



Staff memo

Banks' costs for providing payment services

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Staff Memo

A Staff Memo provides members of the Riksbank's staff with the opportunity to publish advanced analyses of relevant issues. It is a publication for civil servants that is free of policy conclusions and individual standpoints on current policy issues. Publication is approved by the appropriate Head of Department. The opinions expressed in staff memos are those of the authors and are not to be seen as the Riksbank's standpoint.

Summary

In 2021, Swedish banks' cost for offering domestic payment services amounted to nearly SEK 10 billion. More than half of this was related to bank transfers, that is, credit transfers and direct debits. Card services, including banks' activities on the issuing side only, comprised 37 per cent of banks' total costs and cash handling 7 per cent.

Compared to 2009, banks' costs for cash have fallen by SEK 2.7 billion, a cost reduction of 80 per cent. This is due to changes in banks' services and handling of cash as well as declining cash usage. Banks' costs may have increased marginally as a result of legal requirements from 2021 to offer cash services in all of Sweden, including remote areas.

Banks' costs for card services have also decreased significantly in relation to the number of payments. This reflects a combination of cost optimisation and scale effects. The average cost of bank transfers has declined as well, mainly due to increased volumes but also as a consequence of fewer manual transfers, which entail high processing costs.

These cost developments have contributed to turning a deficit on payment services into a surplus. Net income on card services in particular has improved markedly due to the large increase in card payments. Hence, banks' transaction-dependent income has increased, despite the introduction of interchange fee regulation in 2015.

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1 Introduction

Payments entail costs to both end-users and payment service providers like banks. This staff memo focuses on banks' costs for providing payment services. It compares these costs in 2021 with the results from a similar study in 2009. Since the previous study, banks' costs for providing payment services have decreased due to digitalisation. At the same time, banks' fee income has increased with the volume of payments. These two effects have turned a deficit on payment services into a surplus.

Payments entail costs to the parties involved. End-users spend time making and receiving payments. Payment service providers incur costs in preparing and processing payments. End-users' and payment service providers' total costs are the social cost of payments. These are measured by the Riksbank on a regular basis, with the two latest cost studies being from 2009 and 2021, respectively.²

Banks are the main payment service providers in Sweden. In this staff memo, we focus on banks' costs for providing payment services. We do this by delving into the data from 2021, analysing the results and comparing these with the 2009 study. As in previous studies, we only cover domestic payments, leaving the costs of cross-border payments for a forthcoming report.

Since the previous study, the main factor affecting banks' costs is digitalisation, that is, the shift away from manual and paper-based services, which are costly to process. This is particularly clear with respect to banks' costs for cash, which have decreased by SEK 2.7 billion, or 80 per cent. The main reasons are changes in banks' cash services and handling as well as the decline of cash usage in society.

While the use of cash has decreased, card payments have grown substantially. This has contributed to lowering banks' unit costs for card payments. In parallel, banks have managed to reduce their card-related costs due to optimisation of processes and renegotiation of agreements with vendors and service providers. This has been achieved despite improvements in the underlying service of a card payment.

Digitalisation has also affected banks' costs for bank transfers. As for card payments, a volume increase has reduced banks' unit costs for bank transfers, and there has been a shift from manually to digitally initiated transfers. At the same time, the decrease in these costs has been moderated by other cost items rising, including compliance costs and the costs of modernising the Swedish payment infrastructure.³

These cost developments as well as the increase in volume have improved banks' net income from payment services. What was a deficit in 2009 had turned into a surplus

² Results from the two studies are presented in Segendorf and Jansson (2012) and the Riksbank (2023b).

³ Work on modernising the Swedish payment infrastructure has been ongoing for several years and drawn on banks' resources. This is further elaborated on in the final section of the staff memo.

in 2021. This was due in particular to an improved net result on card services and has been achieved despite the introduction of fee regulation in 2015, the EU regulation capping interchange fees on card payments.⁴

The structure of this staff memo is as follows: First, we give an introduction to the Swedish payment infrastructure. Then, in the two main sections, we analyse banks' costs for offering payment services and their cost coverage. In the final section of the staff memo, we provide some concluding remarks. An appendix includes further data on banks' costs for payment services.⁵

⁴ Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions.

⁵ For more information about data sources, methodology, etc., please refer to the Riksbank (2023b).

2 The Swedish payment infrastructure

In Sweden, banks are the main providers of payment services. The market is dominated by a few major full-service banks. The banks jointly own a number of payment infrastructure companies, which offer services to banks. All the major banks have outsourced their cash handling, and most of them have sold off their card acquiring business. In recent years, digitalisation has significantly affected Swedes' use of payment services. While cash usage has fallen markedly, card payments and digital bank transfers, including payments with Swish, have increased significantly.

2.1 Banks as payment service providers

In Sweden, banks are the main providers of payments services. The market is dominated by a few full-scale banks which aim to serve all customer needs, that is, to be a 'one-stop bank'. Six major banks, covering 80–90 per cent of the market in terms of traditional bank services, including payment services, participated in the study and reported data on costs, income and payments volume.

The banks in Sweden jointly own a number of infrastructure companies. Examples include Bankgirot, the clearing house in Sweden, Bankomat, which provides ATM services and operates cash depots, and Getswish, the owner and operator of Swish, the banks' mobile payment solution. Finansiell ID-Teknik BID, which runs the Swedish electronic ID system BankID, is also owned by the banks.

The infrastructure companies typically operate on a cost-plus basis. As such, they are not established to earn a profit besides a moderate return on banks' capital. Moreover, their costs are normally covered by charging banks according to usage. Below, the costs generated by these companies are set equal to the fees paid by the reporting banks. The banks themselves confirmed this to be a reasonable proxy.

As full-scale banks, the major banks in Sweden offer customers card and bank transfer services, both credit transfers and direct debits, as well as cash services through Bankomat. Furthermore, their customers comprise both private individuals and companies. In the remaining part of this section, we provide a short overview of the infrastructure for cash, card and bank transfer services.

2.2 Cash services are outsourced

Banks in Sweden have outsourced most of their cash handling to service providers. Today, the major banks are all 'cash-free', which implies that no cash services are offered at branches. This is very radical compared to a decade ago where abandoning cash services at branch level was hardly conceivable. In 2021, the reference year of the study, cash handling by the major banks was already very limited.

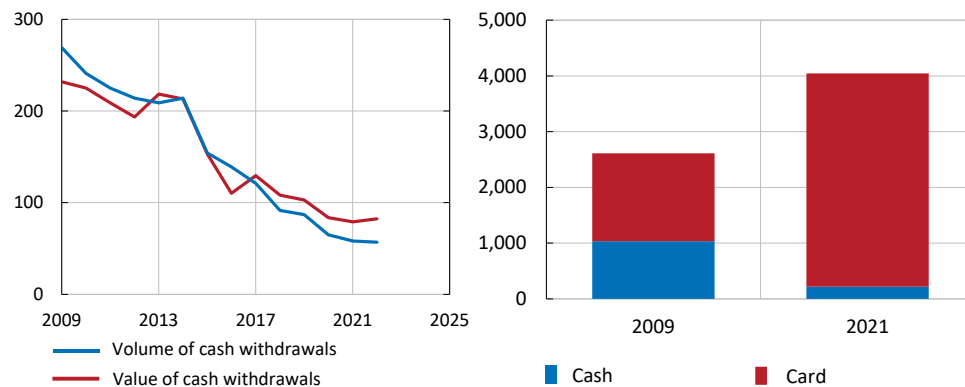
Instead, the task of providing cash services to Swedish households has primarily been taken over by Bankomat with its close to 1400 ATMs across Sweden. All Bankomat’s ATMs enable withdrawals of cash, and some also deposits. Banks pay fees to Bankomat for their customers’ withdrawals and deposits of cash. In addition to Bankomat, there are a few other providers of ATM services, e.g. ICA Banken and Kontanten.

Another important player on the Swedish cash market is Loomis, a global cash-in-transit company. Loomis provides retailers with cash services, delivering, collecting, sorting and counting their cash and ensuring that the cash is registered on retailers’ bank accounts. Additionally, Loomis supplies Bankomat’s ATMs with cash. In 2021, a few banks still offering cash services at branches were also served by Loomis.

The digitalisation of payments in Sweden and its effect on cash usage is clearly visible in Figure 1. ATM withdrawals have been on a downward trend for years, both in terms of volume and value. This mirrors the declining use of cash in society. While in 2009, cash payments to retailers totalled roughly one billion, in 2021 this number had decreased to around 200 million – or one-twentieth of all card payments.

Figure 1. ATM withdrawals and cash payments are decreasing

Volume and value of cash withdrawals, million and SEK billion, respectively (left figure). Volume of person-to-business cash and card payments, million (right figure)



Sources: Segendorf and Jansson (2012), the Riksbank (2023b) and the Riksbank.

In parallel, concerns were raised about the access to withdrawals and deposits of cash in Sweden, especially in remote areas. As a consequence, new legislation was introduced in 2021 that requires major banks to provide certain cash services to households and businesses to a reasonable degree in all parts of Sweden. Recently, the Riksbank has proposed that these requirements should be further strengthened.⁶

2.3 Roles on the card market are shared

Practically all banks in Sweden issue international debit and credit cards, that is, Visa or Mastercard. They issue cards to both households and companies, i.e. commercial cards. Contrary to Denmark and Norway, no domestic card scheme exists in Sweden.

⁶ See the Riksbank (2023a).

A few non-bank card issuers are also active in Sweden, e.g. American Express which issues its own credit cards.

Several of the major banks in Sweden used to be card acquirers, that is, payment service providers of the retailer receiving the card payments. However, over the past decade most of them have sold off their card acquiring business to international companies. Today, the Swedish card acquiring market is dominated by a handful of companies specialised in this type of service.

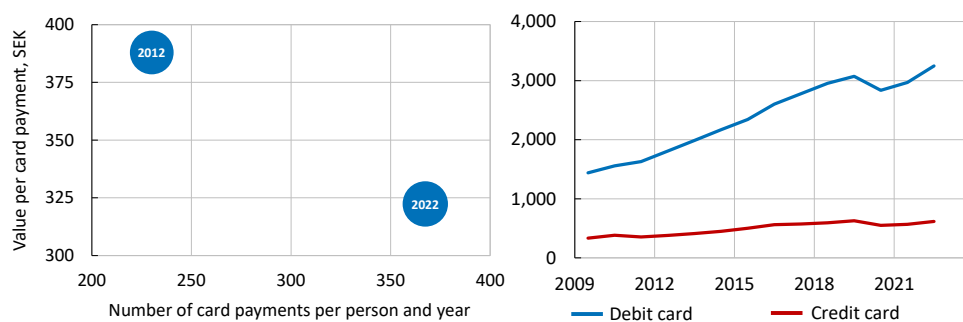
Most banks allow their customers to register their payment cards with digital wallet providers such as Apple Pay, Google Pay and Samsung Pay. Payments using these types of wallets are processed in basically the same way as normal card payments and are registered as such in the study. With some differences, the card issuer often pays a fee per payment to the wallet provider.

Payments with Visa and Mastercard are normally processed in the respective card scheme’s own network. For this service, card issuers and acquirers pay a processing fee to Visa or Mastercard. The settlement part, the exchange of liquidity between issuers and acquirers, takes place on accounts with commercial banks, one for each card scheme.

Cards are the most used payment instrument in Sweden. In 2022, the number of card payments totalled approximately 4 billion – or 367 per Swedish citizen, see Figure 2. Payments with debit cards constitute the major part of all card payments in Sweden. In recent years, the average value of a card payment has decreased, which reflects the fact that more lower-value purchases are being paid by cards instead of cash.

Figure 2. Card payments are increasing and replacing cash payments

Value per card payment, SEK (y-axis), number of card payments per person (x-axis), (left figure). Volume of card payments, million (right figure)



Sources: BIS and the Riksbank.

2.4 Bank transfers come in different forms

Banks in Sweden offer various types of bank transfer, or account-to-account, services. Normally, we distinguish between credit transfers and direct debits. A credit transfer is initiated by the payer, while a direct debit is instructed by the payee. They come

with different advantages and drawbacks for the payer and payee, and the choice between them typically depends on the actual use case.

Another important distinction is between giro payments and ‘pure’ account-to-account transfers. A giro payment is a bank transfer where the payee is identified by a proxy, a giro number. Usually, these are payments to companies, for instance bill payments by households or supplier payments. A large share of the ‘pure’ account-to-account transfers are person-to-person payments.

A specific type of giro payment is electronic invoices – or electronic bill presentment and payments (EBPPs). These are bank transfers where payers receive the invoices directly in their internet bank.⁷ Another type of giro payment is Autogiro, which is the only type of direct debit on the Swedish payment market. Autogiro has traditionally been used for recurring payments, that is, payment of regular bills.

A large share of bank transfers in Sweden is initiated by the mobile payment solution Swish. The latter was launched in 2012 and quickly gained huge traction, first as a convenient solution for person-to-person payments, and later for payments to retailers, both in-store and online. Swish is currently the only payment solution in Sweden, which allows payers to initiate an instant credit transfer.

An important player on the Swedish payment market is Bankgirot, the clearing house. Bankgirot operates the clearing systems in Sweden, including the Bankgiro system, which it also owns.⁸ Banks’ exchange of liquidity resulting from bank transfers takes place on accounts with the Riksbank, using either RIX RTGS, or RIX-INST, the new system for settlement of instant payments.⁹

Figure 3 shows the development of the main types of bank transfers. First, the increase in Swish payments is remarkable. Secondly, other digital credit transfers have increased as well. This also goes for direct debits, which have almost doubled since 2009.¹⁰ Thirdly, paper-based credit transfers, on the contrary, have decreased steadily over time.

⁷ Payers may also receive EBPPs through other payment service providers. In Sweden, an example of such a provider is Kivra.

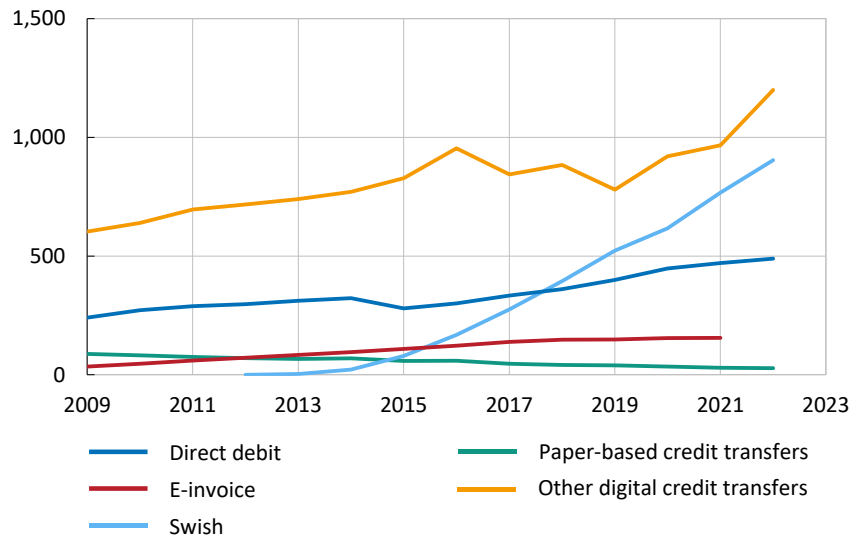
⁸ The Bankgiro system clears giro payments. Bankgirot also operates Dataclearingen, the system processing ‘pure’ account-to-account transfers between customers at different banks. Dataclearingen is owned by the Swedish Bankers’ Association. Bankgirot also operated and owned BiR (*Betalningar i Realtid*, Payments in Realtime), until recently the system that processed Swish payments.

⁹ RIX-INST was launched in May 2022. In early 2024, the settlement of Swish payments was migrated from Bankgirot’s BiR system to RIX-INST.

¹⁰ Autogiro is also widely used for withdrawing funds from payers’ accounts in connection with other payment solutions, for instance Klarna, a ‘buy now, pay later’ service for online purchases.

Figure 3. All digital bank transfers have increased over time

Volume of bank transfers, million



Note. Other digital credit transfers consists of giro payments ('Bankgiro' and 'Plusgiro' payments) and 'pure' account-to-account transfers.

Sources: Getswish AB, Swedish Bankers' Association and the Riksbank.

3 Banks' costs for payment services

In 2021, banks had total costs for payment services of SEK 9.6 billion. Banks' cost per cash payment was SEK 3.11, while their cost per card payment and per bank transfer was SEK 0.92 and SEK 1.72, respectively. Between 2009 and 2021, banks' costs for cash services fell from SEK 3.4 billion to 0.7 billion. Banks' unit costs for card payments and bank transfers also decreased. For card payments, this was due to cost optimisation and scale effects. For bank transfers, scale effects played a role as well together with a shift from manual to digital credit transfers.

3.1 Banks' costs at a glance

The banks' total costs for domestic payments in 2021 are estimated at SEK 9.6 billion, see Table 1. More than half of this concerns bank transfers, while card payments make up 37 per cent of the cost. Banks' costs for cash services constitute around 7 per cent of their total costs for payments.

If we relate the costs to the number of payments the order changes. Then cash becomes the most expensive payment instrument from the banks' perspective with an average cost of SEK 3.11. Banks' cost for a card payment is SEK 0.92 and for a bank transfer SEK 1.72, respectively.

Table 1. Cash payments have the highest cost per payment

Banks' cost of the main payment instruments, 2021

Payment instrument	Total cost, SEK million	Volume of payments, million	Cost per payment, SEK
Cash	682	219	3.11
Card	3,572	3,903	0.92
Bank transfer	5,328	3,089	1.72
Total	9,582	7,211	1.33

Note. The volume of cash payments only includes person-to-business payments. Banks' costs for card payments only include costs from issuer activities, not costs from the acquiring side. Bank transfers include Swish, e-invoices, other digital and non-digital credit transfers and direct debits.

Sources: The Riksbank (2023b) and the Riksbank.

A note of caution here: Banks' involvement differs across payment instruments, which should be taken into account when comparing the costs. Specifically, most of the major banks no longer offer card acquiring, as explained above. Hence, in Table 1 the costs for card payments only include activities related to card issuing.

Banks' cost can be categorised as in Figure 4. External costs are mainly fees paid to providers of infrastructure services such as banks' jointly owned companies as well as

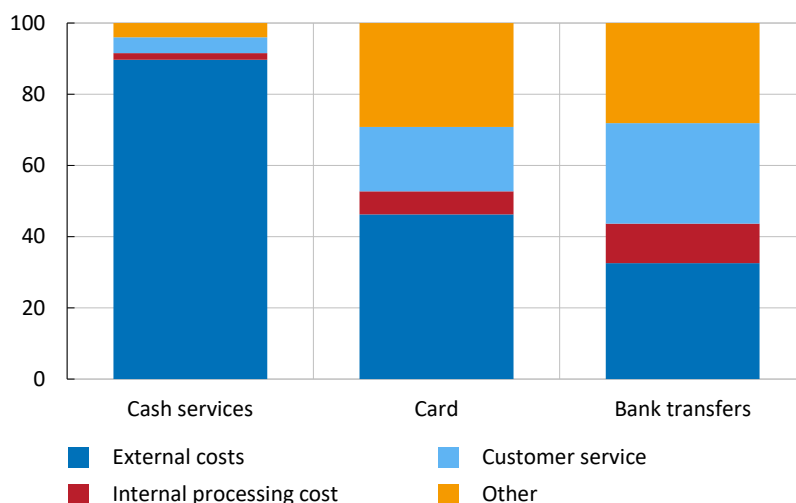
Visa and Mastercard. Customer service includes cost of onboarding customers, while internal processing cost comprises costs for IT systems and employees.

For cash specifically, banks' main cost item is fees paid to Bankomat. Other costs are negligible, reflecting that banks' own cash handling has all but disappeared. The fees paid to Bankomat cover all kinds of costs the company has, including processing costs, maintenance and depreciation of ATMs, fees paid to Loomis, etc.

External costs are important for card payments and bank transfers as well, but also customer-related costs. For bank transfers, system costs are part of internal processing costs, while for card payments most of the processing is handled by Visa and Mastercard making this an external cost.

Figure 4. External costs make up a large part of the total cost

Banks' total costs for the main payment instruments broken down into different cost items, per cent, 2021



Note. Internal processing cost includes both personnel and system costs. Other includes costs for compliance-related activities, fraud, development, administration, etc.

Source: The Riksbank.

In the remaining part of this section, we go into further detail on banks' costs for payment services. In addition, we compare them with the results from the 2009 study. Here we need to correct for differences in scope. We do not adjust for inflation, however, which implies that we tend to underestimate reductions in costs.

3.2 Banks' costs in more detail

Costs for cash services have decreased significantly

Swedish banks' total costs for cash services have decreased significantly from SEK 3.4 billion in 2009 to SEK 0.7 billion in 2021, see Table 2. Proportionately, this is even more than the decline in the number of cash payments, despite certain fixed

costs related to cash handling. Hence, banks' costs per cash payment have decreased as well, from SEK 3.25 to SEK 3.11 per payment.

Table 2. Banks' costs for cash have decreased more than the number of payments

Banks' total cost for cash services in relation to the volume of person-to-business cash payments

Year	Total cost, SEK million	Volume of cash payment, million	Cost per cash payment, SEK
2009	3,360	1,034	3.25
2021	682	219	3.11

Sources: Segendorf and Jansson (2012) and the Riksbank.

Between 2009 and 2021, various factors have affected banks' costs for cash services. Firstly, as already mentioned, major banks have ceased offering these services at branches. In 2009, withdrawals and deposits at branches were estimated at SEK 25–30 billion, 'both ways'. Such services generate costs in the form of time spent by employees, security cost, insurance, etc.

Secondly, centralising functions at Bankomat has allowed for certain cost savings, which overall may have reduced banks' costs for providing cash services. While in 2009 the major banks still owned and operated ATMs, these have now been taken over by Bankomat. Bankomat is compensated through fees paid by banks according to their customers' usage.

Thirdly, part of Bankomat's, and therefore also banks', costs fluctuate with the level of cash usage. For instance, if ATMs used to be filled every week, they now only have to be filled, say, every second week. This reduces Bankomat's fees to Loomis, which provides this service. Furthermore, Bankomat and its owner banks have reduced the number of ATMs, which has also reduced costs.

Fourthly, interest rates have played a role as well. The banks, through Bankomat, lose interest on cash in ATMs. Further, Bankomat receives an interest cost compensation for cash held at depots based on the Riksbank's policy rate, which is below the market interest rate. In 2009, banks' interest loss on their cash holdings amounted to SEK 500 millions, while it was negligible in 2021 with interest rates close to zero.

Costs for card services are affected by scale effects

Table 3 shows banks' costs as card issuers broken down into debit cards and credit cards. Debit cards entail a lower cost per payment for banks than credit cards. This is partly due to scale effects and the larger number of debit card payments. The result is also in line with the usual assumption that servicing credit cards has a higher cost for card issuers than debit cards.¹¹

¹¹ For instance, with credit cards issuers bear various credit-related costs, including the cost of credit, time spent on assessing the card holder, losses on outstanding amounts. This is also acknowledged by the EU regulation on interchange fees from 2015, see section 4.2 below.

Table 3. Banks have lower cost per payment for debit cards than credit cards

Banks' costs for card payments, 2021

Type of card	Total cost, SEK million	Volume of card payments, million	Cost per card payment, SEK
Total	3,572	3,903	0.91
Debit card	2,566	3,360	0.76
Credit card	1,005	543	1.85

Source: The Riksbank.

A further breakdown of banks' unit costs for card payments is provided in Figure 5. External costs include licensing fees paid to Visa and Mastercard, e.g. per card issued. They also contain processing fees paid to the two companies for using their respective networks as well as fees paid to Finansiell ID-Teknik BID for BankID identification when cards are used online.

Banks' costs related to customer service include resources spent on onboarding and activating card holders. They also include the cost of cancelling and sending out new payment cards to customers as well as responding to and handling card holders' queries regarding transactions. Many banks have dedicated customer support functions dealing with such queries.

Costs for fraud in Figure 5 only include banks' direct losses due to card fraud. In addition, banks spend time on handling fraudulent transactions, as part of their customer service, and buy fraud monitoring services from Visa and Mastercard, included in external costs. In 2021, banks also had costs related to the roll-out of strong customer authentication.¹² The latter may have contributed to reducing fraud.

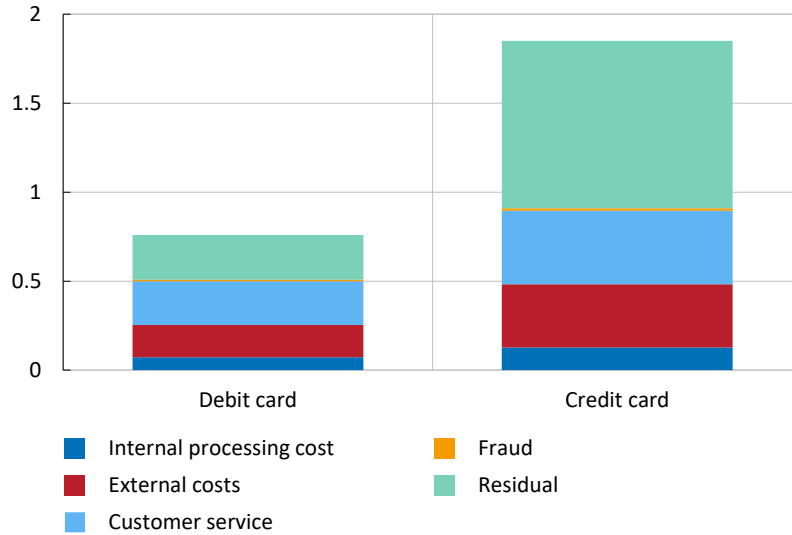
Residual costs include banks' costs for add-on services like travel insurance, access to lounges in airports, etc. These services are more usual for credit cards than for debit cards, which explains part of the difference in costs between the two types of cards. On the contrary, the pure cost of credit, also included in the 'residual item', was fairly limited in 2021 due to the low interest rates.¹³

¹² Strong customer authentication, SCA, aims to reduce fraud. It requires the payer to authenticate by using at least two of something the payer *knows*, *has* or *is*. In the EU, SCA was introduced with the second Payment Services Directive from 2015 and implemented widely in 2021.

¹³ It should be noted that only the cost of credit up until the regular due date, typically following a monthly schedule, is included. The cost of revolving credit, where the card holder makes a discretionary decision not to pay the entire outstanding amount at due date, is not regarded as a 'payment cost'.

Figure 5. Costs for add-on services explain part of higher credit card costs

Unit costs for card payments broken down into different cost items, SEK per payment, 2021



Note. Internal processing costs include both personnel and system costs. Residual includes costs for add-on services, administration, credit, compliance-related activities, etc.

Source: The Riksbank.

Comparing banks' cost for card services in 2021 with 2009 is complicated by the inclusion of acquiring activities in 2009. To correct for this, we deduct for 2009 the estimated costs of these activities, see Fact Box 1. The comparison, which we can then make, shows a significant decrease in banks' unit costs for card payments, which has been achieved despite several improvements in the underlying service of a card payment.

Fact Box 1 also includes some possible explanations of the decreased unit cost for card payments. Firstly, scale effects have been significant as the number of card payments has more than doubled. There are also 'real savings' here, as the banks have continuously optimised their internal procedures and managed to negotiate more favourable terms on their service and vendor agreements.

FACT BOX 1 – Comparing the cost of card services

Changes in banks' involvement in the card payments value chain complicates cost comparisons over time. While the major banks were still heavily involved in card acquiring in 2009, in 2021 most of them had sold off this business. This should be taken into account when comparing banks' costs for card services from the two studies.

In Table 4, we have adjusted the banks' costs for 2009 to make them comparable with the 2021 study. In concrete terms, we have deducted the cost of activities that seem related to card acquiring from the banks' total costs. A small disclaimer is appropriate here, as the data from 2009 does not allow us to break down the costs perfectly.

With this adjustment, we see that the cost per payment has decreased significantly for both debit cards and credit cards. This is noteworthy, taking into account the continued improvements to card services during the period, e.g. contactless technology, enhanced fraud protection, wallet usage, which tend to increase costs.

A major part of the decline in unit costs can be explained by scale effects, that is, the large increase in card payments. In addition, banks have focused a lot on optimising their internal procedures related to cards, leaving more to customers' self-service, and renegotiating service and vendor agreements, which have decreased costs.

Table 4. Unit costs for card payments have decreased since 2009

Banks' unit costs for person-to-business card payments, SEK

Type of card	2009	2021
Total	2.44	0.83
Debit card	1.17	0.71
Credit card	9.48	1.69

Source: The Riksbank.

Development differs for credit transfers and direct debits

Table 5 shows banks' total costs for bank transfers, the volume of transfers and the cost per transfer. For digital bank transfers, differences in unit costs are fairly small and can be explained partly by scale effects. Paper-based credit transfers, on the contrary, involving manual intervention by bank employees, are significantly more costly than digital bank transfers.

Table 5. Digital bank transfers have lower unit costs

Banks' cost for bank transfers, 2021

Payment instrument	Total cost, SEK million	Volume of bank transfers, million	Cost per transfer, SEK
Bank transfer total	5,328	3,089	1.72
Direct debit	644	470	1.37
Swish	949	761	1.25
E-invoice	349	157	2.23
Other digital credit transfers	2,537	1,646	1.54
Paper-based credit transfers	849	55	15.33

Note. Other digital credit transfers consists of giro payments ('Bankgiro' and 'Plusgiro' payments) and 'pure' account-to-account transfers.

Sources: Getswish AB, Swedish Bankers' Association and the Riksbank.

Figure 6 provides a more detailed breakdown of banks' costs related to bank transfers. Several observations can be made. Firstly, the high costs of paper-based credit transfers are mainly due to customer service. This is the time spent by bank employees helping customers to initiate bank transfers and receiving their payment orders, either at branches or over the phone.

Secondly, an important cost item for digital bank transfers is external costs. These include fees paid to Bankgirot for clearing bank transfers and other services. In addition to its role as clearing house, Bankgirot also owns several schemes in Sweden.¹⁴ Other external costs are fees paid to Getswish for its services related to Swish, Finansiell ID-Teknik BID for BankID, and the Riksbank for its settlement services.

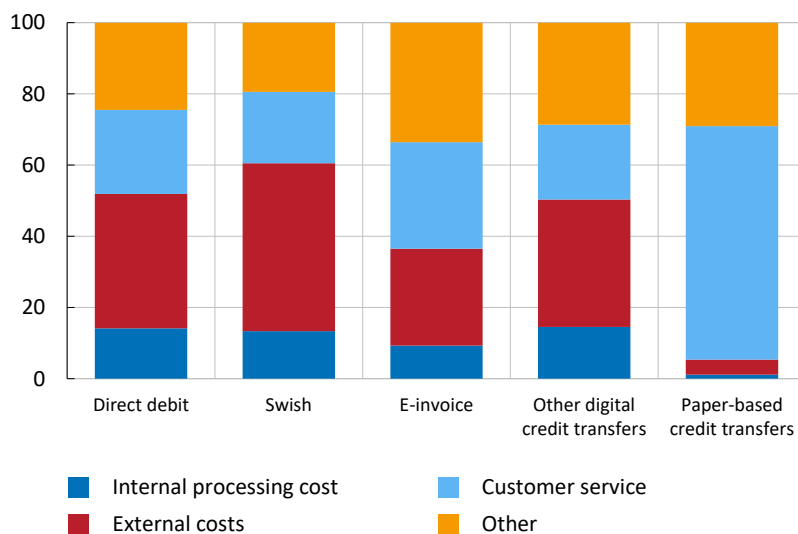
Thirdly, internal processing costs constitute a larger share of total cost for digital bank transfers than for paper-based transfers. For digital transfers, this cost item includes the costs of maintaining and operating customer channels like internet and mobile banking. For paper-based transfers, the costs include the time spent on processing payment orders received per mail, over the phone or at branches.

Finally, for all type of bank transfers, other costs are a major share of total costs. These include costs of complying with legislative requirements such as know-your-customer requirements and transaction monitoring, which banks say have increased significantly. Other costs also include banks' costs of product development and the ongoing work of modernising the Swedish payment infrastructure, see further below.

¹⁴ For instance, Bankgirot owns Autogiro and the services E-invoice Private and E-invoice Corporate. As scheme owner, Bankgirot sets the terms and conditions for the respective services at interbank level.

Figure 6. External costs are important for digital bank transfers

Banks' costs for bank transfers broken down into different cost items, per cent, 2021



Note. Internal processing costs include both personnel and system costs. Other includes costs for compliance-related activities, fraud, development, administration, etc.

Source: The Riksbank.

Comparing the banks' costs for bank transfers in 2021 with 2009, we need to correct for the fact that the 2009 study only covered transfers from private individuals to businesses. Since 2009, other types of bank transfers have grown significantly. This applies in particular to person-to-person payments using Swish, and also for business-to-business payments.

Table 6 shows banks' costs for bank transfers in 2009 and 2021 for person-to-business payments only. For credit transfers, we see a significant decrease in unit costs. This can be related to scale effects and a shift from paper-based to digital credit transfers. Between 2009 and 2021, we estimate that the share of paper-based transfers fell from 30 per cent to 2 per cent of all credit transfers.

Table 6. Unit costs for credit transfers and direct debits have moved differently

Person-to-business transfers

Payment instrument	Total cost, SEK million		Total volume, million		Cost per transfer, SEK	
	2009	2021	2009	2021	2009	2021
Credit transfer	1,110	2,274	274	1,008	4.05	2.26
Direct debit	150	612	190	459	0.79	1.33

Sources: Segendorf and Jansson (2012) and the Riksbank.

On the other hand, certain cost components may have affected costs in the opposite direction. We have already referred to the increasing compliance-related costs and the work to modernise the Swedish payment infrastructure. Both factors may also

have led to increases in banks' external costs, in particular fees paid to Bankgirot to cover costs at the clearing house.¹⁵

For Autogiro, the story is very different. Banks' costs related to Autogiro have increased significantly, and even the unit cost has risen, despite a large growth in the number of payments. Autogiro was launched in 1967, and although processes have been digitalised, it emerges as a costly service. Autogiro will be phased out as part of the modernisation of the Swedish infrastructure.

¹⁵ Bankgirot has also had to comply with new requirements, see various issues of the company's annual report. This has contributed to increasing Bankgirot's operational costs. Moreover, in 2021 Bankgirot increased fees to finance its costs during a period where payments volumes were to be migrated to the planned P27 clearing platform, see Bankgirot (2020).

4 Banks' income from payment services

Banks earn income from payment services in the form of fees paid by customers and other payment service providers, e.g. interchange fees. In 2009, banks made a loss from payment services of approximately SEK 1 billion, which in 2021 had changed to a surplus of roughly SEK 2 billion. This turnaround in profitability was mainly due to a significant increase in net income from card payments, despite the introduction of fee regulation in 2015. The improved net result on card payments can first and foremost be related to the growth of card payments and the fact that the interchange-fee income for card issuers varies with the value of payments, while a large share of the costs are fixed.

4.1 Banks' income at a glance

Banks earn income from payment services in the form of fees paid by customers. These can be fees per transaction or fixed fees, e.g. account or card fees.¹⁶ In addition, banks receive fees from other payment service providers. One example of this is interchange fees paid by card acquirers to banks as card issuers, see further below.

Table 7 shows the banks' total income from payment services broken down into cash services, card payments and bank transfers. The table also includes banks' cost and the difference between income and cost, that is, net income. For comparison, we have also added a column with the banks' net income from the 2009 study.

Table 7. Net income has increased since 2009

Banks' cost, income and net income, SEK million

Payment instrument	Total income, 2021	Total cost, 2021	Net income, 2021	Net income, 2009
Cash	101	682	-581	-2,090
Card	7,698	3,572	4,127	420
Bank transfers	3,943	5,328	-1,384	720
Total	11,743	9,582	2,162	-950

Note. In 2021, net income for bank transfers is SEK -841 million when we only look at person-to-business payments, which is comparable to the 2009 study. In 2009, both card issuing and card acquiring are included.

Sources: Segendorf and Jansson (2012) and the Riksbank.

We see in the table that there has been a marked change in banks' net income. In 2009, banks made a loss from payment services of almost SEK 1 billion. In 2021, this

¹⁶ Banks may charge customers fees for having access to a payment account, including certain basic services. These are often monthly fees. In their reporting, banks have allocated such fees on payment services based on transaction volumes. Further, banks often charge specific card fees, usually on an annual basis.

had turned into a surplus of more than SEK 2 billion. The change was mainly due to a large increase in net income from card payments and a smaller loss on cash.

The increase in banks' net income from card services is remarkable, especially taking into account the fact that the numbers for 2009 also included card acquiring. Moreover, since the previous study, card fees have become subject to regulation, potentially affecting the profitability of card issuing. This is explained in more detail below.

On the other hand, banks' net income from bank transfers has changed from a surplus to a deficit. This is also remarkable bearing in mind the decrease in the unit costs for credit transfers. Based on the data received from the banks, it appears as if their income from payees, billers in particular, has been under pressure in recent years.

In the remaining part of the section, we go more into detail regarding banks' income from payment services and their cost coverage.

4.2 Banks' income in more detail

Significant decrease in the loss on cash

As shown in Table 7, banks' income on cash services was very limited in 2021. Most of the income stemmed from ATM withdrawals as well as account and card fees allocated on cash services. In 2009, when banks had their own ATMs and were still providing cash services at branches, cash handling fees were more common, and banks' total income from cash amounted to almost SEK 1.3 billion.¹⁷

Despite the drop in the banks' income from cash services, their loss on cash has shrunk substantially. This is due to the significant fall in banks' costs for cash services. It should be noted, however, that to measure the total effect on banks' net results of the decline in cash usage, we should also take into account the consequences for card payments and bank transfers, which goes beyond the purpose of this staff memo.

Large turnaround in the profitability of debit cards

The large shift in net income from card services can be related mainly to debit card payments, see Table 8. In 2009, the banks made a loss on debit card payments of a little more than SEK 200 million. In 2021, this had turned into a profit of around SEK 3.3 billion. Banks' net income from credit card payments has improved as well, but at a much smaller scale.

¹⁷ For instance, banks earned interchange fees when their ATMs were used by other banks' customers.

Table 8. Banks' net income on card payments has increased significantly

Banks' costs, income and net income from card services, SEK million

Type of card	Total income, 2021	Total cost, 2021	Net income, 2021	Net income, 2009
Card total	7,698	3,572	4,127	420
Debit card	5,872	2,566	3,306	-230
Credit card	1,826	1,005	821	650

Note. Net income for 2009 includes both card issuing and acquiring.

Sources: Segendorf and Jansson (2012) and the Riksbank.

The increase in net income is particularly noticeable in light of the introduction of fee regulation between the two studies. Traditionally, the major part of card issuers' income has been the interchange fee they receive from card acquirers to balance the costs and income in card schemes. However, to mitigate anti-competitive effects, in 2015 this fee was capped by EU legislation, see Fact Box 2.

FACT BOX 2 – Capping of interchange fees in the EU

Card payments normally involve an interchange fee. The fee serves to balance the costs and income between the two parties as the card issuer bears the lion share of the costs, while only the retailer pays a transaction fee. The card acquirer then pays an interchange fee to the card issuer which ensures that the card issuer is properly compensated for its costs.

However, interchange fees have been subject to legal inquiries in several jurisdictions. This is because these fees, especially if determined by all card issuers and acquirers together, i.e. multilaterally, may effectively constitute a lower limit for the transaction fee paid by the retailer. In that sense, the interchange fee becomes de facto a collectively agreed minimum price for card acquiring.

In the EU, the competition problems of interchange fees have been addressed by legislation. In 2015, the Interchange Fee Regulation, IFR, introduced a cap on these fees of 0.2 per cent of the payment value for debit cards and 0.3 per cent of the payment value for credit cards. The IFR applies to payments within the EU and allows member states to set lower caps domestically.

In 2020, the European Commission published a report on the impact of the IFR up until and including 2017.¹⁸ The report concluded that the main objectives had been achieved as interchange fees had decreased, leading to reduced charges for retailers. In a recent report, ordered by the European Commission, these findings were mainly confirmed for 2018 and onwards.¹⁹

¹⁸ See European Commission (2020).

¹⁹ See European Commission (2024).

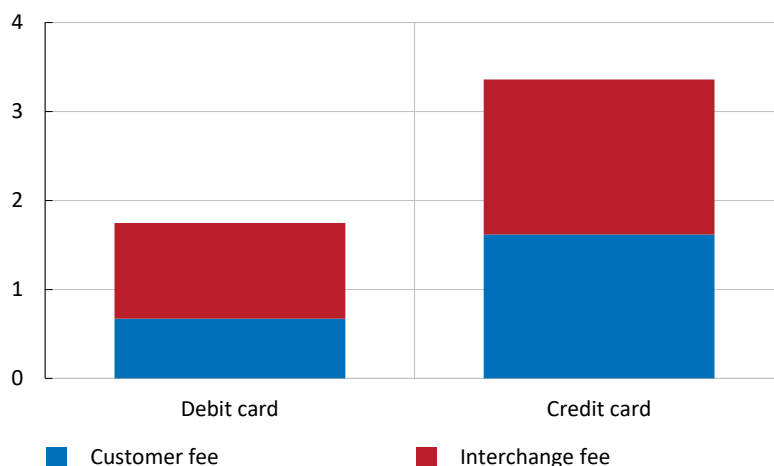
In Sweden, interchange fees are agreed bilaterally between card issuers and acquirers as opposed to the usual practice of multilateral fee setting in other countries and for cross-border payments. Consequently, the regulation of these fees may have affected banks differently. However, most banks in Sweden have probably seen a decrease in their average interchange-fee income due to the regulation.

The banks have responded to this in different ways. While some banks may have sought income compensation by increasing fees to customers, others have focused on cost reduction. The fact that banks' income from card services in 2021 were almost equally split on interchange and customer fees, see Figure 7, indicates that at least some banks have increased their account and card fees.

However, other factors have been more influential in the large increase in banks' net income from card payments. The most important is the growth in card payments. This has not materially affected the overall costs, as shown in the previous section. Yet, while costs are mainly fixed, the interchange fee income varies with the value of payments and has increased substantially, driving the surge in net income.

Figure 7. Income from cards is evenly split on interchange and customer fees

Banks' income per card payment, SEK, 2021



Source: The Riksbank.

Bank transfers – from a surplus to a deficit

The change in net income on bank transfers from a surplus to a deficit is also notable. As explained in the previous section, this has occurred despite a decrease in unit costs for credit transfers. Moreover, the deficit can be related to all types of bank transfers, see Table 9. Thus, the turnaround in profitability for bank transfers is not only the result of including Swish, which generates zero income for person-to-person transfers.

Table 9. All types of bank transfers are loss-making for banks

Banks' income, cost and net income from bank transfers, SEK million

Payment instrument	Total income, 2021	Total cost, 2021	Net income, 2021
Bank transfer total	3,943	5,328	-1,384
Direct debit	472	644	-173
Swish	770	949	-178
E-invoice	215	349	-134
Other digital credit transfers	2,195	2,537	-342
Paper-based credit transfers	291	849	-558

Note. In 2009, the banks' net income from bank transfers was SEK 720 million in total.

Source: The Riksbank.

Instead, the main reason can be found on the income side. As shown in Table 10, banks have seen their average income on bank transfers decrease significantly. This is the case for both credit transfers and direct debits, that is, Autogiro. Income from bank transfers is mainly comprised of fees paid by businesses receiving payments, especially billers.

There are several reasons behind this decrease in fee income from bank transfers. An important factor appears to be an increase in competition. New payment services providers have entered the market, particularly with regard to payments for online purchases, and banks are also competing against each other. All in all, income from this segment has come under pressure, ultimately for the benefit of end-users.

Table 10. Fee income from bank transfers has decreased over time

Banks' fee income per person-to-business bank transfer, SEK

Payment instrument	Fee income per transfer, SEK	
	2009	2021
Bank transfer	4.27	1.44
Credit transfer	5.84	1.64
Direct debit	2.00	0.99

Sources: Segendorf and Jansson (2012) and the Riksbank.

5 Concluding remarks

To conclude, the digitalisation of the Swedish payment market in recent years has contributed to reducing banks' costs for payments. Together with the growing volume of digital payments, this has improved banks' net income from payment services. It remains to be seen how the ongoing modernisation of the Swedish payment infrastructure will affect banks' costs. However, the efficiency gains from both the ongoing digitalisation and the changes to the payment infrastructure will likely continue to put a downward pressure on banks' costs for payment services.

5.1 Digitalisation has affected costs and profitability

Offering payment services entails costs for banks. Payment services requiring processing time by bank employees have the highest costs. Accordingly, it is no surprise that the digitalisation of the Swedish payment market in recent years has contributed to reducing the banks' costs. On top of this, increased volumes of digital payments have lowered banks' unit costs due to scale effects.

The larger payment volumes have also improved banks' net income from payment services. A large share of banks' income from payment services is transaction-based, while a major part of the costs is fixed. Hence, when volumes grow, net income does as well. This has been especially clear for payment card services, where the additional income from increased volume has dominated the effect of capping interchange fees.

When assessing the effect of payment services on banks' net income, it should be borne in mind that the study only covers domestic payments. In addition, banks have income from cross-border payments, which could exceed the costs of these payments. Moreover, it can also be argued that banks offer payment services to attract deposits, an important funding source for other income.

Furthermore, we have not included banks' income from value-dating. This income depends on the level of interest and the length of the period between debiting the payer and crediting the payee. Presumably, income from value-dating was relatively small in 2021, due to the low interest rates. Banks' income from value-dating tends to decrease when instant payments become more widespread.

5.2 Looking ahead

The banks' decreasing costs for payment services do not rule out further cost reductions. In 2017, the Swedish Bankers' Association, together with member banks, started a project to modernise the Swedish payment infrastructure. Important guiding principles were simplification and harmonisation towards international standards, especially the European payment schemes.

The work to modernise the Swedish payment infrastructure aims to improve the foundations for innovation and the development of new payment services. However, it also has as its objective to reduce the banks' costs for offering payment services. This should be achieved by streamlining the processing of payments and replacing existing giro payment services like Autogiro with more cost-efficient services.

Until now, this has only led to increased costs for payments, as banks have set aside resources to participate in the work at sector level and for their internal preparations. An important change of direction was made last year when the major banks decided to abandon the so-called P27 initiative and focus purely on the domestic infrastructure.²⁰ Going forward, Bankgirot will take the lead in coordinating this work.²¹

It remains to be seen how modernising the payment infrastructure will affect banks' costs. Furthermore, these costs are also influenced by other factors, including legal requirements, which tend to drive costs. That said, it seems likely that the efficiency gains from both the ongoing digitalisation and the changes to the payment infrastructure will continue to put a downward pressure on banks' costs for payment services.

²⁰ P27 was the major banks' initiative to establish a common Nordic payment platform. The initiative was in practice abandoned in spring 2023 when P27 Nordic Payments, the intended platform owner, decided to withdraw its clearing license application.

²¹ See Bankgirot (2023).

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Appendix 1 – Data

Table 11. Underlying data to Figure 1 (left figure)

Year	Volume of cash withdrawals, million	Value of cash withdrawals, SEK billion
2009	269	232
2010	241	225
2011	225	209
2012	214	193
2013	209	219
2014	214	213
2015	154	153
2016	139	110
2017	121	130
2018	91	108
2019	87	103
2020	65	84
2021	58	79
2022	57	82

Source: The Riksbank.

Table 12. Underlying data to Figure 1 (right figure)

Volume of person to business payments, million

Year	Cash	Card
2009	1,034	1,577
2021	219	3,825

Sources: Segendorf and Jansson (2012) and the Riksbank (2023b).

Table 13. Underlying data to Figure 2 (left figure)

Year	2012	2022
Number of card payments per person and year	230	367
Value per card payment, SEK	388	322

Sources: BIS and the Riksbank.

Table 14. Underlying data to Figure 2 (right figure)

Volume of card payments, million

Year	Debit card	Credit card
2009	1,438	335
2010	1,558	382
2011	1,629	353
2012	1,810	380
2013	1,987	411
2014	2,170	450
2015	2,343	502
2016	2,604	562
2017	2,778	574
2018	2,954	594
2019	3,074	629
2020	2,836	551
2021	2,970	569
2022	3,249	616

Source: The Riksbank.

Table 15. Underlying data to Figure 3

Volume of bank transfers, million

Year	Direct debit	E-invoice	Swish	Other digital credit transfers	Paper-based credit transfers
2009	241	35	—	603	88
2010	272	47	—	639	82
2011	289	60	—	696	75
2012	297	72	0	717	70
2013	312	83	3	741	67
2014	323	95	22	771	69
2015	280	109	79	828	58
2016	301	122	168	954	59
2017	334	138	275	844	46
2018	360	148	394	884	41
2019	400	148	523	780	40
2020	448	155	617	920	34
2021	470	155	767	966	29
2022	489		904	1,200	28

Note. Other digital credit transfers consists of giro payments ('Bankgiro' and 'Plusgiro' payments) and 'pure' account-to-account transfers.

Sources: Get Swish AB, Swedish Bankers' association and the Riksbank.

Table 16. Underlying data to Figure 4

Banks' total costs of the main payment instruments distributed on different cost items, per cent, 2021

Payment instrument	External costs	Internal processing Cost	Customer service	Other
Cash services	89.7	1.8	4.4	4.0
Card	46.3	6.5	18.1	29.2
Bank transfers	32.6	11.1	28.2	28.1

Note. Internal processing cost includes both personnel and system costs. Other includes costs for compliance-related activities, fraud, development, administration, etc.

Source: The Riksbank.

Table 17. Underlying data to Figure 5

Unit costs for card payments distributed on different cost items, SEK, 2021

Type of card	Internal processing cost	External costs	Customer service	Fraud	Residual	Total
Debit card	0.07	0.18	0.25	0.01	0.26	0.76
Credit card	0.12	0.36	0.41	0.01	0.94	1.85

Note. Internal processing costs include both personnel and system costs. Residual includes costs for add-on services, administration, credit, compliance-related activities, etc.

Source: The Riksbank.

Table 18. Underlying data to Figure 6

Banks' costs for bank transfers distributed on different cost items, per cent, 2021

Payment instrument	Internal processing cost	External costs	Customer service	Other
Direct debit	11.1	37.7	23.6	27.6
Swish	10.8	47.2	20.1	21.9
E-invoice	7.0	27.2	29.9	35.8
Other digital credit transfers	12.2	35.8	21.0	31.0
Paper-based credit transfers	1.1	4.2	65.6	29.1

Note. Internal processing costs include both personnel and system costs. Other includes costs for compliance-related activities, fraud, development, administration, etc.

Source: The Riksbank.

Table 19. Underlying data to Figure 7

Banks' income per card payment, SEK, 2021

Type of card	Customer fee	Interchange fee	Total
Debit card	0.67	1.08	1.75
Credit card	1.62	1.74	3.36

Source: The Riksbank.



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