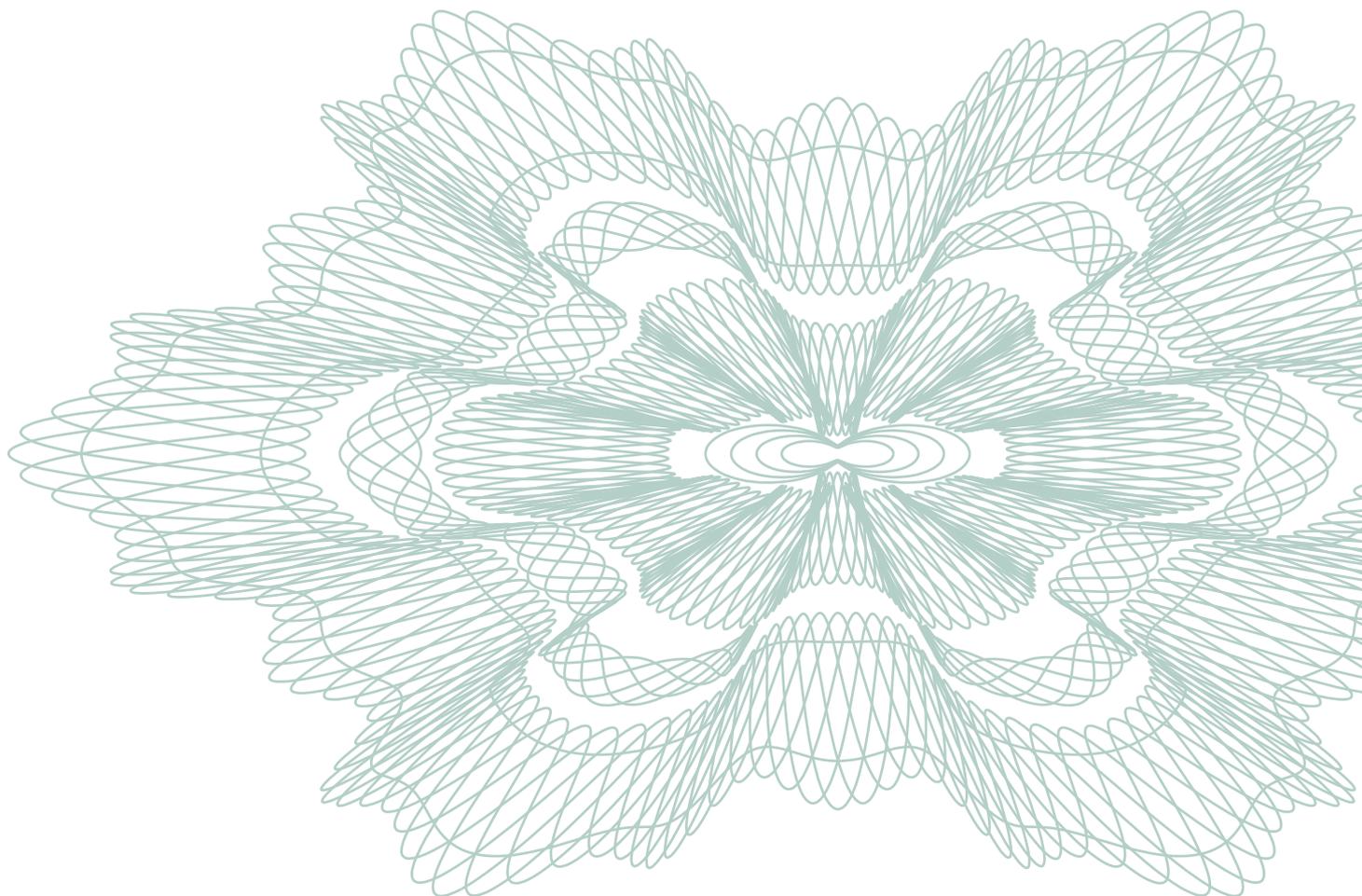




Annual report on payment systems

2004

May
2005



Norges Bank's Annual Report on Payment Systems

Norges Bank shall foster robust and efficient payment systems and financial markets. This is in accordance with the Norges Bank Act and the Act relating to the Payment System. Norges Bank therefore monitors the economy and the financial sector in order to identify any trends that may weaken the stability of the financial system. Pursuant to the Act relating to the Payment System, Norges Bank is responsible for granting licences for and the supervision of interbank systems that are important to financial stability. The supervisory function is exercised with the aim of minimising risk in the payment system in particular. Large transfers are carried out via the payment system every day that result in asset and liability positions between the sender's and the beneficiary's banks. These positions are then settled in the banks' accounts in Norges Bank. These banks and the central bank thus constitute the core of the payment system.

In an efficient payment system, payments are effected quickly, securely and at low cost. The most important factors in achieving an efficient payment system in Norway are:

- a shared infrastructure that facilitates economies of scale,
- prices that reflect the production cost of services and
- effective competition on the supply side.

The Annual Report on Payment Systems contains information that Norges Bank collects from the financial sector as part of its oversight work. The Report has been published since 1987 and gives an annual update of trends and prices in the payment system. The Report also contains a brief presentation of work carried out by Norges Bank and other central banks in this area.

The 2004 report is divided into six chapters. The first four chapters deal largely with system for payment services. Chapters 5 and 6 are about interbank systems. The report also contains a statistical annex with accompanying definitions, sources and explanations.

The cut-off date for this report was 21 April 2005.

Norges Bank's Payment system report is downloadable at:
www.norges-bank.no

Questions can be sent to:
e-mail: central.bank@norges-bank.no

Foreword

Users of the Norwegian payment system have access to efficient payment services. For many years, Norwegian banks have priced these services. The prices fulfil an important information role. Cost-based prices have motivated users to switch from paper-based instruments to electronic solutions, which has helped to improve the utilisation of resources in this sector.

In many countries, it has been very difficult to get consumers to accept that they should pay for the use of payment services. Banks that do not price payment services have to cover production costs for payment services with income from other services. Such cross-subsidisation sends users the wrong signals as to which services are in fact cheapest. This results in an inefficient utilisation of society's resources. Discount schemes and marketing of bank service packages also make prices less transparent, making it harder for customers to compare prices for the various services.

Cost-based pricing of payment services is an important prerequisite for the efficient use of resources. But it is not enough: there also has to be competition between payment service providers in order to ensure that the total use of resources in the payment system is not too high. Competition encourages cost reductions and the development of new services.

Cross-border payments continue to be based on a large number of costly manual operations, involving many participants. This makes such operations expensive and time consuming. Prices for some cross-border payments have fallen since 2004, but the price level remains well over that for domestic payments. Banks and payment intermediaries in Norway and other countries face a major challenge in making this type of payment more efficient.

The Norwegian payment system is fast, secure and stable. Payments are generally carried out at the right time and to the right recipient. The use of electronic payment instruments is high and rising. The regulated cooperation between banks and mandatory supervision by the authorities provide users with a reliable payment system. However, participants in the payment system face challenges when it comes to security, in terms of operational stability or card fraud and identity theft.

Banks in Norway have for many years worked together to improve the infrastructure of the payment system. When new services are developed and put into operation, many of them are based on joint solutions or individual solutions that communicate with each other. One example is Internet banking: the banks have chosen different technical solutions, but work together on the infrastructure. This entails equal efficiency for all customers. Payments can be completed within one day – regardless of which bank the payee is connected to.

Svein Gjedrem

Summary

A modern economy with a large number of payment transactions has a great need for an efficient payment system. Efficiency can be assessed in terms of three dimensions: how *fast*, how *secure* and how *costly* it is to carry out payment transactions.

Increased security in the payment system

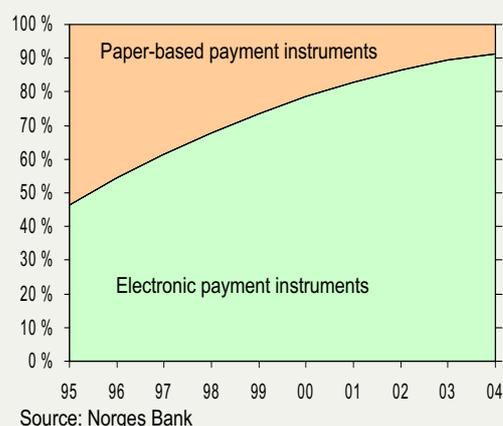
Security entails not only that payment is carried out at the right time and to the right person, but also that payment instruments and means of payment contain security features. Much work has been done to increase security in relation to both electronic payment instruments and cash. Electronic ID solutions have been developed for identification and signatures on the Internet, which make logging on to Internet banks both easier and more secure. In 2004, banks in Norway and several other European countries started to issue payment cards based on a new technology that are more secure than magnetic stripe cards as they are harder to copy. Norwegian banknotes contains a number of security features and the introduction of new elements in recent years has helped to reduce the number of counterfeit notes. In 2004, there was an average of 97.2 million notes in circulation and around 3.5 counterfeit notes were seized for every million notes, which is low compared with other countries.

Continued rise in use of electronic services

Paper-based payment instruments such as cheques and mail giros have higher production costs for banks than electronic services such as Internet banking and payment cards. Prices for using various instruments reflect the relative differences in cost. This is one of the reasons why electronic payment instruments have replaced paper-based instruments over time. This trend continued in 2004 (Chart 1) and has helped to increase efficiency in the payments system, as electronic services are cheaper and can be carried out faster than paper-based services.

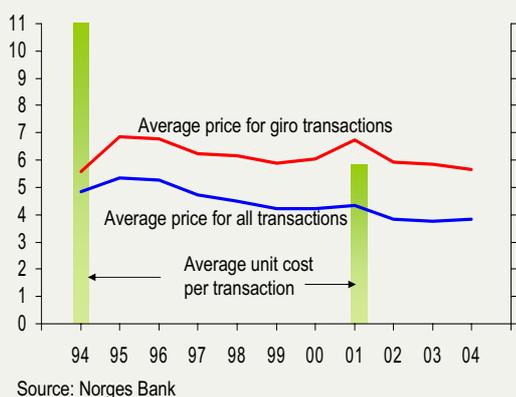
An increasing number of Norwegians have agreements to use Internet banks. The number of bill payments over the Internet rose sharply by 36% to more than 138 million transactions in 2004. There was a 5% increase in the number of direct debits (Avtalegiro and Autogiro) to roughly 36 million transactions in 2004. Around 676 million card payments were effected in connection with the purchase of goods and services in 2004, an increase of 14% on 2003. Most card transactions were carried out with Bank-Axcept cards. The international card systems Visa, MasterCard, Diners Club and American Express recorded the highest relative growth in the number of cards and card transactions. At end-2004, there were more than 97 000 payment terminals installed in Norway.

Chart 1 Use of paper-based and electronic payment instruments 1995-2004. Transactions in per cent



The value of banknotes and coins in circulation as a share of the total means of payment available to the public fell slightly in 2004. Cash withdrawals in connection with card transactions for goods purchases are becoming increasingly popular and accounted for 56% of all withdrawals in Norway in 2004. The number of ATM and over-the-counter withdrawals declined, but still account for 80% of the total value of cash withdrawals (NOK 239 billion).

Chart 2 Nominal average prices and average unit costs 1994 - 2004. NOK



“Average” payments more expensive

Norges Bank has studied changes in prices for payment services in 25 selected banks. The prices shown are banks’ list prices, which do not take into account any discounts or benefits in bank loyalty programmes. Over the last decade, customers have increasingly used relatively cheaper electronic payment services and the price that customers paid for an “average” payment transaction fell by around 21% over the period. However, prices edged up again by 2% in 2004 (Chart 2).

Average prices for paper-based/manual payment services rose sharply from 2004 to 2005, whereas prices for most electronic payment services only showed a moderate rise, with the exception of payment cards in shop terminals (EFTPOS). The average price for this service increased by 18% last year and stood at NOK 2.50 at start-2005.

In 2004, banks’ income from the payments system totalled around NOK 6.7 billion, an increase of NOK 0.5 billion on 2003. Over half of the income comes from payment cards, whereas a third derives from different types of giro.

Cheaper cross-border payments

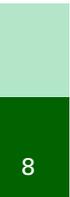
An EU Regulation stipulating that prices for cross-border payments in euro shall not be higher than for corresponding domestic payments in euro entered into force in Norway on 1 January 2005. Norges Bank has surveyed prices for transfers from Norway to other countries in a selection of 25 banks. The survey shows that prices for standardised electronic payment transactions in euro fell by roughly 20% from 1 December 2004 to 1 March 2005. Prices for other cross-border payments remained more or less unchanged.

NOK 152 billion settled daily in Norges Bank’s settlement system, NBO

Banks choose themselves whether they want to settle their mutual obligations over accounts in Norges Bank or a private settlement bank. A daily average of NOK 152 billion was settled over banks’ accounts in Norges Bank in 2004. Norges Bank places great importance on the banks’ settlement system satisfying international requirements and recommendations for security and efficiency.

Annual report on payment systems 2004

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1. The payments system - confidence and efficiency

1.1 Means of payment

Money and means of payment:

- **Cash** – in the form of banknotes and coins issued Norges Bank.
- **Deposit money** – in the form of deposits in bank accounts.

Other means of payment:

- **Use of credit** – in the form of a loan from a bank or other financial institution; consumer loans or use of credit cards are usual for certain types of purchase.

Means of payment: Money in the form of cash or deposit money; these have a value that is guaranteed by the bank or central bank. Norges Bank has had the sole right to issue banknotes and coins in Norway since 1816. Public demand for notes and coins determines the quantity of cash issued by the central bank.

Payment instruments: the most important non-cash instruments in Norway are payment cards, giros and cheques and e-money cards. Payment instruments are tools for using our means of payment. Banknotes and coins function as both a means of payment and a payment instrument.

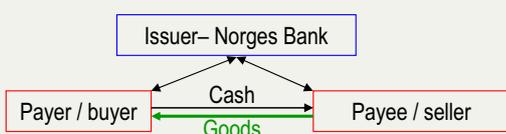
“Money is what money does. Money is defined by its functions,” wrote the British economist and Nobel Prize laureate, John R. Hicks, in 1967. Money is used to carry out payments. But it also has other functions in addition to being a means of payment: cash is a reference value and can be used to store wealth.

In modern society, deposits in an account or credit with a financial institution are used as alternatives to cash. Most Norwegians have bank accounts where deposits are made in the form of wages, social security payments or other income. Bank deposits can be used as *cash* when withdrawn from bank branches/post offices, ATMs or as cashback in connection with the purchase of goods. Alternatively, payment instruments such as payment cards, giros and cheques can be used to access deposit money directly for payments.

Many participants in every payment transaction

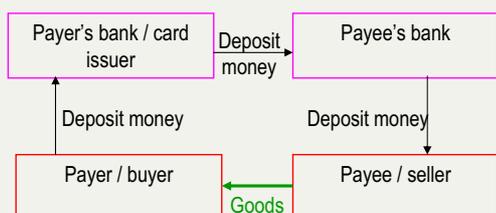
There are at least two actors in all payment transactions¹: the payer and the payee. When banknotes and coins are involved, a third role is established: that of the issuer. In order to have confidence in the cash, users must have confidence in the issuer (Chart 1.1). When deposit money is used, the system normally involves four participants: the payer, the payer’s bank, the payee and the payee’s bank (Chart 1.2). There may also be an entity that collects the transactions (e.g. the Norwegian Banks’ Payments and Clearing Centre Ltd, BBS) and a settlement bank for settlement between the payer’s and the payee’s banks. The settlement bank might be Norges Bank or a private settlement bank.

Chart 1.1 Payment process using cash



Source: Norges Bank

Chart 1.2 Payment process using deposit money



Source: Norges Bank

Chart 1.3 provides a simplified illustration of the payments system in Norway. The system for payment services (the payments system for the retail market) is discussed in the first four chapters of this report, whereas the system for interbank services (payments system between banks) is discussed in the last two chapters of the report.

Payments in society

Trades and asset positions are generally settled using cash or deposit money. However, it is difficult to say which of these means of payment is most used as cash cannot be traced once it has entered into circulation. But statistics from Norges Bank do show that deposit money is used to carry out over one billion transactions in the course of a year. This figure is rising at a faster rate than growth in the economy as a whole. Payments using deposit money are increasingly

¹ A legal entity can have several roles in a transaction. For instance, one and the same bank may be both the payee’s and the payer’s bank.

important and deposit money is now to a greater extent used to carry out payments that were previously made in cash. Many payments using deposit money are carried out electronically, for example, with a card or via an Internet bank.

The payments system largely comprises private participants. In Norway, banks play a key role in supplying deposit money and cash. Banks' activities in this area are monitored by the authorities, as stipulated in the Norges Bank Act, the Act relating to the Payment System and several other acts and regulations. Norges Bank is the banks' bank. Banks have deposits and loans in Norges Bank and settle payment transactions between themselves by transferring money between their accounts in the central bank.

1.2 Fast, secure and at low cost

A modern economy with a large number of payment transactions has a great need for an efficient payments system. Efficiency can be assessed in terms of three dimensions: how *fast*, how *secure* and how *costly* it is to carry out payment transactions.

Speed

In Norway, most payments are completed within one working day. This is fast enough for most purposes and also fast in comparison with other countries. If a payment has to be completed even faster, solutions exist that can process payments within seconds. Limits to the speed with which it is technically possible to carry out payments are constantly falling. In practice, however, speed has to be weighed against security and cost considerations.

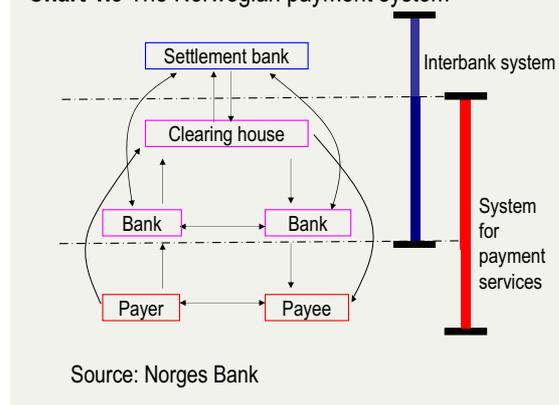
Security

A smooth-functioning payments system is important as it underpins confidence in the financial system. A secure payments system means that money arrives at the right place at the right time without any unexpected costs or problems. In addition, users must also be confident that payment instruments are not being misused. The level of fraud in Norway is relatively low.

Costs

Payment service providers, payees and payers all incur costs when carrying out payment transactions. The actual payment service is produced with the help of labour and other factor inputs, and services are then distributed through a payment network. Among other things, banks have to have computer systems that function safely twenty-four hours a day. Merchants have terminals and till systems, as well as other expenses in connection with security measures, etc. Customers often have to pay a fee for each transaction, in addition to the time used to procure the means of

Chart 1.3 The Norwegian payment system



How fast is a card transaction?

When a customer swipes his/her card in a terminal and punches in the code, the terminal responds within seconds to give notification that payment has been carried out. What happens at the moment of payment is that the amount is earmarked in the account, thereby guaranteeing transfer to the bank by BBS. Once the amount has been earmarked, it is transferred following the next possible clearing and settlement, usually the same day or next working day.

How secure is Internet banking?

Internet bank solutions in Norway are regularly exposed to attempted break-ins in the form of hacking or fraud. These attempts are caught by the Internet banks' security systems. Banks are of the view that security in Norwegian Internet banks is good.

Security and confidence - electronic payments

Security for electronic payments depends on both the design of the system and consumer behaviour. Poor security can undermine the public's confidence in such payment services and reduce the efficiency of the payment system.

Card fraud is a problem in many countries. One method is "skimming", where the payment card is copied. Fraudsters install equipment on ATMs that copies the information on the magnetic stripe when a customer uses his/her card in the ATM. The PIN code for the same card is caught on a video camera or by someone observing the number being punched in. Another variant is the installation of a Lebanese loop on the card slot, which means that the card gets stuck. The card can then be taken out later and copied or misused in some other way.

Another security problem is identity theft, when someone pretends to be another person, for example with the intent of misusing that person's access to bank services (card transactions, online bank services, etc.). There are also security risks involved with using the Internet. For example, in a method known as "phishing", false emails or websites are used in an attempt to get bank customers to provide personal and/or financial information. Break-ins and hacking pose another security threat to IT systems (Internet banks, etc.).

The financial sector and society in general have implemented measures to increase security and confidence in connection with the use of electronic services. Identification systems using electronic certificates and signatures (Public Key Infrastructures - PKI) are being introduced for payments over the Internet and will also be introduced for payment cards in the future. Electronic identification can also be used in many other areas, including Internet banking, Internet-based public services and Internet shopping. In Norway, banks have developed an electronic ID system, BankID, for identification and signature services on the Internet. In 2005, BankID will be available to over half a million Norwegian bank customers. This will make logging on to Internet banks easier and safer. ZebSign is another Norwegian electronic signature service. Other solutions include VISA's "Verified by VISA" and Mastercard's "SecureCode". Both provide passwords for card transactions in connection with Internet shopping.

In 2004, banks in Norway and several other European countries started to issue payment cards that use a new technology with a higher level of security than magnetic stripe cards, as they are harder to copy. A small microchip on these EMV cards¹ replaces the functionality of the magnetic stripe. The chip can also contain software for electronic identification, i.e. the card can replace other forms of ID. Electronic signature solutions contained in the card may also help to reduce the danger of misuse/identity theft. It is anticipated that most banks in Norway will have switched to this new type of card by 2007. As the new cards require a new type of payment terminal, cards will be issued with both chips and magnetic stripes during the transition period so that they can be used on both old and new terminals.

Monitoring systems can also help to prevent card fraud. For example, Europay has developed an early warning system (SECANA) which is used to monitor transaction patterns in the system with the aim of raising the alarm in the event of attempted fraud. Several Norwegian card companies now use this service.

Growth in the use of electronic means of payment such as payment cards and Internet bank services may indicate that confidence in these methods of payments is generally high. Correct use will reduce the likelihood of fraud. However, users should be aware that electronic payment instruments can be misused.

¹EMV is an abbreviation of "Europay, MasterCard and Visa". These international card companies have produced a standard for chips in payment cards that banks and card companies in many countries have adopted for use in their cards. The card system JCB is also involved in the work and most card systems worldwide will use the standard as a basis for their cards in the future.

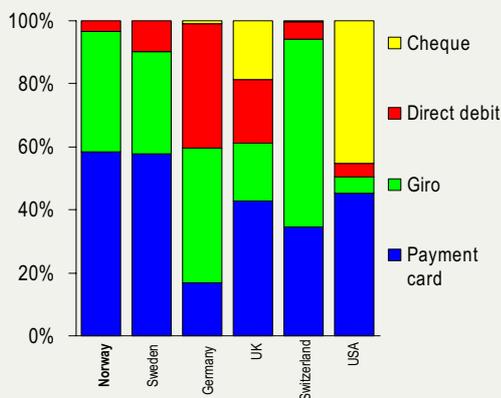
payment and carry out the payment. Customers also have costs in connection with security. It is difficult to calculate total costs in the payments system, but estimates indicate that the figure is around 1-3 per cent of GDP (Hancock & Humphrey (1998), Gresvik & Øwre (2002)). Prices that reflect production costs help to promote the use of services that require least resources. Most payment transactions in Norway are paid by the person who takes the initiative to carry out the payment. In practice this means that when, for example, a payment card is used, the cardholder pays a fee to the bank delivering the payment service.

Efficiency in the payments system is promoted when customers demand services that can be produced at low cost and banks provide more such services and fewer expensive services. Furthermore, competition is needed to ensure sound utilisation of limited resources. This also applies to payment services. Competition between banks is therefore necessary in order to foster an efficient payment system. It is important that banks' prices are transparent, so that users can easily compare what banks have to offer. The marketing of bank products and packages can make comparisons difficult and therefore hinder efficient competition. It also obscures the signals that prices can give to users regarding costs.

2 International differences in payments systems

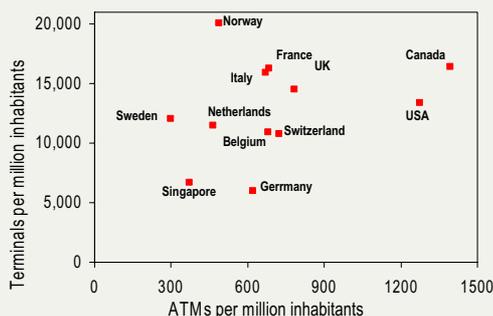
In all countries, payments can be effected in that country's banknotes and coins. It is normally easy to buy or exchange cash in banks, ATMs or bureaux de change all over the world. Even though international payment cards can be used in many countries, cards are not necessarily accepted everywhere. Chart 2.1 shows that the use of different payment instruments varies considerably from country to country. Payment cards and different types of giro are the most used instruments in a number of European countries, as in Norway. In other European countries, direct debit services are more popular than in Norway and the use of payment cards is generally lower. Cards and giros can be used for cross-border payments, but transactions are often more expensive, slower or involve greater risk than corresponding domestic payment transactions. In many countries, for example the UK and the US, it is still usual to write cheques. Cheques are also often used for cross-border payment transactions.

Chart 2.1 Use of payment instruments in selected countries in 2003. Figures in per cent



Source: CPSS and Norges Bank

Chart 2.2 ATMs and payment terminals per million inhabitants in selected countries at end-2003



Source: CPSS and Norges Bank

The use of payment cards depends, among others, on the availability of ATMs and card terminals. Chart 2.2 shows the number of ATMs and terminals per million inhabitants in selected countries. There is considerable variation between countries. Canada and the US have the largest number of ATMs, whereas Norway has the largest number of merchant terminals. Table 2.2 at the end of the chapter shows that the differences between countries apply to all aspects of the payment system.

2.1 Cross-border payments

Carrying out cross-border payments requires more resources than carrying out corresponding domestic payments. Each country has its own payments system. Cross-border payments often involve several banks, many manual operations and payments systems that cannot always communicate with each other. The international cards systems are an exception.

The volume of cross-border retail payments is still small compared with the volume of domestic payments. In 2004, 56 million transactions were registered using Norwegian cards abroad and foreign cards in Norway. In the same period, 785 million transactions were completed using domestic cards in Norway.

Production costs and prices for cross-border payments are generally lower when more automated solutions are involved. A number of banks have developed Internet bank solutions with electronic procedures for sending payment orders to other banks. In such cases, the entire payment process is carried out automatically (Straight Through Processing (STP)). In other words, all the information is transferred automati-

cally from the point when the customer notifies his or her bank electronically about a payment order to the point when the payment is credited to the payee's account.

For wholly automated payment transfers between countries to be possible, both banks and customers have to use international standards. This facilitates communication between the participants involved in the payment transaction. Banks in the EU/EEA area now use two such standards, IBAN (customer's International Bank Account Number) and BIC (Bank's Identifier Code), which are explained in more detail in the margin. Chart 2.3 illustrates how payments are carried out using BIC and IBAN.

IBAN, the customer's International Bank Account Number, contains three elements: the bank account number, the country code and the bank code. The number of characters varies from country to country, but can be up to 34 characters. IBAN comprises both numbers and letters. The standard was developed by ECBS, European Committee for Banking Standards (www.ecbs.org)

BIC, the Bank Identifier Code, also contains three elements: the bank code, the country code and the location code within the country. The BIC is either 8 or 11 characters and is a combination of numbers and letters. The standard is central to all SWIFT messages, i.e. electronic messages based on the format developed by SWIFT (www.swift.com).

Norway and the Regulation on Cross-border Payments in Euro

Background

In 1997, the EU implemented a directive (97/5/EC) with the aim of making it faster, cheaper and more secure for consumers and small and medium-sized enterprises to carry out cross-border payment transfers. However, prices have only changed marginally since the directive was implemented in national legislation. A regulation stipulating that the price of cross-border payments in euro shall be no more expensive than corresponding domestic euro payments was therefore introduced. The Regulation entered into force in Norwegian law in January 2005.¹

Key points of the Regulation

The Regulation entered into force in the EU on 1 July 2002 for cross-border electronic payment transactions and on 1 July 2003 for credit transfers. The Regulation applies initially to amounts up to EUR 12 500. This limit will be raised to EUR 50 000 on 1 January 2006. Sweden is the only EU country outside the euro area that has chosen to introduce the Regulation for its currency.

The Regulation sets requirements regarding prior information on prices. The Regulation applies to electronic payment transfers based on two standards that facilitate automatic processing: IBAN (customer's International Bank Account Number) and BIC (Bank Identifier Code). Prices for manual, paper-based cross-border payment transfers can still differ from domestic prices, if the customer is informed. This also applies if the payee's BIC and IBAN information is not provided.

Compliance with the Regulation

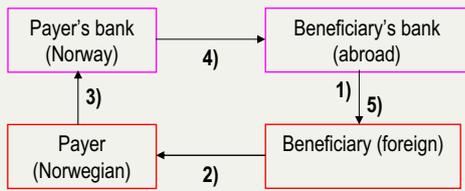
The European banking industry has developed a joint European clearing system, STEP2, in order to meet the requirements in the Regulation on Cross-border Payments in Euro. The system handles small payments (credit transfers) using BIC and IBAN. On average 110 000 transactions pass through STEP2 every day. The system has 67 direct and more than 1360 indirect participants, of which over 60 are from the ten new EU countries.

The Regulation applies to euro payments between Norway and EU/EEA countries. In order to comply with the Regulation without too much extra cost, banks in Norway applied for membership in STEP2. All Norwegian banks have access to STEP2 via participating Norwegian banks.

Norway has not introduced the Regulation for Norwegian krone, as our currency is not linked to the joint European infrastructure that has been developed for the settlement of euro transactions. However, the Ministry of Finance will monitor changes in prices for cross-border payments in NOK and assess various measures, including whether the Regulation should be implemented for NOK, if prices do not fall within a reasonable period of time.

¹(EU) 2560/2001 on Cross-border Payments in Euro, etc. -implemented in Norwegian legislation by amendment to §9.1 of the Financial Contracts Act on 1 January 2005 (Proposition no. 52 (2003-2004) to the Odelsting, p.13.)

Chart 2.3 Payments abroad using BIC and IBAN



- 1) The beneficiary's bank provides the IBAN and related BIC to the beneficiary
- 2) The beneficiary forwards the IBAN and related BIC to the ordering customer
- 3) The ordering customer submits a cross-border credit transfer order, which includes the beneficiary's IBAN and related BIC
- 4) The ordering customer's bank checks the IBAN and the BIC and sends the cross-border credit transfer to the beneficiary's bank. Upon receipt of the order, the beneficiary's account will be credited

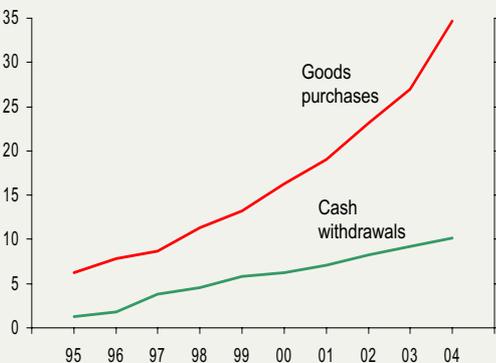
Source: European Committee for Banking Standards

Table 2.1 Prices for payments from Norway to EEA countries

Change in prices for payments equivalent to NOK 100 and NOK 2500

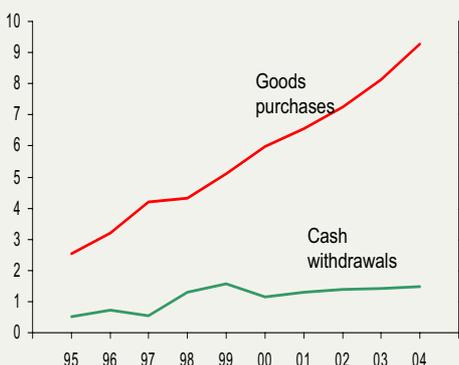
	Electronic payment			Semi-electronic payment		
	2004	2005	2005	2004	2005	2005
	1.12.	1.1.	1.3.	1.12.	1.1.	1.3.
Payments in euro						
<i>With BIC and IBAN</i>						
NOK 100	42.77	34.91	34.17	53.30	57.16	52.51
NOK 2500	43.16	35.29	34.55	58.25	60.87	53.45
Payments in NOK						
<i>With BIC and IBAN</i>						
NOK 100	55.55	55.48	55.17	65.89	69.75	65.11
NOK 2500	55.93	55.87	55.55	70.85	73.47	66.05

Chart 2.4 Norwegian card transactions abroad. 1995-2004. In millions of transactions



Source: Norges Bank

Chart 2.5 Foreign card transactions in Norway. 1995-2004. In millions of transactions



Source: Norges Bank

In accordance with the Regulation on Cross-border Payments in Euro (see separate box), prices for electronic cross-border payments in euro shall not be higher than for corresponding domestic payments in euro within the EU/EEA. Norges Bank has surveyed prices in 25 banks in order to establish the extent to which the introduction of this Regulation has resulted in cheaper euro payments between Norway and other EU/EEA countries. The survey was carried out on 1 December 2004, 1 January 2005 and 1 March 2005. Table 2.1 shows that prices for electronic payment orders in euro with BIC and IBAN have fallen by up to 20%. Prices for receiving these payments have also been reduced. Norges Bank looked at prices for semi-electronic payment orders in euro with BIC and IBAN, in addition to electronic and semi-electronic payment orders in NOK with BIC and IBAN. Table 2.1 shows that there has been little change in prices for these services. For the sake of comparison, manual payment orders were also included, as were transactions where the BIC and IBAN were not available. The survey shows that these payments are more expensive, see Tables 40 and 41 in the annex.

2.2 Cross-border card payments

Cards are the most popular payment instrument used by Norwegians abroad. In 2004, 45 million transactions were carried out using Norwegian payment cards abroad, a 24% increase on the previous year. Cards were used for the purchase of goods, in particular (Chart 2.4). A quarter of all transactions were cash withdrawals. Measured in value, Norwegians' use of payment cards abroad increased by 18% and totalled NOK 39.8 billion, of which goods purchases accounted for 62%. The growth in transactions and turnover abroad is assumed to be linked to greater access to using cards. The use of foreign payment cards in Norway rose by 13% to 10.8 million transactions in 2004 (Chart 2.5), of which 86% was in connection with the purchase of goods. Foreigners used cards in Norway for a total value of NOK 8.5 billion in 2004. Cash withdrawals accounted for a good 25% of the value of foreigners' card use in Norway.

Prices for card use abroad vary according to the issuing bank and card type. Payment for a goods purchase abroad will typically cost between NOK 0-5. There is an additional mark-up for the currency change. Cash withdrawals abroad cost more, but prices for this service also vary. Some card transactions are priced using a fixed amount whereas others charge a percentage of the withdrawal amount (or combination). For example, a cash withdrawal using a Visa card can cost the cardholder anything from NOK 25 to 35. There is also often an additional charge of between 0.5 and 1% of the amount withdrawn and a mark-up for the exchange rate.

In 2004, banks in Norway and several other European countries started to issue payment cards based on a new technol-

ogy (see box in Chapter 1). The new cards are more secure than the old ones as they are harder to copy. This new type of card is called a smart card, chip card or EMV card. The magnetic stripe function has been replaced by a microchip and the new cards are inserted into terminals rather than being swiped like the old cards. The cards are being introduced at different times in different countries. In the UK, the transition is well under way and the majority of cards will have EMV chips by end-2005. It is assumed that it will take a couple more years - until 2007 – before most cards in Norway have chips. According to plan, the Bank-Axcept function will be incorporated in the chip, in addition to international card functions. EMV cards may also contain solutions for electronic identification.

2.3 E-money

Electronic money (e-money) is defined as a monetary value represented by a claim that is stored on an electronic medium (e.g. a card or a computer). E-money is issued on a prepayment basis and is accepted as a means of payment by participants other than the issuer. E-money is primarily used to carry out small-value transactions, e.g. parking charges, in telephone boxes, for public transport and over the Internet. Van Hove (2004) has studied a selection of e-money systems in the euro area. The study shows substantial variations in the use of e-money in different countries and concludes, among other things, that it is uncertain whether e-money will become a common means of payment in the future. At end-2004, four companies in Norway held licences to issue e-money. E-money issued in Norway can only be used for domestic payments.

2.4 Costs in the payments system

Norway has previously been the only country to carry out surveys that show changes in banks' costs in the payments system over time. The last study was completed in 2002, based on data from 2001 (Gresvik & Øwre, 2002). However, a similar study has now been carried out in Sweden based on data from 2002 (Guiborg & Segendorff, 2004). Chart 2.6 shows prices and costs for some retail payment services in Sweden.

If the Norwegian studies are to be compared with the Swedish study, a natural starting point is that payments can be produced at a lower cost in Sweden than in Norway. One important reason for this is that the payments system is characterised by economies of scale. This alone will result in lower unit costs in Sweden, as the number of transactions is higher than in Norway. Furthermore, the level of costs in Sweden is generally lower.

Norwegian card: payment card issued in Norway.

Foreign card: card issued in a country other than Norway.

Worldwide payment systems

Visa cards are issued by 21 000 banks and financial institutions worldwide. The card is accepted at more than 20 million locations and 945 000 ATMs.

MasterCard is a global payment network with 24.6 million locations, including 1 million ATMs and other locations where cash can be withdrawn.

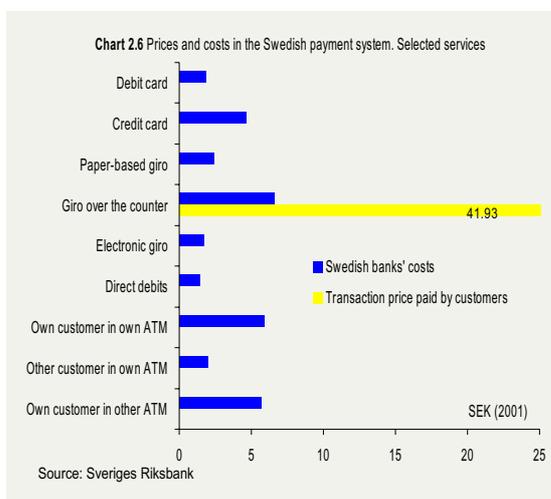
Diners Club can be used at over 8.4 million locations and more than 900 000 ATMs worldwide.

American Express is accepted at locations all over the world and cash can be withdrawn from over 670 000 ATMs.

Source: Card companies' websites

Bank-Axcept is the most widespread payment/debit card in Norway. The Bank-Axcept system is operated by the Norwegian Banks' Payment and Clearing Centre Ltd. (BBS) on behalf of the banks in Norway. All Norwegian banks issue these cards.

EMV is an abbreviation for "Europay, MasterCard and Visa". These international card companies have developed a standard for chips in payment cards.



In addition, the two countries have different banking structures – four major banks cover 95% of the market for payment systems in Sweden, whereas 147 banks have around 60% of the market in Norway. There are also methodological differences in the surveys and one complicating element is that they cover different years in a period of major change in the payments system in both countries. There was particularly sharp growth in the use of Internet banking and payment cards in this period.

The Norwegian studies show that the level of costs has fallen over time and that pricing to a greater extent reflects the relative costs. The survey from Sweden shows that pricing does not reflect the relative costs. The general rule is in fact to the contrary - use of the most expensive services is cheapest (free) for customers. The Swedish survey points out that this is unfortunate in view of the wish to promote an efficient payment system (see Chapter 1).

The Norwegian banking system is built on the principle that all banks (and their customers) should have access to the same payment services, developed jointly by the banks. In Sweden, there has been a greater degree of competition between banks and other participants regarding the development of payment systems. The costs surveys do not provide information that indicates whether the Norwegian joint solutions have been more or less cost-effective than the Swedish solutions.

Table 2.2 Key figures regarding payments in selected countries. 2003									
	France	Italy	Netherlands	Switzerland	Sweden	Germany	UK	USA	Norway
Notes and coin, % of GDP (* 2001 figures)	2.0*	4.7*	2.1*	8.2	4.0	3.3*	3.3	6.1	2.7
Balance in current accounts as % of GDP	24.4	41.7	34.0	37.7	41.1	29.7	67.6	5.9	24.8
No. branches offering payment services (bank and post), per million inhabitants	584	767	389	729	320	566	518	268	622
ATMs									
No. per million inhabitants	683	671	465	722	299	620	783	1275	487
No. withdrawals per year per inhabitant	20	11	30	16	37	40	40	37	22
Average withdrawals (USD)	73	186	119	180	106	200	99	68	159
Card payments									
No. POS-terminals per million inhabitants	16 267	15 945	11 466	10 803	12 062	6 008	14 508	13 365	20 053
No. card transactions per inhabitant	71	17	74	44	85	27	92	126	130
Average goods purchase, debit card (USD)	53	109	53	121	53	74	63	45	49
Average goods purchase, credit card (USD)	n.a.	106	125	139	107	77	109	93	99
Instruments' percentage share of non-cash payments									
Cheques	30	16	0	0	0	1	19	45	0
Giro (credit transfers)	20	32	35	59	32	43	18	5	38
Direct debits	18	22	39	5	10	39	20	4	3
Payment cards	33	30	34	34	58	17	43	45	58
Card-based e-money	0	0	3	2	0	0	n.a.	n.a.	n.a.
Source: BIS and Norges Bank USD = 7.0824 NOK (2003)									

3 Access to means of payment and use of payment instruments

Bank customers can use different payment instruments to access their deposit money. Norwegians increasingly use electronic payment instruments rather than paper-based instruments. This trend continued in 2004 (Chart 3.1). The number of new Internet bank agreements and the number of bills paid over the Internet rose sharply. The use of payment cards continued to increase and more terminals for card payments were installed in 2004. There was a marked fall in the number of paper-based transactions through bank branches.

In 2004, 1.1 billion payment transactions were carried out in Norway using different types of non-cash payment instruments, a 10% increase on 2003. Around 676 million of the payments were card transactions, whereas the different types of giro payments accounted for 440 million transactions (Chart 3.2). This means that every Norwegian initiated an average of 243 non-cash payments. Payments using giro, cards and cheques totalled NOK 8 708 billion, a 30% increase on 2003. Electronic giros account for the bulk of the value (93%).

3.1 Access to cash and deposit money

The value of banknotes and coins in circulation, as a share of the total means of payment available to the public, fell slightly in 2004. Cash is primarily available from bank branches and post office outlets, from ATMs and payment terminals in shops. On 31 December 2004, there were 1234 bank branches in Norway (Chart 3.3). The merger between DnB and NOR meant that DnB's branches became savings bank branches and a number of branches were also closed down. The number of bank branches has fallen every year for the past 10 years and there were substantial changes in Norway Post's distribution network in the same period. In connection with the reorganisation of Norway Post, the number of post offices fell sharply in the second half of the 1990s. In recent years, the number has increased again slightly as a result of more Post-in-Shop outlets. There are now 1201 Post-in-Shop outlets, of which 26 were established in 2004.

The number of ATMs rose by between 25 and 112 units every year from 1995 to 2004 (Chart 3.4), but then fell by 2% to 2180 in 2004. The number of payment terminals (EFTPOS) has risen sharply since 1995, when there were nearly 35 000 such terminals in shops and other locations. By end-2004, there were over 97 000 payment terminals installed in nearly 65 000 retail outlets (Chart 3.5).

Chart 3.1 Use of paper-based and electronic payment instruments 1995-2004. Transactions in per cent

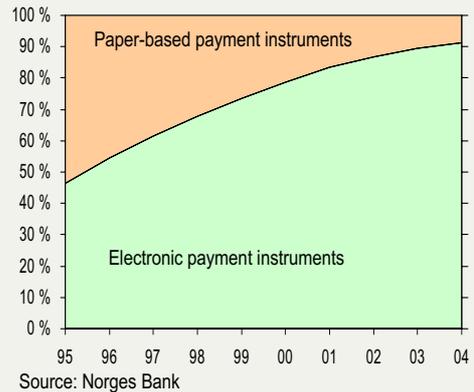


Chart 3.2 Payment instruments 1995-2004. In millions of transactions

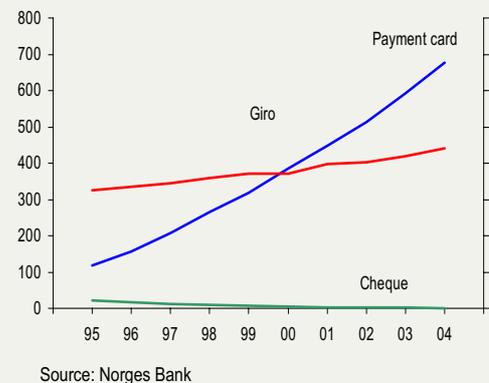


Chart 3.3 Number of banks and post office branches 1995-2004

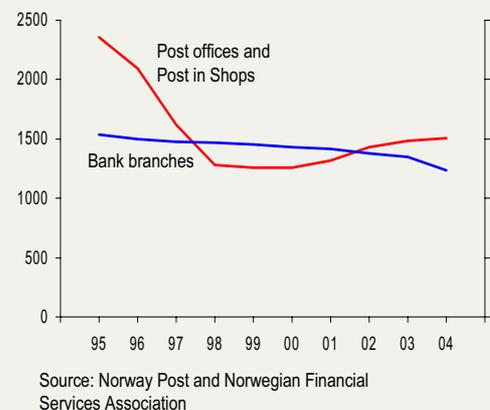


Chart 3.4 Number of ATMs 1995-2004

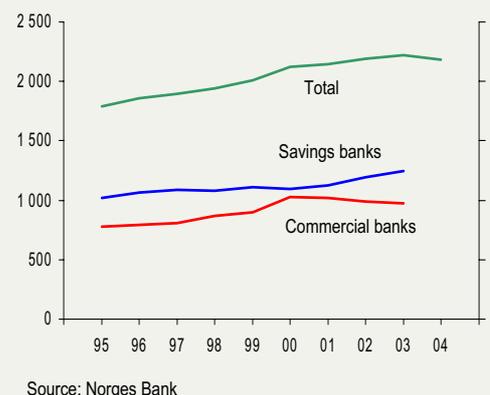


Chart 3.5 Number of payment terminals 1995-2004



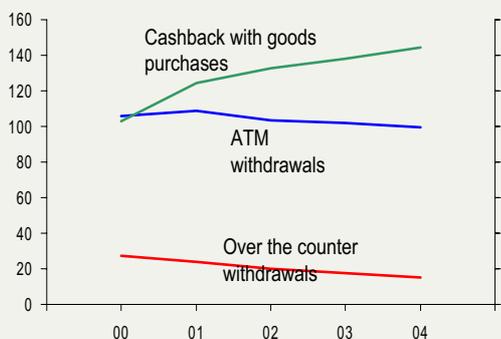
Source: Norges Bank

Payment cards, the telephone, Internet, mail giro and other services can also be used to access deposit money. Bank customers have to enter into agreements with their bank to access and use these services.

There has been robust growth in the use of Internet banking services in the past five years. In one survey carried out by TNS Gallup in the fourth quarter of 2004, 74% of individuals over the age of 15 who use the Internet said that they were registered Internet bank customers. The corresponding share in the first quarter of 1999 was 10%.

A survey by the Norwegian Savings Banks' Association from January 2005 shows a rise in the number of Internet bank users of around 4 percentage points on 2004. According to the survey, 59% of the population (15 years and older) use Internet banking. This is equivalent to over 2 million Internet bank users. In relative terms, the increase in Internet bank use has been sharpest among people over 60. Around 28% of those asked in this age group said that they used Internet banking. The figures from the Norwegian Savings Banks' Association also show that Internet banking services are used frequently: 9 out of 10 Internet bank customers use the services every 14th day or more often. The survey shows that Internet banks are largely used to pay bills, for direct debits and electronic invoicing and to check account information. The difference between the TNS Gallup and the Norwegian Savings Banks' Association surveys may indicate that a number of people have Internet bank agreements without using them.

Chart 3.6 Number of cash withdrawals in Norway 2000-2004. In millions of withdrawals

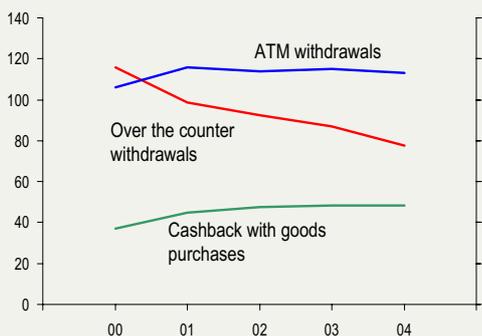


Source: Norges Bank

From deposit money to cash

It has become more usual to withdraw cash in connection with goods purchases (cashback) and these withdrawals now account for over half of all cash withdrawals in Norway (Chart 3.6). Roughly 259 million cash withdrawals were registered in Norway in 2004. At-the-counter cash withdrawals have become less usual and now only account for 6% of withdrawals. There has been a gentle fall in cash withdrawals from ATMs in every year since 2001.

Chart 3.7 Value of cash withdrawals in Norway 2000-2004. NOK billions



Source: Norges Bank

The total value of cash withdrawals was round NOK 239 billion in 2004, a 5% reduction on 2003. Nearly half of the value was withdrawn from ATMs, followed by at-the-counter withdrawals, whereas around 20% was withdrawn in connection with goods purchases (Chart 3.7). When members of the public want to withdraw large amounts, they do this at the counter, as ATMs and payment terminals normally have a maximum limit for withdrawals. The average value of at-the-counter withdrawals is NOK 5065. In 2004, the average value of ATM withdrawals was NOK 1139. The total value of cashback withdrawals was unchanged, whereas the number of withdrawals rose by 5%. The average value of withdrawals in connection with goods purchases has fallen slightly since 2003 and was NOK 334 in 2004.

Norges Bank's role in the cash supply - changes in terms and conditions for the acceptance of surplus cash from and delivery of cash to banks

In accordance with §20 of the Norges Bank Act, Norges Bank lays down the terms for banks' deposits and withdrawals of cash. Major changes have been made to these terms, with effect from 1 January 2005.

The changes were made as part of the central bank's work to clarify the division of responsibility and tasks between different participants in the cash supply system. This work has been ongoing for several years and the objective is to improve efficiency in the payment system as a whole. Among other things, Norges Bank is seeking to establish a clearer role as wholesaler and would like banks assume responsibility for the distribution of cash within each region and the associated costs.

The work to clarify the central bank's role and responsibilities in relation to the cash supply has been carried out in three stages:

1. *Winding up of commercial services to banks (2001)*¹

Norges Bank previously offered commercial cash handling services to banks in competition with other participants in the market. Developments eventually made it necessary to make a clearer division between statutory responsibilities (core activities) and activities of a more commercial nature. In 2001, the central bank and several other banks established Norsk Kontantservice AS (NOKAS). All Norges Bank's commercial cash handling services were then transferred to NOKAS.

2. *Changed terms and conditions for the acceptance and delivery of cash to and from Norges Bank (2005)*

The changes in the terms and conditions for the acceptance of surplus cash and withdrawal of cash from Norges Bank entail the following:

- banks must sort cash into circulation and non-circulation quality before it is deposited in Norges Bank
- an increase in the minimum quantity for deposit and delivery
- more specific packaging requirements
- explicit pricing of handling charges

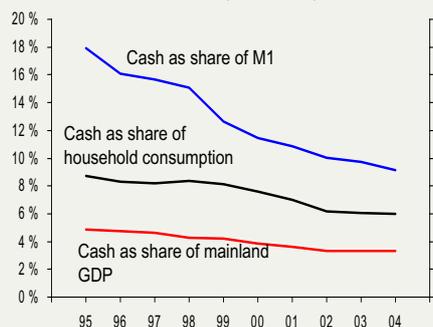
From 1 January 2005, banks will be invoiced for handling charges directly by Norges Bank, which will entail a clearer division between central bank services and other services offered by the cash transport manager. This will contribute to greater clarity in terms of the actual costs of different cash services and thereby to more efficient use of these services. Handling charges should cover the cash distribution manager's costs in connection with the collection and delivery of cash. Banks have previously covered these costs, but through prices for services carried out by Norges Bank's cash distribution manager (Norsk Kontantservice AS).

3. *Changes in distribution structure (2005)*

Norges Bank will fulfil its obligation to supply banknotes and coins, by supplying banks with cash through central bank depots located in different parts of the country. The number of central bank depots and their locations has recently been under review. As a result, Norges Bank will clear the way for the establishment of bank-operated, private depots which will receive interest compensation from the central bank. At the same time, the central bank will reduce its presence to only five depots.

¹See article in Economic Bulletin no. 2/2002: *Changes in the organisation of the supply of notes and coins – establishment of the limited company Norsk Kontantservice AS (NOKAS)*.

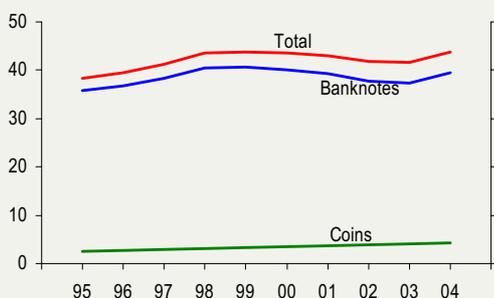
Chart 3.8 Value of banknotes and coins in circulation as a share of M1*, household consumption and mainland GDP 1995-2004 (December). Per cent



Source: Statistics Norway and Norges Bank

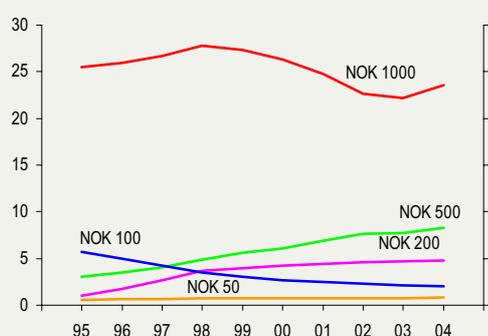
*M1 is the money holding sector's holding of Norwegian banknotes and coins, as well as the sector's deposits in current accounts in Norges Bank and commercial and savings banks (in NOK and foreign currencies).

Chart 3.9 Cash in circulation 1995-2004. Annual average. NOK billions



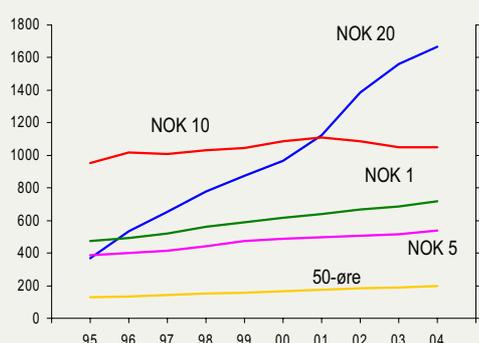
Source: Norges Bank

Chart 3.10 Composition of banknotes in circulation 1995-2004. Annual average. NOK billions



Source: Norges Bank

Chart 3.11 Composition of coins in circulation 1995-2004. Annual average. NOK billions



Source: Norges Bank

3.2 Cash

The use of cash for transaction purposes is governed by developments in household consumption and costs in connection with the acquisition and use of cash in relation to alternative means of payment. The storage of wealth in the form of cash is in part governed by developments in inflation and interest rates. The size of the unregistered (black) part of the economy also affects demand for cash.

Notes and coins in circulation

The value of banknotes and coins in circulation accounts for a steadily smaller share of private consumption, means of payment used by the public (M1) and mainland GDP, see Chart 3.8. It is, however, uncertain whether the decline in cash holdings is due to permanent changes in the demand for cash for payment purposes. The replacement of the 1000-krone note and reduction in the very large cash holdings at the turn of the millennium may also have contributed to the decline in cash holdings.

The value of cash in circulation has risen for the first time since 1999. The average value of cash in circulation was NOK 43.7 billion, divided into NOK 39.4 billion in banknotes and NOK 4.3 billion in coins in 2004 (Chart 3.9). The different denominations' share of the value of cash holdings has changed considerably in recent years (Chart 3.10). The value of 1000-krone notes in circulation continues to be lower than at the end of the 1990s. The transition from Series VI to Series VII is a possible reason for some of this decline. The public chose to exchange old notes for deposits in their accounts rather than new notes.

The 1000-krone note accounted for 60% of banknotes in circulation in 2004, an increase on 2003 following several years of decline. The share of 500-krone notes continues to rise, due to increased use in ATMs. A greater need for change resulted in an increase in the number of 50-krone notes in circulation. The circulation of 100-krone notes continued to fall in 2004. Measured in numbers of notes, there are most 200-krone notes in circulation, followed by 1000-krone notes and 100-krone notes. There are clear seasonal variations in the demand for cash. Every year, demand is low in March and highest in December (NOK 41.9 and 47.6 billion respectively in 2004).

The value of coins in circulation has increased steadily every year for the last 20 years. The average value of coins in circulation was NOK 4.3 billion in 2004, a 4% increase on 2003. The introduction of the 20-krone coin in 1994 is the primary reason for the rise in the value of coins in circulation. The 20-krone coin increased its share of coins in circulation at the expense of 10-krone coins and now has a 40% share (Chart 3.11).

Counterfeit money

In order for cash to function as an efficient and secure means of payment, participants in the payment system must have

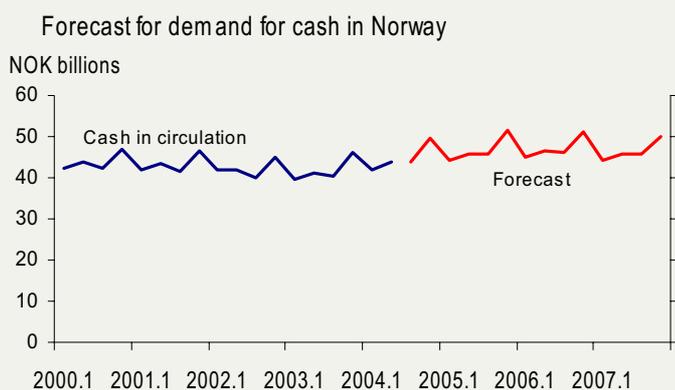
Demand for cash in Norway

In Norway, the public's demand for notes and coins determines the volume of cash that is issued. The requirement is communicated to Norges Bank by means of banks' orders for different denominations. Norges Bank has to try to calculate how great demand will be in the period ahead, as it is also desirable that the production of cash is managed in the most efficient way. Norges Bank currently orders coins from an external supplier and will also order banknotes from an external printer from 2007. The calculation of society's total demand for cash provides important information for the central bank when estimating the volume of banknotes and coins that needs to be produced.

Outstanding cash holdings in Norway increased every year from 1980 to 1999 and then fell in the period 2000-2003. In 2004, outstanding cash holdings rose again. An analysis indicates that changes in the cash balance are determined by changes in interest rates and private consumption, as well as technological developments in the payment system (Aastveit, 2005).

The public's demand for cash is governed by their need to carry out transactions, store value and the wish to have a benchmark value for goods, services and other means of payment. Calculations for Norway in 2000¹ indicate that increased card use may considerably reduce the use of cash at points of sale. A study by the Finnish central bank shows similar results.² This is an example of one of the factors included in Aastveit's model as technological development in the payment system.

In addition, an analysis carried out in 2001³ showed that only about one third of the size of cash holdings in Norway can be determined on the basis of registered legal purposes. The remaining two thirds is used both legally and illegally for non-registered purposes, in other words to store value or for non-registered transactions. This complicates analyses of the type carried out by Aastveit.



The chart shows Aastveit's forecast for changes in the cash balance. The forecast estimates that demand for cash will increase in the years ahead, and then fall from 2006⁴. The forecast is based on estimates for the interest rate path and consumption from Norges Bank and Statistics Norway, respectively. The estimates (and forecast for the cash balance) are shrouded in uncertainty.

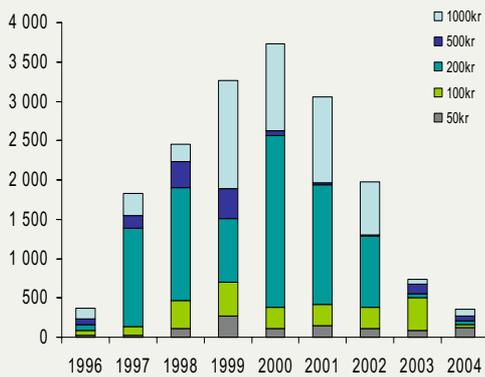
¹ Humphrey, D., A. Kaloudis & G. Øwre (2000)

² Jyrkönen, H. (2004)

³ Gresvik, O. & A. Kaloudis (2001)

⁴ The basis for the forecast was Norges Bank's estimates for the interest rate path in the *Inflation Report 3/04* and estimates from Statistics Norway for consumption and the price index in *Economic Survey 3/2004*. Aastveit's calculations are based on the econometric method, using a number of factors that may possibly explain demand as a starting point. The analysis tool is called regression analysis, where a one-equation error adjustment model has been used. (In order to make the forecast more robust, a constant adjustment has been added, so that the model hits the mark exactly in the final observation). The factors in Model 1 were initially consumption, interest rates, the number of terminals for payment cards, the number of ATMs, tax (as an estimation of the size of the black economy), prices for card use and prices for cheque use. These factors were eliminated one by one from the analysis, until only two remained: consumption and interest rates. Consumption here means private household consumption in retail outlets. Interest rates are banks' deposit rates on current accounts. In addition, developments in the payment system are represented by a negative linear trend. The data basis for calculations comprised quarterly observations from Q1 1980 to Q2 2004. Aastveit's forecast was compared with forecasts from simple, univariate auto-regressive model (not shown in the chart). This model underpinned the conclusions of Aastveit's calculations.

Chart 3.12 Number of counterfeit notes confiscated

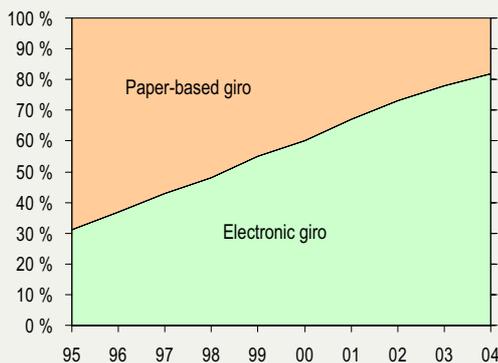


Source: Kripis, National Criminal Investigation Service

confidence in cash. Confidence means that users do not doubt that cash represents a claim on the central bank. Norges Bank is responsible for ensuring that banknotes are produced in such a way that they are difficult to counterfeit, that they include features that make it possible to differentiate between genuine and counterfeit notes and that these elements are widely recognised.

From the mid-1990s, the number of counterfeit banknotes seized increased each year, peaking in 2000 with 3736 counterfeit notes. This was primarily due to technological developments in colour photocopiers, PC scanners and printers. In 2004, the upgrading of low-denomination notes in Series VII was completed with the launch of the upgraded 50-krone note. The volume of counterfeit notes has fallen since the upgrade and the level is now only 10% of the level recorded in 2000 (Chart 3.12). The introduction of metallic elements in the upgraded banknotes contributed greatly to this reduction. In addition to the figures for 2004 shown in the Chart, 146 counterfeit 1000-krone notes were seized in France. With an average of 9.2 million banknotes in circulation, counterfeit notes accounted for roughly 3.5 per 1 million notes in 2004. The level of counterfeiting in Norway is low compared with other countries. For example, total counterfeit notes in euro accounted for around 67 notes per 1 million in 2004. Around half of the counterfeits were 50-euro notes.

Chart 3.13 Giro transactions 1995-2004. Share



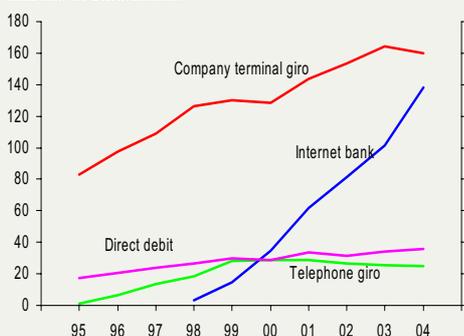
Source: Norges Bank

3.3 Giro

In 2004, giro payments accounted for 39% of total transactions using deposit money. The trend favouring electronic services over paper-based services continued. Chart 3.13 shows the distribution of electronic and paper-based giro transactions. The number of electronic giro transactions rose by 10% in 2004, whereas the number of paper-based transactions fell by 13%. The number of electronic giro transactions has risen three-fold since 1995.

Chart 3.14 Use of electronic giro services 1995-2004.

Millions of transactions*



Source: Norges Bank

*To end-2002 only includes Internet bank retail customers

The public can make giro payments in several ways. A giro form can be delivered to a bank branch or sent in the post (mail giro). Electronic giros can be delivered over the telephone or the Internet. Banks' corporate customers are offered solutions whereby payments can be registered over the Internet or via terminals with fixed telephone lines (company terminal giros). Customers have to enter into an agreement with the bank in order to use mail giros or electronic giro services. Direct debit services require an agreement where the account holder authorises the bank to debit the account on behalf of the payee.

The number of agreements for using Internet bank solutions for retail customers (giro payments registered over the Internet) rose by a good 23% in 2004 and was close to 3 million by the year-end. The number of agreements for direct debit services (Autogiro and Avtalegiro) increased by 12%

and totalled around 5.5 million at end-2004. The decline in the number of mail giro agreements continued and stood at 1.5 million at end-2004.

Electronic giro services

In 2004, 359 million electronic giro transactions were registered (Chart 3.14). The value of turnover was NOK 8132 billion (Chart 3.15). As electronic services are faster and cheaper to produce than paper-based services, the transition to more electronic processing has helped to improve efficiency in the payment system. Electronic transactions are also less prone to errors and other problems than paper-based solutions.

There was substantial growth in the number of giro payments over the Internet in 2004 (Chart 3.14-16). The number of transactions rose from 102 million in 2003 to 138 million in 2004. The value of giro payments over the Internet was NOK 1352 billion in 2004. Business customers, who have traditionally used closed network solutions, have now started to use Internet bank solutions. Several participants who provide Internet banking services are now developing new solutions for businesses based on open networks. In 2004, 81% of all giro payments registered over the Internet were initiated by retail customers using Internet banking services. These solutions are also used by smaller companies; 68% of the value of payments was initiated using business Internet solutions.

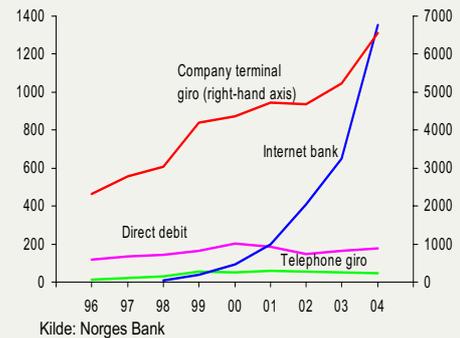
Electronic invoicing (eFaktura) has simplified the handling of giro payments to Internet banks. Use of eFaktura is growing rapidly. Statistics from BBS show that 2.8 million bills were presented as eFaktura for Norwegian Internet bank customers in 2004. Before 2004, a total of 1.2 million payment claims had been issued via eFaktura. The number of issued invoices has more than doubled in the course of 2004. There is reason to assume that use of this service will continue to rise in the period ahead.

One "home banking service" that has shown a decline for several years now is telephone giro payments. The number of direct debits rose by 5% in 2004, whereas the value of transactions increased by 8%.

Direct debits have the highest average amount per transaction of the electronic giro services (NOK 4990). The fact that direct debit services are used for relatively large payments is peculiar to Norway. In many countries, direct debits are normally used to pay small bills.

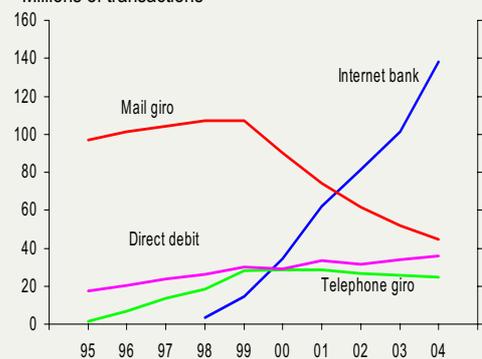
Measured in both number and value, different types of company terminal giros account for the largest share of electronic giro services. Large and medium-sized enterprises are the main users of this service. In 2004, 160 million such transactions were completed with a turnover value of NOK 6553 billion. The average amount per payment was NOK 40 900 in 2004.

Chart 3.15 Use of electronic giro services 1996-2004. NOK billions*



*To end-2002 only includes Internet bank retail customers

Chart 3.16 Use of "home banking services" 1995-2004. Millions of transactions*

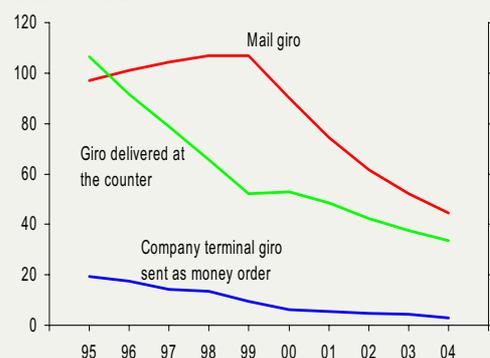


Source: Norges Bank
*To end-2002 only includes Internet bank retail customers.

Open network solutions: Network with an unspecified group of users, e.g. Internet. Banks' Internet bank solutions are distributed over an open network. Both business and retail customers can use Internet bank solutions.

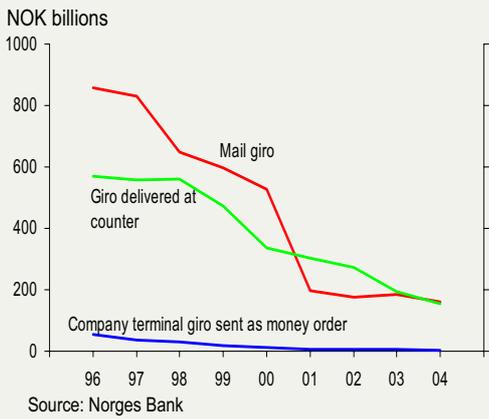
Closed network solutions: Separate network for a closed group of users, e.g. banks' company terminal giro solutions. These are specially adapted to businesses' needs and retail customers do not use them - partly because they do not have to transfer large numbers of payments and partly because these solutions would be expensive for retail customers.

Chart 3.17 Use of paper-based giro services 1995-2004. Millions of transactions



Source: Norges Bank

Chart 3.18 Use of paper-based giro services 1996-2004.

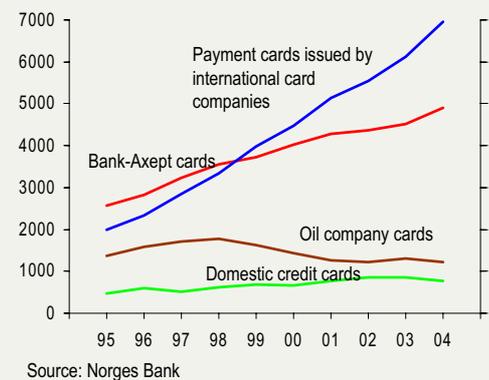


Use of paper-based giro services

For several years now, use of paper-based giro services has been falling. One important reason for this trend is the rise in prices for paper-based services in parallel with the increased use of cheaper and more user-friendly electronic giro services.

Mail giros and giros delivered at the counter in a bank branch or post office outlet are the most frequently used paper-based giro services. Centralised and automated processing makes mail giro a relatively efficient form of payment. However, in relation to the electronic alternatives, it is an expensive service to produce, which is reflected in a higher price than for electronic giro payments. Giros delivered at the counter (cash payments and account debits) fell by 11% in 2004 and now only account for 8% of total giro payments, whereas they accounted for 31% of giro transactions in 1995 (Chart 3.17). The turnover value of paper-based giros declined in 2004 (Chart 3.18).

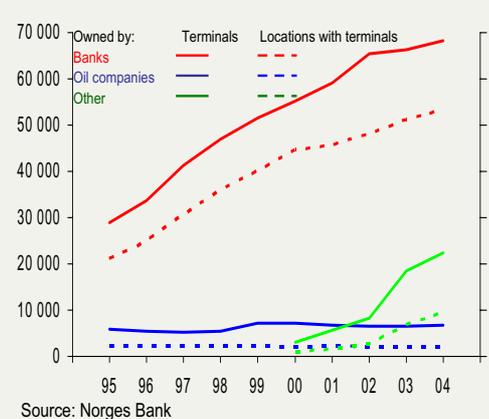
Chart 3.19 Number of issued payment cards at year-end 1995-2004. Thousands



3.4 Payment cards

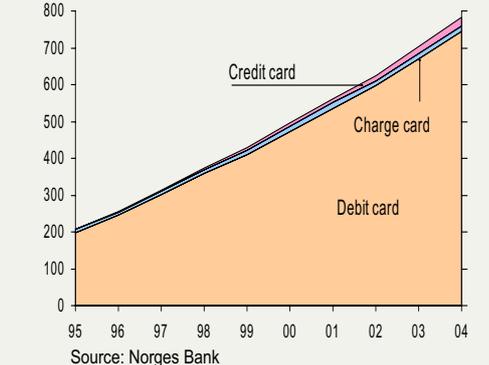
Most Norwegians have several payment cards and in an international context, Norwegians' use of cards is high. A total of 7.6 million cards have been issued in Norway and most cards have more than one function – they can often be used as Bank-Axcept and Visa or another international card system (Chart 3.19). Around 2.6 million “pure” credit cards and charge cards have been issued. Domestic credit card companies had issued 771 000 cards at end-2004. The oil companies have issued a further 1.2 million cards.

Chart 3.20 Number of payment terminals and locations with terminals 1995-2004



Debit cards with online authorisation and balance checks account for the bulk of use, at around 95%. In 2004, the number of Bank-Axcept cards rose by 8% and international payment cards increased by 14%. Card companies and banks in Norway issue payment cards from four international companies: VISA, MasterCard/Maestro, American Express and Diners Club. Whereas debit cards are used to access money in accounts, including any credit linked to that account, credit cards and charge cards are not linked to bank accounts. Credit cards give the cardholder an agreed credit limit with the card issuer. Charge cards are normally based on the principle that the sum of all individual purchases using the card in a given period is paid at a fixed time, e.g. once a month.

Chart 3.21 Use of different payment cards for goods purchases and cash withdrawals 1995-2004. In millions of transactions



Card use in Norway is largely electronic. This requires an online terminal that can check that the card has not been blocked and for debit cards, that there are sufficient funds in the account. The use of electronic terminals is more and more widespread. Manual/paper-based terminals are being replaced, among other things, by cordless electronic terminals that are easy to use in bars and restaurants and in connection with the home delivery of goods. Manual terminals were only used for 2% of card transactions in 2004. At end-2004, there were more than 97 000 payment terminals

in Norway that accepted Bank-Axcept and other types of payment card, an increase of 7% on the previous year (Chart 3.20). The number of locations with terminals that accept Bank-Axcept rose by 8% to around 65 000. Payment terminals are primarily owned by banks/BBS (70%), who then rent out terminals to shops. However, the share of terminals owned by retail chains continued to rise and stood at 23% in 2004. Oil companies own around 7% of terminals.

Norwegians' card use has more than doubled in the past five years. In 2004, a total of 785 million cards transactions were registered for goods purchases and cash withdrawals from ATMs, a 12% increase on 2003 (Chart 3.21). Use of Norwegian charge cards and credit cards is minimal, accounting for only 5% of transactions and 10% of the value in 2004. But this share has increased somewhat over time. The value of transactions using charge cards and credit cards was NOK 44 billion (Chart 3.22).

Most card transactions are with Bank-Axcept (Chart 3.23). In other countries, charge cards and credit cards are used far more than in Norway. In countries with joint solutions similar to the Norwegian Bank-Axcept, the use of debit cards is widespread (Denmark and Finland). Chart 3.24 shows the distribution of the different international card companies. Domestic credit cards only accounted for 0.5% of the number of transactions.

Around 676 million card transactions were carried out in 2004 for the purchase of goods and services to a value of NOK 262 billion. Bank-Axcept cards are often used to pay small amounts. In 2004, the average amount was NOK 343. By comparison, international cards had an average amount per payment of NOK 675. Domestic credit cards are used to make more expensive purchases and the average transaction was NOK 1000.

3.5 Cheques

From the time that current accounts were introduced in the 1960s, the use of cheques rose steadily, peaking at 110 million cheques per year in 1984. Since then, use has declined rapidly. Chart 3.25 shows that 1.2 million cheques were written in 2004, which is equivalent to 0.1% of total non-cash transactions in Norway. Cheques are suited to payments that require immediate settlement between private individuals. The average amount for cheques is over NOK 35000. Cheques have largely been replaced by payment cards, which are a far more efficient payment instrument for both the payer and the merchant, as well as for banks. Cheques have been priced so that customers are encouraged to replace cheques with more efficient alternatives.

Chart 3.22 Use of different payment cards for goods purchases and cash withdrawals 1995-2004. NOK billions

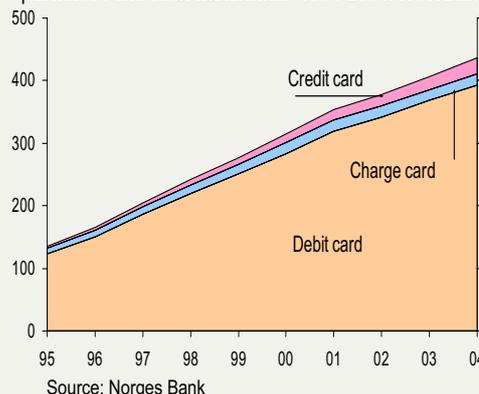


Chart 3.23 Use of Norwegian payment cards 1995-2004. Goods purchases and ATM withdrawals. In millions of transactions

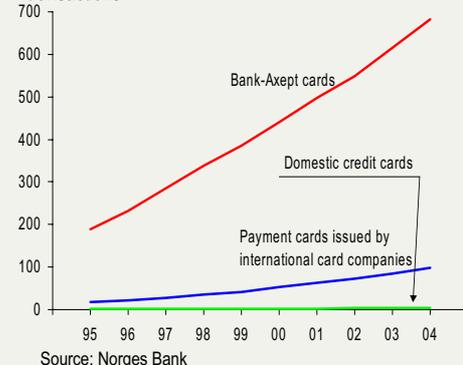


Chart 3.24 Use of payment cards issued by international card companies 1995-2004. In millions of transactions

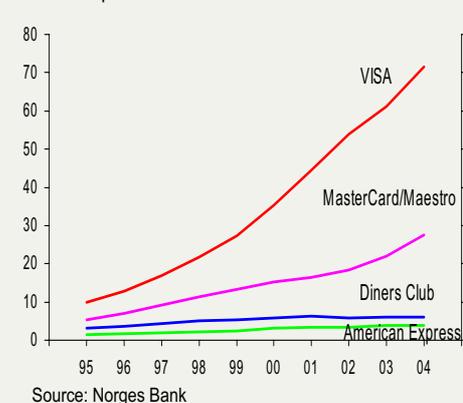
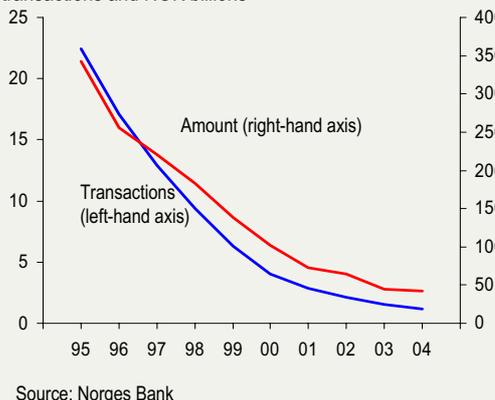


Chart 3.25 Use of cheques 1995-2004. In millions of transactions and NOK billions



4. Prices and information in the payment system²

4.1 Payments have a cost

Norwegian banks have been charging customers for most payment services since 1986. Customers include both enterprises and individuals, and banks provide payment services to both the payee (such as card terminals and Internet bank solutions) and the payer (payment cards and giro services).

It should be possible for customers to compare different providers' prices for payment services. Many banks offer customers a discount on payment transactions when they use several services in the bank, e.g. loans, investment services (purchase of shares, funds and bonds) or insurance services. This makes it difficult for customers to compare prices. If prices are to convey information about costs and thereby encourage customers to choose the most efficient service, the use of such discounts should be limited.

Customers may also be charged for other costs in the payment system in addition to direct pricing. If banks do not base prices for payment services on production costs, they have to charge a correspondingly higher price for other services. For example, banks may charge customers a fixed fee for account management. Banks' interest margin (average borrowing rate less average deposit rate) can also be used to cover costs in connection with the payment system. Up until 1999, it was usual for banks to debit a payer's account a few days before the sum was paid in to the payee's account and neither the payer nor the payee received interest on the amount in the intervening days. But the bank used the money to earn interest income in this period (float). Pursuant to the Financial Contracts Act (1999), float is now forbidden in Norway. Consequently, direct prices for payment services are now a very important source of income for banks. Float is still a common source of income for banks in many other countries.

Surveys indicate that customers react to price increases by switching to payment services that are cheaper (Humphrey, Kim & Vale, 2001). Data from recent years further supports this and shows a reduction in the use of more expensive services such as cheques and paper-based giros and a corresponding increase in relatively cheaper electronic giro services (see Chapter 3).

² The reporting of payments system price statistics has changed somewhat since last year's report. In 2003, statistics were divided into commercial banks and savings banks. Following the merger of DnB and NOR in 2003, it is no longer relevant to make this division.

4.2 Income and costs in the payment system

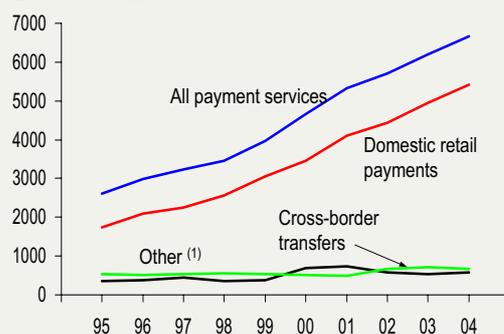
In 2004, banks' income from payment services totalled around NOK 6.7 billion, an increase of NOK 0.5 billion on 2003 (Chart 4.1). Of this, income from domestic payment services amounted to NOK 5.4 billion. Income from transfers abroad and other income from the payment system were NOK 0.6 and 0.7 billion, respectively. Information about banks' income from the payment system is gathered from the official financial statistics covering all banks in Norway.

A large part of banks' income from payment services derives from payment cards and different types of giro (Chart 4.2). Income from cards includes transaction prices, annual fees and rental income from terminals. Income from giros accounted for 30% of total income in 2004, of which around half was from electronic giros. This is the first year that banks' income from paper-based giros did not exceed income from electronic giros. Income per transaction for payment cards and electronic giros is low compared with paper-based giros and cheques. This means that income from these services is low in relation to the total number of transactions (discussed in Chapter 3).

In recent years, banks' income from the payment system has increased, at the same time that production costs for the same services have fallen. Norges Bank's most recent survey of banks' costs in the payment system was carried out in 2001 (Gresvik & Øwre, 2002). The survey showed that the cost of producing domestic payment services was NOK 5.9 billion. Banks covered around 70% of costs in 2001. The survey focused on banks' costs and did not look at customers' costs and other production and processing costs.

The economic costs to the society of the payment system include costs for the payer and the payee. In recent years, the degree of self-service involved in a number of payment services has increased and to certain extent it could be said that customers now perform tasks that were previously carried out by banks. On the other hand, the accessibility of payment services has improved. More payment terminals imply that there are now more locations where cards can be used for payments and also better access to cash and credit. Internet bank services and the expansion of Post-in-Shops have also helped to increase accessibility. It is therefore now easier to carry out payment transactions than before.

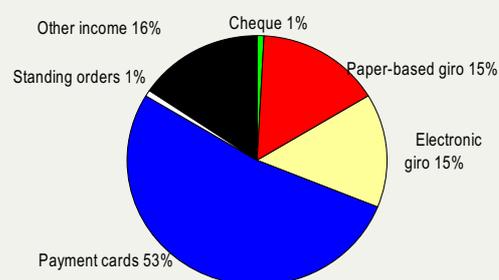
Chart 4.1 Banks' income from the payment system. 1995-2004. NOK millions



(1) Debt collection, letters of credit and interbank transactions

Source: Norges Bank

Chart 4.2 Income from retail payment services by service type. 2004. Per cent¹

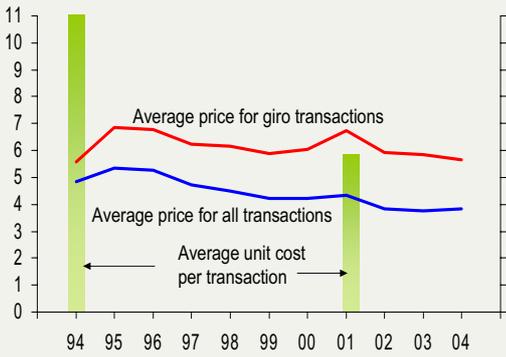


¹Income shown in the chart totals NOK 5.5 billion

Source: Norges Bank

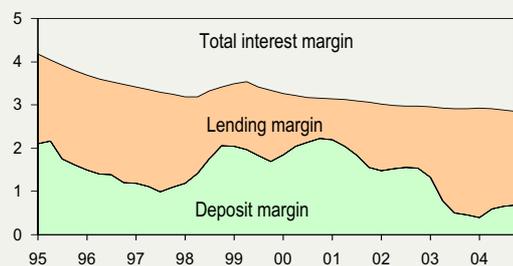
The prices presented in sections 4.3 – 4.6 are based on listed prices from a selection of 25 Norwegian banks. Norges Bank carries out a survey in January every year and the prices shown are 2005 prices.

Chart 4.3 Nominal average prices and average unit costs 1994 - 2004. NOK



Source: Norges Bank

Chart 4.4 Banks' deposit and lending margins, and total interest margin¹⁾. 1995 - 2004, Per cent



¹⁾ The interest margin is defined as the average of lending rate less the average deposit rate. 3 month money market rates (NIBOR) are used to divide the interest margin into a lending and a deposit margin. The chart shows a sliding average over the last four quarters.

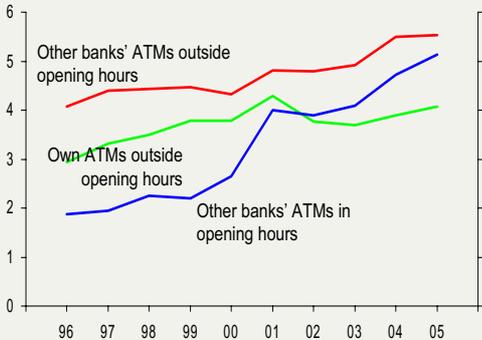
Source: Norges Bank

Two types of average are used in the text:

Weighted average: Average calculated by giving each bank in the survey a weight corresponding to the bank's total assets. Charts 4.5 - 4.10 show weighted averages.

Arithmetic average: "Normal" average, i.e. all the banks have the same weight in the calculations. Section 4.6 is based on arithmetic averages.

Chart 4.5 Prices for ATM withdrawals 1996-2005. Average for all banks. Prices in NOK



Source: Norges Bank

4.3 Average prices and interest margins

Average prices for electronic payment services rose moderately from 2004 to 2005. Over time, customers have increasingly switched to cheaper electronic alternatives (see Chapter 3). The sharpest price increase was for paper-based payment services. Despite the fact that prices for a number of payment services have been higher in recent years, the price a customer has to pay for an "average" payment transaction fell by 21% from 1994 to 2004, but has edged up again by 2% in the past twelve months (Chart 4.3). Measured in real prices, the index declined by 36% over the period.

Low interest rates in Norway also restricted the possibility for banks to use the interest differential to finance costs in connection with the production of payment services. Banks' interest margin has narrowed considerably in the past decade (Chart 4.4). Banks' ability to cover costs in the payment system from other sources is therefore limited. Norges Bank's cost surveys in 1989, 1994 and 2001 have also shown that the share of costs that banks can cover from pricing payment services directly has increased over time and that cross-subsidisation with income from other activities has been reduced.

4.4 Prices for cash withdrawals

Banks' pay for the deposit and withdrawal of cash from Norges Bank and NOKAS (Norsk Kontantservice AS) and merchants pay to withdraw money from banks. Bank customers also pay to withdraw cash in some instances. On the other hand, *the use of cash* at points of sale is free in Norway.

What is free? Bank customers can withdraw cash free of charge in three ways: in their bank's own branches and own ATMs (in opening hours) and in connection with goods purchases when a card is used.

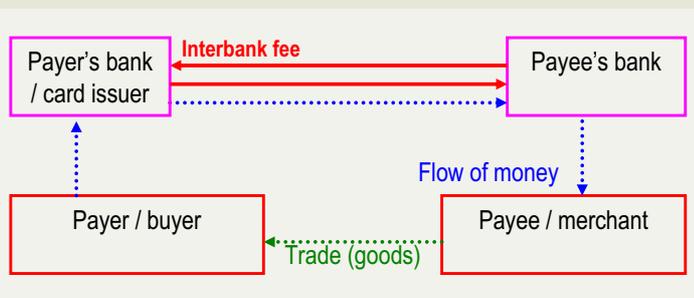
Which services cost? It is possible for bank customers in Norway to withdraw cash at the counter in banks other than the one in which they have an account, but this service carries a relatively high cost. The service is therefore rarely used. Most banks have a charge for cash withdrawals outside opening hours or withdrawals from another bank's ATMs. However, some banks offer this service free of charge (see discussion in section 4.6). Chart 4.5 shows weighted average prices for cash withdrawals from ATMs. The average price for withdrawing cash from one's own bank's ATMs outside opening hours rose by 5% to NOK 4.08 in 2004. Every single ATM in Norway is owned or rented by a bank, but can be used by all card users, irrespective of which bank they are connected to as customers. The cost of this arrangement is divided between the banks by means of interbank charges (see box). The average price for withdrawals from other banks' ATMs in opening hours increased by 9% to NOK 5.14, nearly the same as the price for withdrawals outside opening hours, which was more or less stable at NOK 5.53 last year.

Interbank charges in Norway

Joint payment systems such as the Norwegian system permit bank customers to carry out payment services that involve several banks, irrespective of which bank they themselves use. The costs incurred by one bank carrying out a number of bank services for customers from another bank are distributed between the banks in the system by means of interbank charges. Cash withdrawals from ATMs can be used as an illustration. ATMs are owned or leased by individual banks. The bank is responsible for offering cash withdrawal services to all customers, including those from other banks. The cardholder's bank pays an interbank charge to the bank that owns the ATM where the cash is being withdrawn, thereby sharing the costs. The interbank charge for ATM withdrawals is NOK 6.50.

The system for interbank charges is regulated by an agreement between the Norwegian Financial Services Association (FNH) and the Norwegian Savings Banks Association. The charges are cleared through the Norwegian Banks' Payments and Clearing Centre Ltd (BBS) and settled on a monthly basis. Alternatively, banks can agree other charge rates bilaterally (FNH 2003). Although the agreement is basically equivalent to price-fixing, the Norwegian Competition Authority has, for efficiency reasons, granted dispensation from the Competitions Act until 1 July 2006 (Konkurransetilsynet 2001).

The chart shows interbank charges, rates for various payment services and how the charges are paid. Banks' interbank charges are different from the interchange fee used in international card systems, which is a percentage charge and is paid to the card issuing (payer's) bank (see separate box).



Interbank fees	Payment service	Price in NOK
From payee's bank to payer's bank / card issuer	Direct debit	2.00
	Simplified payment claim	1.00
From payer's bank / card issuer to payee's bank	EFTPOS and Internet payment	0.40
	Cashing giro	14.00
	Debt instrument Lånekassen	18.00
	Cheque	14.00
	Special message to payee	2.00
From payer's bank / card issuer to bank that owns ATM	ATM	6.50

4.5 Prices for using payment instruments

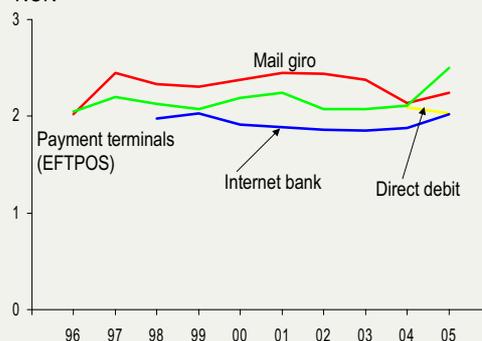
Prices for electronic payment services targeted at retail customers have remained relatively stable in recent years, as shown in Chart 4.6. However, there were a number of changes in prices for these services last year. The price for Avtalegiro (direct debit) has fallen slightly and now costs on average NOK 2.03. The price for paying bills via the Internet rose by 7% to NOK 2.02 in the course of 2004 and the price of telephone giros increased by 5% to NOK 2.24. Using cards in payment terminals in shops (EFTPOS) became more expensive for cardholders in relative terms in 2004. At the start of 2005, the average list price was NOK 2.50, which is 18% up on the previous year.

The increase in prices for paper-based retail services has been considerable in recent years (Chart 4.7). The rise was sharpest (34%) for personal cheques which now cost NOK 27.61. The price for mail giro (excluding postage) rose to NOK 7.46 (14%) and the price for giros delivered at the counter increased by 11% to NOK 33.17. The most expensive service in the retail market is giros paid with cash, but the price for this service has fallen marginally in the last year.

Direct Remittance: Service established by the Norwegian Banks' Payments and Clearing Centre Ltd. (BBS) for payments via business terminals. Used by companies for individual payment, retail payments, account adjustments, etc. The service uses closed communication lines and is not available via the Internet or similar open networks and requires software that is installed locally for each user.

Company terminal giro: Collective term for payment services similar to Direct Remittance that are offered by institutions other than BBS (i.e. banks and data centres).

Chart 4.6 Prices for electronic payment services for retail customers 1996-2005. Average for all banks. Prices in NOK



Cash - an expensive means of payment?

Payment transactions using payment cards are priced. The same is true of payments using either giro or cheque. The use of cash is not priced in the same way. When the public pay in cash, the payment service is generally free of charge. However, the acquirement of cash from ATMs or similar, is often priced.

There are different costs associated with the use and distribution of cash. Points of sale use resources to cash up the tills every evening, separate out damaged banknotes, transports the cash to night safes, and to install security measures against robbery. Points of sale must also ensure that they have an appropriate amount of notes and coin in the tills at any given time. Banks in Norway charge for the delivery of coin and banknote roles to shops, etc. These charges are meant to cover some of banks' costs in connection with cash. Like points of sale, banks use resources to sort and count cash and to separate out damaged banknotes from ATMs and banks and to install security measures against robbery. In addition, banks have to transport cash to and from cash depots and empty and fill ATMs and branch counters.

The costs linked to cash also include the costs of production, counting and destruction in Norges Bank. The resources that enterprises and private individuals use to collect cash from ATMs and bank branches come in addition. The storage of cash also entails a security risk and lost interest income.

The use and distribution of cash thus entails a number of costs that are not necessarily priced. At the same time, cash has features that are useful to the payment system, as banknotes and coins are a benchmark value for all prices in society. The use of cash also involves immediate settlement on the spot. Not all payment instruments can provide this.

Payment with CID:

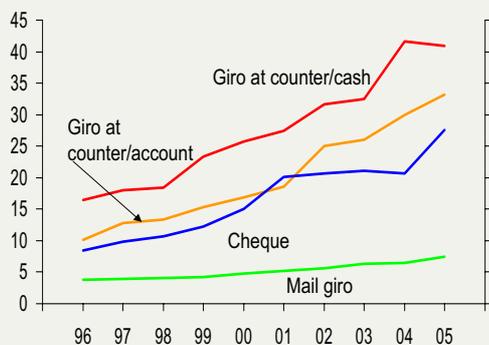
CID (customer identification number) is a series of numbers of up to 25 digits that companies can use to identify customers and payment claims. The payer's bank checks if the payer is using a valid CID number.

Payment with notification: When payment is made without CID, it is possible for the payer to write a non-standardised message in a separate field on the giro. The message might include the customer and invoice number. You cannot include information in the message field when CID is used.

Payment without notification: A payment with no CID and an empty message field. The beneficiary then only gets information about the amount paid, the date and the sender (if this field is filled in).

As with electronic services used by retail customers, there has been a moderate price increase for electronic payment services delivered to the corporate market in recent years (Charts 4.8 and 4.9). The most automated services (with CID) generally have the lowest prices. When payments with notification are sent to the payee, the payer's bank is charged an interbank fee by the payee's bank. Giros with notification are therefore more expensive. Chart 4.8 shows that the price differential between company terminal giros with notification and corresponding giros with CID has narrowed in the past year. Giros with CID are now 51% more expensive, whereas giros with notification are 5% cheaper.

Chart 4.7 Prices for paper-based payment services for retail customers 1996-2005. Average for all banks. Prices in NOK



Source: Norges Bank

Changes in prices for paper-based business services are shown in Chart 4.10. The rise in prices for these services has been relatively steep. Both direct remittance sent as a money order³ and company terminal giros sent as money orders are now 30% more expensive. The price for business cheques rose by 16% and the cost of filling out optical character recognition forms (OCR-return)⁴ rose by 6%. The greatest relative increase (72%) was for company terminal giros without notification, which now cost NOK 2.78

³A giro form with payment order has no account number for the payee. The payee has to deliver the form to the bank in order to receive payment.

⁴ OCR: Optical Character Reading. Forms that have not been filled in correctly are returned.

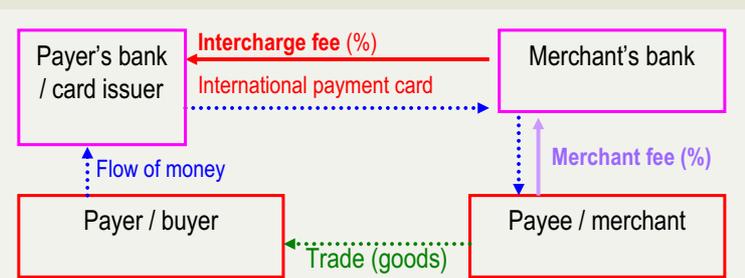
International card companies – weak competition?

A project group was established to assess whether there is too little competition between international card systems in Norway and whether the authorities should introduce measures to encourage competition. The group, which comprised members from The Norwegian Financial Supervisory Authority, the Norwegian Competition Authority and Norges Bank, submitted its report to the Ministry of Finance in October 2004.

The chart shows the four parties involved in payment transactions in the two largest international card companies in Norway, VISA and MasterCard: 1) the payer (cardholder), 2) payer's bank / card issuer, 3) payee's bank, also called acquirer, 4) payee / merchant (shops, etc.). The chart also shows payment flows between the parties.

Card systems involve two markets. Participants in the first market (issuer market) compete to issue cards to cardholders. In the other market (acquiring market), acquirers compete to establish links with merchants. The two markets are mutually dependent on their joint product: the payment card. This is called a two-sided market.

The more outlets there are that accept a given payment card, the more companies and individuals benefit from the card services. Merchant demand to join a network increases in line with the number of cardholders attached to the network. Every time a new cardholder joins the card system, the utility value for existing users increases as the card system becomes more attractive to merchants and more users will then want to join to the system. This is called network externalities.



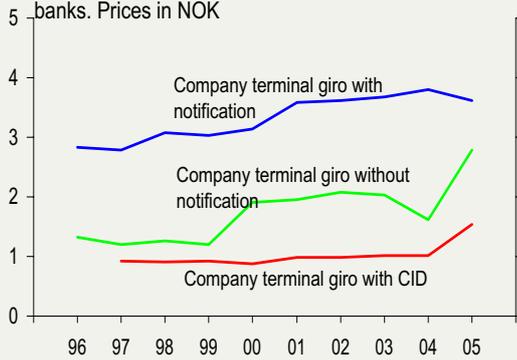
Cardholders pay different charges to their bank / card issuer, whereas merchants pay merchant fees to the acquirer's bank. The project group showed that cardholders generally pay less than the accrued costs, whereas merchants pay more. The acquirer's bank has to pay the interchange fee to the payer's bank / card issuer. The interchange fee levels the difference in income between

the acquirer and the issuer. This is called cross-subsidisation and may be necessary in a bilateral market in order to harvest the benefits of network externalities (Baxter, 1983). The project group shows that cross-subsidisation exists in the Norwegian market for international payment cards, but has little basis for saying whether this is a problem or not.

Economies of scale give lower production costs per unit, the more production increases. Both the acquirer and the issuer can exploit economies of scale to promote more efficient operations (Bergman, 2003). However, in markets with economies of scale, there is a risk that one or more major providers achieve a situation where they can misuse their market position. The market for international payment cards in Norway is characterised by a small number of major participants with good profitability on the supply side and high interchange fees and merchants' charges compared with other countries. However, the situation is changing as new participants are establishing themselves as acquirers, and VISA and MasterCard's guidelines for setting fees will be increasingly cost-based in the future.

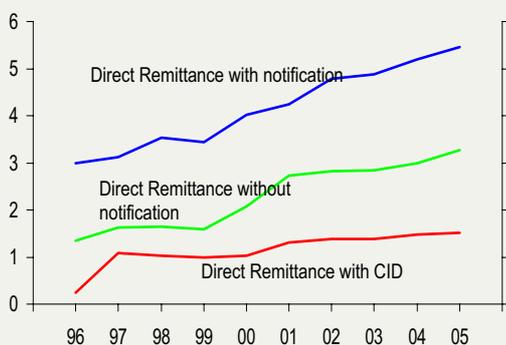
The project group has chosen to underline recent changes in the market for international payment cards and recommends an observation period of two years to see whether competition improves. If competition and price levels in the acquirer market do not improve in the course of two years, the project group recommends that the Ministry of Finance then assesses whether interchange fees should be regulated. The group advises the authorities against setting an upper limit for merchant fees. It may also be appropriate for the Norwegian Competition Authority to assess the legality of some clauses in the contracts between acquirers and merchants that restrict competition, in particular the rule that merchants cannot impose charges on customers for paying with international payment cards. The report was distributed for comment, with deadline of 25 April.

Chart 4.8 Prices for company terminal giros (without Remittance) 1996-2005. Average for all banks. Prices in NOK



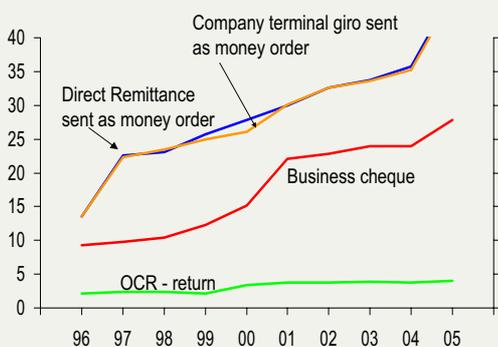
Source: Norges Bank

Chart 4.9 Prices for Direct Remittance 1996-2005. Average for all banks. Prices in NOK



Source: Norges Bank

Chart 4.10 Prices for paper-based payment services for businesses 1996-2005. Average for all banks. Prices in NOK



Source: Norges Bank

Annual fees and start-up fees

Banks normally charge an annual fee for combined payment cards, i.e. cards that are both Bank-Axcept cards and international payment cards. At start-2005, the average annual fee customers paid for this service was NOK 256, against NOK 252 in 2003. The annual fee varies between NOK 200 and 290 in the 25 banks surveyed by Norges Bank, 13 of which charge NOK 250.

A joint agreement between banks⁵ stipulates that newly established banks must pay a fee to the banks association for access the Bank-Axcept system. The fee is designed to cover banks' joint costs for the development and adaptation of a shared infrastructure for payment cards. The start-up fee is calculated based on the number of Bank-Axcept cards that the new bank has issued over a two-year period. The bank has to pay a one-time fee of NOK 250 per card for each card in excess of 17 500 at this point. Banks recording robust growth in the card market are therefore particularly affected. Skandiabanken lodged a complaint about this with the Norwegian Competition Authority in autumn 2002, but the complaint was not upheld.

Some banks charge customers a monthly or annual fee for access to Internet bank services. Some banks also have start-up fees for access to Internet banks. At start-2005, a total of 15 banks in the survey charged a monthly/annual fee for access. The average price in these banks was NOK 183 per annum, an increase of 15% on 2003. The fees are between NOK 100 and 300. The number of banks that charge set-up fees and annual/monthly fees has fallen since Internet bank services were first introduced.

4.6 Price spread

Average prices for payment services can conceal large variations in actual prices between banks. A large spread *may* mean that banks have different market strategies, e.g. they are focusing on different market segments. A smaller spread in prices for a service *may* indicate strong competition for customers for that particular service. However, a smaller spread may also be due to the banks' joint agreement and regulations for payment services, particularly regarding how to cover costs for joint services through interbank fees. Data on the price spread for some services in selected banks is presented below.⁶ In order to assess the competitive situation for these services or in the market for payment services in general, it is necessary to carry out a more thorough analysis.

⁵ Rules for the calculation of prices for access to banks' joint systems in the payment system. These rules are drawn up by the Norwegian Financial Services Association and the Norwegian Savings Banks' Association. The rules are published in the collected agreements and rules for domestic payment systems, see reference material.

⁶ All average prices in this section are based on arithmetic (i.e. unweighted) averages.

Prices in the payment system - a challenge

In most countries, payment services for bank customers have been free. This was also the case in Norway until the mid-1980s, when prices were introduced for using cheques. Banks in Norway have gradually introduced direct prices for most services. In many other countries, banks have not succeeded in doing this. Introducing such charges can be problematic, partly due to the market structure, as shown in the box about the regulation of international card companies. It is sometimes also difficult to convince consumers and the authorities that the pricing of payment services will result in a more efficient use of society's resources.

The introduction of prices in the payment system might be described as a "prisoner's dilemma" game (Guiborg & Segendorff, 2002). For the sake of simplicity, imagine that the market comprises two banks, Bank A and Bank B. To begin with, the banks do not charge their customers for providing payment services. The banks have the same costs, the same profitability and the same market shares. The banks have to cover their costs through other channels (interest margin, float, etc.). If Bank A decides to introduce prices for payment services and Bank B does not do the same, customers will punish Bank A by switching banks. If both banks introduce prices *at the same time*, neither will lose market shares and the use of payment services in the future can be steered towards more cost effective services through direct pricing.

The problem with introducing services at the same time is that both Bank A and Bank B have to know that the other bank is going to introduce prices and when. If the banks introduce prices simultaneously, the authorities may deem it to be price-fixing, which is forbidden in most countries. It is also likely that the banks' customers will be very dissatisfied, which makes the change even harder. Furthermore, banks will always be motivated to offer free services as it will procure the "free bank" a larger customer base, as long as the other bank continues to price services and there is the possibility of covering costs through channels other than the payment system.

Prisoner's dilemma

Market share	Bank B	
	Price	Free
Bank A	Price	Equal market shares. Priced services give income based on use of services
	Free	Customer prefers A
		Customer prefers B
		Equal market shares. No pricing results in cross-subsidisation

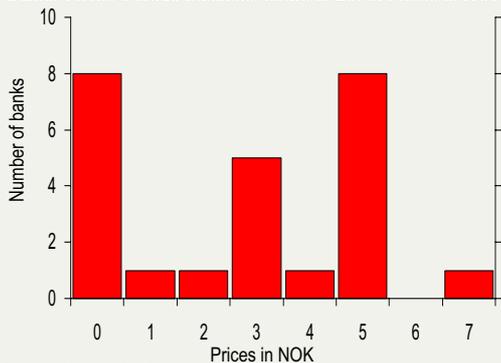
Prices in Norway are based on a number of charges that banks pay each other (see box on interbank charges). Prices were introduced in a form of open cooperation; the competition authorities were involved in the process and the central bank encouraged the establishment of joint solutions. The use of float is now prohibited by Norwegian law and Norwegian banks have done much to cut production costs in the payment system and for other bank services. Banks' income from the payment system is now largely based on prices for the services they provide, whereas previously there was widespread cross-subsidisation between different services.

It is beneficial if customers can choose between different payment services. Prices give signals that help users to choose the most cost-effective service, in terms of production. Both theory and practical experience show that markets are more efficient when services are priced.

Price spread on selected services

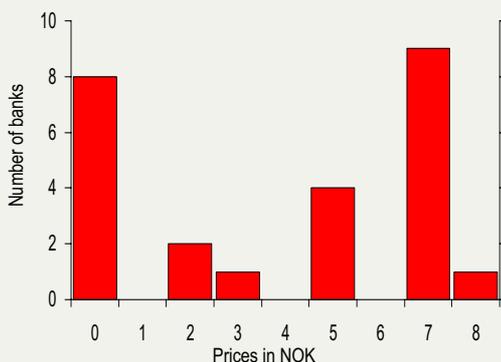
The price spread is marginal for a number of paper-based services and payment card services, whereas the spread for using electronic giro services and some ATM services is larger.

Chart 4.11 Price spread for withdrawals from customers' own banks' ATMs outside business hours in 2005. Prices in NOK



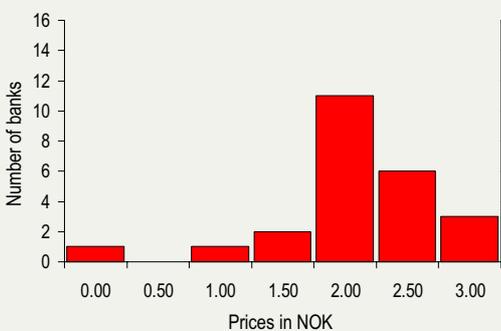
Source: Norges Bank

Chart 4.12 Price spread for withdrawals from other banks' ATMs during business hours in 2005. Prices in NOK



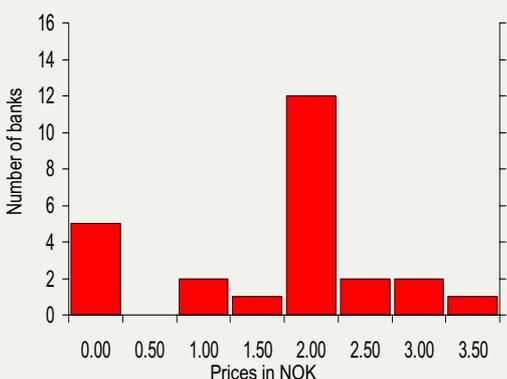
Source: Norges Bank

Chart 4.13 Price spread for use of Bank-Axcept cards in payment terminals (EFTPOS) in 2005. Prices in NOK



Source: Norges Bank

Chart 4.14 Price spread for Internet giros in 2005. Prices in NOK



Source: Norges Bank

As many as 24 of the 25 banks in the survey offer free cash withdrawals when the customer uses his/her own bank's ATMs in opening hours. The price spread is considerably larger for withdrawals from own ATMs outside opening hours. This service is free in 8 banks, whereas 9 banks charge NOK 5 or more (Chart 4.11). There is also a considerable spread in prices for withdrawals from other banks' ATMs; 8 banks offer this service free in opening hours, whereas the others charge on average NOK 5.77 (Chart 4.12). This is an 8% increase on 2004. Only 2 banks offer free ATM withdrawals, regardless of when and where they are made.

The price spread for using payment cards in connection with goods purchases is relatively small. Most banks price this service somewhere between NOK 2 - 2.50 (Chart 4.13). Telephone giros and bill payments via Internet banks have a greater price spread (latter shown in Chart 4.14). In 5 banks customers are offered free bill payments via the telephone or Internet bank, whereas 12 banks charge NOK 2 for each giro paid via an Internet bank. The price spread for paper-based retail services is relatively small. For example, the price for mail giros is between NOK 6 - 8 in 21 of the banks included in the survey (Chart 4.15).

Company terminal giros are a widespread means of payment among corporate customers. There are a number of different services for payments from company terminals, but the majority of them have a relatively small price spread. The price for company terminal giros without notification and giros with CID lies between NOK 1 - 2 in 18 of the banks. Company terminal giros with notification are more expensive, as shown in Chart 4.8. This service is priced at NOK 2 - 4 in 19 of the banks.

In contrast to the services mentioned above, the price for company terminal giros sent as money orders varies widely from bank to bank. Prices vary between NOK 15 - 56.

Price spread and banks' sizes

The price surveys do not indicate that prices vary systematically according to the size of the bank. A bank is regarded as big if its share of the banks' combined total assets or deposits in NOK is greater than 2%. Of the 25 banks included in the survey, 8 are regarded as big banks (based on observations in December 2004).

Big banks are more expensive for some the 26 services that have been analysed. The average price for goods purchases with a payment card (EFTPOS) is NOK 1.90 in small banks and NOK 2.60 in big banks, i.e. a price differential of 37%. Four other services are also more expensive in big banks than in small banks. These are over-the-counter giros, ATM withdrawals from other banks outside opening hours, OCR file services and company terminal giros without notification.⁷

⁷ The results are based on a level of significance of 95%.

4.7 Information problems regarding financial services

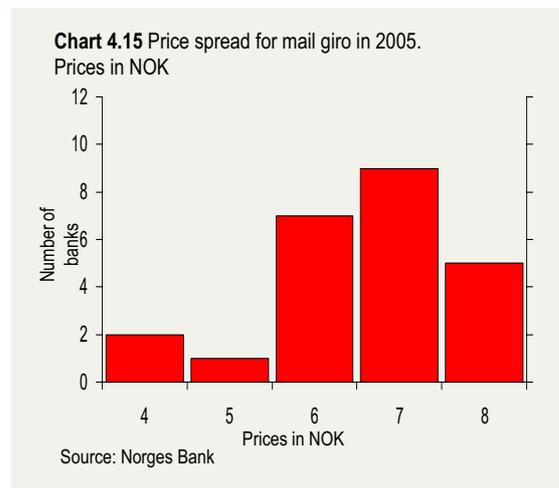
For consumers, good and reliable information is an important prerequisite for making the right choice when purchasing goods and services.

The Norwegian Consumer Council, the Consumer Ombudsman and Kredittilsynet (the Norwegian Financial Supervisory Authority) published a joint report in August 2004 on improvement measures for the provision of information to end-users in the financial market. The report assessed, among other things, information problems in connection with “everyday” banking services, i.e. services linked to bank accounts such as bill payments, use of cards and Internet banking. The report points out that it is often not a *lack* of information that is the problem, but rather that there is *too much* information and it is often unstructured and virtually inaccessible. A number of products are relatively complex and use of product packages and loyalty programmes may confuse customers. The report also points out that it is sometimes difficult to compare prices between banks because different banks price account services in different ways.

Information regarding customer liability in connection with the misuse of payment instruments is also important. For example, no maximum loss limit has been set for Internet banking, as it has for payment cards, which has considerable implications if a third party was to misuse a customer’s Internet bank account. The report states that many consumers are not aware of this.

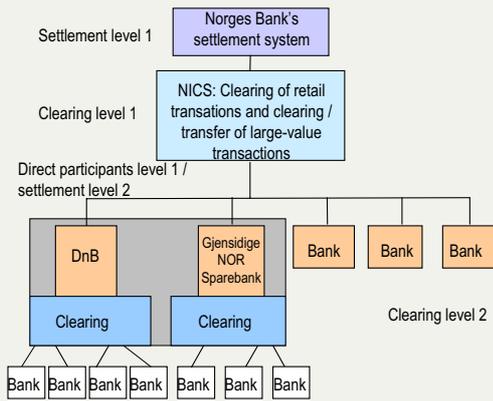
In order to improve the situation for customers, the report proposes the establishment of a centralised information data base/Internet portal where all relevant information can be gathered, structured and compared. The purpose of this would be to offer consumers an updated overview of information on different financial products that is distributed by an independent body and presented in a standardised manner.

There are already private and public initiatives that provide customers with information about prices, including www.dinside.no, www.forbruker.no and regular postings in Norwegian papers about different banking services. Norges Bank’s “Annual Report on the Payment System” shows average list prices from a selection of banks. The problem is that the information is dispersed, incomplete and not necessarily up to date. However, today’s information provision is better than it was only a few years ago.



5 Interbank payments and settlement in the central bank

Chart 5.1 Interbank systems in Norway



Source: Norges Bank

Clearing

A payment transaction between two customers in different banks results in the payee's bank having a claim on the payer's bank. When a payer and a payee have accounts in the same bank, the payment can in principle be processed locally in the bank. In Norway, however, a large part of service production in the payment system is coordinated. This means that transactions using payment cards, mail giro, the Internet and terminals are normally processed via a clearing house, regardless of whether the payer and the payee have accounts in the same bank.

Asset and liability positions are calculated in a clearing house before being settled in a settlement bank. Banks' positions vis-à-vis other banks participating in the clearing are offset against each other. This is called multilateral net clearing.

Net settlement

In the settlement process, clearing results are transferred to banks that are owed money and accounts of banks with net debts are debited. In this way, the need for liquidity is reduced. Both banks must have accounts in the settlement bank.

Gross settlement

In gross settlement between banks, payment transactions are settled individually, without prior clearing.

RTGS system

RTGS is an abbreviation for Real-Time Gross Settlement and is a gross settlement system where payments are settled continuously.

5.1 Large-value transactions

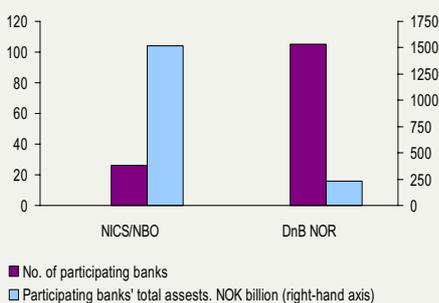
Interbank systems, participants and payment flows

Banks in Norway are linked together by interbank systems that make it possible for them to settle any claims among themselves. The structure of interbank systems in Norway is illustrated in Chart 5.1. A total of 147 banks participate in the most important joint system for interbank clearing, the Norwegian Interbank Clearing System (NICS). The banks decide themselves whether they want to settle their mutual obligations over accounts in Norges Bank or in a private settlement bank. Average daily turnover in NICS was NOK 196 billion in 2004 and the average value settled daily in Norges Bank was NOK 152 billion.

All of the 145 banks with accounts in Norges Bank also have access to Norges Bank's settlement system (NBO), including Norwegian commercial and savings banks, foreign subsidiaries and branches of foreign banks.

The establishment and operation of interbank systems is subject to licensing pursuant to the Act relating to Payment Systems, etc. Norges Bank is the licensing authority. In 2001, NICS, Den norske Bank and Gjensidige NOR Sparebank were granted licences to operate interbank systems and the systems are subject to supervision. Den norske Bank and Gjensidige NOR have subsequently merged to become DnB NOR Bank ASA. There are, however, still two different solutions for the settlement systems. The technical integration of these systems will happen over time. On this basis, both licences will be upheld until further notice. Other banks also operate similar settlement services, but on such a small scale that they are exempt from licensing requirements. Many smaller banks settle their positions in one of the private settlement banks, whereas the larger banks settle in NBO. Chart 5.2 shows participation in the various Norwegian settlement systems, measured by the number of participating banks and participating banks' total assets, respectively.

Chart 5.2 Licenced interbank systems. Number of participating banks and total assets 2004

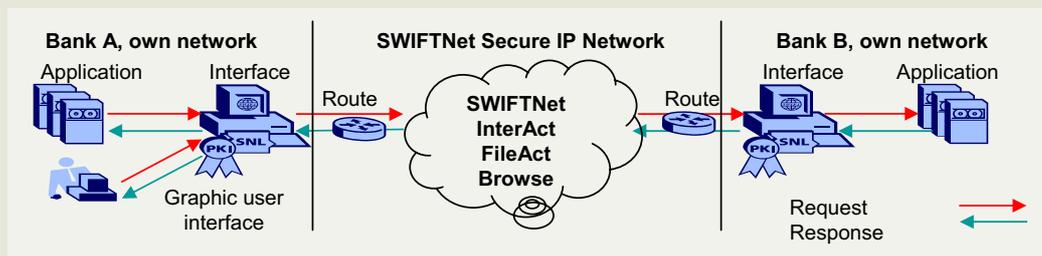


Source: Norges Bank

SWIFTNet – SWIFT’s new services now in operation in Norway

For over 30 years, SWIFT (Society for Worldwide Interbank Financial Telecommunication) has provided messaging services for the financial sector. Payments with specific information requirements or where speed is of the essence are sent via SWIFT in Norway and in most parts of the world. Norges Bank and many Norwegian banks are linked to SWIFT. As the use of SWIFT is so widespread, the quality of this service is one of the factors that determine efficiency in the payment system.

SWIFT implemented a technical change in 2003-2004. Messages that were previously sent via a closed network (SWIFT Transport Network) are now sent over the Internet (SWIFTNet). The change has made it possible to introduce more services for users. SWIFT wanted to increase the degree of security, reliability and accessibility by introducing SWIFTNet. Messages are sent over the Internet via a route that is cleared and encrypted in advance. All users are identified by means of electronic signature to ensure that the message traffic is based on actual requests.



By end-November 2004, 98% of users (over 7000) and 96% of all SWIFT FIN traffic had switched to SWIFTNet. All SWIFT members in Norway were SWIFTNet users at 1 January 2005.

SWIFTNet is designed to satisfy banks' need to exchange messages and transfer files in real time and for "store-and-forward"/batch transmissions. Banks also have the need for secure information collection (browsing). There are three different solutions in SWIFTNet that aim to satisfy these needs:

- *InterAct* is a real time messaging system with "store-and-forward" functionality. The service is designed for priority messaging in terms of time and operations.
- *FileAct* is also a real time messaging system with "store-and-forward" functionality, but is designed so that users can use non-standardised messages. The service is suitable for the transfer of large amounts of data.
- *Browse* provides access to the websites that are available via SWIFTNet. The service provides access to messages and information that are sent via *InterAct* and *FileAct*.

Different types of payment are settled between banks in different ways. Ordinary customer payments (e.g. payment card, giro and ATM transactions) are included in NICS retail netting. This is a multilateral netting in which all claims between banks as a result of customers' payments are reduced to one set of positions between the 147 participating banks. Retail settlement is carried out twice daily in Norges Bank at 6am and 3pm; 26 banks participate in these settlements. At these times, transactions that have been registered through the day are settled. If a payment order is registered early in the day, the amount may be paid in to the payee's account the same day, but due to the settlement times, it may take up to one working day before the payee receives the money in his/her account.

Bigger transactions and interbank transactions are settled in a separate net settlement (NICS-SWIFT-net settlement) or individually in real time (NICS-RTGS). A total of 19 banks participate in the net settlements. Most SWIFT payments under NOK 25 million are cleared in one of three daily clearings, with subsequent settlement in Norges Bank. Payments in excess of NOK 25 million and other specially earmarked transactions are settled immediately on an individual basis in Norges Bank in the gross settlement. All banks in Norway that are SWIFT members can participate in the gross settlement.

Trades in securities and options are settled in the Norwegian Central Securities Depository (VPS), whereas the cash leg of the settlement takes place in Norges Bank's securities settlement (VPO). VPS registers and clears transactions and positions for settlement in securities trading. VPS also clears options trades on behalf of the Norwegian Futures and Options Clearing House (NOS). A total of 20 banks (in addition to Norges Bank) and 21 investment firms participate in the securities settlement, and 6 banks and 17 investment firms participate in NOS settlement.

Turnover and liquidity

Average daily turnover in NICS was NOK 196 billion in 2004, a reduction of NOK 53 billion on 2003. Total turnover in the interbank systems can vary considerably from day to day. There are also substantial variations in the value and number of transactions by transaction type. One important reason for the decline in 2004 was the merger between DnB and Gjensidige NOR. Transactions that previously were carried out between DnB and NOR are now often processed internally in the merged bank, which results in fewer transactions and smaller amounts in the clearing and settlement.

Gross transactions (RTGS) accounted for 0.1% of the total number of transactions, but account for 66% of the value in NICS (NOK 129 billion). The amounts involved in retail netting are far smaller than for gross transactions, but retail netting accounts for over 99% of the total number of transactions. In 2004, an average of 4.3 million transactions were processed daily in retail netting, with a value equivalent to over 31% of average daily turnover (NOK 61 billion).

Average daily turnover in SWIFT net clearing was NOK 5 billion (before netting), with just under 4500 transactions per day. There has been a fall in turnover in the SWIFT net clearing in recent years, following a reduction in the maximum transaction amount for this clearing system from NOK 100 million to NOK 25 million in 2003.

Banks need liquidity in order to carry out settlements in Norges Bank. In 2004, banks had on average NOK 112 billion available in liquidity in NBO as sight deposits and borrowing facilities in Norges Bank at start of day (05:00). Chart 5.3 shows that liquidity rose from 2003 to 2004. The increase was due to banks pledging more securities in favour of Norges Bank. In 2004, turnover in NBO was down on 2003 and the settlement system had more liquidity in relation to turnover in 2004 than in the three previous years.

The netting of banks' positions in net clearings reduces banks' need for liquidity for settlement. The daily value of transactions (which are included in NICS retail clearing and NICS-SWIFT) is reduced from an average of NOK 66 billion before clearing to NOK 8.6 billion in the settlement in NBO. This netting effect means that banks, on average, only require liquidity equivalent to 13% of the value of total payments in the clearing in order to cover their payments.

Continuous Linked Settlement (CLS) is a settlement system for foreign exchange trading. The Norwegian, Swedish and Danish krone were included in CLS in September 2003. In connection with the settlement of foreign exchange trades, participants in NBO have pay-in obligations to the foreign exchange settlement system, CLS. Chart 5.4 shows banks' daily pay-in obligations to CLS in 2004. The average daily volume of pay-in obligations was NOK 8 billion in 2004. In order to ensure that banks fulfil their pay-in obligations to CLS, the three Scandinavian central banks have established the "Scandinavian Cash Pool" (SCP) for the efficient transfer of liquidity across the three currencies. The arrangement means that banks can use deposits in one of the Scandinavian central banks as collateral for loans in the other central banks.

5.2 Securities settlement system

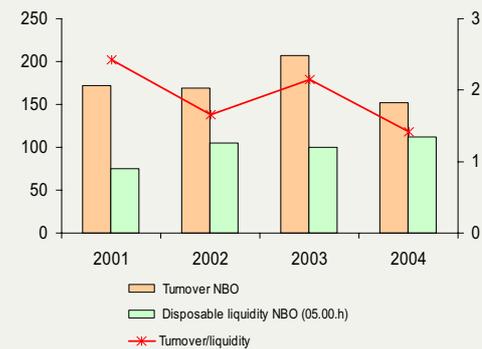
The primary function of the securities market is to raise capital for private and public enterprises (primary market) and to ensure that investors can trade ownership interests (secondary market.) The following section describes the Norwegian system for securities settlement. There is then a brief outline of international recommendations and the ongoing consolidation of markets.

Norwegian securities settlement

Chart 5.5 shows a securities trade initiated by the buying investor (B) and the selling investor (S) (secondary market) via brokers on the Oslo Stock Exchange. The trade is settled in the securities settlement (VPO).⁸ In the primary market, a trade is agreed between the issuer (S) and the investor (B).

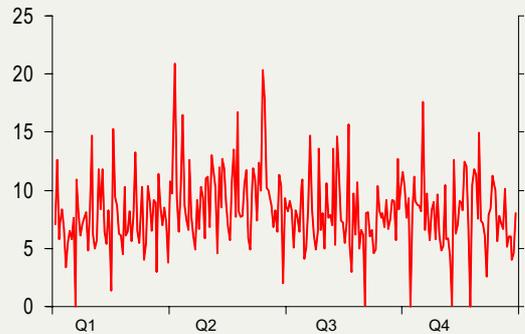
⁸ Trades that are agreed without a broker are settled in accordance with procedures set out in NOU (2000:10, p. 32).

Chart 5.3 Turnover and liquidity in NBO 2001-2004. NOK billions (left-hand axis) and ratio (right-hand axis)



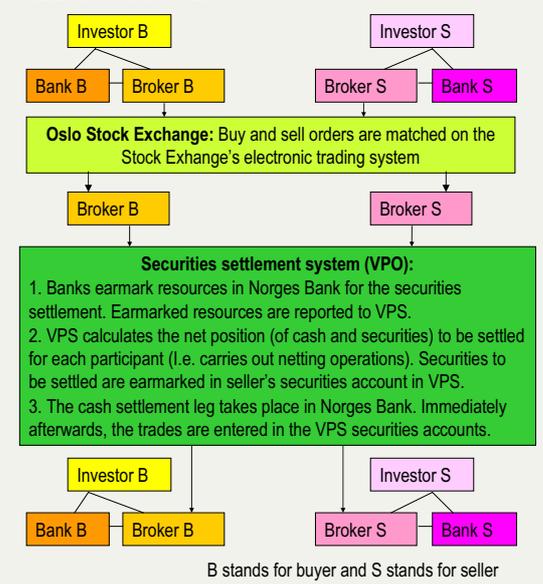
Source: Norges Bank

Chart 5.4 Banks' daily payment obligations to CLS in 2004. NOK billions



Source: Norges Bank

Chart 5.5 Securities chain



Dematerialised system

Securities that are settled in VPO do not exist in any physical form, only as registrations in the Norwegian Central Securities Depository (VPS). The transfer of ownership for securities therefore takes place by electronic registration in VPS.

Central Counterparty (CCP): A central counterparty is an entity that steps in as a legal counterparty between the buyer and the seller in a securities or derivative trade, so that the buyer and the seller do not deal directly with each other. This means that the buyer and the seller only have risk in relation to the CCP and not in relation to each other.

Participants in VPO: 20 banks and 21 brokers participate in VPO in addition to Norges Bank, which is responsible for the issue and turnover of government loans on behalf of the government.

Two settlements daily: Two securities settlements are carried out daily, one at around 6am and one at 12 noon.

Stock Exchange turnover: on 31 December 2004, the market value of shares on the Oslo Stock Exchange was NOK 931.7 billion. The value of outstanding domestic bond debt and short-term paper debt was NOK 671.3 billion. Average daily turnover on the Stock Exchange totalled NOK 18 billion per day in 2004.

Foreigners: Of the 39 brokers that are members of the Oslo Stock Exchange, 16 are distant members, i.e. foreign companies that are not established in Norway. Foreigners account for 50-70% of the trade volume on the Oslo Stock Exchange.

VPO settlement: In 2004, net positions amounting to around NOK 3.7 billion were settled daily in VPO.

Investors who wish to trade securities on the Oslo Stock Exchange must have an account with a broker (investment firm) and a bank, as indicated in the chart.⁹ A securities trade is initiated when a broker places a trade order on the Stock Exchange, on his/her own behalf or an investor's behalf. As soon as the trade is completed on the Stock Exchange, the buyer and the seller have to report the trade for settlement. A broker secures the funds for settlement by entering into an agreement with his/her bank that the bank will advance the funds on the broker's behalf (broker guarantee).

The first step in VPO is that banks earmark funds before each settlement to cover their expected obligations in the settlement. The earmarked funds are reported to VPS. The next step is that VPS calculates each participant's net position in the settlement, on the basis of stock exchange transactions that have been sent in to VPO for settlement. A net cash position and a net position for each security are calculated for all participants. The calculated net positions are multilateral, i.e. they represent the total net position of the participant (in relation to all the other participants). Securities that are to be settled are reserved in the seller's securities account in VPS. The third and final step starts with banks' positions being recorded in their accounts in Norges Bank. As soon as the cash position is settled in Norges Bank, VPS records the VPS trades in the customers' securities account with immediate legal effect. Settlement normally takes place three days after the trade date.

Investors do not participate in VPO unless they are banks and brokers trading on their own behalf. Once the VPO settlement is completed, a cash settlement must be made between the investors, brokers and banks, as illustrated at the bottom of the chart.

Central counterparties

Two institutions in Norway are licensed to operate as a central counterparty. Both institutions clear derivative products. NordPool Clearing is the central counterparty for power contracts. NOS Clearing (NOS) is the central counterparty for financial derivatives traded on the Oslo Stock Exchange and freight derivatives traded on the global freight market, Imarex. NOS recorded a relatively large loss in connection with the freight market in summer 2004, as one member could not settle his positions vis-à-vis NOS. This demonstrates the potential risk for spillover from one market to another when a central counterparty operates in several markets. NOS has since procured new capital and implemented measures to reduce the risk in connection with activities in the freight market. Following the recapitalisation, Imarex and VPS each own 16.6% of shares in NOS.

Chart 5.6 Infrastructure for securities trading and settlement in Europe

Country / Function	Stock Exchange	Central counterparty	Securities depository
UK, Ireland	London Stock Exchange	LCH-Cleamnet	CREST
France, Netherlands, Belgium	Euronext	LCH-Cleamnet	Euroclear
Germany, Luxembourg	Deutsche Börse	Eurex Clearing	Clearstream

Source: Norges Bank

⁹Applies to investors who are not themselves brokers or banks.

Consolidation

Chart 5.6 shows the three largest stock exchanges in Europe, with associated central counterparties and securities clearing houses. Companies that are shown in the same colour are part of the same group. Companies that are shown in black are independent.

Consolidation has been ongoing in Europe for several years and has recently also picked up pace in the Nordic countries, see Chart 5.7.¹⁰ The first step was when the stock exchanges and securities clearing houses in Finland and the Baltic States together formed the group HEX. In 2003, the Swedish participant OM, which owned the Stockholm Stock Exchange, merged with the HEX Group to become OMX. In 2004, OMX sold 80% of its shares in the Finnish securities clearing house, APK, to the Swedish Central Securities Depository, VPC. APK and VPC merged under the name Nordic Central Securities Depository (NCSD). A part of NCSD's strategy is to establish a central counterparty for securities settlement in the Nordic countries. In February 2005, it was also decided that OMX would buy the Copenhagen Stock Exchange. Norway and Iceland have not participated in the Nordic consolidation process. However, a certain degree of cross ownership has been established within the Norwegian infrastructure, as the Oslo Stock Exchange bought 6.5% of shares in VPS in March 2004 and VPS bought shares in NOS in January 2005.

Cross-border consolidation between stock exchanges, clearing houses and securities depositories may encourage standardisation and ensure better exploitation of economies of scale. Consolidation may also facilitate market access for foreign investors.

5.3 Norges Bank's role in the payment system

The Payment Systems Act gives Norges Bank responsibility for the licensing and oversight of interbank systems, i.e. systems for clearing and settling accounts between banks. The purpose of the Act is to ensure that interbank systems are designed in such a way that operators bear in mind the consideration of financial stability. Licensees are obliged to report to the central bank. In 2004, the Bank focused on operational risk, in particular. The working partnership with Kredittilsynet in this field continues.

¹⁰As shown in the charts, the Nordic countries do not have established central counterparties in contrast to the largest markets in Europe. Iceland has some degree of domestic consolidation, as the stock exchange and central securities depository have been owned by the same holding company (Eignarhaldsfelagig Verdbrefathing hf) since 2002. Oslo Stock Exchange and VPS were converted from foundations to limited companies in 2001 and 2003, respectively.

Chart 5.7 Infrastructure for securities trading and settlement in the Nordic countries

Country/Function	Stock Exchange	Securities depository
Norway	Oslo Børs	VPS
Denmark	OMX	VP
Sweden	OMX	NCSD
Finland	OMX	NCSD
Estonia	OMX	OMX
Latvia	OMX	OMX
Lithuania	OMX	OMX
Iceland	EV	EV

Source: Norges Bank

Different types of risk in the payment system:

Systemic risk is the risk that problems in one financial institution will spread to another, thus threatening financial stability. Systemic risk originates in other types of risk:

Settlement risk is the risk connected with participating in a settlement and consists of credit and liquidity risk.

Credit risk is the risk of losses when another bank does not meet its payment obligations.

Liquidity risk is the risk that payment obligations are not settled at the agreed time and that refinancing may be necessary.

Legal risk arises when the legal framework is unclear and legal uncertainties result in unexpected exposure for a market participant, which in turn can lead to losses.

Operational risk is the risk of losses due to malfunctions in computer systems, telecommunication systems or operational errors.

Participants in the financial sector each have an individual responsibility to reduce operational risk in their own activities. This responsibility includes the development of stable operational solutions and sound contingency planning. In order to facilitate the optimal coordination of contingency planning in the financial sector, the Contingency Committee for Financial Infrastructure (BFI) was established in 2000. The BFI is headed by Norges Bank and comprises representatives from key participants in the financial infrastructure, including banks and data centres. In 2004, one exercise was held under the auspices of the BFI, and the BFI took part in a further two exercises initiated by other bodies.

In autumn 2002, Norges Bank made a decision of principle regarding the outsourcing of the operation and management of IT systems associated with Norges Bank's settlement system (NBO). An agreement for IT services was signed with ErgoGroup AS in 2003. In 2004, all operations were outsourced. The agreement runs for three years and the central bank has the option to extend the agreement for a further three years. Even though operational activities are now performed by another participant, Norges Bank still has the same responsibilities and obligations vis-à-vis banks as before.

In August 2004, the central bank started to prepare for the procurement of new secure and efficient system solutions for the settlement system. The work of renewing the settlement system will be based on the principles that the new system must be a standard system and that communication with participants and other systems must take place by means of a very limited number of internationally recognised interfaces. The Bank's aim is that all new system solutions will be in operation from 2007 at the latest.

A more detailed discussion of the topics in section 5.3 can be found in Norges Bank's annual report for 2004.

6 Integration in international payment systems

6.1 A joint European infrastructure

Development of a more efficient settlement system between banks in the euro area

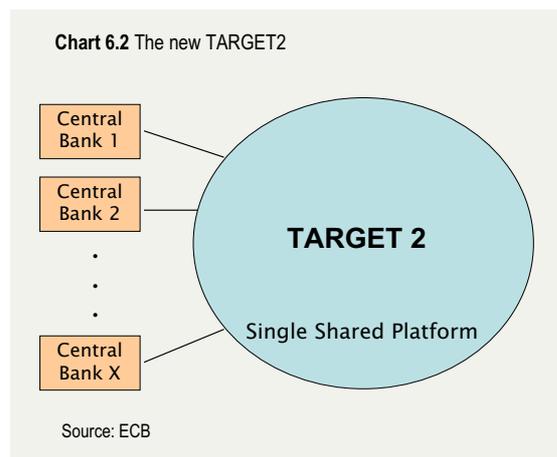
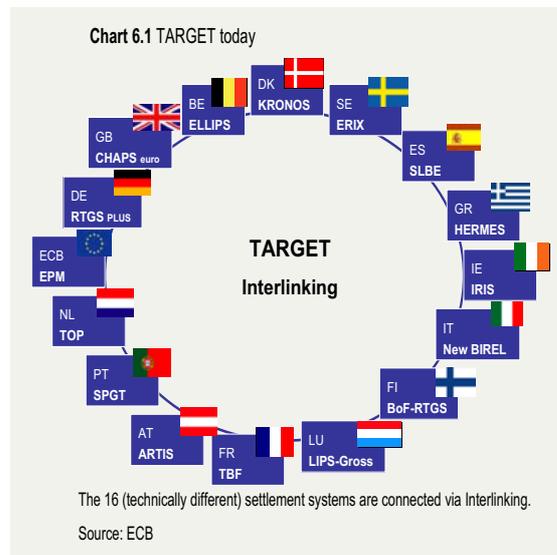
The TARGET system is central to the European payment infrastructure. TARGET is the Euro System's real time gross settlement system for cross-border payments in euro. The Euro System comprises the European Central Bank (ECB) and national central banks in countries that have introduced the euro.

The settlement systems of the national EU central banks are linked together in the joint settlement system, TARGET (see Chart 6.1). A new system, TARGET2, is currently being developed and is expected to be in operation in 2007. In TARGET2, a Single Shared Platform (a technical solution) will be introduced in all central banks in the euro area, see Chart 6.2. The central banks in France, Italy and Germany will develop and operate the platform on behalf of the Euro System (ECB 2004c). National central banks will continue to be responsible for account management and business relations with banks in the respective countries. Several banks in Norway are linked to TARGET through either foreign branches or foreign parent banks. These banks will also have the opportunity to be linked to TARGET2.

Banks must provide collateral for loans from central banks. The framework for pledging collateral for loans in the Euro System is under development. In 2004, the ECB decided to change the system for eligible collateral and to introduce a single list of approved securities. One of the purposes of this reorganisation is to encourage equal treatment within the euro area, to promote a level playing field for counterparties and issuers and to promote overall transparency in the collateral framework. A new category of collateral will be introduced to the list: euro-denominated debt instruments issued by entities established in G-10 countries outside EEA. It has also been decided that bank loans should be included in the list. Equities, which are currently only accepted as collateral in some countries, will be phased out of the collateral framework (ESB 2004a & 2004b).

6.2 A single payment area in Europe?

Efficient cross-border payment systems in Europe are considered necessary in order to realise the advantages of the internal market and are a natural consequence of the establishment of the monetary union and introduction of euro banknotes and coins. Typical retail payments between countries in Europe today are expensive and have long transfer times.



The EU Commission is working on the development of a New Legal Framework to replace the regulatory framework for payment systems in 25 European countries. The aim is:

- to achieve a level playing field and improve competition between payment service providers
- to achieve consistency in consumer protection and increased openness
- to improve efficiency

A draft of the regulations is expected to be ready in 2005.

The European banking industry has assumed responsibility for developing a joint infrastructure, payment instruments and procedures for the establishment of a single payment area in Europe. The European banking industry has cooperated in this field since 2002, with the goal of creating one payment area in Europe by 2010 - the *Single European Payment Area* (SEPA). Banks have organised this work under the auspices of the European Payments Council (EPC) which sets the strategic guidelines for the work. Measures include:

- the development of a single standard for carrying out cross-border credit transactions (Credeuro Convention) and a joint European direct debit solution by 2010
- the use of standards (BIC, IBAN, see Chapter 2)
- the establishment of pan-European clearing houses
- the banking industry is committed to leading the way in realising a single European card market and fostering efficient cash handling and cash services in Europe

In order for banks to comply with the Euro Regulation's requirement that prices are the same for cross-border and domestic euro transactions, Norwegian banks have expressed a wish to be linked to the infrastructure currently being developed in the EU.

In December 2004, the ECB published its "Third progress report" evaluating the SEPA project and measures implemented by the industry. The central bank underlined the importance of unity in the banking industry with regard to its aims and focus on the euro area. It also recommended that joint European payment instruments should first be introduced as payment instruments for national transfers as early as 2008. The ECB further recommended that the banking industry present a plan in 2005 for the transition to SEPA in 2010. The ECB might permit the introduction of regulations in the market if this proves necessary to achieve the set goals.

6.3 New international guidelines

Central banks and supervisory authorities have cooperated on drawing up international guidelines for securities settlement systems (see also Chapter 5.2.). Four different reports have been published, which are presented in the margin text.

The BIS/IOSCO report contains 19 recommendations relating to different risk elements, efficiency, information, management and legal framework (Reports 1 and 2 in margin text). The recommendations constitute general principles that should be satisfied by the various securities settlement systems. Differences between national securities settlement systems in Europe makes cross-border securities trading difficult and expensive in the EU. The EU Commission has identified 15 barriers in this connection (Giovannini 2001 and 2003). In order to promote the internal market in the EU it is therefore important that the BIS/IOSCO recommendations are implemented in a uniform manner. In September 2004, EU standards that build on the BIS/IOSCO recommendations were published. Several initiatives have been taken to help public authorities and private participants work together to foster the harmonisation of securities settlement systems. Both the EU Commission and the ECB support this process. The EU Commission will assess progress and then decide whether it would be expedient to propose an EU directive in this area.

In 2004, a joint project group comprising representatives from Kredittilsynet, VPS and Norges Bank assessed the extent to which the Norwegian securities settlement system satisfies international recommendations from central banks and supervisory authorities (BIS/IOSCO 2001). The project group's conclusion was that the system satisfies most of the recommendations. In order to comply with the recommendation on supervision and oversight by the authorities, it was deemed necessary to draw up a separate official document defining the division of responsibilities and roles between Kredittilsynet and Norges Bank in relation to securities settlement. This document is now available on the institutions' websites. Key points include:

- Kredittilsynet will supervise and approve securities settlement systems pursuant to §4.1 of the Payment Systems Act (deals with legal protection and security rules for settlement agreements in the event of bankruptcy).
- Norges Bank will continuously assess the securities settlement system's effect on financial stability and will offer settlement services. The Bank decides which securities can be used as collateral for loans from the central bank.

Global recommendations for securities settlement

1) Recommendations for securities settlement systems (BIS/IOSCO 2001). The report contains 19 recommendations for securities settlement systems.

2) Assessment methodology for "Recommendations for securities settlement systems". (BIS/IOSCO 2002). The report includes detailed criteria for "character setting".

Global recommendations for central counterparties

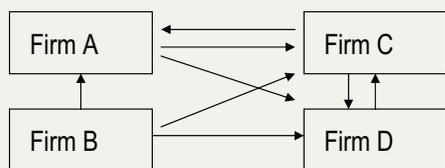
3) Recommendations for Central Counterparties (BIS/IOSCO November 2004). This report includes 15 recommendations and detailed criteria for "character setting".

EU standards for securities settlement

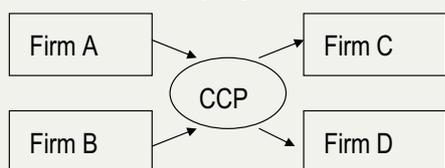
4) Standards for securities clearing and settlement systems in the European Union (CESR/ECB 2004). The report includes 19 standards for securities settlement systems. The report was written by the European Central Bank (ESB) and the Committee of European Securities Regulators (CESR). The Banking, Insurance and Securities Commission is Norway's representative in CESR. Publication of a report containing detailed criteria for "character setting" is planned for September 2005.

Chart 6.3 Securities settlement

Without central counterparty



With central counterparty



Norges Bank and Kredittilsynet hold regular meetings to keep each other informed of important events and to consult on major decisions that are of significance to securities settlement systems.

Derivatives have traditionally been settled via central counterparties. In recent years, there has been an international trend towards increased use of central counterparties for securities settlement as well. This is because all securities trades involve the risk that settlement will not be performed on the agreed day, either because the seller does not have the security or because the buyer does not have the money. When settlement is carried out via a central counterparty, both the seller and the buyer avoid exposure to the risk of a counterparty lacking cover, see Chart 6.3. The participants pay the central counterparty a fee to carry the market and liquidity risk. Use of central counterparties entails the potential centralisation of risk. Against this background, central banks and supervisory authorities have worked together on international recommendations for central counterparties (Report 3 in the margin text). The recommendations deal with all major risks associated with central counterparties, whether they offer services linked to securities or derivatives trading or both. The recommendations also cover efficiency, information, management and legal frameworks.

All the reports mentioned include guidelines for the division of responsibilities between central banks and supervisory authorities in relation to supervision and oversight. Norges Bank and Kredittilsynet are working together on the follow-up in Norway.

Financial Sector Assessment Programme (FSAP)

In 1999, the IMF and the World Bank launched a programme to assess and then set out proposals for improving financial stability in different countries, “Financial Sector Assessment Programme” (FSAP). In an FSAP review, the IMF assesses how different parts of the financial system in a specific country satisfy international standards. Experience has shown that external reviews of the financial system provide the authorities with relevant recommendations on measure to make the system more robust and efficient. The IMF carried out its first evaluation of the Norwegian financial system at the request of the Norwegian authorities, in autumn 2004 and early 2005. NBO was assessed in relation to “Core Principles for Systemically Important Payment Systems”. A study of the work of the Norwegian authorities was also carried out, based on the “Basle Core Principles for Effective Banking Supervision” and “Insurance Core Principles” from “International Association of Insurance Supervisors”. At the same time, information was gathered from other areas relating to financial stability. A report will be drawn up on the basis of these studies and is expected to be published in June 2005.

References

- Aastveit, K.A. (2005): "The demand for cash in Norway". *Dissertation*, Department of Economics, University of Oslo.
- Baxter, W.F. (1983): "Bank interchange of transactional paper: legal and economic perspectives". *Journal of Law & Economics* no. 3 (series 26), p. 541-588
- Bergman, Mats A. (2003): "Payment system efficiency and pro-competitive regulation". *Economic Review* 4/2003, Sveriges Riksbank.
- BIS/IOSCO (2001): *Recommendations for securities settlement systems*. Committee on Payment and Settlement Systems (CPSS), Technical Committee of the International Organization of Securities Commissions (IOSCO). Bank for International Settlement (BIS), November 2001.
- BIS/IOSCO (2002): *Assessment methodology for "Recommendations for securities settlement systems"*. Committee on Payment and Settlement Systems (CPSS), Technical Committee of the International Organization of Securities Commissions (IOSCO). Bank for International Settlement (BIS), November 2002.
- BIS/IOSCO (2004): *Recommendations for Central Counterparties*. Committee on Payment and Settlement Systems (CPSS), Technical Committee of the International Organization of Securities Commissions (IOSCO). Bank for International Settlement (BIS), November 2004.
- Clements, M.P. & D.F. Hendry (1998): *Forecasting Economic Time Series*. Cambridge University Press, Cambridge.
- Committee on Payment and Settlement Systems (2005): "Statistics on payment and settlement systems in selected countries - Figures for 2003". *CPSS Publications* no. 66, March 2005.
- ECB/CESR (2004): *Standards for securities clearing and settlement systems in the European Union*. Committee of European Securities Regulators (CESR), European Central Bank (ECB), September 2004.
- European Central Bank (2004a): "Review of the Eurosystem's Collateral Framework: First step towards a Single List". Press release, 10 May 2004.
- European Central Bank (2004b): "Review of the Eurosystem's Collateral Framework: Second step towards a Single list". Press release, 5 August 2004.
- European Central Bank (2004c): "TARGET2 - The future TARGET system". October 2004.
- European Central Bank (2005): "Progress Report on TARGET2". February 2005.
- Finansnæringens Hovedorganisasjon (2003): "Avtale- og regelverkssamling for innenlands betalingsformidling" (*Collected agreements and regulations for the domestic payment system*). 6th edition. Updated per 25 September 2003.
- Greene, W.H. (2000): *Econometric Analysis*. 4th edition. Prentice-Hall, New York.
- Gresvik, O. & A. Kaloudis (2001): "Increased cash holdings – reduced used of cash: A paradox?" *Economic Bulletin* 4/2001.
- Gresvik, Olaf & Grete Øwre (2003): "Costs and Income in the Norwegian Payments System 2001. An application of the Activity Based Costing framework". *Working Paper* 2003/8, Norges Bank.
- Guiborg, G. & B. Segendorff (2004): "Do prices reflect costs? A study of price and cost structure of retail payments services in the Swedish banking sector 2002". *Working paper* 172, Sveriges Riksbank, October 2004.
- Humphrey, D., A. Kaloudis & G. Øwre (2000): "Forecasting Cash Use in Legal and Illegal activities". *Working paper* 2000/14, Norges Bank.
- Humphrey, D., K. Moshe & B. Vale (2001): "Realizing the Gains from Electronic Payments: Costs, Pricing, and Payment Choice". *Journal of Money, Credit, and Banking* no. 2 2001 (series 33), pp. 216-234.
- Husevåg, Vigdis & Kristin Bjerkeland (2003): "Securities settlement in Norway. How will developments in Europe affect the Norwegian system?" *Economic Bulletin* 4/2003.
- Jyrkönen, H. (2004): "Less cash on the counter – Forecasting Finnish payment preferences". *Discussion Paper* 2004/27, Bank of Finland.

Konkurransetilsynet (2001): "Avtale om interbankgebyrer mellom Finansnæringens Servicekontor og Sparebankforeningens Servicekontor – konkurranseloven §3-9" (*Agreement on interbank charges between the Norwegian Financial Services Association's Service Office and the Norwegian Savings Banks' Association's Service Office – §3-9 the Competitions Act*). 21 June 2001.

Kredittilsynet (2004): "Informasjonstilbudet til sluttbrukerne i finansmarkedet" (*Information Provision to End-Users in the Financial Market*). Working group report. 18 August 2004 (Strategic project no. 5).

Kredittilsynet (2005): *Annual Report 2004*.

Sparebankforeningen(2005):
Nettbankundersøkelsen 2005
(*Internet Bank Survey 2005*)

TNS Gallup (2004): "Norske personer og husholdningers bruk av Internett og teknologi". (*Norwegians and Norwegian households' use of the Internet and technology*). No.4, 2004.

Van Hove, Leo (2004): "Electronic purses in Euroland: why do penetration and usage rates differ?" *SUERF Studies*, no. 4/2004.

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A General data

Table 1: Basic statistical data: Norway

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Population (per 1 Jan., millions)	4.35	4.37	4.39	4.42	4.45	4.48	4.50	4.52	4.55	4.61
GDP, market value (NOK billions)	937.4	1,026.9	1,111.3	1,132.1	1,233.0	1,469.1	1,526.2	1,519.1	1,561.9	1,685.6
Mainland GDP, market value (NOK billions)	798.9	843.1	908.2	981.3	1,035.5	1,101.5	1,167.2	1,212.6	1,246.1	1,307.5
GDP per capita (NOK thousands)	215.6	235.0	253.0	256.3	277.4	327.9	339.2	336.1	343.3	365.6
1 USD in NOK (year-end)	6.32	6.44	7.32	7.60	8.04	8.85	9.01	6.97	6.68	6.04
1 euro in NOK (year-end. ECU to end-1998)	8.29	8.09	8.06	8.90	8.08	8.23	7.97	7.29	8.42	8.24

Table 2: Technological infrastructure in Norway

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 (juli)
Fixed network telephone subscribers	2,443,585	2,484,173	2,474,964	2,475,490	2,445,734	2,400,785	2,337,719	2,316,919	2,228,565	2,204,094
PSTN	2 431 271	2 440 185	2,325,010	2,165,530	1,913,657	1,682,603	1,548,142	1,484,344	1,417,120	1,442,041
ISDN 2B+D	11,580	41,819	146,005	304,636	524,999	696,289	760,643	801,971	775,686	710,364
ISDN 30B+D	734	2,169	3,949	5,324	7,078	7,554	8,165	8,942	9,200	8,671
Cable TV network telephone subscribers					:	14,325	20,764	21,520	23,563	23,155
Other types of fixed network links (IP telephone networks, etc.)						14	5	142	2,996	19,861
Mobile telephone subscribers	981,305	1,261,445	1,676,763	2,106,414	2,744,793	3,367,763	3,759,862	3,911,136	4,163,381	4,376,090
NMT	488,528	444,614	387,751	310,582	216,272	133,272	70,616	52,495	37,000	29,004
GSM	492,777	816,831	1,289,012	1,795,832	2,528,521	3,206,664	3,695,815	3,858,641	4,126,381	4,347,086
Internet subscribers				381,342	715,922	1,176,552	1,250,261	1,344,867	1,681,447	1,327,302
Cable TV	677,186	664,852	705,125	774,607	788,722	823,320	838,707	840,097	852,766	na
Fixed network penetration - subscribers per 100 inhabitants	56	57	56	56	55	53	51			na
								50	48	
Mobile telephones per 100 inhabitants	22	29	38	48	62	75	82	86	91	na

Source : Norwegian Post and Telecommunications Authority

B Settlement media in Norway

Table 3: Settlement media used by the public (at year-end, in NOK millions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Notes and coins	39,074	39,865	42,215	42,142	43,366	42,523	42,038	40,282	41,687	43,340
Deposits in current accounts	178,653	208,073	227,382	237,047	300,128	328,816	344,110	360,341	387,309	430,092
Narrow money supply (M1)	217,727	247,938	269,597	279,189	343,494	371,339	386,148	400,623	428,996	473,432
Other deposits	296,799	294,741	278,741	292,820	295,820	326,350	370,171	409,704	407,337	423,193
Certificates of deposit	15,731	21,686	30,200	33,322	30,802	34,152	39,048	45,001	36,806	39,112
M1 + other short-term deposits (M2)	530,257	564,365	578,538	605,331	670,116	731,841	795,367	855,328	873,139	935,737

Table 4: Settlement media used by banks (at year-end, in NOK millions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Banks' cash holdings	3,340	3,893	4,240	4,395	5,116	4,879	5,290	5,063	4,980	4,649
<i>Cash holdings, annual average</i>	3,095	3,568	3,835	3,940	4,519	4,431	4,817	4,675	4,409	4,457
Banks' sight deposits in the central bank	1,498	9,597	8,139	4,716	18,330	11,540	17,438	33,348	22,117	35,240
<i>Sight deposits, annual average</i>	2,809	4,826	8,463	6,986	8,016	9,233	11,804	15,647	24,690	21,337
Central bank lending (F-loans + D-loans)	8,312	98	547	6,918	13,600	14,160	12,443	19	10,460	7
<i>Lending (F-loans + D-loans), annual average</i>	4,626	6,351	790	1,225	4,385	5,104	13,356	538	2,978	18,788
Banks' deposits from the money-holding sector	7,442	14,153	14,828	13,421	13,594	15,774	16,633	16,027	19,982	18,383
<i>Deposits from the money-holding sector, annual average</i>	11,097	15,595	16,107	15,830	18,538	18,173	20,420	16,737	23,148	23,897

Table 5: Banknotes and coins. Annual average (in NOK millions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	38,359	39,588	41,221	43,578	43,837	43,571	42,947	41,767	41,562	43,728
Total notes	35,851	36,812	38,284	40,487	40,566	40,119	39,271	37,811	37,429	39,429
1000-krone	25,522	25,985	26,711	27,773	27,290	26,336	24,713	22,599	22,167	23,555
500-krone	2,992	3,465	4,068	4,875	5,588	6,107	6,921	7,626	7,732	8,278
200-krone	1,025	1,771	2,630	3,650	3,949	4,275	4,446	4,573	4,674	4,792
100-krone	5,728	4,962	4,246	3,473	3,027	2,684	2,464	2,270	2,091	2,012
50-krone	585	629	629	717	712	717	727	744	765	793
Total coins	2,508	2,776	2,937	3,090	3,271	3,452	3,676	3,955	4,132	4,299
20-krone	369	532	655	779	873	966	1,124	1,387	1,561	1,667
10-krone	952	1,020	1,010	1,030	1,046	1,087	1,111	1,085	1,051	1,049
5-krone	388	401	415	440	474	487	497	505	515	538
1-krone	472	492	518	561	590	617	641	666	686	718
0.5 krone	128	134	142	150	157	165	174	182	191	199
0.25 krone	40	40	40	:	:	:	:	:	:	:
0.10 krone	134	132	131	131	130	130	130	130	129	128
Copper	26	26	26	:	:	:	:	:	:	:

C Payments infrastructure

Table 6: Institutional infrastructure

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
All banks										
Number of banks	:	148	146	146	144	143	144	145	144	140
Number of foreign bank branches	:	3	6	6	8	9	8	8	8	8
Number of bank branches	1,537	1,500	1,477	1,468	1,457	1,429	1,414	1,376	1,348	1,234
Number of Norway Post branches	2,356	2,091	1,618	1,280	1,257	1,261	1,320	1,433	1,480	1,504
Number of accounts in all banks	11,494,535					11,534,617				

Table 7: Average daily turnover in NBO (in NOK billions)

	1999	2000	2001	2002	2003	2004
Total	147.2	144.0	172.1	169.2	206.8	152.3
VPO	2.4	2.2	2.3	2.5	3.1	3.7
NICS retail netting	ca 4	5.5	6.8	6.9	6.7	7.6
NICS SWIFT net settlement	5.2	3.8	5.3	5.5	2.1	1.0
Total gross/RTGS	135.6	132.5	157.7	154.3	194.9	140.0
<i>Of which</i>						
SWIFT Gross/RTGS	127.3	123.2	150.7	149.5	187.7	128.9
Other gross/RTGS	8.3	9.3	6.9	4.8	7.2	11.1

Table 8: Average daily turnover in NICS (number of transactions)

	1999	2000	2001	2002	2003	2004
SWIFT Total	4,589	4,626	5,022	5,225	5,751	5,091
SWIFT Gross/RTGS	331	282	303	300	596	611
SWIFT net settlement	4,258	4,344	4,719	4,925	5,155	4,480
NICS retail netting (in millions)	2-3	3.0	3.4	3.7	4.0	4.3

Table 9: Average daily turnover in NICS (in NOK billions)

	1999	2000	2001	2002	2003	2004
SWIFT Total	145	140	167	165	201	134
SWIFT Gross/RTGS	127	123	151	149	188	129
SWIFT net settlement	18	17	16	16	13	5
NICS retail netting (approximately)	20-25	35	44	47	48	61
NICS Total	165-170	175	211	212	249	196

Table 10: Participation in SWIFT

	2000		2001		2002		2003		2004	
	Norwegian	Total								
Members	17	2,307	21	2,241	22	2,203	22	2,312	14	2,280
Sub-members/domestic users covered by members abroad	9	3,036	8	3,027	7	3,079	7	3,051	12	3,019
Participants	5	1,949	5	1,931	4	2,183	5	2,164	8	2,368
Total	31	7,292	34	7,199	33	7,465	34	7,527	34	7,667

Table 11: SWIFT message traffic to/from Norway (in thousands of transactions)

	1999	2000	2001	2002	2003	2004
Number of messages sent	8,124	9,238	10,521	11,239	12,931	18,590
Number of messages received	6,051	6,920	8,163	8,747	10,391	13,650
Global SWIFT traffic	1,058,836	1,273,913	1,533,906	1,817,444	2,047,564	2,299,074

Table 12: Number of ATMs

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	1,792	1,861	1,896	1,944	2,007	2,119	2,144	2,188	2,217	2,180
Commercial banks	775	796	808	867	900	1,026	1,018	992	972	:
Savings banks	1,017	1,065	1,088	1,077	1,107	1,093	1,126	1,196	1,245	:

Table 13: Use of ATM network (in millions of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	87.4	97.7	104.0	107.1	107.4	106.1	109.0	103.5	102.1	99.3
<i>Of which:</i>										
Withdrawals from other banks' ATMs	:	:	50.5	52.1	51.3	49.0	47.3	48.5	50.3	51.5
Bank-Axcept cards	85.9	95.2	100.9	103.2	102.3	98.6	102.0	96.6	95.6	93.2
Domestic credit cards	0.3	0.6	0.7	0.8	0.9	1.0	1.2	1.0	1.4	1.1
Payment cards issued by international card companies	1.2	1.9	2.4	3.2	4.2	6.6	5.8	5.9	5.1	4.9
Commercial banks' ATMs, total	36.6	41.6	44.2	46.4	45.8	46.3	46.2	43.5	43.0	:
Bank-Axcept cards	35.4	39.7	41.9	43.6	42.5	42.1	42.1	39.4	39.0	:
Domestic credit cards	0.3	0.6	0.7	0.8	0.9	0.8	0.8	0.8	1.1	:
Payment cards issued by international card companies	0.9	1.3	1.6	2.0	2.4	3.4	3.3	3.4	3.0	:
Savings banks' ATMs, total	50.8	56.1	59.8	60.8	61.6	59.8	62.8	60.1	59.1	:
Bank-Axcept cards	50.6	55.5	59.0	59.6	59.8	56.4	59.9	57.2	56.6	:
Domestic credit cards	-	-	-	-	-	0.2	0.3	0.3	0.3	:
Payment cards issued by international card companies	0.3	0.6	0.8	1.2	1.8	3.2	2.5	2.5	2.1	:

Table 14: Use of ATM network (in NOK billions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	74.9	84.6	94.5	102.1	105.6	106.3	115.8	114.0	115.0	113.1
<i>Of which</i>										
Withdrawals from other banks' ATMs	:	:	46.0	47.6	48.1	45.4	46.1	48.4	51.0	52.8
Bank-Axcept cards	73.1	81.5	90.5	97.2	99.2	97.9	107.0	105.0	105.7	104.2
Domestic credit cards	0.4	0.6	0.7	0.9	1.1	1.4	1.4	1.4	2.1	1.7
Payment cards issued by international card companies	1.5	2.4	3.2	4.0	5.3	7.0	7.3	7.6	7.3	7.2
Commercial banks' ATMs, total	31.8	37.1	41.4	45.7	47.1	49.0	52.2	51.3	51.4	:
Bank-Axcept cards	30.3	34.9	38.5	42.2	42.9	43.7	47.0	45.8	45.6	:
Domestic credit cards	0.4	0.6	0.7	0.9	1.1	1.1	0.9	1.1	1.6	:
Payment cards issued by international card companies	1.1	1.7	2.2	2.6	3.1	4.3	4.3	4.3	4.2	:
Savings banks' ATMs, total	43.1	47.4	53.1	56.4	58.5	57.2	63.6	62.8	63.6	:
Bank-Axcept cards	42.8	46.7	52.0	54.9	56.3	54.2	60.1	59.2	60.1	:
Domestic credit cards	-	-	-	-	-	0.3	0.5	0.3	0.5	:
Payment cards issued by international card companies	0.3	0.8	1.0	1.5	2.2	2.7	3.0	3.2	3.1	:

Table 15: Number of payment terminals (EFTPOS) and number of locations with payment terminals that accept Bank-Axcept cards

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Payment terminals, total	34,706	39,033	46,592	52,235	58,742	65,326	71,688	80,106	91,239	97,230
Payment terminals owned by banks	28,897	33,679	41,299	46,849	51,618	55,208	59,184	65,374	66,207	68,197
Payment terminals owned by oil companies	5,809	5,354	5,293	5,386	7,124	7,093	6,752	6,439	6,554	6,706
Other payment terminals	-	-	-	-	-	3,025	5,752	8,293	18,478	22,327
Locations with payment terminals, total	23,239	27,048	32,761	38,029	42,164	47,434	49,328	52,705	59,786	64,663
With payment terminals owned by banks	21,081	24,841	30,607	35,861	39,978	44,468	45,573	47,995	51,041	53,204
With payment terminals owned by oil companies	2,158	2,207	2,154	2,168	2,186	2,050	2,129	2,024	1,997	2,045
With other payment terminals	-	-	-	-	-	916	1,626	2,686	6,748	9,414

Table 16: Use of payment terminals (EFTPOS) that accept Bank- Axcept cards. Cash withdrawals and goods purchases (in millions of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	143.4	182.5	234.7	288.6	:	:	:	500.8	575.6	644.6
Banks' payment terminals, total	90.2	120.6	162.7	210.7	254.7	302.4	329.1	368.3	411.0	454.1
Bank-Axcept cards	86.6	116.5	156.8	202.9	244.8	291.8	317.8	357.2	398.6	441.7
Domestic credit cards	0.2	0.4	0.7	1.0	1.3	0.6	0.6	0.6	1.4	1.0
Payment cards issued by international card companies	3.4	3.8	5.2	6.8	8.5	10.0	10.7	10.5	11.0	11.4
Oil companies' payment terminals, total	53.2	61.9	72.0	77.9	82.6	84.1	91.9	90.8	102.4	109.0
Bank-Axcept cards	17.2	21.1	27.4	31.9	36.4	45.6	51.8	57.2	64.9	69.3
Domestic credit cards	-	-	-	-	-	-	-	-	-	-
Payment cards issued by international card companies	0.4	1.5	1.8	2.2	2.5	3.1	3.0	3.1	7.1	10.1
Oil companies' cards	35.6	39.3	42.8	43.8	43.8	35.4	37.1	30.5	30.4	29.6
Other payment terminals, total	-	-	-	-	:	:	:	41.6	62.2	81.5
Bank-Axcept cards	-	-	-	-	1.5	5.1	25.1	37.3	56.2	77.4
Domestic credit cards	-	-	-	-	-	-	-	0.1	0.1	0.1
Payment cards issued by international card companies	-	-	-	-	-	-	-	4.2	5.8	4.0

Table 17: Use of payment terminals (EFTPOS) that accept Bank-Axcept cards. Cash withdrawals and goods purchases (in NOK billions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	55.9	75.4	100.8	127.1	:	:	:	231.0	259.5	280.0
Banks' payment terminals, total	41.8	58.6	81.0	105.5	129.9	153.2	167.7	181.5	197.5	212.3
Bank-Axcept cards	38.5	54.6	75.4	98.6	121.5	143.5	156.8	171.4	186.5	200.1
Domestic credit cards	0.4	0.5	0.8	0.8	0.9	0.7	0.8	0.8	0.9	0.7
Payment cards issued by international card companies	2.9	3.4	4.7	6.1	7.5	9.0	10.1	9.3	10.1	11.4
Oil companies' payment terminals, total	14.0	16.9	19.9	21.6	23.6	29.1	29.1	27.2	30.1	32.2
Bank-Axcept cards	4.3	5.4	7.3	8.6	10.1	13.7	14.6	15.2	16.8	17.8
Domestic credit cards	-	-	-	-	-	-	-	-	-	-
Payment cards issued by international card companies	0.1	0.2	0.3	0.3	0.4	0.5	0.4	0.5	1.3	2.2
Oil companies' cards	9.6	11.3	12.3	12.6	13.1	14.9	14.2	11.6	12.0	12.2
Other payment terminals, total	-	-	-	-	:	:	:	22.3	31.9	35.5
Bank-Axcept cards	-	-	-	-	1.6	4.7	13.4	18.1	26.6	32.0
Domestic credit cards	-	-	-	-	-	-	-	0.0	0.2	0.2
Payment cards issued by international card companies	-	-	-	-	-	-	-	4.1	5.1	3.3

Table 18: Number of payment cards (thousands)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	5,025	5,766	6,583	7,527	8,406	9,156	10,210	10,751	11,501	12,627
Bank-Axcept cards	2,561	2,835	3,227	3,561	3,734	4,020	4,287	4,362	4,527	4,908
Domestic credit cards	480	589	514	620	687	672	779	850	862	771
Payment cards issued by international card companies	1,984	2,343	2,842	3,346	3,985	4,464	5,145	5,539	6,112	6,947
Combined cards	1,597	1,879	2,287	2,759	3,186	3,497	4,102	4,316	4,582	5,025
Number of cards less combined cards	3,428	3,887	4,296	4,768	5,220	5,658	6,108	6,435	6,918	7,602
<i>Of which</i>										
Debit cards	2,630	2,912	3,320	3,563	3,733	4,020	4,287	4,362	4,527	4,908
Credit cards	798	976	976	1,205	1,487	1,638	1,822	2,073	2,391	2,635
Oil companies' cards	1,372	1,592	1,713	1,772	1,633	1,429	1,259	1,211	1,300	1,216

Table 19: Number of agreements

	2000	2001	2002	2003	2004
Internet bank agreements	933,335	1,340,661	1,934,318	2,429,694	2,976,690
Mail giro agreements	2,687,420	2,361,031	1,787,462	1,707,428	1,540,768
Direct debit agreements	3,500,000	4,044,848	4,483,286	4,901,219	5,505,933
Direct debit - beneficiaries	6,041	6,473	6,883	7,194	7,905
Direct debit where payees have power of attorney	558	541	534	548	542
Direct debit where payees have no power of attorney	616	659	731	684	645

D Cash withdrawals in Norway

Table 20: Cash withdrawals (in millions of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	:	:	:	:	:	236.1	256.9	256.2	257.9	259.1
Cash withdrawals at the counter	:	:	:	:	37.2	27.3	23.8	20.1	17.6	15.3
Commercial banks	:	28.7	24.7	21.9	19.1	15.8	13.8	10.7	9.7	:
Savings banks	:	:	:	:	18.1	11.5	10.1	9.4	8.0	:
ATM withdrawals	87.4	97.6	103.9	107.1	107.3	106.0	108.8	103.5	102.1	99.3
Commercial banks	36.6	41.5	44.1	46.3	45.7	46.2	46.1	43.5	43.0	:
Savings banks	50.8	56.1	59.8	60.8	61.6	59.8	62.8	60.1	59.1	:
Cashback withdrawals	:	:	:	:	:	102.7	124.2	132.6	138.2	144.6

Table 21: Cash withdrawals (in NOK billions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	:	:	:	:	:	258.7	259.1	253.8	250.3	238.9
Cash withdrawals at the counter	:	:	:	:	:	115.7	98.6	92.3	87.0	77.5
Commercial banks	:	118.1	99.8	89.7	86.9	72.8	62.0	57.3	52.7	:
Savings banks	:	:	:	:	:	42.9	36.6	35.0	34.3	:
ATM withdrawals	74.9	84.6	94.5	102.1	105.5	106.1	115.8	114.0	115.0	113.1
Commercial banks	31.8	37.1	41.4	45.7	47.0	48.8	52.2	51.3	51.4	:
Savings banks	43.1	47.4	53.1	56.4	58.5	57.2	63.6	62.8	63.6	:
Cashback withdrawals	:	:	:	:	:	36.9	44.7	47.5	48.3	48.3

E Use of payment services

Table 22: Payments using Norwegian payment services (in millions of transactions)

	2002	2003	2004
Total	940.3	1037.5	1142.9
Payment instruments:	917.7	1014.1	1117.7
Giros	401.8	419.4	440.4
Payment cards (goods purchases)	513.9	593.2	676.1
Cheques	2.0	1.5	1.2
Payment orders:	22.6	23.4	25.1
Standing orders	22.6	23.4	25.1

Table 23: Payments using Norwegian payment services (in NOK billions)

	2002	2003	2004
Total	6175.7	6854.8	8859.4
Payment instruments:	6019.4	6704.4	8707.9
Giros	5,750.5	6,474.6	8,452.2
Payment cards (goods purchases)	204.5	184.9	213.2
Cheques	64.4	44.9	42.5
Payment orders:	156.3	150.4	151.5
Standing orders	156.3	150.4	151.5

Table 24: Payments using Norwegian payment instruments (in millions of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	465.7	508.4	564.3	634.1	695.3	760.3	847.4	918.0	1,014.1	1,117.7
Giros, total	324.5	335.2	343.9	360.0	371.3	370.4	397.5	402.0	419.4	440.4
Electronic giros	101.7	125.1	146.5	173.9	202.7	221.0	268.1	292.8	325.5	359.1
Paper-based giros	222.9	210.1	197.4	186.2	168.5	149.3	129.3	109.3	93.9	81.3
Payment cards (goods purchases)	118.8	156.1	207.5	264.6	317.7	385.9	447.0	513.9	593.2	676.1
Electronic	113.8	151.5	200.9	256.0	307.3	377.5	437.9	503.9	582.8	662.1
Manual	5.0	4.5	6.6	8.6	10.4	8.3	9.1	10.0	10.4	14.0
Cheques	22.4	17.1	12.9	9.4	6.3	4.0	2.9	2.0	1.5	1.2

Table 25: Payments using Norwegian payment instruments (in NOK billions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	2,474.5	4,257.4	4,683.4	4,781.9	5,837.0	5,860.3	5,928.0	6,019.4	6,704.4	8,707.9
Giros, total	2,074.8	3,921.5	4,358.8	4,464.6	5,534.0	5,595.1	5,673.0	5,750.5	6,474.6	8,452.2
Electronic giros	1,309.3	2,440.6	2,935.6	3,223.2	4,444.4	4,720.0	5,156.0	5,290.9	6,091.6	8,132.0
Paper-based giros	765.5	1,480.9	1,423.2	1,241.4	1,089.5	875.2	516.9	459.6	383.0	320.2
Payment cards (goods purchases)	57.8	80.4	104.1	134.6	164.1	162.8	182.5	204.5	184.9	213.2
Electronic	49.3	74.6	97.4	125.3	151.2	153.9	172.8	194.2	175.6	201.8
Manual	8.4	5.8	6.7	9.3	12.9	8.9	9.7	10.3	9.3	11.5
Cheques	342.0	255.5	220.5	182.7	138.9	102.4	72.5	64.4	44.9	42.5

Table 26: Giro services (in millions of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Giros, total	343.7	353.2	358.1	373.1	371.3	370.4	397.5	402.0	419.4	440.4
Electronic giro, total	101.7	125.1	146.5	173.9	202.7	221.0	268.1	292.8	325.5	359.1
Company terminal giros	83.0	97.8	109.1	126.1	129.9	128.7	143.8	153.2	164.4	160.2
Internet bank	-	:	:	3.2	14.5	34.6	62.0	81.4	101.5	138.4
<i>Of which</i>										
Internet bank - solutions for retail customers	-	:	:	3.2	14.5	34.6	62.0	:	91.6	112.0
Internet bank - solutions for corporate customers	-	-	-	-	-	-	-	:	9.9	26.4
Telephone giros	1.3	6.7	13.4	18.2	28.3	28.8	28.7	26.8	25.5	24.8
Direct debits	17.4	20.6	24.0	26.3	30.0	29.0	33.6	31.3	34.1	35.8
Paper-based giros, total	242.0	228.1	211.6	199.2	168.5	149.3	129.3	109.3	93.9	81.3
Mail giros	96.9	101.1	104.3	106.9	107.0	90.2	74.4	61.7	52.1	44.6
Giros delivered at the counter, total	106.5	91.4	78.8	65.6	52.2	52.9	48.6	42.3	37.6	33.6
<i>Of which</i>										
Cash payments	62.5	46.3	37.1	28.1	22.9	20.4	19.5	15.0	13.2	11.6
Account debits	25.0	27.1	27.4	24.5	29.2	32.4	28.3	27.1	24.4	22.0
Various giros registered in banks	19.1	18.1	14.2	13.0	-	-	0.8	0.3	-	-
Company terminal giros sent as money orders	19.5	17.5	14.3	13.7	9.4	6.3	5.6	4.9	4.2	3.0

Table 27: Giro services (in NOK billions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Giros, total	2,268.9	4,096.3	4,489.1	4,590.6	5,534.0	5,595.1	5,673.0	5,750.5	6,474.6	8,452.2
Electronic giro, total	1,309.3	2,440.6	2,935.6	3,223.2	4,444.4	4,720.0	5,156.0	5,290.9	6,091.6	8,132.0
Company terminal giros	1233.6	2310.6	2779.2	3041.1	4185.7	4372.2	4716.2	4678.4	5225.3	6553.4
Internet bank	-	:	:	7.3	39.7	93.3	197.3	409.1	650.7	1351.8
<i>Of which</i>										
Internet bank - solutions for retail customers	-	:	:	7.3	39.7	93.3	197.3	:	332.6	436.4
Internet bank - solutions for corporate customers	-	-	-	-	-	-	-	:	318.1	915.4
Telephone giros	2.1	11.3	22.8	31.0	55.6	52.5	57.6	54.3	51.0	48.4
Direct debits	73.6	118.7	133.6	143.8	163.5	202.0	184.8	149.2	164.6	178.5
Paper-based giros, total	959.6	1,655.7	1,553.5	1,367.4	1,089.5	875.2	516.9	459.6	383.0	320.2
Mail giros	214.9	858.0	830.2	649.8	597.6	527.7	195.5	175.7	184.6	161.1
Giros delivered at the counter, total	544.6	569.7	557.2	561.0	473.9	336.1	301.6	273.8	193.3	155.3
<i>Of which</i>										
Cash payments	175.4	188.4	179.1	126.5	143.8	111.5	99.7	79.8	57.2	52.2
Account debits	175.2	206.5	247.8	308.5	330.1	224.6	189.0	190.0	136.1	103.1
Miscellaneous giros registered in banks	194.0	174.8	130.3	126.0	-	-	12.9	3.9	-	-
Company terminal giros sent as money orders	6.1	53.2	35.8	30.6	18.1	11.4	7.0	6.1	5.2	3.8

Table 28: Total use of Norwegian payment cards. Cash withdrawals and goods purchases (in millions of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total card use	207.8	255.4	314.4	374.7	429.1	496.3	562.9	625.1	703.1	784.8
<i>of which</i>										
Debit cards	198.6	244.9	301.2	358.0	410.0	473.7	536.5	596.4	669.5	743.6
Charge cards	7.7	7.8	10.6	11.7	12.5	13.9	14.8	13.9	14.8	16.3
Credit cards	1.4	1.7	2.6	4.9	6.7	8.7	11.6	14.7	18.8	24.9
Bank-Axcept cards	189.7	232.8	285.1	337.9	385.0	441.1	497.0	548.3	615.3	681.7
Domestic credit cards	1.1	1.2	1.4	1.7	1.9	2.4	2.8	3.6	3.7	3.9
GE Money Bank AS	:	:	:	:	0.7	0.8	0.9	0.9	0.8	0.8
DnB NOR Kort	:	:	:	:	1.2	1.5	1.8	2.1	2.2	2.3
Entercard AS	-	-	-	-	-	-	0.2	0.6	0.7	0.8
Payment cards issued by international card companies	16.9	21.4	27.9	35.1	42.2	52.8	63.0	73.2	84.2	99.2

Table 29: Total use of Norwegian payment cards. Cash withdrawals and goods purchases (in NOK billions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total card use	135.8	166.4	204.6	242.6	277.1	314.6	354.2	378.0	408.6	436.9
<i>of which</i>										
Debit cards	123.4	151.1	186.1	219.9	251.2	283.4	320.0	341.7	371.0	393.5
Charge cards	8.7	10.7	12.8	14.3	15.3	17.2	18.1	17.5	16.9	17.8
Credit cards	3.7	4.5	5.7	8.4	10.8	14.0	16.1	18.9	20.8	25.7
Bank-Axcept cards	116.0	141.5	173.3	204.4	232.3	259.8	292.3	309.7	335.7	354.1
Domestic credit cards	3.2	3.8	4.2	4.5	5.1	5.4	5.9	6.2	4.5	4.5
GE Money Bank AS	1.1	1.4	1.5	1.7	1.9	2.1	2.4	2.5	1.0	1.0
DnB NOR Kort	2.1	2.4	2.6	2.6	3.2	3.2	3.5	3.4	3.2	3.2
Entercard AS	-	-	-	-	-	-	0.1	0.3	0.3	0.4
Payment cards issued by international card companies	16.6	21.1	27.1	33.7	39.7	49.4	56.0	62.0	68.4	78.2

Table 30: Total use of payment cards issued by international card companies. Cash withdrawals and goods purchases (in millions of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total use of payment cards issued by international card companies	19.9	25.2	32.5	40.4	48.5	59.6	70.5	81.3	93.0	109.3
American Express	1.4	1.6	2.0	2.2	2.4	3.0	3.4	3.4	3.8	3.9
Diners Club	3.2	3.7	4.3	5.1	5.4	5.9	6.2	5.8	6.0	6.1
MasterCard/Maestro	5.4	7.1	9.3	11.4	13.3	15.3	16.5	18.3	22.1	27.6
VISA	9.9	12.8	17.0	21.7	27.3	35.3	44.4	53.9	61.1	71.6
<i>Of which:</i>										
Use of foreign payment cards in Norway	3.0	3.8	4.6	5.3	6.2	6.7	7.5	8.1	8.8	10.0
Use of Norwegian payment cards in Norway and abroad	16.9	21.4	27.9	35.1	42.2	52.8	63.0	73.2	84.2	99.2

Table 31: Total use of payment cards issued by international card companies. Cash withdrawals and goods purchases (in NOK billions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total use of payment cards issued by international card companies	19.1	24.3	30.9	38.1	45.2	54.8	61.9	68.0	75.3	86.7
American Express	1.9	2.6	3.1	3.5	4.3	4.2	4.7	4.6	4.6	4.6
Diners Club	3.7	4.1	4.8	5.6	6.0	6.8	7.1	7.0	6.8	6.8
MasterCard/Maestro	5.2	7.1	9.6	12.1	14.0	16.8	18.1	19.5	22.5	26.5
VISA	8.3	10.5	13.4	16.9	20.8	27.0	32.0	36.9	41.4	48.8
<i>Of which:</i>										
Use of foreign payment cards in Norway	2.5	3.2	3.8	4.4	5.5	5.4	5.8	5.9	6.9	8.5
Use of Norwegian payment cards in Norway and abroad	16.6	21.1	27.1	33.7	39.7	49.4	56.0	62.0	68.4	78.2

Table 32: Goods purchases with Norwegian payment cards (in millions of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total goods purchases	118.8	156.1	207.5	264.6	317.7	385.9	447.0	513.9	593.2	676.1
Bank-Axcept cards	103.8	137.6	184.2	234.8	282.7	342.5	394.7	451.7	519.7	588.4
Domestic credit cards	0.4	0.5	0.4	0.7	0.8	0.9	1.3	2.0	2.1	2.2
Payment cards issued by international card companies	14.5	18.1	22.9	29.1	34.2	42.4	51.1	60.2	71.4	85.5

Table 33: Goods purchases with Norwegian payment cards (in NOK billions)*

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total goods purchases	57.8	80.4	104.1	134.6	164.1	162.8	182.5	204.5	233.2	261.5
Bank-Axcept cards	42.9	60.0	82.8	107.2	133.1	125.0	140.1	157.2	181.6	201.7
Domestic credit cards	1.8	2.1	1.9	3.1	3.5	3.3	3.7	4.0	2.2	2.2
Payment cards issued by international card companies	13.1	18.3	19.4	24.3	27.5	34.5	38.7	43.3	49.4	57.7

* Figures for period to 1999 include cashback at payment terminals

Table 34: Cheques (in millions of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total use of cheques	22.4	17.1	12.9	9.4	6.3	4.0	2.9	2.1	1.5	1.2
Savings banks	12.8	9.8	7.4	5.6	3.9	2.5	1.9	1.3	1.0	:
Commercial banks	9.6	7.3	5.5	3.8	2.4	1.5	1.0	0.8	0.5	:

Table 35: Cheques (in NOK billions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total use of cheques	342.0	255.5	220.5	182.7	139.0	102.4	72.5	64.4	44.9	42.5
Savings banks	159.4	103.9	87.8	72.6	65.9	47.1	37.1	29.7	21.9	:
Commercial banks	182.6	151.6	132.7	110.1	73.1	55.3	35.5	34.7	23.0	:

Table 36: Cross-border use of payment cards. Cash withdrawals and goods purchases (in thousands of transactions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	10,607	13,483	17,280	21,419	25,647	29,702	34,003	40,125	45,729	55,638
Use of Norwegian payment cards abroad	7,534	9,573	12,530	15,800	18,986	22,560	26,153	31,480	36,188	44,861
Domestic credit cards	-	-	1	1	2	1	-	-	-	-
American Express	520	610	750	844	968	722	714	708	691	700
Diners Club	669	725	816	899	900	927	893	874	1,128	1,053
MasterCard/Maestro	1,465	1,936	2,747	3,500	3,983	4,393	4,514	4,988	5,496	6,043
VISA	4,782	6,168	8,042	10,326	12,805	16,132	19,638	24,704	28,496	36,703
Eufiserv	98	134	174	230	328	385	394	206	377	362
<i>Of which</i>										
Cash withdrawals	1,244	1,752	3,845	4,528	5,806	6,286	7,129	8,299	9,187	10,153
Use of foreign payment cards in Norway	3,073	3,910	4,750	5,619	6,661	7,142	7,850	8,645	9,541	10,777
American Express	209	246	279	289	605	578	758	768	415	440
Diners Club	156	186	231	256	269	260	246	220	198	194
MasterCard/Maestro	1,130	1,508	1,730	1,983	2,096	2,266	2,412	2,541	3,105	3,266
VISA	1,501	1,872	2,359	2,798	3,262	3,627	4,089	4,576	5,118	6,139
Eufiserv	77	98	151	293	429	411	345	540	705	738
<i>Of which</i>										
Non-residents' cash withdrawals in Norway	527	717	539	1,296	1,561	1,155	1,304	1,384	1,418	1,495

Table 37: Cross-border use of payment cards. Cash withdrawals and goods purchases (in NOK millions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	9,797	12,463	16,109	20,294	24,980	28,708	31,390	35,273	40,557	48,234
Use of Norwegian payment cards abroad	7,254	9,269	12,336	15,846	19,484	23,280	25,557	29,341	33,640	39,774
Domestic credit cards	-	-	1	1	2	2	-	-	-	-
American Express	637	718	861	905	1,490	977	952	870	878	891
Diners Club	708	769	892	1,033	1,038	1,135	1,095	1,243	1,483	1,628
MasterCard/Maestro	1,436	1,958	2,794	3,725	4,301	4,905	4,883	5,214	5,851	6,411
VISA	4,473	5,824	7,788	10,182	12,653	16,261	18,627	22,014	25,428	30,844
<i>Of which</i>										
Cash withdrawals	1,871	2,515	5,333	6,490	8,388	9,509	10,598	11,917	13,287	14,934
Use of foreign payment cards in Norway	2,543	3,194	3,773	4,448	5,496	5,428	5,833	5,932	6,917	8,460
American Express	420	467	513	560	1,159	594	623	504	508	532
Diners Club	122	141	170	187	201	198	186	167	149	139
MasterCard/Maestro	860	1,196	1,387	1,615	1,694	1,928	2,078	2,133	2,670	2,912
VISA	1,141	1,390	1,703	2,086	2,442	2,708	2,946	3,128	3,590	4,877
<i>Of which</i>										
Non-residents' cash withdrawals in Norway	675	915	716	1,478	1,504	1,518	1,700	1,708	1,923	2,155

Table 38: Cross-border transfers to/from Norway with foreign currency cheques, foreign currency giros, Money Gram and Western Union (in thousands of transactions)

	1999	2000	2001	2002	2003	2004
Transfers from Norway to other countries	588	452	239	80	71	68
Transfers to Norway from abroad	578	392	299	158	234	230

F Prices in the payment system

Table 39: Prices in NOK for payment transactions, receipt of payments and cash withdrawals. Weighted average

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Payment transactions										
Giros										
<i>Electronic giro services</i>										
Telephone giro	2.02	2.45	2.33	2.31	2.38	2.45	2.44	2.38	2.14	2.24
Internet bank - solutions for retail customers	:	:	1.98	2.03	1.91	1.89	1.86	1.85	1.88	2.02
Direct Debit	:	:	:	:	:	:	:	0.00	2.09	2.03
Direct Remittance without notification	1.34	1.62	1.64	1.59	2.07	2.73	2.82	2.85	2.99	3.28
Direct Remittance with notification	3.00	3.12	3.53	3.44	4.02	4.25	4.78	4.88	5.19	5.46
Direct Remittance with CID	0.25	1.09	1.02	0.99	1.03	1.31	1.38	1.38	1.47	1.52
Other company terminal giros without notification	1.33	1.20	1.26	1.20	1.91	1.96	2.07	2.03	1.62	2.78
Other company terminal giros with notification	2.83	2.78	3.08	3.03	3.14	3.58	3.61	3.68	3.80	3.62
Other company terminal giros with CID	:	0.93	0.91	0.92	0.88	0.98	0.99	1.01	1.02	1.54
<i>Paper-based giro services</i>										
Mail giro	3.76	3.88	4.04	4.25	4.84	5.14	5.67	6.36	6.52	7.46
Giro, account debits	10.14	12.73	13.30	15.28	16.92	18.59	25.10	26.01	29.99	33.17
Giro, cash payment	16.51	17.95	18.46	23.40	25.67	27.37	31.69	32.50	41.68	40.89
Direct Remittance sent as money order	13.57	22.52	23.12	25.72	27.78	30.01	32.64	33.70	35.69	46.65
Other company terminal giro sent as money order	13.57	22.35	23.41	25.01	26.06	30.11	32.61	33.58	35.27	46.06
Payment cards										
Payment terminal (EFTPOS)	2.05	2.20	2.13	2.07	2.19	2.24	2.07	2.07	2.11	2.50
Cheques										
Personal cheques	8.50	9.79	10.72	12.30	15.00	20.07	20.70	21.13	20.64	27.61
Business cheques	9.28	9.82	10.46	12.31	15.13	22.05	22.79	23.94	24.01	27.81
Receipt of payments										
Giro										
<i>Electronic giro services</i>										
Direct debit	:	1.52	1.60	1.51	1.38	1.42	1.42	1.42	1.53	1.39
Optical Character Recognition (OCR) - File	0.80	0.82	0.80	0.79	0.93	1.15	1.15	1.17	1.15	1.22
GiroFax	:	:	:	:	:	:	:	0	0.16	0.09
GiroMail	:	:	:	:	:	:	:	0	0.06	0.01
<i>Paper-based giro services</i>										
Optical Character Recognition (OCR) - Return	2.15	2.38	2.40	2.12	3.39	3.81	3.70	3.85	3.82	4.06
Cash withdrawals										
ATM withdrawals										
Own bank's ATM outside opening hours	2.93	3.31	3.49	3.79	3.78	4.28	3.76	3.69	3.89	4.08
Other banks' ATMs in opening hours	1.87	1.95	2.25	2.19	2.64	4.00	3.89	4.09	4.72	5.14
Other banks' ATMs outside opening hours	4.08	4.40	4.44	4.46	4.32	4.81	4.79	4.91	5.49	5.53

Table 40: Prices in NOK for transfers from Norway to countries in EEA. Weighted average

	Electronic payment order/ wholly automated processing			Electronic payment order/ Bank performs some operations manually			Manual payment order		
	12/1/2004	1/1/2005	3/1/2005	12/1/2004	1/1/2005	3/1/2005	12/1/2004	1/1/2005	3/1/2005
Ordinary SWIFT transfer in NOK									
Without BIC and IBAN, NOK 100	66.39	66.50	66.90	77.72	81.75	77.38	125.50	129.83	130.28
Without BIC and IBAN, NOK 2500	66.78	66.88	67.28	82.67	85.46	78.31	132.66	135.71	134.71
With BIC and IBAN, NOK 100	55.55	55.48	55.17	65.89	69.75	65.11	114.55	118.88	119.33
With BIC and IBAN, NOK 2500	55.93	55.87	55.55	70.85	73.47	66.05	121.71	124.76	123.76
Ordinary SWIFT transfers in euro									
Without BIC and IBAN, equivalent to NOK 100	66.39	66.50	66.90	77.72	81.75	77.38	125.50	129.83	130.28
Without BIC and IBAN, equivalent to NOK 2500	66.78	66.88	67.28	82.67	85.46	78.31	132.66	135.71	134.71
With BIC and IBAN, equivalent to NOK 100	42.77	34.91	34.17	53.30	57.16	52.51	114.55	102.22	102.67
With BIC and IBAN, equivalent to NOK 2500	43.16	35.29	34.55	58.25	60.87	53.45	121.71	108.11	107.11
SWIFT express transfers in NOK									
Without BIC and IBAN, NOK 100	279.93	280.55	288.66	279.93	280.55	292.39	341.84	346.37	356.62
Without BIC and IBAN, NOK 50000	296.64	292.11	296.21	296.64	292.11	299.94	360.72	360.10	366.90
Without BIC and IBAN, NOK 150000	311.63	311.01	307.45	311.63	311.01	312.41	375.84	377.69	379.50
With BIC and IBAN, NOK 100	269.55	270.17	278.01	269.55	270.17	281.74	331.46	336.00	346.25
With BIC and IBAN, NOK 50000	286.27	281.73	285.55	286.27	281.73	289.29	350.34	349.73	356.52
With BIC and IBAN, NOK 150000	301.25	300.63	296.80	301.25	300.63	301.76	365.46	367.31	369.12
SWIFT express transfers in euro									
Without BIC and IBAN, equivalent to NOK 100	279.93	280.55	288.66	279.93	280.55	292.39	341.84	346.37	356.62
Without BIC and IBAN, equivalent to NOK 50000	296.64	292.11	296.21	296.64	292.11	299.94	360.72	360.10	366.90
Without BIC and IBAN, equivalent to NOK 150000	311.63	311.01	307.45	311.63	311.01	312.41	375.84	377.69	379.50
With BIC and IBAN, equivalent to NOK 100	269.55	270.17	278.01	269.55	270.17	281.74	331.46	336.00	346.25
With BIC and IBAN, equivalent to NOK 50000	286.27	281.73	285.55	286.27	281.73	289.29	350.34	349.73	356.52
With BIC and IBAN, equivalent to NOK 150000	301.25	300.63	296.80	301.25	300.63	301.76	365.46	367.31	369.12
Cheques to other countries									
Equivalent to NOK 100	-	-	-	149.84	157.51	157.51	193.29	199.80	199.80
Equivalent to NOK 2500	-	-	-	151.53	159.20	159.20	201.27	205.73	205.73

Table 41: Prices in NOK for transfers from Norway to countries outside the EEA. Weighted average

	Electronic payment order/ Wholly automated processing			Electronic payment order/ Bank performs some operations manually			Manual payment order		
	12/1/2004	1/1/2005	3/1/2005	12/1/2004	1/1/2005	3/1/2005	12/1/2004	1/1/2005	3/1/2005
	Ordinary SWIFT transfer in NOK								
Without BIC and IBAN, NOK 100	64.29	65.28	66.90	75.67	80.63	77.38	123.46	128.62	130.28
Without BIC and IBAN, NOK 2500	64.67	65.66	67.28	81.00	84.72	78.31	130.62	134.50	134.71
With BIC and IBAN, NOK 100	55.55	55.66	55.34	65.99	70.01	65.30	114.55	118.88	119.33
With BIC and IBAN, NOK 2500	55.93	56.04	55.72	71.31	74.10	66.24	121.71	124.76	123.76
Ordinary SWIFT transfer in euro									
Without BIC and IBAN, equivalent to NOK 100	64.29	65.28	66.90	75.58	80.54	77.38	123.46	128.62	130.28
Without BIC and IBAN, equivalent to NOK 2500	64.67	65.66	67.28	80.54	84.25	78.31	130.62	134.50	134.71
With BIC and IBAN, equivalent to NOK 100	42.77	42.88	42.56	53.30	57.33	52.71	114.55	118.88	119.33
With BIC and IBAN, equivalent to NOK 2500	43.16	43.26	42.95	58.25	61.04	53.65	121.71	124.76	123.76
SWIFT express transfer in NOK									
Without BIC and IBAN, NOK 100	277.89	279.35	288.66	277.89	279.35	292.39	339.80	345.17	356.62
Without BIC and IBAN, NOK 50000	294.60	290.91	296.21	294.60	290.91	299.94	358.68	358.90	366.90
Without BIC and IBAN, NOK 150000	309.59	309.81	307.45	309.59	309.81	312.41	375.00	376.48	379.50
With BIC and IBAN, NOK 100	269.55	270.17	278.01	269.55	270.17	281.74	331.46	336.00	346.25
With BIC and IBAN, NOK 50000	286.27	281.73	285.55	286.27	281.73	289.29	350.34	349.73	356.52
With BIC and IBAN, NOK 150000	301.25	300.63	296.80	301.25	300.63	301.76	365.46	367.31	369.12
SWIFT express transfers in euro									
Without BIC and IBAN, equivalent to NOK 100	277.89	279.35	288.66	277.89	279.35	292.39	339.80	345.17	356.62
Without BIC and IBAN, equivalent to NOK 50000	294.60	290.91	296.21	294.60	290.91	299.94	358.68	358.90	366.90
Without BIC and IBAN, equivalent to NOK 150000	309.59	309.81	307.45	309.59	309.81	312.41	375.00	376.48	379.50
With BIC and IBAN, equivalent to NOK 100	269.55	270.17	278.01	269.55	270.17	281.74	331.46	336.00	346.25
With BIC and IBAN, equivalent to NOK 50000	286.27	281.73	285.55	286.27	281.73	289.29	350.34	349.73	356.52
With BIC and IBAN, equivalent to NOK 150000	301.25	300.63	296.80	301.25	300.63	301.76	365.46	367.31	369.12
Cheques to other countries									
Equivalent to NOK 100	-	-	-	149.84	157.51	157.51	193.29	199.77	199.80
Equivalent to NOK 2500	-	-	-	153.96	159.20	159.20	201.27	205.73	205.73

Table 42: Prices in NOK for receipt of payments in Norway from abroad. Weighted average

	Receipt of payments from countries in EEA			Receipt of payments from countries outside EEA		
	12/1/2004	1/1/2005	3/1/2005	12/1/2004	1/1/2005	3/1/2005
	Receipt of payments in euro					
Without BIC and IBAN, equivalent to NOK 100	35.76	35.76	35.97	35.76	35.76	37.18
Without BIC and IBAN, equivalent to NOK 50000	97.48	96.43	92.97	97.48	97.89	96.84
Without BIC and IBAN, equivalent to NOK 150000	97.48	97.89	96.84	97.48	97.89	96.84
With BIC and IBAN, equivalent to NOK 100	35.76	8.95	8.38	35.76	35.76	35.94
With BIC and IBAN, equivalent to NOK 50000	97.48	21.57	18.57	97.48	97.89	93.54
With BIC and IBAN, equivalent to NOK 150000	97.48	95.81	94.76	97.48	97.89	96.84
Receipt of payments in other currencies						
Without BIC and IBAN, equivalent to NOK 100	35.76	35.76	37.18	35.76	35.76	37.18
Without BIC and IBAN, equivalent to NOK 50000	97.48	97.89	96.84	97.48	97.89	96.84
Without BIC and IBAN, equivalent to NOK 150000	97.48	97.89	96.84	97.48	97.89	96.84
With BIC and IBAN, equivalent to NOK 100	35.76	35.76	37.18	35.76	35.76	37.18
With BIC and IBAN, equivalent to NOK 50000	97.48	95.81	94.76	97.48	97.89	96.84
With BIC and IBAN, equivalent to NOK 150000	97.48	95.81	94.76	97.48	97.89	96.84

Table 43: Price list for participation in Norges Bank's settlement system (NBO), valid from 1 January 2005 (in NOK)

Annual fees									
Participant category	Access fee for new participants	Retail settlement	SWIFT settlement	Securities settlement	NOS settlement	Infrastructure fees 1	Basic fee for collateral for loans	Supplementary fee for collateral for loans	Scandinavian Cash Pool
Banks with total assets in excess of NOK 100 billion	50,000	100,000	100,000	100,000	100,000	400,000	150,000	100,000	15,000
Banks with total assets between NOK 5-100 billion and branches of foreign banks	50,000	75,000	75,000	75,000	75,000	200,000	75,000	100,000	15,000
Banks with total assets under NOK 5 billion	50,000	50,000	50,000	50,000	50,000	10,000	10,000	100,000	15,000
Investment firms / brokers	50,000			100,000	100,000	10,000			
Transaction fees²									
Participant category	Manual gross transactions	STP transactions	Cheques	Changes in collateral					
Banks	45	3	150	150					
Money brokers	45		150						

(1) Per bank / money broker

(2) Transaction fees only apply to debit transactions. There are no transaction fees for transactions where Norges Bank is the counterparty (cash, F-loans, F-deposits, currency swaps, etc.)

Table 44: Price list for banks' delivery and withdrawal of cash to and from Norges Bank's depots. Valid from 1 May 2005 (in NOK)

Type of fee/charge ¹	Delivery	Withdrawal
Handling charge, fixed share		
Banknotes, per transaction	100,-	100,-
Coins, per transaction	100,-	100,-
Handling fee, variable share		
Banknotes, per packet of 500 notes	6,-	6,-
Coins, per standard unit (150 rolls)	30,-	30,-
Incorrect sorting, error in delivery charge²		
Too many good notes delivered as damaged notes	0,-	
Counterfeit notes	0,-	

(1) Prices do not apply to exempt exchange transactions or delivery of banknotes and coin not fit for circulation.

(2) Charges will possibly be introduced at a later date.

Definitions:

e-money: a monetary value represented by a claim on the issuer that is: 1) stored on an electronic medium, 2) issued on receipt of funds and 3) a recognised means of payments by enterprises other than the issuer.

Giro:

Giros comprise both credit and debit transfers from one bank account to another. The term *giro* is often used only for paper-based money transfers. In this report, the term *giro* also includes all electronic payments between banks on behalf of customers.

Autogiro: an electronic collection procedure whereby companies can debit outstanding claims directly from customers' accounts when they fall due (see also *direct debit*).

Avtalegiro: the bank automatically debits payment of regular bills from customers' accounts on the due date (see also *direct debit*).

Company terminal giro: Payment solutions for businesses that do not use Internet for payments. Solutions require installation of software in the user's/business' computer system. Used for individual payments, retail payments to payees with and without accounts, etc. The term *company terminal giro* also includes the BBS service, *Direct Remittance*.

Mail giro: Payer sends a paper-based giro in an envelope directly to BBS rather than delivering the form to his/her bank. Figures up to 2002 also include *mail giros* to Postbanken.

Direct debits: From 2002, Autogiro and Avtalegiro. To 2002, the term also included DataGiro Direkte Trekk, DataGiro Terminbetaling and DataGiro Medlemsbetaling. See Tables 26-27.

Miscellaneous bank-registered giros: Cash payments and account debits using giro forms registered in processing centres other than BBS.

e-Faktura: Electronic Invoicing that is completed with CID, account number, etc. and sent to customer's Internet bank. The customer has to confirm the payment his/herself.

Giro as money order: Paper-based giro without the payee's account number which must be presented in a bank in order to receive payment.

CID: Customer Identification Number that may be received electronically by the payee whether the payment is effected electronically or in paper-based form.

Internet bank: Home banking services and use of business payment solutions over the Internet.

OCR: Optical Character Recognition. Paper-based giros with a special code bar that makes it possible for the payee to register the amount and to invoice electronically. *OCR File*: The bank keeps the form. *OCR Return*: The form is returned to the payee.

Transfers by telephone/Telephone giro: Transfers from one account to another, initiated by telephone.

Cards:

EFTPOS (Electronic Funds Transfer at Point Of Sale): Payments and cash withdrawals (cashback) in connection with the use of payment cards in payment terminals in shops, etc.

Debit card. Payment card that accesses deposits and credit linked to customer's bank account. The user's account is debited each time the card is used. *Bank-Axept card* is a debit card issued by Norwegian banks that is linked to a bank account.

Charge card. Payment card that is not linked to a bank account. The user receives an invoice for all use in a given period at regular intervals and pays the card issuer using another payment instrument. The user has a certain amount of credit in the form of delayed payment, whereas the merchant/payee receives settlement from the card company.

Credit card: Payment card with a credit limit that is repaid according to an agreed repayment plan, regardless of use.

Domestic credit card is a card designed for use in Norway that is issued by or in cooperation with DnB NOR Kort, Entercard AS or GE Money Bank.

Payment cards established by international card companies are payment cards (debit cards, charge cards and credit cards) that are issued on the basis of a direct licence from the international card companies (Visa/Europay/American Express/Diners Club).

Combined payment cards: Combination(s) of a bank card, domestic credit card and payment card issued by an international card company.

Oil company card: Card that can only be used for payments in the oil companies' own terminals and is therefore not defined as a payment card.

Money transfers:

Credit transfer: Money transfer initiated by the payer.

Debit transfer: Money transfer initiated by the payee.

Systems and institutions:

SWIFT (Society for Worldwide Interbank Financial Telecommunications): an electronic network (system) for transmitting messages. Used extensively in connection with large-value transfer, e.g. between banks, and for cross-border transfers in particular.

Money Gram/Western Union: Own network for cross-border payments.

NBO: Norges Bank's Settlement System

NICS (Norwegian Interbank Clearing System): a system for clearing and providing liquidity information that is jointly owned by the banks and operated by BBS.

NOS: Norwegian Futures and Options Clearing House.

VPS: The Norwegian Central Securities Depository

VPO: Securities settlement system

Guide to tables:

The tables provide an overview of the payments system's infrastructure, the use of different payment instruments and the volume of cash and deposit money in Norway. The figures presented in the statistics are divided between commercial and savings banks to end-2003, but from 2004 include information for all banks as a result of the merger between DnB and Gjensidige NOR in January 2004.

Sources for statistics on *cash*: Norges Bank. Information about *giros, cheques, bank cards, ATMs, payment terminals owned by banks and retail chains and cross-border transfers* was obtained from the Norwegian Financial Services' Association (FNH), the Norwegian Savings Banks' Association, Entercard A/S, the Norwegian Banks' Payment and Central Clearing House Ltd. (BBS), Nordea Bank Norge ASA, DnB NOR Bank ASA, Fokus Bank ASA, Danske Bank, Forex Bank Norge and EDB Business Partner ASA with associated banks. Information about *payment cards other than Bank-Axept cards and payment terminals owned by oil companies* was obtained from Teller A/S, SEB Kort AB (Oslo branch), DnB NOR Kort, Nordea Bank Norge ASA, GE Money Bank, Statoil ASA, Esso Norge A/S, A/S Norske Shell, Hydro Texaco AS and Conoco Jet Norge A/S. Information about clearing and settlement was obtained from Norges Bank, the Norwegian Central Securities Depository (VPS) and the Norwegian Interbank Clearing System (NICS). Other information was obtained from Statistics Norway, the Norwegian Post and Telecommunications Authority and Kredittilsynet, the Financial Supervisory Authority of Norway.

Information about *prices and information in the payments system* is based on a sample survey comprising 25 commercial and savings banks. The commercial and savings banks in the survey account for 85% of the bank groups' market shares measured by sight deposits as of 30 November 2004. The prices were taken from banks' price lists on 1 January in the period 1996-2005.

Information about banks' income from the payment system was obtained from Norges Bank's database for bank statistics (ORBOF) and is thus based on the banks' official accounts.

Comments on individual tables:

Tables 7 – 9. Average daily turnover in NBO and NICS: The figures for 1999 only cover the period May – December 1999. The figures for 2000 - 2003 cover the whole year. There is some uncertainty about the statistics on NICS retail settlement.

Table 15. Number of payment terminals (EFTPOS) and number of locations with payment terminals: The number of payment terminals owned by oil companies to end-1998 does not include terminals owned by FINA (bought out by Shell on 4 March 1999), whereas the figures from 1999 onwards include these terminals. Locations with payment terminals: shops, post offices, petrol stations, restaurants and cafés, hairdressers, dentists, etc. Statistics only include terminals that accept bankcards.

Table 18. Number of payment cards: To end-1997, information about bankcards was not available from 8% of commercial banks measured by the bank's share of sight deposits. From 1998, the share of banks with no available information is negligible.

Tables 20 and 21. Cash withdrawals:

Cash withdrawals at the counter: The share of commercial banks that provided information represented approximately 90% of the commercial bank market measured by sight deposits to end-1999. From 2000, information about the number of withdrawals refers to all commercial and savings banks, while the volume figures have been estimated by Norges Bank on the basis of information from selected banks.

Cashback withdrawals: Cash withdrawals in connection with payment card use in terminals that accept bankcards and are owned by banks, retail chains and oil companies. In some cases, the distribution between commercial and savings banks and the volume for the period 2000 - 2004 have been estimated by Norges Bank and BBS.

Tables 22 and 23. Use of Norwegian payment services. Tables 24 and 25. Use of Norwegian payment instruments and Tables 26 and 27. Giro services:

Giro: Figures shown in italics do not include Postbanken figures due to substantial uncertainty about the information gathered to end-1995. Turnover figures for electronic giro, including terminal payments - closed networks to end-2002, have in some cases been estimated by Norges Bank and are uncertain.

Payment cards: Payments, including goods purchases, with Norwegian cards in Norway and abroad. Turnover with bankcards to end-1999 includes withdrawals from payment terminals whereas figures from 2000 only include goods purchases. The share of goods purchases in relation to total turnover (turnover including cashback withdrawals) has in some cases been estimated by Norges Bank and BBS.

Tables 13, 14, 16, 17, 28 – 33, 36 and 37. Use of ATM network and payment terminals and use of payment cards: Tables 13-17 refer to cash withdrawals and goods purchases using Norwegian and foreign payment cards in Norwegian ATMs and payment terminals. Tables 28 – 33 refer to the use of Norwegian payment cards in Norway and abroad. Tables 28 – 31 refer to both cash withdrawals and goods purchases whereas Tables 32 and 33 only refer to goods purchases. The tables also include the use of combined cards (e.g. combined Bank-Axcept cards/payment cards issued by international card companies). The use of combined cards is broken down according to different card groups (such as Bank-Axcept cards, VISA cards, etc.), depending on which part of the card has been used. Information about withdrawals from other banks' ATMs (*Tables 13 and 14*) to end-2002 are estimates from Norges Bank and subject to uncertainty. Figures for Bank-Axcept card turnover in connection with goods purchases to end-1999 include cash withdrawals (*Table 33*). From 2000, cash withdrawals are differentiated and presented in a separate table (*Table 21*), so that turnover only refers to goods purchases. The share of goods purchases in relation to total turnover (turnover including cashback withdrawals) has in some cases been estimated by Norges Bank and BBS. Use of Norwegian payment cards abroad (*Tables 36 and 37*) refers primarily to the use (cash withdrawals and goods purchases) of payment cards from the international card companies. To a certain extent, i.e. in less than 1% of cases, Bank-Axcept cards are also used in the Eufiserv network. Some registered foreign MasterCard / Maestro transactions in Norway refer to JCB cards (Japan Credit Bureau). The share of such transactions has been negligible to date. The break down of cash withdrawals and goods purchases for American Express has been estimated by Norges Bank and is subject to uncertainty.

Tables 34 and 35. Cheques: The distribution of cheques by commercial and savings banks in the period 2000 – 2003 has in some cases been estimated due to incomplete data.

Tables 40, 41 and 42: Prices for domestic payment transactions, receipt of payments and cash withdrawals and prices for cross-border transfers: The price statistics present average prices in banks per transaction. The statistics refer to standard prices in banks as shown in price lists. Average prices are calculated by first calculating the average for commercial and savings banks as separate groups and then the average for all banks as a whole. Average prices for bank groups are calculated by weighting the price per transaction in each bank with the bank's share of sight deposits. The average price for all banks in the survey is calculated by weighting the bank groups' average prices with the groups' real market shares for payment services, measured by number of transactions. For domestic payments, the fees charged to the payee come in addition to the fees charged to the payer. Cross-border prices refer to a fixed sum transfer in and out of the EEA both with and without BIC and IBAN. Prices are also differentiated according to whether the payment instruction is manual or electronic and whether the payment process is semi-manual or fully automated. Prices do not include additional costs for cash payments, third country currency, confirmations or costs that the payer must cover for the payee.

Mail giro: Average price refers to each form sent in. Postage for each sending is an additional charge.

Internet bank– solutions for retail customers: Prices refer to payments with CID.

Direct debit: Prices per payment received refer to direct debits without notification.

Standard symbols in the tables:

: Incomplete information/will not be published

- Zero

0 Less than (the absolute value of) 0.5 of the used unit

General comments: Some figures have been revised in relation to previous years' reports. Norges Bank should be cited as the source when referring to figures from this report.

