not dependent on the US dollar via the SPFS.

## **Increased focus on resilience and preparedness**

The geopolitical tensions in the world have also contributed to a clear increase in the focus on payments system preparedness and resilience. Several Nordic countries have developed the possibilities for making offline payments with cards, that is, being able to pay with cards even when data communications are down. This has been done both through market agreements, as in Denmark and Norway, and through legislation, as in the Baltic countries. Read more in the box How our neighbours have strengthened payments system resilience with offline payments in Chapter 2.1. A further example of the strengthened preparedness work in the Nordic region is the back-up arrangement developed by Finland to ensure that payments can be made in the event of serious disruptions. The system will ensure that some common payment services work even if, for example, a major bank's system is down.

## **Preparations for a digital euro continue**

Central banks around the world are continuing to explore different aspects of central bank digital currencies (CBDC) for the general public. The ECB is well advanced in its work on a digital euro. In 2023 the ECB started a preparatory phase, which is expected to last until autumn 2025. After that, the ECB is expected to take a new decision on whether to continue preparations for the launch of a digital euro.

In parallel with the ECB's work, a [legislative proposal](#) on a digital euro is being negotiated in the Council and the European Parliament. The draft law presented in June 2023 aims to set the legal framework for the possible introduction of a digital euro. This includes the equivalence of the digital euro with cash as legal tender, the availability of digital euros to users, as well as restrictions on distribution and use in non-euro countries.

## The possible impact of the digital euro on Sweden

If the ECB launches a digital euro, it could affect Sweden even though we do not have the euro as our currency. In a [staff memo](#) written by employees of the Riksbank, it is noted that the consequences are likely to be limited, even if Sweden signs an agreement authorising payment service providers to distribute digital euros in Sweden.

The staff memo claims that if use of the digital euro in Sweden becomes more than marginal, it could strengthen competition and contribute to increased robustness in the Swedish payments system. At the same time, it is pointed out that the European Commission's legislative proposal includes an upper limit on the amount of digital euros that can be owned, so the impact on bank deposits is expected to be small. According to the assessment in the staff memo, a digital euro would not have a major impact on the exchange rate or monetary policy in Sweden, but it could, however, increase the economic costs of payments.

Further, it is pointed out that a digital euro circulating in Sweden could increase the need for an e-krona to protect the Swedish currency. The digital euro could also have a positive impact on the work on a possible future e-krona. The technology and regulatory framework being developed for a digital euro can reduce the costs and complexity of working with the e-krona by establishing a standard. In addition, it is emphasised that a digital euro, together with an e-krona, could improve and simplify cross-border payments.

### Tokenisation and wholesale CBDC explored

Tokenisation is a technique whereby traditional assets are converted into digital representations of them – known as tokens. Traditional assets include shares, bonds and bank deposits. One of the advantages of tokenisation is that transactions can be made in real time, without traditional intermediaries. Another advantage is that platforms where the transaction is carried out can hold both tokenised money and other assets. The number of tokenised assets and the number of transactions are limited today, but there are several [market participants](#) who believe that tokenisation will increase in the future.

Tokenised deposits could improve cross-border payments. This is something that the Bank for International Settlements (BIS), in cooperation with central banks and private financial institutions, is exploring in [project Agora](#). The project aims to improve the efficiency and security of cross-border payments. This is done by linking tokenised bank deposits to tokenised central bank money (i.e. wholesale Central Bank Digital Currency, wCBDC) on a common platform.

The wCBDC is a form of central bank digital currency for transactions between banks, central banks and other financial institutions based on new technologies. In essence, wCBDC is central bank digital money, similar to the reserves that institutions already hold in accounts with central banks, for example in the RIX system. However, unlike existing central bank money, wCBDC can function in transactions with new forms of tokenised assets on a blockchain. The ECB has launched a [project](#) together with the

French, German and Italian central banks, among others, to explore the pros and cons of different wCBDC solutions.

## FACT BOX – Central banks explore central bank digital money for different purposes

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BIS has over several years examined which central banks are exploring digital central bank currencies for retail payments, so-called retail CBDC (rCBDC) and large-value payments between financial institutions, so-called wholesale CBDC (wCBDC) respectively.

The [2024 survey](#) is based on survey data from 2023. It shows that 94 per cent of the central banks that responded to the survey are exploring central bank digital money in some form. This is about the same proportion as the year before. The survey shows that interest in the wCBDC has increased. The share of respondents who think they might launch a wCBDC has increased. At the same time, it shows that the share of central banks that believe they might launch an rCBDC within the next six years has decreased.

In countries that have a payments market comparable to Sweden's, interest in central bank digital money varies. In the euro area, the ECB has decided to proceed with the preparations for a digital euro and experiments with the wCBDC are ongoing. Also [Norges Bank](#) and the [Bank of England](#) are exploring both rCBDC and wCBDC. [Nationalbanken](#) does not see a need for an rCBDC in Denmark at present. In Australia, the [Reserve Bank of Australia \(RBA\) and Treasury](#) have come to a similar conclusion. The RBA will continue to explore the wCBDC in the future. The [USA](#) stopped the development of a CBDC in January, citing risks to financial stability and individual privacy. The [Bank of Canada](#) announced in 2024 that it is de-prioritising its work on the rCBDC, to focus on other payment issues. In Sweden too, work on the [e-krona](#) has changed focus. In the autumn of 2023, the e-krona project was brought to a conclusion, and the Riksbank will instead continue to analyse and follow international policy work, particularly the work on the digital euro.

## 2 Safety, efficiency and accessibility

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Payments in Sweden are generally safe, efficient and accessible, but there are problems with fraud and the payments infrastructure needs to be strengthened and modernised. While the digitalisation of payment systems has made payments smoother and safer, it has also created challenges in terms of increased technical vulnerability and making it more difficult for some people to pay.

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## 2.1 Are payments in Sweden safe?

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Payments in Sweden are generally safe. The critical infrastructure for digital payments has experienced few disruptions in 2024. At the same time, individual actors have been exposed to cyber attacks and disruptions, and the geopolitical situation means that the risk of new attacks is significant. The security of the payments system is also challenged by other vulnerabilities – including the cash infrastructure. In addition, digitalisation has contributed to vulnerability to disruptions in electricity networks and data communications. This development has also led to a change in payment-related offences, for instance, fraud has become a major problem in recent years.

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### What is needed for payments to be safe?

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The payment system shall be stable, resilient to disruptions in normal times and able to function in peacetime crises and states of heightened alert. It should be possible to use multiple payment methods so that payments can be made even if there is a disruption in any part of the system. Protection against fraud must be high. The payer and payee must be confident that the payment will be received and that the cash received is genuine, and that sensitive information such as authentication and card details are not disclosed and used by unauthorised persons.

### **Swedish payments are safe but digitalisation adds to vulnerability**

Swedish payments are generally safe. Payments reach the recipient and the protection of individuals' sensitive authentication and payment data is high. In 2024, the payments system has experienced few disruptions, but individual agents have been subject to attacks and have experienced disruptions. This is also confirmed by [Finance](#)



[Sweden](#), which states that recent cyber attacks have increased in strength and scope. The risk of new cyber attacks is significant, and is amplified by the heightened geopolitical risks.

Various measures have been taken to strengthen the resilience of the financial sector to digital risks, such as cyber threats. A key measure to increase resilience is the [DORA regulation](#), which started to apply in January 2025. The regulation imposes new requirements on financial sector organisations with regard to cyber risks. However, the clearing organisation Bankgirot and the Riksbank's settlement system RIX are examples of important actors that are not covered by the DORA regulation, but which are important for the financial system. The Riksbank has previously expressed that it is important that the participants not covered by the regulation also comply with its requirements and strive for the same level of resilience.

Households and companies can also help to ensure that the payments system is well prepared. To improve the ability to make and receive payments, even if some part of the payments system is not working, it is important to have access to different payment methods. This is also emphasised by the Swedish Civil Contingencies Agency (MSB). MSB, in co-operation with the Riksbank, has produced recommendations aimed at households:

- Have accounts with different banks, cards from different card networks (such as Visa and Mastercard) and access to payment services via mobile phone (such as Swish)
- Have several alternatives to internet connection (e.g. mobile data and broadband).
- Have several options to identify yourself electronically (e.g. BankID and security token for your bank).
- Have cash in smaller denominations that will last your household for a week's purchases.
- Keep track of payment cards and PINs in case contactless payments by card and mobile phone (by "tapping" a card terminal) stop working.

Furthermore, the Riksbank [encourages](#) households to occasionally use cash for payments. In this way, households help to keep cash management going under normal conditions so that it can also function in a crisis situation or, ultimately, in war. It will also make it easier for households and companies to recognise genuine banknotes and coins.

### **Good that companies accept different payment methods**

By offering customers multiple ways to pay, businesses can both increase customer satisfaction and ensure contingency preparedness for their company – especially when disruptions occur in a payment method. In this way, companies can also contribute to the resilience of the payments system. It is particularly important that companies selling essential goods are able to receive payments, also when regular data

communications and electricity supply are not functioning. According to the Riksbank's survey on payments, 85 per cent of companies selling essential goods accept cash, which is significantly higher than the average for all companies in the survey. About the same proportion of these businesses accept card payments via Mastercard and Visa, and two thirds also offer Swish and invoice. According to the survey responses, cash and Swish are the main methods used to process payments in the event of disruptions in data communications.

### **Offline payments are necessary to strengthen resilience**

A further way to strengthen the resilience of the payments system is by enabling various types of payment to be made offline. Being able to pay by card offline is particularly important, as card payments are the most common means of payment in physical retail sales. The actors typically involved in a card payment are the cardholder, the payee, the card acquirer and the card issuer. An offline payment occurs when one of these actors is not available via data communication. In Sweden, it is currently possible to pay by card offline to some extent, but it depends on the card you have, the agreement you have with the card issuer (i.e. the bank), the payment terminal the shop has and what is allowed in the Visa and Mastercard card networks' rules. Cardholders often lack information on whether their cards work offline and if so, what maximum amounts might apply. When an offline payment is made, a credit risk arises, as a coverage check against the customer's account at the bank cannot be performed. In Sweden, the card issuer normally bears the risk if the card is from Mastercard, while the retailer usually bears the risk if the payment is made with Visa. Offline payments can pose certain risks of both overdrafts and fraud, which makes it important that a framework for increasing the opportunity for offline payments also includes limits regarding amounts and areas of use.

The Riksbank's survey shows that only 10 per cent of companies state that they can accept offline payments by card. The percentage is higher among companies selling essential goods, where the corresponding figure is 29 per cent. The low number of companies reporting that they can accept offline payments may be due to the limited availability of terminals that can accept offline payments, but it is also likely that companies are unsure whether it works. At present, offline payments in Sweden only work with physical cards. It is therefore important to keep track of your card and PIN in case contactless payments with your mobile phone (by "tapping" your mobile phone against a card terminal) stop working. Several countries, in dialogue with the card networks, have extended the possibility of offline payments through deferred authorisation. This means that contactless payments can also be made offline. Deferred authorisation means that the transaction is authorised retrospectively, normally within 24 hours of the time of purchase.

## FACT BOX - How our neighbours have strengthened payments system resilience with offline payments

In recent years, several countries have been looking at ways to increase the availability of offline payments and thus improve the resilience of the payments system. In Norway, several measures have been taken in recent years to strengthen preparedness for card payments. The national card network, BankAxept, plays a central role in the Norwegian system, providing a general fallback solution when card payments cannot be made as usual.

The market is required by Norwegian law to be able to handle an increase in demand for cash in the event of serious disruptions to the digital payments system. However, the requirements can be limited if fallback solutions for digital payments are available. This has fuelled the development of the extended offline solution for card payments by banks. Since 2022, an extended offline solution has been in place, providing selected food, fuel and pharmacy retailers with a guarantee for offline purchases for up to seven days. As Norway has a national card network, Norwegian banks are able to define and establish rules and processes themselves. Card-issuing banks jointly and severally bear the credit risks in the scheme.

The [Danish Payments Council](#) brings together authorities, market participants and stakeholder organisations. They are actively working to strengthen the possibility of offline payments. In 2024, together with stakeholders involved in card payments, it has enabled more cards to be used for offline purchases. The aim of the work is to enable offline payments in major grocery stores and pharmacies across the country for at least seven days. This is for holders of cards from the national Dankort, Mastercard and Visa card networks. Visa, which usually does not accept offline payments, changed its rules in Denmark in 2024. As part of the process, an agreement was developed that distributed the credit risk in a different way than normal, in case of a severe crisis.

In Estonia, a system has also been developed to extend the possibility of offline payments by card. From mid-2025, a legal obligation will be introduced for systemically important banks to offer offline card payments. Initially, this will only apply to the purchase of fuel, and will later be extended to the purchase of food and medicines. The new legislation follows the regulations of the international card networks. Visa changed its regulatory framework in 2024 to enable offline payments in Estonia, similar to what was previously done in Denmark. Similar legislation has also been introduced in Latvia. There, the law has already entered into force on 1 January 2025.

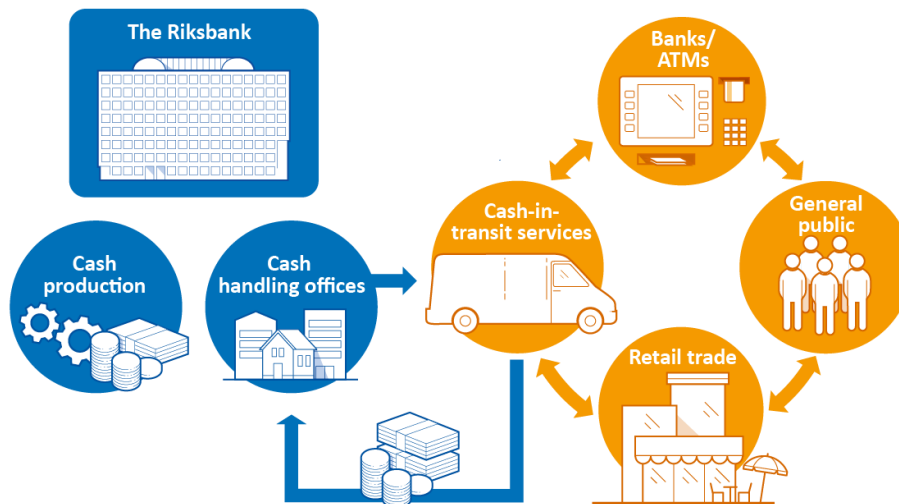
In Sweden, a private-public sector cooperation group is working on improving offline card payments, see Chapter 3.1.

### Proposed measures to maintain the cash chain

In last year's Payments Report, the Riksbank noted that the underlying infrastructure for cash – what we call the cash chain – is vulnerable. The cash chain includes deposits and withdrawals, distribution in the form of transport, sorting, counting and storage

of cash. The start and end of the chain is the Riksbank, which issues and redeems cash. Otherwise, the cash chain is mainly managed by private actors in the form of banks, the bank-owned company Bankomat and the cash-in-transit company Loomis, see Illustration 1.

**Illustration 1. The cash chain**



The ability to pay with cash is important, both from a contingency planning perspective and for those who, for various reasons, cannot or do not want to use digital payment services. In September 2024, the Riksbank submitted a [letter](#) to the Ministry of Finance's Cash Inquiry with a number of proposals to reduce the vulnerability of the chain and thereby strengthen the possibility to pay with cash in the future.

In the letter, the Riksbank describes how the market for cash services has changed as a result of reduced cash usage. The number of cash services has decreased and they are increasingly offered through automated services such as ATMs. On the one hand, offering cash services via ATMs is cost-effective. On the other hand, the machines do not meet the needs of many traders. For example, you cannot withdraw petty cash from ATMs. ATMs also often have limits that are too low even for small traders, around SEK 500-1,000 per day.

There is already a [legal requirement](#) for some banks to ensure that companies can deposit daily takings to an adequate extent. In line with the Riksbank's letter, the [Cash Inquiry](#) has proposed that this requirement be expanded and clarified, by giving the major banks an increased responsibility to provide appropriate and needs-based services for depositing daily takings and petty cash at reasonable prices. You can read more about the Inquiry in the section The Cash Inquiry proposes that essential goods can be paid for in cash in Chapter 1.3.

### **Fraud remains a major problem**

Public trust in the payments market is central to its functioning. The major problems with payment fraud in recent years risk undermining this confidence.

With effect from last year, Finansinspektionen (the Swedish Financial Supervisory Authority) has been publishing biannual statistics on fraud through payment services. The authority is tasked by the government with monitoring payment service providers' compliance with the Payment Services Act, a piece of legislation that aims, among other things, to combat fraud. Finansinspektionen's statistics cover fraud reported by payment service providers under its supervision. The latest published [statistics](#) show that the number of frauds has increased, totalling more than SEK 1 billion in the first half of 2024.

According to preliminary statistics from the Police, the total number of frauds decreased slightly in 2024 compared to 2023. Unlike the Finansinspektionen data, the Police statistics cover all reported offences. The number of card frauds has decreased, while so-called authorisation frauds have increased by 12 per cent. Authorisation frauds can involve the fraudster claiming to be calling from the victim's bank and misleading the victim into signing something with their e-identification or providing sensitive information. This type of fraud is rarely compensated by banks given the current regulatory framework. This means that the victims will have to bear the loss themselves.

At the same time, the fight against fraud is given high priority by market participants as well as by the government and authorities. Last May, for example, Finansinspektionen published a [report](#) showing how payment service providers are working to prevent fraud. The report is the result of a government commission and describes, among other things, how payment service providers develop the technical protections and carry out educational activities aimed at consumers. The report also shows that social manipulation is the most common form of fraud, and that it mainly affects the elderly. Social manipulation involves people being manipulated by fraudsters to carry out transactions or give up sensitive information.

In the report, the Finansinspektionen proposes measures to reduce fraud and strengthen consumer protection. According to Finansinspektionen, payment service providers should bear a larger share of the loss, which would give them greater incentive to develop safer services. Additional measures proposed include stronger requirements regarding transaction monitoring for payment service providers, better opportunities for information sharing between authorities and payment service providers, and regulation that counteracts and makes it more difficult to manipulate mobile and telephone numbers. A couple of the proposals may be implemented via new EU legislation, through the [Commission's proposal for a reformed payment services framework](#), which is currently being negotiated in the Council and the European Parliament.

Banks are also prioritising fraud prevention. In May 2024, Finance Sweden presented a [package of measures](#) to counter fraud. In line with Finansinspektionen's proposals, this includes monitoring how transactions develop, as well as adjustments to the banks' product offerings, such as time delays and limits on amounts. This means similar adjustments to those recommended by Finansinspektionen to enable more people to access payment accounts.

The banks' measures package also involves being able to exclude criminals and fraudsters from certain services, such as Swish and BankID. It is positive that concrete measures are being taken to strengthen protection against fraud, as this helps to increase security for bank customers and reduce the risk of financial crime.

Fraud is not only a problem in Sweden, but also in other countries. This is shown, among other things, in a [report](#) produced by the European Central Bank (ECB) together with the European Banking Authority (EBA). According to the report, payment fraud in the EEA totalled €4.3 billion in 2022 and €2 billion in the first half of 2023. In the EU, there is a requirement for Strong Customer Authentication (SCA) for card payments, for example a code or BankID in addition to the card. This has contributed to a decrease in card fraud, but according to the ECB and the EBA, card fraud is still the most common form of payment fraud in the EU. This is because a fraudster can steal card details without having access to the physical card and use the data for online transactions in countries where strong customer authentication is not required.

### **Cash is used in criminal activities but cashless shops can create other problems**

Money laundering is the concealment of the origin of money derived from criminal activities to make it appear legitimate. Money laundering is carried out through many different payment methods and is a global problem that risks undermining trust in the payments system. Since one can pay anonymously with cash, it can be used to conceal crimes or criminal activities. According to the [Swedish Police](#), it is common for cash from criminal activities to be taken out of Sweden to be either laundered or reinvested in crime. Some shops have stopped accepting cash to prevent criminals from realising the proceeds of crime.

The fight against the criminal economy is very important. At the same time, cash is an important payment option, both as a backup solution in the event of disruptions to other payment methods and for those who cannot pay digitally. The Cash Inquiry proposes a maximum limit per purchase for the companies that, according to the Inquiry's proposal, should be obliged to accept cash. The Riksbank welcomes the Inquiry's proposals and also considers that general limits for cash payments can be a way of continuing to offer cash payments, while making it more difficult for the criminal economy, see also Chapter 3.1.

### **Number of forged banknotes has declined from a high level**

Another type of fraud is counterfeit banknotes. The number of counterfeit banknotes submitted to the police in Sweden has decreased from a historically high level of 6,629 in 2020 to 3,109 in 2024 (see [Banknote and coin statistics](#)). Swedish banknotes have advanced security features and the counterfeits found by the police are often simple copies (see [Security features](#)). It is almost only 500-krona banknotes that are counterfeited. However, as fewer and fewer people in Sweden use cash, the knowledge of what a banknote looks and feels like is decreasing, which increases the risk of counterfeits being mistaken for the real thing.

## FACT BOX – Virtual cards provide better fraud protection but usually do not work offline

In recent years, more and more people have started using virtual cards in their mobile phone, smart watch or other so-called wearable technology when making payments. People often use services like Apple Pay, Samsung Pay or Google Pay.

All of the services mentioned use a technique called tokenisation. This is a technique used in various contexts, see Chapter 1.4 for a description of asset tokenisation. In this context, card details are exchanged for a digital representation of a card (token), which is stored in, for example, your mobile phone. This token can only be used on the device on which it is stored and does not contain any information that can be misused by fraudsters. This means that card payments made with virtual cards have very strong protection against card fraud.

However, in the event of disruptions to communication networks, card payments made with virtual cards will not work in Sweden. This is because the current ability to make so-called offline payments through local authorisation is programmed into the physical card's chip. It is therefore a good idea to have access to physical cards and to remember their pin code, even if you use your mobile phone for everyday card payments.

### **A government e-ID could strengthen resilience**

Today, e-identification is often a requirement for accessing digital services from both public and private organisations. BankID dominates the market with over 8.5 million users, making it by far the most widely used e-ID in Sweden and the only one that can be used to identify oneself to payment service providers and authenticate (authorise) payments.

In Sweden, there is no widely accepted e-ID at the highest level of trust for private individuals, which the EU [requires](#) all member states to provide. According to EU requirements, the highest level of trust means that the e-ID must be stored in a physical object. A governmental option at this level would not only increase security, but could also increase the availability of e-IDs, as a governmental e-ID can be used as a basic identification for other e-IDs. It facilitates increased competition. A government e-ID is particularly important for people without a bank account and therefore without a BankID.

The Riksbank's [consultation response](#) to the inquiry into a secure and accessible e-ID, emphasises the importance of the private financial sector accepting the new e-ID. This is to ensure the relevance and functionality of the new e-identification in the Swedish payments system. In addition, the Riksbank emphasises that such an e-identification would be important for strengthening society's resilience in crises and heightened alert if, for example, BankID did not function.

The European Identity Wallet will serve as an e-identification, a repository for certificates and a tool for electronic signatures. Member States have until November 2026



to implement it. The requirement for a European identity wallet further reinforces the need for a secure e-identification solution in Sweden.

## FACT BOX – Inquiry into secure and accessible digital identity

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The eIDAS Regulation requires EU Member States to implement uniform rules for electronic identification with the aim of increasing trust in electronic transactions and promoting e-commerce and other exchanges within and between Member States. In line with this, the Swedish inquiry on secure and accessible digital identity has submitted its [final report](#). The report makes proposals on how Sweden can meet the requirements of the revised eIDAS Regulation and what supplementary provisions are required, particularly with regard to the implementation of the European digital identity wallet.

The report proposes that Sweden should introduce a digital identity wallet, to which all natural and legal persons in the EU should have access. Access to the wallet requires an e-identification at the highest trust level. As Sweden currently lacks a state e-identification that fulfils EU requirements, the government has commissioned the Swedish Police Authority to develop such an e-identification in 2025.

The complementary Swedish provisions are expected to enter into force on 1 October 2025, and aim to strengthen security in society, counter fraud committed using e-identifications and make it easier for as many people as possible to access an e-identification.

## 2.2 Are payments in Sweden efficient?

Payments in Sweden are, on the whole, efficient. Shops and service-related businesses accept different payment methods and find that payments work smoothly. The payment infrastructure is evolving to allow more payments to be instantaneous, but the private payment infrastructure for traditional batch payments needs to be upgraded. More and more initiatives are emerging to make cross-border payments smoother and cheaper, but there is still work to be done.



### What is needed to ensure payments are efficient?

The costs to society, including energy consumption, for different methods of payment should be low. Fees shall be transparent and payments shall be quick and easy. There shall also be healthy competition between operators offering payment services. This means, among other things, that the payments system shall be accessible to different types of operator who want to offer payment services.

#### **Digital payment payments in Sweden are efficient**

Payments in Sweden are generally efficient, well developed and work well for most people. More payment methods have started to be accepted in commerce, which favours competition. However, some types of payment have evolved at a different pace than others. Among other things, there should be more types of payments that can be settled immediately, the private infrastructure for regular batch payments (such as direct debits and bank giro payments) is in dire need of upgrading and, finally, cross-border payments need to become faster and cheaper. This is a problem outlook that remains from the Riksbank's assessments in the Payments Report 2024. The Riksbank is contributing to increased efficiency on the payments market, for instance, by having opened up for more types of payment than Swish in the RIX-INST payments system.

### **Many firms have difficulty estimating the cost of receiving payments**

Understanding the cost of payments is important for firms so that they can use their resources efficiently, boost profitability and increase competitiveness, which ultimately benefits society as a whole. The Riksbank's survey shows that companies' perceptions of the costs for receiving payments vary, but in particular many find it difficult to make an approximate assessment of the cost. Almost one in three firms could not estimate the approximate cost of receiving payments as a proportion of annual turnover. The fact that so many were unable to answer this question indicates that greater clarity is needed regarding the pricing of payment services to enable competition. More on the Riksbank's view of payment pricing can be found in Chapter 3.3.

### **More competition among in-store payment methods is a good thing**

In Sweden, cards (debit and credit cards) have long been the most common means of payment among consumers. The card networks Visa and Mastercard have a dominant position in physical trade due to strong two-sided network effects which limit competition. The networks' large user base among both buyers and sellers, and the fact that the cards are accepted worldwide, make it convenient for consumers and firms. At the same time, it will be difficult for smaller actors to enter the market. In recent years, however, new payment methods have started to challenge the dominance of the card networks.

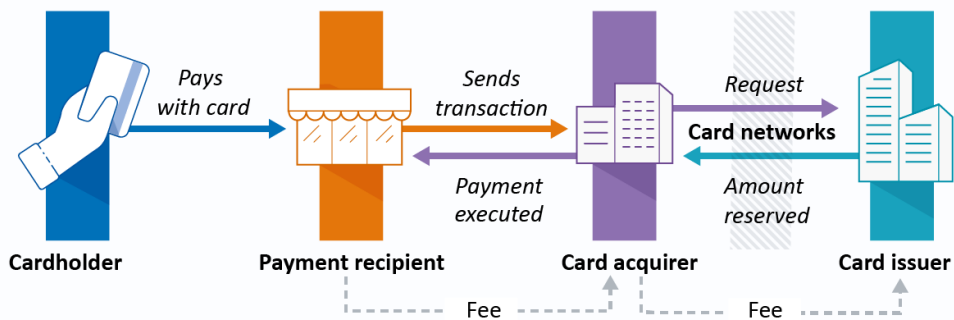
Swish has grown rapidly and in recent years has also established itself in physical commerce as a competitor to traditional card networks. Swish has been integrated into many POS systems and the company behind the service, GetSwish, has also started offering a self-scanning service using the Swish app and QR codes. This is to simplify the payment process and reduce queuing times for users.

In addition to Swish, open banking solutions can also play an important role in increasing competition in the payments market. By allowing direct access to bank accounts, open banking can reduce the number of intermediaries, which can lead to lower transaction costs and increased efficiency. Open banking payments with linked bank accounts are mainly used in e-commerce and for digital services, but there is potential for these solutions to move into physical stores as well. Such developments can foster a more diverse and innovative payments market with greater competition, where both consumers and merchants have more choice, more convenient payment solutions and better conditions.

## FACT BOX – How different payment solutions work

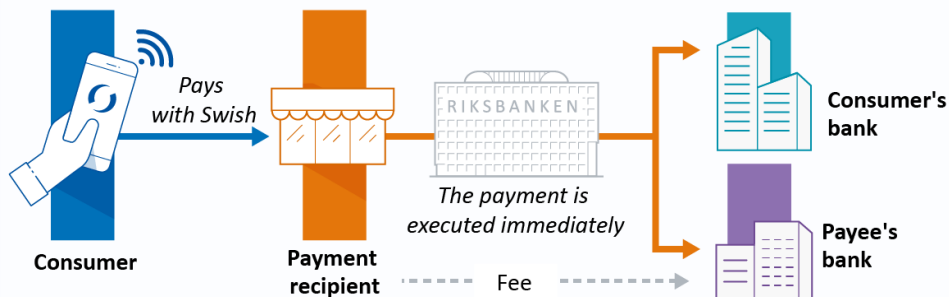
Cards are the most common method of payment in Sweden for payments between private individuals and companies. A card can be linked to a bank account or credit card account with a bank. A card transaction often involves several parties. The most common model is called the 'four-party model'. The main actors in a four-party model based on the Visa and Mastercard networks are the cardholder, the payment recipient, a card issuer and a card acquirer.

**Illustration 2. Simplified view of a card payment**



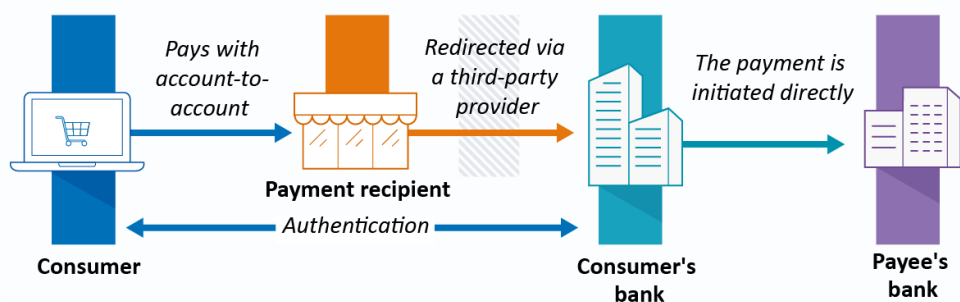
Swish is an increasingly common payment method in Sweden, especially for payments between individuals and from individuals to businesses via e-commerce. All payments made with Swish between two bank accounts in different banks are executed immediately between the sender and recipient banks in RIX-INST, the Riksbank's system for the settlement of instant payments. Swish is currently free for individuals, but retailers and companies pay fees for receiving payments to the bank with which the retailer or company has an agreement. The fees consist of a monthly fee and a fee per transaction.

**Illustration 3. Simplified picture of a Swish payment**



One payment solution that is becoming increasingly common is account-to-account payment via so-called payment initiation, for example through services from Tink and Trustly. In this solution, a third-party provider enables a consumer to initiate a payment directly from their bank account to the recipient, without having to leave the app or website being used. The payer identifies himself to his bank, chooses the account from which the money is to be withdrawn and then authorises (authenticates) the payment. The payment is then settled between the payer's and payee's banks via their accounts in RIX-RTGS. The payer does not pay a fee to initiate a payment, but merchants and firms typically pay a fee to the third-party provider that makes the initiation possible.

**Illustration 4. Simplified view of a payment initiation**



### Self-service can be effective but requires consumers to be able to pay digitally

Today, many shops offer self-service via self-scanning, self-checkout or their own apps. Most often, self-service is a complement to manned checkouts. According to a [study](#) by HUI Research, commissioned by GetSwish, self-service commerce grew by 10 per cent in 2023.

Another form of self-service is unmanned shops, which have also become more common. According to a [report](#) from the Swedish Agency for Economic and Regional Growth, the number of unmanned shops increased from just under 100 to 205 between 2021 and 2023. However, the share of unmanned stores is still a small proportion of all stores, just under 4 per cent.

For traders, there can be several advantages to self-service. According to GetSwish's report, self-service can lead to more purchases at higher amounts on average and better data collection for the merchant. In addition, just over half of consumers preferred to pay at a self-checkout station or self-scanning till when shopping in a grocery store. Unmanned stores can increase the accessibility of groceries, for example by being located in sparsely populated areas where there is no profitability for a manned store.

As currently designed, unmanned self-service shops assume that consumers have access to and master digital payment methods. In addition, access to unmanned shops often requires a BankID. Reducing manned checkouts in favour of self-service could reduce the ability of some groups to pay for essential goods and services.

## There are too few ways to make instant payments in Sweden

Instant payments are account to account transfers that can be made around the clock and reach the payee's account within seconds. In Sweden, these payments are not as common as in other countries – such as Denmark. In 2023, almost half of the number of account-to-account payments were instantaneous in Denmark, compared with 40 per cent in Sweden, according to the Riksbank's own calculations. All banks in Denmark offer instant transfers via their online banks.

In the euro area, the share of instant payments was just over [20 per cent](#) at the end of 2024. New [regulations](#) coming into force this year are expected to cause this figure to rise in the future. The value of immediate payments is also emphasised at EU level. The European Parliament and Council [Regulation on instant payments \(2024/886\)](#) entered into force in April 2024, and aims to accelerate the move towards more instant payments. Under the regulation, banks offering regular euro credit transfers (also known as SEPA payments) will be obliged to also offer instant euro payments at the same cost. The obligation also applies to Swedish banks offering euro payments, but does not apply to transactions in Swedish kronor. The Riksbank has previously, in the [consultation response](#) to the Payments Inquiry (SOU 2023:16), expressed that it is important that Swedish legislation is also adapted to include an obligation to provide instant payments in Swedish kronor. This is because firms and consumers expect payments to be made quickly and securely and to keep up with developments in international payments markets.

In Sweden, there is currently no possibility to make instant payments via online and mobile banking. By the Riksbank requiring participants in RIX-INST to accept more types of instant payments from the autumn of 2024, users in Sweden can have greater choice. For example, a customer may want to make an invoice payment in their online bank that will reach the recipient immediately.

## Instant payments increase efficiency

Instant payments have become an increasingly important part of the payments market as the digital economy develops and consumer expectations for fast and convenient financial services grow. With instant payments, intermediaries disappear and transaction times are shortened. This reduces the economic costs of payments, which benefits both businesses and consumers. Companies can then have better control over their cash flow and improved liquidity. Consumers can access their money quickly, which is important in many payment situations and particularly valuable for beneficiaries who are financially vulnerable. Among the merchants, hairdressers and restaurants that participated in the Riksbank's survey on payments, more than half responded that it is important that payments are received into the account immediately, instead of 1-3 days later. This is particularly important for firms with small average customer payments.

On the other hand, there are some [retail payments that are not considered suitable for immediate settlement](#), such as batch payments for salaries and government pay-

ments. These are best handled at scheduled times to efficiently manage large transaction volumes, facilitate liquidity planning and enable the necessary controls that reduce the risk of error and fraud.

Despite several advantages of instant payments, some challenges regarding security remain. For example, it may be more difficult to carry out checks to prevent money laundering and terrorist financing. In addition, various forms of fraud can be more difficult to stop than card payments and regular bank transfers due to their speed.

### **RIX-INST enables competition and innovation**

RIX-INST is the Riksbank's system for the settlement of instant payments. RIX-INST uses the technical platform TIPS, which is the ECB's system for instant payments. Unlike the settlement system for large-value payments, RIX-RTGS, RIX-INST is open around the clock every day of the year and settlement in RIX-INST is instant.

Since February 2024, all Swish payments have been routed through RIX-INST, in cases where payments are made between two bank accounts in different banks. Previously, Swish payments were processed in Bankgirot's BiR (Betalingar i realtid) system. There are several advantages to Swish payments having moved into RIX-INST, including that transfers between two different banks now take place between the banks' accounts with the Riksbank. This reduces the risks in the payments system, because the Riksbank cannot go bankrupt, among other reasons.

Since November 2024, all RIX-INST participants are obliged to accept instant payments according to a common set of rules (NCT-INST) developed by the [Nordic Payments Council](#). This allows for increased competition and innovation in the payments market, as a bank participating in RIX-INST can now develop new payment services where its customers can send instant payments to accounts in other participating banks. By using a standardised format, it also enables open banking actors to offer instant payments via payment initiation. However, there is no obligation for the banks in RIX-INST to offer their customers such services, see more about the Riksbank's view on this in Chapter 3.4. There are currently two smaller banks that send payments on RIX-INST in the standard format on a daily basis.

### **Faster and cheaper payments between countries**

Efficient cross-border payments contribute to the credibility of the payments system and promote economic stability and growth. In a time of high migration, it is also important for people to be able to send money to relatives through so-called remittances.

Facilitating cross-border payments is a task for the government. Central banks around the world are working to connect national systems and make instant payments between different currencies possible (you can read more about this in Chapter 1.4). One example of such a project is a cooperation between the Riksbank, the ECB, the Banca d'Italia and Danmarks Nationalbank. The aim is to build a basic infrastructure for instant, cross-currency payments in Europe through the ECB's instant payment platform, TIPS. Banks and other payment service providers will be able to benefit from

this infrastructure when developing payment services for consumers and firms. You can read more about instant payments between different currencies in Chapter 3.4.

Cross-border payments are also important in the Nordic countries. Many people travel, work and shop across borders, making fast and smooth payments between Sweden, Denmark, Norway and Finland essential.

A key player in the Nordic region is the bank-owned company Vipps MobilePay, which since 2024 has been offering cross-border payments between Denmark, Norway, Finland and Sweden through the Vipps service. However, not all banks in Sweden offer this service. A Vipps MobilePay payment works in different ways depending on where it is sent from and where it is sent to. Cross-border payments to accounts in Denmark, Norway or Finland have a certain [fee](#).

### **Foreign payments have become more efficient but much work remains to be done**

Foreign payments are often more expensive, slower and more cumbersome than domestic payments. In November 2020, the G20 countries agreed on a five-year cooperation to improve cross-border payments. The aim of the cooperation is to address some of the problems associated with cross-border payments. According to the latest follow-up reports ([Report 1](#) and [Report 2](#)) of the Financial Stability Board (FSB), progress has been made in the priority areas, but the work done so far is not sufficient. More work is needed to achieve the quantitative targets. Furthermore, some measures will take time to produce visible results.

As part of the G20 cooperation on cross-border payments, targets have been set for the cost of cross-border payments. By 2027, the cost of cross-border payments must not exceed 1 per cent of the payment value for retail payments and 3 per cent of the amount sent for a remittance. According to a [study](#) by the Riksbank, the cost of foreign payments via the major banks from Sweden is higher than the G20 target. This applies to card payments, credit transfers and remittances. It is mainly the exchange rate mark-up and high fixed charges per payment that contribute to the high costs. For example, the exchange rate mark-up alone averages just over 3 per cent for card payments in EEA countries. The same publication notes that there are some other institutions in Sweden that offer foreign payments at costs close to the G20 target.

### **Modernising the clearing infrastructure**

The Riksbank shall contribute to the stability and efficiency of the financial system, including the ability of the public to make payments. The payment infrastructure is a central part of this. The Riksbank's oversight and Finansinspektionen's supervision aim to ensure that the private payment infrastructure complies with current legislation, regulations and standards.

Bankgirot is responsible for the clearing of retail payments. Since 2023, they have been tasked by their owner banks with securing and modernising the existing infrastructure in Sweden in the short term. In the longer term, they are tasked with devel-



oping solutions for the future. One challenge for Bankgirot is to build a new infrastructure and to develop services based on standard Nordic payment formats, while maintaining the stability of existing systems based on other older formats. The transition to a new system may entail a temporary increase in operational risks. To meet these challenges, [Bankgirot](#) is working closely with the financial sector on a step-by-step development.

Finansinspektionen has put further pressure on the modernisation process by [ordering](#) the owner banks to address deficiencies in the existing payment infrastructure by December 2026. These deficiencies mean that the owner banks do not currently fulfil the information transfer requirements of the anti-money laundering regulations. The deficiencies are present in all participants in Bankgirot and the payments system Data-clearingen operated by Bankgirot. The injunction is addressed to the owners of Bankgirot as they have the possibility to ensure that the deficiencies are remedied. The Riksbank has [previously](#) expressed itself favourably about Bankgirot's development work. In addition, the Riksbank has stated that the participating banks also need to ensure that they prepare their own systems and operations for a transition to the new Bankgirot solution.

### **Increased access to payment infrastructure can lead to more efficient payments**

To be able to operate, payment service providers, such as fintech companies, need access to payment infrastructure and a payment account. More payment service providers can contribute to greater efficiency and innovation in the payments market, thereby benefiting end-users of payment services such as consumers, merchants and others.

Today, credit institutions, investment firms, central counterparties, clearing organisations, central securities depositories and the Swedish National Debt Office can participate in the Riksbank's settlement system RIX and in Bankgirot's clearing and settlement service. On 9 April 2025, amendments to the Settlement Act (1999:1309) will enter into force, which will also allow payment institutions and e-money institutions to participate in settlement systems such as RIX. The changes are related to amendments to the Finality Directive and the EU Payment Services Directive, and have been implemented in local legislation across the EU. The aim of the legislative changes is to enable more players to offer payments on equal terms and to increase competition in payments, which can ultimately contribute to greater efficiency and innovation. The Riksbank takes a positive view of the new legislation, which you can read more about in Chapter 3.4.

## FACT BOX – The Riksbank collects new payment statistics

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The Riksbank needs a clearer picture of the payments market, both for its own analyses and to report payment statistics to the ECB, as do other EU countries. The Riksbank lacks basic and comprehensive information on the payments market, which is crucial for monitoring market developments. A clearer picture of the payments market would reduce the reliance on surveys and ad hoc data collections, as well as contribute to a more comprehensive and comparable picture of payment flows across the EU. The Sveriges Riksbank Act, which entered into force in 2023, provides an extended mandate for the Riksbank to prescribe this, and a draft regulation on payment statistics is being prepared. Following a [referral procedure](#) in 2024, work is underway to adapt and concretise the regulations on the basis of market conditions and the Riksbank's needs. This work is done in cooperation with the intended rapporteurs.

## 2.3 Are payments in Sweden accessible?

For most people in Sweden, access to the payments market is good. The digitalisation of the payments market has helped make payments faster and more convenient for most people. At the same time, many are not able to take part in new developments. These are people who are unwilling or unable to use digital services, and people who do not have access to a bank account.



### What is needed to ensure payments are accessible?

It must be possible for everyone in Sweden to pay at a reasonable cost. Users shall have good access to payment services and there shall be different payment methods to choose between, depending on the situation and conditions.

#### Still problems with access to payment accounts

In last year's Payments Report, the Riksbank drew attention to the fact that some individuals and companies experience problems opening and maintaining payment accounts with banks. The Riksbank considers that this problem remains.

The Swedish Consumers' Banking and Finance Bureau says that complaints related to the availability of payment accounts are among the most common ones it receives. The problem has also been recognised by, for example, [Finansinspektionen](#), the Swedish Post and Telecom Authority (PTS) and the county administrative boards. The [study](#) conducted by Ramboll on behalf of the Swedish Post and Telecom Authority shows that, for example, people without a Swedish ID document, visiting researchers at universities and colleges, as well as refugees from Ukraine, are among the groups that may face problems in obtaining a payment account.

However, consumers are entitled to a payment account with basic functionalities under the [Payment Services Act \(2010:751\)](#). This is provided that the consumer is legally resident in the European Economic Area (EEA), and that it would not be in breach of the Money Laundering Act or for other specific reasons.

Most often, banks cite anti-money laundering rules, in particular lack of knowledge of the customer (KYC), as a reason for denying or cancelling accounts to consumers and companies, or terminating them. At the same time, it is difficult to live a functional life in Sweden without a payment account. [Finansinspektionen](#) has expressed the view that banks could to a greater extent offer a payment account with limited functionalities to reduce the risks, or have tighter monitoring of transactions. Efforts to increase access to payment accounts are ongoing in many banks. Read about the Riksbank's views on access to payment accounts in Chapter 3.2.

For people without access to a payment account, so-called reloadable cards can be an alternative. For example, government agencies use them to make payments to people who do not have an account. The card seems to work relatively well. However, it has certain limitations, including the fact that you cannot use it to shop online or pay bills. Moreover, the thresholds are often low and the fees high. As the card is not linked to a person's account but to the authority issuing it, there is a certain degree of anonymity built in, which entails, among other things, a risk of the card being misused, used for money laundering, terrorist financing or other criminal activities.

Companies and associations are also sometimes refused an account, or have their account cancelled. They do not have a legal right to open a payment account in the same way as private individuals, but it is of great practical importance to have such an account. On the other hand, banks, and some other financial institutions, are obliged to accept deposits (contracting obligation) according to the [Deposit Guarantee Act](#). [Finansinspektionen](#) believes that the reason for denied and closed accounts in these cases is also related to the banks' application of the money laundering regulations. The [Swedish Fintech Association](#) reports that the problem affects their member companies. In the survey of small businesses' views on payments carried out by the Riksbank, only a small proportion stated that they had experienced problems with access to accounts. Thus, among most small traders, restaurants and hairdressers, this does not seem to be a widespread problem.

The [Payments Inquiry](#) made a number of proposals in this area. Among other things, the report proposed that [Finansinspektionen](#), through amended regulations, should collect data on the number of denied and cancelled payment accounts. This would make the scale of the problem visible. However, [Finansinspektionen](#) has decided that at present the legal conditions are not in place for such a change in the regulations, but the matter is under further consideration.

### **Access to basic payment services does not meet society's needs**

The county administrative boards are [tasked](#) with monitoring and assessing access to basic payment services. These include payment intermediation, such as bill payments, as well as cash withdrawals and daily cash deposits into bank accounts for traders and

associations. In the 2024 [monitoring report](#), 15 out of 21 county administrative boards consider that access to retail payment services is not satisfactory. This is the same number as in 2023. No county administrative board considers access to basic payment services for the elderly and people with disabilities to be satisfactory. This picture is also confirmed in the [report](#) produced by Ramboll on behalf of PTS. The Ramboll report analyses the need for basic payment services, with a focus on paying bills.

The county administrative boards' mission is based on the objective of ensuring that everyone in society has access to basic payment services at reasonable prices, as decided by the Riksdag in 2007. However, the payments market has undergone major changes since then and today, for example, access to payment cards and Swish could be considered as at least as basic payment services as the existing ones. [Betälnings-sutredningen](#) proposed that the target should be changed to better reflect current needs and conditions and focus on the ability of everyone to make their payments, rather than on certain specific services. The report also argued that a new target formulation would give public actors such as county administrative boards and PTS greater opportunity to take appropriate measures. In the Riksbank's [consultation response](#) to the inquiry, support was expressed for this proposal.

However, there is still a need for the payment services covered by the current target, such as over-the-counter bill payments and the possibility of depositing daily takings into accounts for companies and associations. According to the county administrative boards, it is not possible to pay a bill in cash in many parts of the country. As mentioned in Chapter 2.1, there are also currently some problems and vulnerabilities in the ability to deposit overnight cash.

### **Some digital payment methods are more accessible than others**

Some payment services are designed in such a way that people with different types of physical disabilities cannot use them. This can include, for example, visually impaired people who have difficulty using touchscreens, which can include both smart phones and payment terminals with glass screens (so-called pin on glass). For people with cognitive disabilities, digital payment methods can sometimes be difficult to learn or understand. Cash can more clearly show how much money is spent and how much is left in your wallet. Many people with cognitive disabilities do not have a BankID, which rules out Swish and makes it difficult to shop online. BankID also facilitates the use of a range of other services - for example, access to the digital services of public authorities and businesses. Access to a BankID requires a Swedish personal identity number, which can make it difficult for foreign citizens coming to Sweden. A new government e-ID can improve the possibilities of digital identification for those who, for various reasons, are not allowed or unable to use BankID. See Chapter 2.1.

Card payments in physical stores have become an accessible and easy-to-use payment option for the vast majority of people, even for groups that are not otherwise digitally involved to any great extent. The 'tap-to-pay' function has made payments faster, and also made it easier for people who have difficulty remembering codes. This is because lower-value purchases do not require a PIN, although the maximum amount varies between banks. Services that integrate cards into mobile phones can also help, such

as Apple Pay and Samsung Pay. These purchases are authenticated with biometric solutions such as facial recognition or fingerprints, and rarely require a PIN. But this requires access to and use of a smart phone. The same applies to some services, such as parking and public transport, which advertise and provide discounts for purchases and payments via different apps. The Riksbank believes that several payment alternatives, particularly cards, need to be offered when purchasing goods and services. Read more about this in Chapter 3.2.

### **New regulation can help increase accessibility**

In June 2025, the [Act](#) on the accessibility of certain products and services will enter into force. The law aims to make banking and payment services more accessible through requirements such as standardisation. This means, for example, that the information about a service should be perceived by more than one mind and presented in an understandable way. According to the rules, apps should be made accessible in a consistent and effective manner by making them perceivable, manageable, understandable and robust. Payment terminals and self-service machines, such as ATMs and ticket machines, are also subject to accessibility requirements.

The law should make services easier to use. At the same time, criticism has been levelled that the law and the EU Accessibility Directive, from which the law originates, do not sufficiently cover cognitive accessibility. In addition, there are concerns that there are too many possibilities to make exceptions from the requirements.

### **Difficult to get help with payments**

As more and more payments are made digitally and more bank branches close, there is an increasing need for payment assistance for those who find it difficult to pay themselves using digital tools. As the Riksbank highlighted in last year's Payments Report, there are only a few places that offer over-the-counter bill payments, and they can be expensive – up to SEK 150 per bill. Instead, you may need help from a relative to pay bills or make purchases. However, giving out your card and PIN is a breach of the banks' card terms and conditions, and using someone else's BankID may constitute misuse or forgery. Helping someone with payments also raises issues of privacy and accountability, as well as the risk of exploitation by the family member or carer.

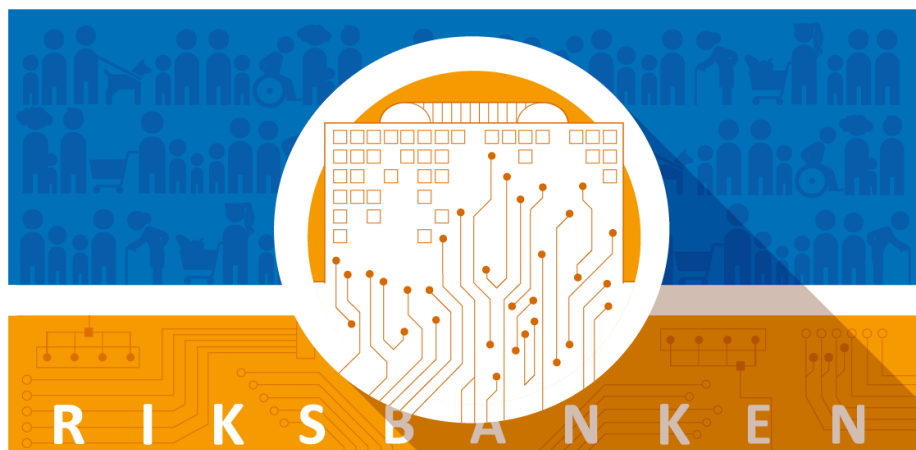
To get help with payments, you can authorise a relative. You may also need a representative, i.e. a guardian or trustee. What they have in common is that processing is generally much less digitalised than the rest of the payments market. For example, an authorised representative often needs to visit a bank branch, with the original power of attorney, to carry out banking transactions on behalf of the principal. In this way, the bank can ensure that the authorisation is still valid. For guardians and trustees, the digital service offering varies between banks, and they may also need to visit a bank branch for some banking transactions. To facilitate digitalisation, the [Ställföreträdarutredningen \(SOU 2021:36\)](#) has proposed a national register of proxies that banks and other payment service providers, among others, can use to verify the eligibility of proxies. The proposal, presented in May 2021, has so far not led to any new legislation.

### 3 The Riksbank's work and recommendations

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The Riksbank takes a socio-economic perspective and provides solutions and acts where it is difficult to attain safety, efficiency and accessibility without central government involvement. This includes, among other things, ensuring the country's cash supply and operating the RIX payments system. By monitoring developments on the payments market, the Riksbank identifies measures that can contribute to a safer, more efficient and more accessible market. This includes both private and public actors needing to ensure that the public is able to pay - in normal circumstances as well as in times of crisis and states of heightened alert. In addition, the underlying payment infrastructure needs to be strengthened and modernised.

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### 3.1 The public's ability to pay in times of crisis and states of heightened alert needs to be strengthened

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The Riksbank works to ensure that payments can be made in all situations. This includes ensuring the supply of cash in the country, as well as imposing regulatory requirements on companies that are of particular importance for payments. To further strengthen the preparedness of the payments system, the Riksbank considers that it needs to be possible to pay for essential goods using both cards offline and cash. In addition, the cash infrastructure needs to become less vulnerable.

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#### **The Sveriges Riksbank Act includes provisions on preparedness for payments**

According to the Sveriges Riksbank Act, the Riksbank is responsible for civil preparedness in the area of payments. The Riksbank shall ensure that the general public can make payments, both in peacetime crisis situations and in states of heightened alert.

The Riksbank is tasked with setting requirements for, coordinating and monitoring companies that are of particular importance for the execution of payments. The Riksbank's [regulations](#) determine which companies are covered and their preparedness responsibilities. The regulations set out requirements for the internal work of these companies to enable them to maintain payment activities in all situations. In addition to strengthening their own preparedness, the companies shall also participate in the joint capacity-building work in the payments area and in the management function for coordination and information that the Riksbank can activate in the event of serious disruptions to the payments system. The Riksbank supports the companies in fulfilling the requirements of the regulations, for example by providing planning conditions for the payment area and ensuring that the companies can deploy their staff. Further, the



Riksbank oversees the companies to ensure they fulfil the requirements, and can decide on injunctions with or without penalty payments if the requirements are not met.

At present, twelve companies fall under the regulations. In 2025, the Riksbank plans to start work on updating the regulations with the aim of expanding the number of actors covered and, if necessary, concretising and tightening the existing requirements.

### **Private-public partnership is key**

The Riksbank leads the Civil Preparedness Payments cooperation structure, which includes the companies subject to the regulations as well as the Riksbank and the Swedish National Debt Office. In 2024, the Riksbank, together with the companies, has studied payment flows, analysed risks and vulnerabilities and identified the need for measures to strengthen preparedness in the area of payments. Work is now under way to implement the measures identified to further strengthen the payments system. One of these is to improve the possibility to pay by card offline for essential goods, such as food, medicines and fuel.

### **Need to extend the possibility to pay by card offline**

The Riksbank considers it necessary to increase the possibility of making payments even in the event of major disruptions in data communication. This applies in particular to payments by the public for essential goods. Therefore, card payments should be possible even without functioning data communication, i.e. offline. Several of our Nordic-Baltic neighbours have already implemented or are in the process of implementing such a system, either through legislation as in Estonia and Latvia, or through a voluntary agreement between market participants as in Denmark. Read more in the box How our neighbours have strengthened payments system resilience with offline payments in Chapter 2.1. According to the Riksbank, it is essential that the work is conducted in close collaboration between the private and public actors concerned, but that it is ultimately the private actors who must decide how this is to be done in practice.

This requires both a common understanding of how offline payments currently work in different situations and an analysis of changes that may need to be made to existing regulations, agreements and processes. The Riksbank has therefore convened a broader circle of market participants than just the companies covered by the regulations, for example card networks, card acquirers and retailers, to achieve a common view and identify measures. The technical conditions for offline payments are already considered to be relatively favourable, but issues to be resolved include administrative processes, how abuse of offline payments can be curbed and who should bear the liquidity and credit risk arising from an offline payment.

The Riksbank's objective is that, by 1 July 2026, it shall be possible to make card payments offline for the purchase of essential goods in the event of disruptions lasting up to 7 days. The possibility shall apply to all those over the age of 18 who have a card with one of the banks covered by the Riksbank's regulations.

## **The Riksbank takes the lead in peacetime crises and states of heightened alert**

In the event of more serious disruptions or in states of heightened alert, the Riksbank is responsible for collecting information and compiling a current picture for payments within the framework of the Riksbank's management function. The function is activated if an event occurs that affects or may affect the ability to maintain payments.

In the inquiry [A new function for crisis management in the event of serious operational disruptions in the financial sector's digital infrastructure](#) it is proposed that the Riksbank shall be responsible for an operational function within [the Financial services preparedness sector](#). The Riksbank has in its [consultation response](#) expressed support for the proposal for a new function under the Riksbank's responsibility in cooperation with Finansinspektionen, but considers that its crisis preparation tasks should be limited to what is necessary for it to function effectively in a crisis situation. This would require the Riksbank's management function to be extended to cover the entire preparedness sector, and not be limited to the payments area, which was pointed out in Payments Report 2024.

## **The Riksbank's responsibility for cash**

According to the Sveriges Riksbank Act, the Riksbank must operate at least five bank-note depots at various sites throughout the country. This is a significant increase, as previously there was only one depot. Since 1 January 2023, the Riksbank has operated depots in Märsta, Jönköping and Umeå. By 1 January 2026, the Riksbank will have opened two more depots, one of which will be in the northern county of either Jämtland or Västernorrland. Having such stocks of cash in more locations across the country reduces both the costs for companies and the risk that cash would be difficult to use in the event of a disruption. The Riksbank is reviewing further measures to support the distribution of cash throughout the country.

According to the Act, the Riksbank shall also monitor, analyse and, if necessary, coordinate cash management in Sweden. Under the Act, a company that conducts operations affecting the availability of cash in Sweden shall inform the Riksbank if it intends to cease these operations. The Riksbank plans to draw up regulations during 2025 that clarify this obligation to inform with regard to, for instance, requirements for when the information shall be submitted and what it should contain.

## **More measures needed for a sustainable cash chain**

At the end of 2024, an inquiry at the Ministry of Finance submitted [proposals](#) for measures to secure the possibility of paying by cash and access to cash services (the inquiry is described in more detail in Chapter 1.3). In September 2024, the Riksbank sent a [written communication](#) to the Ministry of Finance with proposals for measures aimed at ensuring that companies and public sector entities that accept cash have access to daily takings and petty cash services. If companies and public authorities are forced to accept cash, as proposed by the inquiry, they must have access to these services.

There is already a [legal requirement](#) for some banks to ensure that companies can deposit daily takings to an adequate extent. The requirement currently also applies to foundations and sole traders but not to private individuals or public-sector entities. According to the Riksbank, the legal requirement needs to be tightened and clarified as the services offered by banks are inadequate. They have chosen to fulfil these requirements by providing deposit machines with limits that are too low for many business operators.

The Riksbank also wants banks to be obliged to offer corporate customers the opportunity to withdraw small sums of money in the form of petty cash. This service has deteriorated significantly as more and more banks have closed their manual cash services.

The Riksbank therefore welcomes the fact that the Cash Inquiry has presented proposals that are well in line with the Riksbank's written communication on increasing the responsibility of the major banks for daily takings and petty cash services. In order to maintain the cash infrastructure in Sweden and for cash to continue to function as a means of payment, the Riksdag and the Government should, following a consultation process, implement the measures proposed by the Cash Inquiry regarding compulsory cash payments for certain payees, as well as measures to safeguard the cash infrastructure.

### **Introduce a cash obligation and a threshold for cash payments**

Cash is needed to enable everyone to pay and to provide an additional means of payment in the event of crisis or war. The Riksbank therefore considers that there should be a general obligation for merchants to accept cash for purchases of essential goods. The Cash Inquiry makes proposals in this direction, which the Riksbank welcomes.

At the same time, cash is sometimes used for criminal purposes. To make it more difficult for the criminal economy, the Riksbank considers that a maximum amount should be introduced for cash purchases. Today, the [Money Laundering Act](#) requires companies to carry out customer due diligence if customers make cash payments over EUR 5,000. When the EU Anti-Money Laundering Regulation enters into force in 2027, the maximum amount for cash payments within the EU will be EUR 10 000. However, lower limits for cash purchases are common in [many European countries](#), such as Denmark, with a limit of DKK 15 000, or Spain and Italy with a maximum amount of EUR 1 000. With an appropriately designed threshold, people who want and need to use cash for legitimate reasons can continue to do so and the resilience of society can be maintained. At the same time, it will be more difficult to engage in money laundering, tax evasion and get rid of large sums of cash obtained through criminal activities such as the purchase of luxury goods. An appropriate threshold could be designed with inspiration from our neighbouring countries and the rest of Europe.

## 3.2 Everyone shall be able to pay

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Too many people are excluded from the digital payments market. For everyone to be able to pay, banks need to ensure that more people have access to a payment account. In addition, payment services need to be customised according to the needs of different consumers.

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### Access to payment accounts needs to increase

In last year's Payments Report, the Riksbank drew attention to the fact that some consumers and companies are denied access to a payment account, or have their account cancelled. [Finansinspektionen](#) has also highlighted the problem, and considers that banks should primarily try risk-reducing measures instead of completely refusing to open an account for a customer. Despite this, the problem does not seem to have diminished, especially among certain groups and companies. However, reliable statistics are needed to get a better idea of the scale of the number of denied and cancelled accounts.

A common reason for banks to deny or close accounts is that they think they are unable to achieve sufficient customer due diligence and thus do not fulfil the requirements in the anti-money laundering and anti-terrorist financing regulations. Money laundering and terrorist financing are serious problems that must of course be countered. At the same time, the Riksbank considers that more people should be able to have access to a payment account with limited functions by, for example, exempting foreign payments or adjusting amount limits. This type of measure is also in line with anti-fraud efforts, where simpler accounts and safeguards can make it more difficult for criminals. The banks can also step up their monitoring of transactions to and from these accounts. This has also been emphasised by both the [Betalningsutredningen](#) and [Finansinspektionen](#). [Finansinspektionen](#) has announced that it will continue to scrutinise the issue in its [supervisory work](#) in 2025, as well as convene a number of

banks to follow up on their work on access to payment accounts. Efforts to increase access to payment accounts are ongoing in many banks. The Riksbank welcomes this.

The Riksbank will monitor the issue and, in dialogue with market participants and the relevant authorities, investigate what further clarifications or measures are needed to improve access to payment accounts.

### **Payment options for different consumer needs**

For everyone in society to be able to pay, different payment options need to be available. This is in line with the financial market policy objectives adopted by the Riksdag, which require financial companies to satisfy the needs of households and firms for financial services. For people who, for various reasons, cannot or do not want to use digital services, cash is an important payment option, as is postal giro for bill payments.

For many people, paying by card is a quick and convenient way to pay, especially since the introduction of the ability to tap your card or mobile phone. Although card payments are digital, they are much easier to use for the digitally inexperienced than payments via apps, for example. App payments are increasingly used for public transport and parking, for example. As the Riksbank's survey has shown, card payments are the most common method of payment accepted by small shops, hairdressers and restaurants. The Riksbank considers that cards should be available as a payment alternative for important services, which would make it easier for more people to pay and participate in society.

The Act on the accessibility of certain products and services can contribute to better designed services so that more people can use them. The Riksbank continues to monitor the issue, in dialogue with market participants and other stakeholders. However, the Riksbank considers that more measures can be taken to further improve the availability of payment services. This involves, for example, making greater use of technical solutions such as biometrics for identification and authentication – naturally with respect for the integrity of the consumer.

For people who help others to make payments – such as relatives and guardians – the possibility to make digital payments should be improved. This is particularly the case for traceable payment methods, which are important to prevent fraud. One example is cards linked to the principal person's transaction account, where it is possible to record that a payment has been made by the authorised representative. Another option could be cards with a payment function that can be used in specific shops, and which usually have no credit function. Other more traditional payment methods are also important for many representatives as well as family members who help with payments. An example of such a traditional payment method is postal giro. To make it easier for these people, there needs to be access to different payment methods that are secure and that do not violate terms and conditions or other regulations.

### **Anti-fraud work should remain a priority**

People who are unfamiliar with digital payment services may be more likely to experience a fear of being victimised by fraud. These fears are not unfounded, as fraud through social engineering and digital payment services has become a major problem in recent years. Many actors – both public and private – are now actively working to combat fraud. This is positive. For the public to have confidence in the payments system, they need to feel that the system is safe, not least those groups who want to use digital services but are afraid to.

Last year, for example, the banks, through Finance Sweden, presented a [package of measures](#) to stop fraudsters. The package includes, among other things, banks blocking the use of Swish and BankID by fraudsters and money launderers more effectively. In addition, consumers will be able to add various options to banks' services – including time delays and amount limits on certain payments. As mentioned above, such options and measures could also be used to increase inclusion in the payments market, by giving more people access to payment accounts with limited functionalities. Finansinspektionen has also made [suggestions](#) on how to combat payment-related fraud. It is important that all actors involved continue to work actively to prevent fraud as much as possible.

### 3.3 Future payments infrastructure needs to evolve

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The payments market has undergone rapid and extensive change, driven by increased digitalisation, new consumer behaviours and the emergence of new operators. This places new demands on the Swedish payments infrastructure. The infrastructure must evolve and adapt to continue to enable secure, efficient and accessible payments for all users.

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#### **Developments in the payments market require modernisation of the infrastructure**

The Riksbank has long emphasised the need for a new, efficient and safe payments infrastructure in Sweden in the form of systems for clearing and settling payments. Several factors are changing the conditions for the existing infrastructure, such as the increasing number of instant payments and the growing demand for harmonisation and the use of common international standards in both domestic and cross-border payments. Both private and public actors have a responsibility to modernise the payments infrastructure.

In 2024, the Riksbank produced an analysis of how the payments infrastructure needs to be modernised in the coming years, and commissioned an external evaluation of the Swedish payments market with particular focus on the infrastructure.

#### **External evaluation of payments infrastructure points to areas for improvement**

In spring 2024, the Riksbank commissioned an independent expert with extensive international experience of payment issues to [assess](#) the Swedish payments market. A key conclusion of the evaluation is that Sweden needs to take a new approach to developing instant payments. According to the evaluation, Swish was a success and made Sweden a pioneer in the use of instant payments. However, in order not to fall

behind, Sweden should now further develop instant payments for more uses (e.g. corporate and government payments), ensure that payments can be made in different interfaces in addition to Swish (e.g. in online banking), and finally enable new operators to offer instant payment services. The Riksbank's settlement system RIX-INST and the new requirements for the system's participants to be able to receive instant payments, in accordance with the Nordic common framework NCT-INST (which was produced by the Nordice Payments Council), are an important catalyst for such a development.

Another key conclusion of the evaluation concerns the system of governance and development of the Swedish payments infrastructure in order to incorporate more public interests into an infrastructure that is central to Swedish society. The evaluation mentions that Sweden should consider the following proposals, among others:

- Give a greater role to governmental actors to provide high-level strategic guidance on priorities in the payments industry and represent the interests of end-users, i.e. companies and citizens, in the payments system.
- Establish some form of national comprehensive payments organisation with a role for smaller banks, other payments market stakeholders such as payment service providers, consumer organisations, retailers and possibly also the Riksbank, complementing existing stakeholder organisations.
- Regulation that imposes some form of explicit social mission on private operators of key national payments infrastructure.

### **Riksbank study on future Swedish payments infrastructure**

In the Riksbank study [The way forward for clearing and settlement of retail payments in Swedish kronor](#), the Riksbank presents its view of how the infrastructure needs to be modernised over the next five years. Cooperation between actors and adaptation to new technical requirements are crucial to ensure a safe, efficient and stable payments market in Sweden. Key changes that a future payments infrastructure will have to address include the transition to the ISO 20022 standard for payment messages, increased demand for instant payments, new participants in the core infrastructure systems, as well as security risks and requirements to counter illegal transactions.

The study highlights six principles that should guide the modernisation of the Swedish payments infrastructure:

- **Shared responsibility between public and private actors:** Public and private actors have a joint responsibility for developing, operating and maintaining the Swedish payments infrastructure.
- **Comply with international standards:** The payments infrastructure shall be aligned with international standards such as ISO 20022 and the Nordic Payments Council (NPC) framework to ensure efficiency, innovation and competitiveness.



- **Availability at all times:** The infrastructure's systems shall be able to process payments around the clock, both instant payments and those that require clearing and settlement at specific times.
- **Capacity for new actors:** The systems shall be able to welcome new types of actors, such as payment institutions and e-money institutions, in line with new EU regulation.
- **Settlement in central bank money:** All retail payments, including card payments, should be settled in central bank money to minimise risks and ensure stability.
- **Resilience:** The infrastructure must be robust and resilient to cyber attacks, fraud and other disruptions, and able to cope with crisis situations during peacetime and in states of heightened alert.

### **Modernisation of the clearing infrastructure is urgent**

Bankgirot and the banks have extensive and urgent work ahead of them to modernise and streamline the Swedish infrastructure and services for batch payments. This includes implementing international standards such as ISO 20022, complying with new regulations and ensuring the resilience of infrastructure in a more uncertain geopolitical environment. The work will take several years and needs to be conducted transparently and in close contact with both authorities and infrastructure end-users – both in its planning and implementation. The Riksbank considers that the principles listed in the Riksbank study should guide the work of Bankgirot and the banks.

### **Broadening the influence over the future payments infrastructure**

A future Swedish payments infrastructure is important for the whole of society and affects consumers, companies and the public sector. The major banks have long been responsible for designing and operating the privately owned payments infrastructure. Given the importance of the payments infrastructure for various societal interests, the major banks should consider broadening their influence over the infrastructure. The independent members of Bankgirot's board are a good first step towards broader representation..

The evaluation made of the Swedish payments market shows that several other countries have more developed models for ensuring the influence of both the public sector and end-users over the payments infrastructure. The Riksbank needs to take an active role in ensuring that a broad societal perspective permeates the design of the payment infrastructure. This means enabling the influence of various interests in the RIX payments system and helping to ensure that the privately-owned infrastructure is designed to take into account all of the important social functions of the payments system. However, the ambition should be that non-banks, relevant public actors and representatives of end-users of the payments system, such as retailers and consumers, are given influence over the design of a future Swedish payments infrastructure.

### **Strengthening the conditions for competition in the payments market by increasing price transparency**

To further strengthen the functioning of the payments market, the Riksbank considers that the pricing of payment services needs to become more transparent. Today, the pricing of payment services for companies can be difficult to understand, and list prices for card acquiring, for example, differ from the actual costs paid by companies. Almost a third of the small companies that participated in the Riksbank's survey on payments lack knowledge of what their payments and payment services actually cost. The same applies to consumers, who may also find it difficult to compare the costs of different services. Banking services are namely often gathered into [various packages that differ](#) with regard to the basic supply and what constitutes extra services. Even specific services, such as those used by consumers to send money abroad (so-called remittances), are associated with unclear pricing. This was highlighted by the Riksbank in the Payments Report 2024.

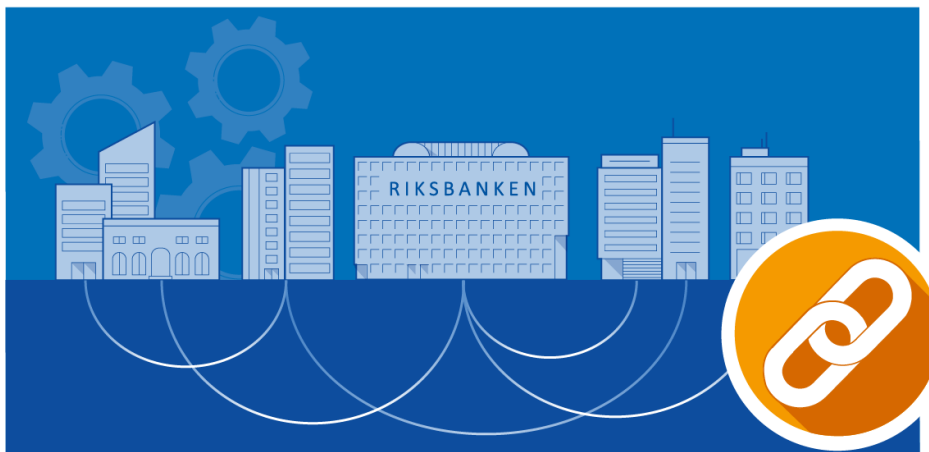
Increased transparency on the pricing of payment services would allow companies and consumers to make better informed choices, which in turn could promote competition in the payments market. In light of this, the Riksbank considers that the Government should consider giving the Swedish Competition Authority the task of analysing both the actual pricing of payment services and its transparency towards end-customers. Based on this analysis, the Authority should propose measures to increase price transparency and thereby strengthen competition in the payments market.

### 3.4 The RIX payments system needs to be able to handle future challenges

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The Riksbank needs to continue to develop and modernise the RIX payments system to meet future needs. This strengthens both the safety and efficiency of the system. The Riksbank will also open up RIX to more participants, which can promote competition on the payments market. Another focus area is to make foreign payments faster and smoother and to enable more types of instant payments than Swish to be processed in RIX-INST. This requires that participants in the system use the services the Riksbank develops.

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#### **The Riksbank is modernising its systems**

Apart from card payments, almost all digital payments between banks go through accounts they hold in the Riksbank's RIX settlement system. The RIX system consists of two services: RIX-RTGS for large-value payments and aggregated payments and RIX-INST for individual instant payments. Several major modernisation projects are under way, which have a bearing on both services.

#### **Banks are expected to offer their customers more types of instant payments through RIX-INST**

Since November 2024, RIX-INST participants have had new opportunities to offer instant payment services (see Section 2.2 on RIX-INST enabling competition and innovation). This creates the conditions for increased competition and innovation in the payments market. Through RIX-INST, banks and other payment service providers can now develop new payment services where their customers can send instant payments to accounts in other connected banks.

This development is an important step towards a more dynamic payments market. It allows banks and other financial actors to differentiate their services and meet customers' growing demand for fast and smooth payment solutions. At the same time, it helps to strengthen competition, which in turn can lead to better and more affordable services for consumers and companies.

The launch of new payment services by RIX-INST participants has so far been limited. Only two small banks send payments daily. This suggests that there is untapped potential for innovation, competition and development in the area. The Riksbank expects the participants, not least the major actors, to start offering their customers more types of instant payments through RIX-INST than via Swish alone. An external evaluation of the Swedish payments market (see Section 3.3) emphasises that Sweden needs to continue developing the market for instant payments. However, as more payments become instant, banks and other payment service providers need to have money laundering control systems that work for different types of instant payments. This is important as new services must not facilitate money laundering, terrorist financing and fraud.

#### **RIX-INST can facilitate payments between Swedish kronor and Danish kroner and euros**

RIX-INST uses the technical platform TIPS, which is the Eurosystem's platform for the settlement of instant payments. Together with the European Central Bank, Banca d'Italia and Danmarks Nationalbank, the Riksbank is investigating whether it is possible to make instant payments between different currencies connected to TIPS, which today are Swedish kronor, euro and, from 2025, also Danish kroner.

The ECB is planning a new initiative that is expected to become operational in autumn 2025. The initiative, called TIPS cross-currency, shall make it easier for companies to develop services for executing instant payments between different currencies on the TIPS platform. Companies and organisations that have joined RIX-INST will be able to utilise the cross-currency service. In connection with the decision by the ECB to launch the service, a decision was also made to explore the possibilities of making payments between currencies outside the EU. In practice, this means [examining](#) whether it is possible to link the TIPS platform with other similar systems outside the EU, for example through Project Nexus, developed by the Bank for International Settlements, and the Unified Payments Interface (UPI), developed by the National Payments Corporation of India.

The Riksbank encourages banks and other payment service providers that are connected to RIX-INST to also connect to and use the cross-currency service. However, it is up to banks and other payment service providers connected to RIX-INST to create the payment services that the public wants.

#### **EU regulation opens the door to new actors**

The payments market is a central part of the financial system, and increased competition among payment service providers is crucial to drive innovation and efficiency. Of the various actors offering payment services, only credit institutions, such as banks

and credit market companies, currently have direct access to payment systems such as RIX and Bankgirot's clearing and settlement services. On 9 April 2025, amendments to the [Act on systems for the settlement of obligations in the financial market](#) will enter into force. These legislative amendments mean that other payment service providers such as payment institutions and electronic money institutions will also be able to participate in these systems. For more details, see the section entitled "Increased access to payment infrastructure can lead to more efficient payments" in Chapter 2.2.

The Riksbank takes a positive view of the new possibilities and will open up RIX to more types of participant. At the same time, widening participation in these systems presents both opportunities and challenges. On the one hand, it can lead to increased competition and innovation, and on the other hand, it places higher demands on risk management and monitoring in the systems. The balance between innovation and stability will be key. Although payment institutions and e-money institutions must be authorised and supervised by Finansinspektionen, the requirements imposed on these entities are less extensive than for credit institutions and financial infrastructures. It is important that Bankgirot and the Riksbank make well-balanced adjustments to the terms and conditions in order, on the one hand, to reduce the risks when new participants are admitted into the systems and, on the other hand, not to set up unnecessary obstacles.

#### **RIX-RTGS to migrate to a new standard for payment messages**

Digital payments are based on communication between the parties involved in the payment systems and these must therefore communicate using the same 'language'. All around the world, central banks, banks and financial infrastructures use the SWIFT network and its message format and standard to execute payments. However, SWIFT's previous message standard has limitations, including the amount of information that can be sent with a payment. To meet these needs, in autumn 2020, SWIFT presented a strategy and timetable for migration to the new ISO 20022 format.

The Riksbank is working on adapting RIX-RTGS payment messages to ISO 20022. The transition to the new standard will be finalised in May 2025. RIX-INST is already adapted to this message standard.

The international use of ISO 20022 opens the door to faster and more efficient processing of payments between countries and currencies. The new format, which includes more information, can also help to increase the transparency and traceability of international payments.

## T2 and T2S - Transition from national to common European solution

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In 2024, the Riksbank decided to move forward in the process of using the European platform T2 for the RIX-RTGS settlement service, i.e. for large-value payments in Swedish kronor between banks, for example. A detailed analysis of feasibility and of the agreements related to the service is currently under way.

The decision to join T2 means a transition from a national to a common European solution. This is expected to enhance the security of RIX-RTGS through multiple operating locations within Europe, strong cyber defences, shared operations and responsibilities among several central banks.

At the same time, connecting to the platform means that the Riksbank will have less direct control and will need to adapt to common standards. However, it provides access to a more advanced infrastructure and may also reduce the need for in-house technical expertise. Implementation is expected to take around five years and will involve adapting systems and processes at both the Riksbank and RIX participants. In summary, connection to the T2 platform is a step towards a more integrated European payments infrastructure, which can increase the robustness and efficiency of Sweden's financial system.

The Riksbank has already taken a decision in principle to make the Swedish krona available for securities settlement on the European platform T2S in the future. The Swedish securities market should continue its work on harmonising processes and systems to European standards to prepare for the transition to the T2S platform. However, a transition to the T2 platform should be implemented before starting a transition to the T2S platform.

### 3.5 The future of the digital euro affects work on the e-krona

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The Riksbank still needs to be ready for the possible introduction of an e-krona in the future. In 2024, analyses of the climate impact and offline solutions for an e-krona were performed. The focus for future work will be to closely follow international work on central bank digital currencies, with a particular focus on work on a digital euro.

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#### **The Riksbank's work on a central bank digital currency**

The public currently has access to Swedish kronor either as cash, issued by the state, or as digital money, issued by private actors. As the use of cash declines, there is a risk that in the future the public will no longer have direct access to government-issued money, making companies and individuals entirely dependent on private payment solutions.

In response to this development, the Riksbank launched [the e-krona project](#) in 2017 to analyse the need for a central bank digital currency. The project has included dialogues with Swedish and international actors, as well as analyses of technical and legal issues. Through the technical e-krona project, the Riksbank has gathered valuable knowledge for future evaluations. The project ended in 2023, and the focus is now on monitoring the global development of digital currencies.

#### **Important to follow the development of a digital euro**

The Payments Inquiry's assessment in 2023 was that there was insufficient social need for the Riksbank to issue an e-krona. At the same time, the inquiry considered that the Riksbank should continue to evaluate the conditions for issuing an e-krona so that it is possible to introduce an e-krona within a reasonable time if the Riksdag takes such a decision. The inquiry also assessed that the need to issue an e-krona may increase if

the ECB issues a digital euro. The Riksbank's main focus for the continued work on an e-krona is to follow the ECB's work on a digital euro and the outcome of the political negotiations on the regulation of a digital euro, at the same time as carrying out internal analyses.

#### **E-krona project phase 4 - Offline payments**

One of the basic premises of the e-krona pilot has been that the e-krona shall serve as a further payment option to contribute robustness and increased preparedness. In line with this, in the [fourth stage](#) of the project, the Riksbank has tested a balance-based offline solution for an e-krona, which can strengthen the reliability of the payments system even in the event of internet connection interruptions. The solution means that payments made without an internet connection are recorded locally and the balance is updated. The payment is then made when the system is online.

Security risks with offline payments can be addressed with technical solutions such as digital certificates and regular synchronisation. Restrictions can be put in place to increase security, but they require clear communication to users. The conclusion is that, with the right regulatory framework and security measures, a secure, fit-for-purpose and user-friendly offline e-krona solution can be developed.

#### **Climate impact of a potential e-krona**

A [study](#) by the Riksbank and the Royal Institute of Technology has analysed the potential climate impact of a central bank digital currency (CBDC), such as the Swedish e-krona. The study focuses on the electricity consumption of different system designs and compares the energy use of a potential e-krona with existing payment systems, such as card payments. The results show that a centralised design is the most energy-efficient, although the climate impact is affected by transaction volumes, server location and energy sources. The report recommends further research on technical solutions to evaluate the long-term climate impact of an e-krona.



# Glossary

**Settlement:** When a transaction is finally executed, it has been settled. For payments within a bank, this is when the transfer is made between accounts. For payments between banks, settlement is when the money has reached the receiving bank. In the case of a securities transaction, settlement takes place when the security or the payment for it reaches the recipient's account.

**Settlement system:** The technical system used to initiate, implement and record a payment, known as settlement. See also *Settlement*.

**Batch payments:** An arrangement whereby several payment transactions are processed as a single group, or batch, at a specific time, rather than being processed individually. This method is particularly useful for predictable payment transactions in large quantities, such as salaries, or supplier payments.

**Payment infrastructure:** The digital systems that, among other things, enable financial flows and interoperability between different actors, such as banks. The payment infrastructure also includes the regulations and procedures governing the use of the systems.

**Payment initiation:** Payment initiation service is a service that enables a third-party actor to initiate a payment from a user's bank account at their request. This can happen, for example, when an e-commerce retailer offers the customer the possibility to pay via such a service, whereupon the third-party actor accesses the customer's account to post the payment, which the bank then executes.

**Payment institution:** A Swedish limited liability company or economic association authorised under the Payment Services Act to provide payment services. This may also be a legal entity domiciled in another EU/EEA country that, under that country's legislation, is authorised to provide payment services. See also *the Payment Services Directive* and *payment service provider*.

**Payment Services Directive (Directive (EU) 2015/2366 on payment services in the internal market, PSD2):** The Payment Services Directive is a European directive that regulates payment services and payment service providers within the EU/EEA. It has been implemented into Swedish law by the Payment Services Act (2010:751).

**Payment service provider:** A collective term for those who offer payment services, including banks, credit market companies, payment institutions, registered payment service providers, institutions for electronic money and the foreign equivalents of these categories that provide payment services in Sweden.

**Biometric identification:** Method of identifying a person by their physical or physiological characteristics such as a person's face, fingerprints or retina.

**Blockchain:** A distributed (decentralised) database, that is, a database stored in many copies - one on each node (computer) in a network.

**Postal giro:** A service that allows you to pay bills by post, for example.

**BRICS countries:** Brazil, China, Egypt, Ethiopia, India, Indonesia, Iran, Russia, Saudi Arabia, South Africa and the United Arab Emirates.

**Central counterparties:** A central counterparty goes in as seller to all buyers and buyer to all sellers to take on the counterparty risk that arises when trading in securities. In addition to counterparty risks, the central counterparty also clears securities transactions.

**Clearing:** Compilation and processing of payment instructions. Many transactions are generally handled at the same time (a so-called batch), which means that they can sometimes be offset against one another.

**Clearing Companies:** A company authorised by the supervisory authority (in Sweden, Finansinspektionen, the Swedish Financial Supervisory Authority) to carry out clearing. In Sweden, Bankgirot is authorised to carry out clearing of retail payments.

**Dataclearing:** Finance Sweden's transfer system for payments between accounts in different banks and credit market companies. Bankgirot is responsible for operating Dataclearing.

**Debit card:** A card linked to the cardholder's account at a bank, from which the amount paid is directly debited when a payment is made. Debit cards are also called bank cards in Sweden.

**Central Bank Digital Currencies (CBDC):** Digital money created by central banks. 'Retail CBDC' is intended for the public, while 'wholesale CBDC' is intended for financial institutions.

**E-krona:** A central bank digital currency that may be issued by the Riksbank and that would be available to the public (a so-called 'retail CBDC'). The Riksbank has not taken any decision on issuing an e-krona. See also *central bank digital currency*.

**E-money institutions/Electronic money institutions:** A Swedish limited liability company or economic association authorised under the Payment Services Act to issue e-money. It can also be a legal entity within the EU/EEA that is authorised under national law to issue e-money.

**Finality Directive** (Directive 1998/26/EC of the European Parliament and the European Council concerning payment and securities settlement systems): Aims to prevent or minimise legal risks in settlement in the financial markets. The Directive ensures that transactions are carried out in the order in which they were submitted to the system and also that they are finally settled, regardless of whether a participant has become insolvent in the meantime. Among other things, the Directive governs which participants can access designated settlement systems including central banks' RTGS systems, such as RIX in Sweden. The Directive has been implemented into Swedish law primarily through the Act on Systems for the Settlement of Obligations on the Financial Market (1999:1309).

**G20 countries:** An informal association of nineteen countries and the European Union (EU) and African Union.

**ISO 20022:** A new standard for payment orders that can help make cross-border payments faster, more efficient and more transparent.

**Cognitive accessibility:** Factors that influence how a person can understand a service or how information should be interpreted.

**Cash services:** Cash services consist of withdrawals, deposits and cash payment services such as over-the-counter bill payments.

**Card company/card network:** The legal entity that owns the system and product name of a card service (e.g. Visa and Mastercard).

**Card acquirer:** A financial company that processes card payments on behalf of businesses by paying out funds based on transactions. The card acquirer enables companies to accept card payments from card issuers within a card scheme.

**Card issuer:** a financial institution that issues debit and credit cards, i.e. where the cardholder's account is held.

**Know your customer (KYC):** Statutory requirement for companies to have good knowledge of their customers and their business activities. The aim is to make difficult and prevent the use of such activities for money laundering or terrorist financing.

**Legal tender:** Banknotes and coins (cash) issued by the Riksbank are legal tender. Public institutions are generally obliged to accept cash as payment for fees, but there are several exceptions. There is no contractual obligation for cash between individuals or between traders and consumers. As a result, many business operators choose to opt out of this obligation.

**Retail payment:** A collective name for payment of smaller value that are usually made between private individuals, companies and authorities.

**Network effects:** When the benefits of a product or service increase with the number of users. For example, a payment service is usually more attractive the more sellers that accept payments through the service.

**Open banking:** When third-party service providers access data from the customer's bank in order to provide different types of financial services, such as initiating a payment from the customer's bank account.

**Remittance:** Usually refers to money sent by migrants to family and friends in another country.

**RIX:** The Riksbank's central payment system that processes payments to and from the banks' accounts with the Riksbank. RIX consists of two services: RIX-RTGS (for large-value payments and aggregated payments) and RIX-INST (for individual instant payments).

**Banknote depot:** Physical location for the storage and depositing/withdrawal of banknotes.

**Single Euro Payments Area (SEPA) payments:** A common European standard for payments in euro.

**Strong customer authentication:** A customer must be able to identify themselves with at least two of the following elements when making digital payments or logging in to payment accounts: knowledge (something that only the user knows, such as a password or PIN) possession (something that only the user has, such as a card or phone) or a unique characteristic (something that is unique to the user, such as a fingerprint). The requirement for strong customer authentication is part of the regulations in the Payment Services Act (2010:751).

**Economies of scale:** Economic term for production in which the average cost decreases as production increases. Economies of scale normally occur when production is associated with large fixed costs.

**SWIFT:** A global network for financial messages that complies with certain standards. Central banks, banks and financial infrastructures use the SWIFT network and its format and standard to execute payments.

**T2:** Eurosystem's platform for settling wholesale payments. *See also Settlement.*

**T2S:** Eurosystem's platform for settling security transactions. *See also Settlement.*

**TIPS** (Target Instant Payment Settlement): The Eurosystem's platform for instant payments that the Riksbank will use to offer instant payments through RIX-INST.

**Securities settlement:** The exchange of money and securities between buyers and sellers of securities.

**wCBDC:** Wholesale central bank digital currency (CBDC) is money issued by a central bank in digital form to be used exclusively by central banks, commercial banks or other financial institutions to settle transactions involving tokenised assets (see also *Central bank digital currency*)



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