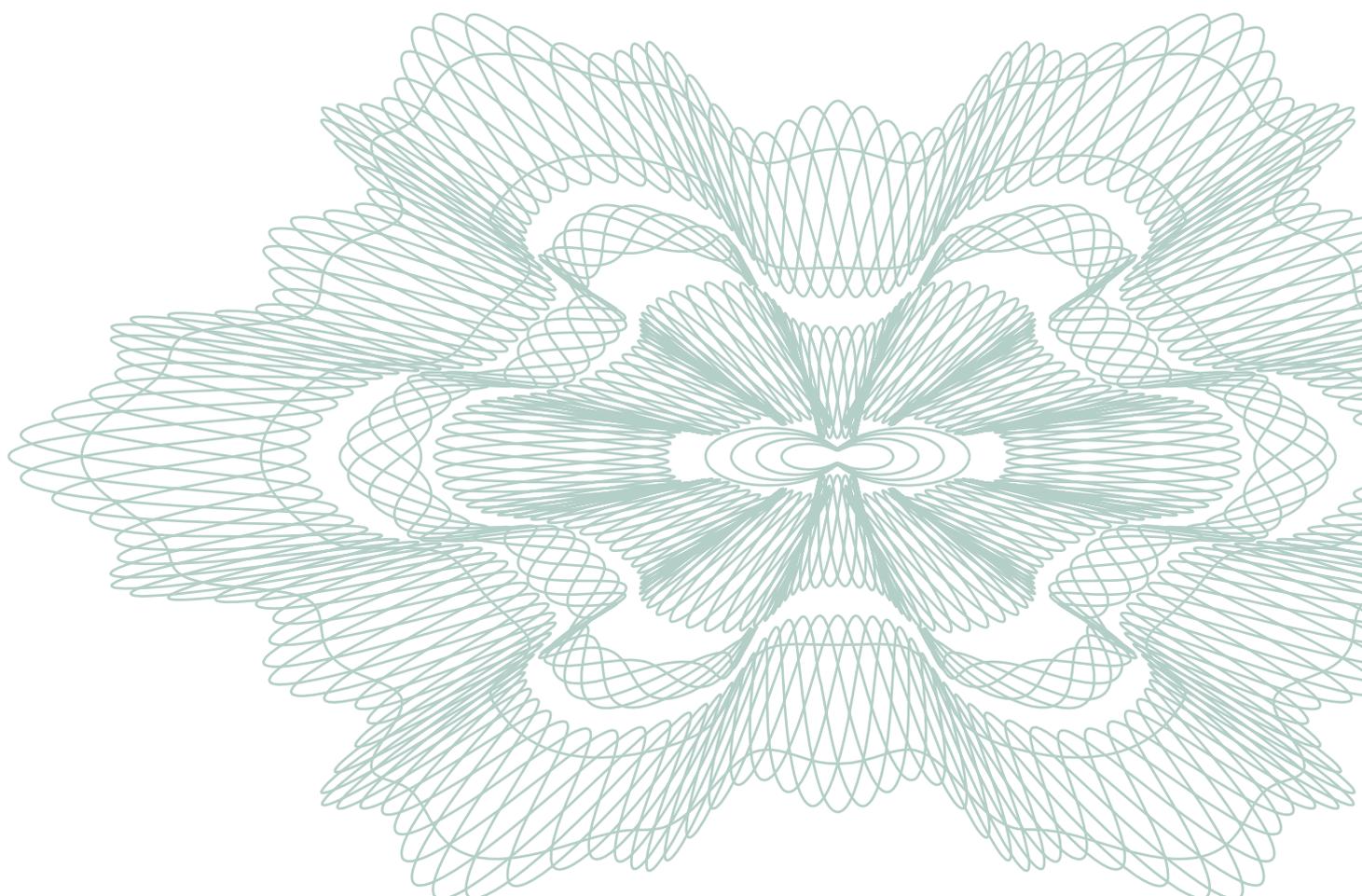




Annual Report on Payment Systems

2005

May
2006



Norges Bank's Annual Report on Payment Systems

Norges Bank is responsible for promoting robust and efficient payment systems and financial markets, 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 the authorisation and 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 that result in asset and liability positions between the sender's and beneficiary's banks are carried out via the payment system every day. 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.

Norges Bank also monitors trends that may influence the efficiency of the payment system in Norway and vis-à-vis other countries. 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:

- an infrastructure that facilitates economies of scale,
- prices that reflect the relative differences in 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 supervisory 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 report also gives an account of Norges Bank's monitoring of risk in important payment and settlement systems.

The 2005 report is divided into five chapters. The first four chapters are largely about customer-oriented services. Chapter 5 deals with Norges Bank's oversight of interbank systems. The report also contains a statistical annex with accompanying explanations.

Norges Bank's Annual Report on Payment Systems is published annually. The report is available on Norges Bank's website: www.norges-bank.no

The statistical annex is also available in Excel format on Norges Bank's website.

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Foreword

The International Monetary Fund (IMF) carried out a review of the Norwegian financial system in 2005. The IMF stated that the infrastructure for payments is highly developed and efficient and that the systemically important settlement system, Norges Bank's Settlement System (NBO), fully complies with international standards. The banks' cooperation on a joint infrastructure, which in turn is the basis for the range of payments services offered by individual banks to the market, was highlighted as a positive element.

Norwegian banks use prices as a tool to get customers to choose the most cost-effective services. The combination of user-friendly services and pricing has encouraged Norwegians to switch to electronic payment services faster than consumers in other countries. The rise in the use of electronic payment instruments continued in 2005. Growth was strongest for the most efficient electronic services, such as electronic invoicing and direct debits. Use of electronic invoicing doubled from 2004 to 2005. There was a continued increase in the use of payment cards and in 2005, every Norwegian used a card on average 188 times.

Norges Bank oversees risk in the key payment and settlement systems. The purpose of this is to ensure that the systems are organised to ensure financial stability. Norges Bank strives for transparency in all its activities. In line with this, the main aspects of Norges Bank's oversight work are published in a separate chapter in this report, for the first time. Norges Bank will continue to report on its oversight work in this report in the future.

Jarle Bergo

Summary

In an efficient payment system, payments are carried out quickly, securely and at low cost. In Norway, most payments are executed the same day. Security in the Norwegian payment system is good and production costs linked to payment services have been substantially reduced in recent years.

To ensure that the payment system continues to be efficient, it is important that customers are motivated to choose the most efficient payment services. Banks also need incentives to develop new instruments and to invest in new technology. Norges Bank is of the opinion that direct pricing is an important means of further developing services and accelerating changes in user patterns.

Steady increase in use of electronic payment services

In 2005, over 1.2 billion transactions were made with non-cash payment instruments, of which 93% were electronic (see Chart 1).

The number of electronic giro transactions rose by 6% in 2005 (see Chart 2), which is a slightly lower increase than in previous years. Around 2.3 million people now use Internet banking in Norway and the number of enterprises using Internet banking has risen considerably. Growth in the use of electronic invoicing was robust and around 20% of Internet banking customers now use electronic invoicing.

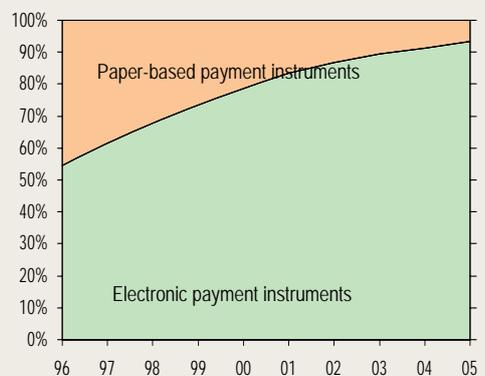
In 2005, 864 million card transactions were registered, comprising cash withdrawals and goods purchases. This is a 10% increase on 2004. The average goods purchase with a BankAxept-card was NOK 365 in 2005, which is NOK 22 more than in 2004.

The number of cash withdrawals and the total value of cash withdrawals both fell in 2005 compared with 2004. The reduction is largely due to fewer cash withdrawals over the counter. However, the value of banknotes and coins in circulation rose by 5% to an average of NOK 45.9 billion in 2005.

Minor changes in prices

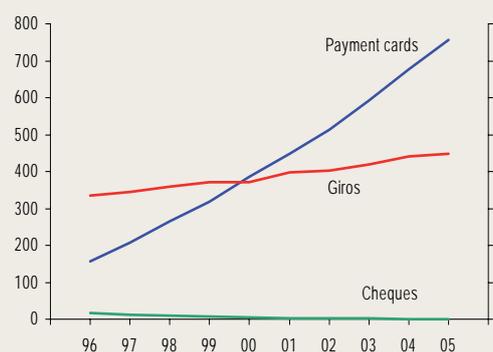
Most Norwegian banks price their payment services, but the range of free services on offer is growing. The prices that customers pay largely reflect the relative differences in the cost of producing payment services. This motivates customers to choose the most cost-effective payment services. More and more bank customers are participating customer programmes with discounts on payment services. The discounts are primarily on electronic services. Most

Chart 1 Use of paper-based and electronic payment instruments 1996-2005. Transactions in per cent



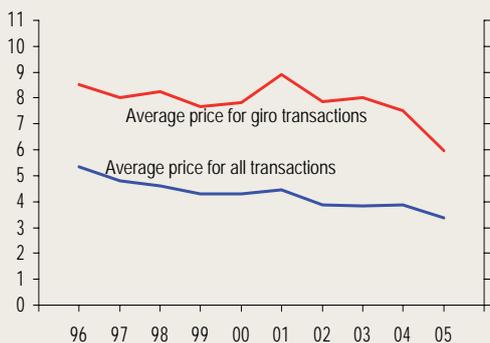
Source: Norges Bank

Chart 2 Payment instruments 1996-2005. In millions of transactions



Source: Norges Bank

Chart 3 Weighted nominal average prices for payment services to retail customers 1996 - 2005. In NOK



Source: Norges Bank

customer programmes, therefore, still have incentives for choosing electronic payment services.

Average list prices for electronic services rose marginally in 2005. List prices for a selection of Norwegian banks show that the price for card payments in terminals has fallen. However, prices for other payment services in the retail market edged up slightly. Greater use of cheaper, electronic payment services means, however, that the price of an average payment transaction has fallen (see Chart 3).

Developments in Europe

Work is underway in Europe to establish a joint payment system for the EU area. Banks and banking associations from 28 European countries have together formed the European Payments Council (EPC) to create a joint payment system and a single infrastructure for payments in euro. In autumn 2005 and spring 2006, the EPC issued frameworks for cards and cash and schemes for direct debits and credit transfers. At the same time, work is also underway in the EU to draw up a new, joint legal framework for payments in the EEA. The ECB is also working on the introduction of a new version of the pan-European clearing and settlement system for central banks (TARGET2).

Norges Bank's oversight of payment and settlement systems

If payment systems are not organised in a secure manner, problems in one bank can spill over to other banks. A key responsibility for central banks is, therefore, to oversee the functioning of the payment and settlement systems.

In its work linked to the oversight of interbank systems, Norges Bank adheres to the international recommendations from the Bank for International Settlements (BIS). The recommendations contain 10 principles that aim to limit risk in systemically important payment systems. The BIS has also issued 4 recommendations for central banks in connection with the oversight of interbank systems.

In 2005, Norges Bank's settlement system (NBO) was assessed by the International Monetary Fund (IMF). Prior to the IMF's review, Norges Bank had carried out a self-assessment of NBO. Norges Bank concluded that the system complies with all relevant international standards. The IMF concurred with the Bank's evaluation, but also made some suggestions that they felt would help to improve the system further.

The IMF also reviewed the system for securities settlement (VPO), but it was not assessed in detail in relation to relevant international standards. The IMF recommended that measures should be implemented to reduce market and liquidity risk in VPO. This work is now underway.

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1. An efficient payment system

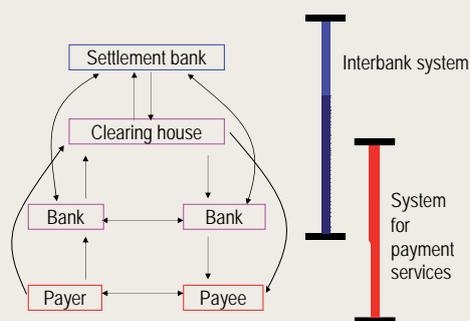
Means of payment: Money in the form of banknotes and coins issued by Norges Bank or deposit money; cash has a value that is guaranteed by the central bank, whereas deposit money is guaranteed by the bank in question and the Banks' Guarantee Fund.

Payment instruments: Payment instruments are tools for using the means of payment. The most important instruments in Norway are payment cards and giros. Banknotes and coins function as both a means of payment and a payment instrument.

The provision of payment services requires considerable resources. It is estimated that the costs to society amount to between 1 and 3% of gross domestic product (GDP) in industrialised countries¹. Surveys carried out by Norges Bank show that banks' costs in connection with the production of payment services totalled NOK 5.9 billion in 2001 (Gresvik and Øwre, 2002), which constituted just under 0.4% of GDP. The payer and payee also have costs in connection with the execution of payments. The total costs for Norway are probably in the lower part of the interval for industrialised countries. The transition from a cash-based economy to the current payment system, which is largely based on deposit money, has resulted in considerable savings for society.

1.1 Efficiency in the payment system

Chart 1.1 The Norwegian payment system



Source: Norges Bank

Pursuant to the Norges Bank Act, Norges Bank is responsible for promoting efficient payment systems domestically and vis-à-vis other countries. Norges Bank and the banks have focused on risk-reducing measures in the clearing and settlement systems (interbank systems, see Chart 1.1). The reason for this is that banks can be subject to considerable exposure in these systems and the stability of the financial system may be threatened if interbank systems do not have mechanisms for limiting risk. Chapter 5 is a summary of Norges Bank's work in connection with oversight and supervision of the payment and settlement systems. In the customer-oriented parts of the payment system (system for payment services, see Chart 1.1, such as giros and card payments), the focus has primarily been on efficiency.

An efficient payment system in Norway

In an efficient payment system, payments are effected quickly, securely and at low cost.

In Norway, most payments are completed within one working day. Time-critical payments can be effected within seconds. The speed with which it is technically possible to complete payments is constantly being increased. However, speed has to be offset against needs, security and costs.

Security in customer-oriented parts of the payment systems is good. The extent of fraud related to cash and other payment instruments is relatively low in Norway, but attempted fraud using electronic payment services is on the rise (see frame).

Norges Bank's cost surveys² show a falling trend in banks' costs in connection with the production of payment services.

¹ See, for example, Hancock and Humphrey (1998).

² The last cost survey was carried out in 2001.

A Swedish survey of costs in payment systems concurs to some extent with Norges Bank's surveys. However, due to different calculation methods, it is difficult to determine whether the Swedish or Norwegian payment system is most cost efficient.

Efficiency and prices

In order to increase efficiency in the payment system, it is important that customers are motivated to choose the most cost-effective payment services. Banks must have incentives to develop new instruments and to invest in new technology.

Norges Bank is of the opinion that the pricing of payment services is an important means to promote efficiency, a view supported by Humphrey, Kim and Vale (2001). They show that consumers react to price signals and choose cost-effective payment instruments if these are the cheapest for them. The survey is based on Norwegian data. Bolt, Humphrey and Uittenbogaard (2005) compare changes in the use of payment services in Norway with the trend in the Netherlands, where payment services are not directly priced. They show that in the choice between payment cards and cash, features such as security and user-friendliness may be more important than price.³ However, in terms of the transition from paper-based to electronic giros, the effect of direct pricing was much greater. Nevertheless, Bolt, Humphrey and Uittenbogaard find strong evidence to support the notion that prices which reflect relative costs will encourage the use of electronic payment services. The more swiftly the transition from paper-based to electronic payment instruments is effected, the faster society will be able to achieve the savings.

Most Norwegian banks price payment services directly, but some offer free payment services. When payment services are free, consumers are not given clear signals with regard to the costs of producing the services. Furthermore, a lack of income opportunities in the payment system may, in the long term, make it less attractive for banks to develop new payment services.

However, the negative consequences of subsidised prices in the payment system, in terms of efficiency, are limited if only the most efficient payment services are offered free. The price differential between electronic and paper-based services will then continue to motivate customers to choose payment services that require the least resources. Zero pricing will, however, entail that both variable and fixed production costs for payment services will have to be covered from other sources, such as through higher interest rate margins or higher prices on other products.

³ The price of cash is calculated on the price of a cash withdrawal.

Cash is legal tender and can therefore be used in any payment situation where the service is paid for on the spot. The use of cash entails immediate, non-traceable and anonymous settlement.

Banks have substantial costs in connection with the procurement, distribution and safe-keeping of cash. Shops and others who receive cash payments also incur costs in connection with the use of cash, for example, in the form of security measures, the time involved in cashing up, and collecting and delivering cash to the bank.

The Dutch central bank has worked with representatives from the banking industry to calculate the costs of using cash, debit cards, credit cards and pre-paid cards when purchasing goods or services (De Nederlandsche Bank 2004). The societal cost of these payment instruments is calculated to account for around 0.7% of GDP. The calculations take little consideration of the costs to consumers. The survey concludes that a debit card is more efficient than cash for payments over 12 euros. The results of the Dutch survey are probably not directly comparable with Norwegian conditions, due to differences in geography and population density, differing use of payment services today and different structures for cash distribution and payment systems.

TNS Gallup was contracted by Bankenes Betalingsentral (BBS) to establish which amounts respondents felt it was natural to pay by card. The youngest people in the survey gave an average amount of NOK 87, whereas the oldest gave an average of NOK 195. In the same survey, the majority of those asked answered that they expected to use their cards more in the future.

Security in electronic payment services

Fraud linked to the use of electronic payment services has increased in recent years. The attempts at fraud have also become more sophisticated. Fake emails or Internet pages designed to look like a bank's website are used to extract personal and/or financial information from bank customers. This is called "phishing". Another security threat is direct break-ins to central servers on the Internet in order to redirect information that is being sent between customers and Internet banks (this type of attack has been called "pharming"). If the criminals succeed in redirecting the traffic, they could gain access to information such as passwords and user identification. There have also been several registered attempts at "skimming", when criminals install equipment in ATMs in order to access card and user information.

Extent

At present, comprehensive statistics for fraud in Norway are not collected, but several participants do watch developments closely. Figures gathered by the Norwegian Financial Services Association (FNH) show that the extent of fraud and attempted fraud is limited in Norway.¹ This is partly because online balance checks and PIN checks are used for nearly all card payments in Norway. The banking industry has also placed importance on developing secure Internet bank solutions, among other things, using one-off passwords for logging on to Internet banks.

The figures from the FNH show that the number of card frauds in 2005 was lower than in 2004. However, losses rose by around 30%. Losses for the banking industry as a whole continued to be low and are calculated to total just under 0.025% of total use of Norwegian payment cards in NOK. Customer losses come in addition to this, but are generally limited to NOK 800 pursuant to the Financial Contracts Act. By way of comparison, the British organisation, APACS², reported card fraud equivalent to 0.1% of total turnover using British payment cards in the UK.

Fraud targeted at Internet banks, telebanking and telegiros entailed losses amounting to a negligible share of the sums transferred by this type of payment services. However, losses did increase by around 34% from 2004 to 2005.

Measures

Even though the extent of fraud in electronic services is still modest in Norway, it is on the rise. Measures are therefore being implemented to increase security in connection with electronic payment services. Identification systems are being introduced for payments over the Internet, such as electronic certificates and signatures. Similarly, the switch from magnetic stripes to microchips on payment cards makes it harder to copy such cards.³ The banking industry, headed by the banking associations, is keeping a close watch on developments and regularly assesses potential threats and proposes possible measures to combat these threats. The banking industry is also represented in a multi-disciplinary group organised by the Norwegian Consumer Council, which is working to limit the extent of fraud. In addition, banks implement measures to inform customers that they will not be asked to give customer information, such as the card number and various PIN codes, by email. The preventative measures taken by the public themselves are also important. The regulation of account holders' liability pursuant to the Financial Contracts Act also motivates the public to be vigilant.

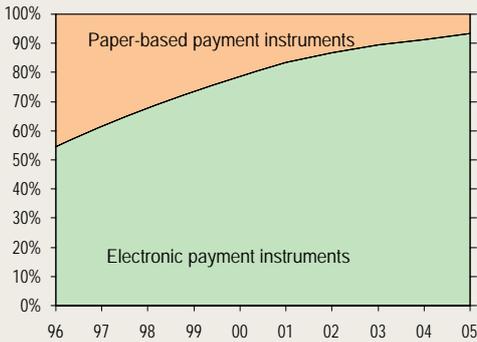
¹ The data from FNH covers around 2/3 of the Norwegian bank market, measured in total assets.

² APACS (Association for Payment Clearing Services) is a trade association for institutions providing payment services in the UK (<http://apacs.org.uk>).

³ The EMV standard: Europay, MasterCard and Visa have established a standard for microchips on payment cards. It is assumed that most national card systems in the world will use this standard in their solutions in the future.

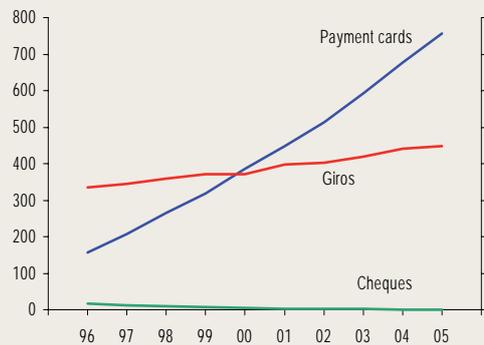
2. Access to means of payment and use of payment instruments

Chart 2.1 Use of paper-based and electronic payment instruments 1996-2005. Transactions in per cent



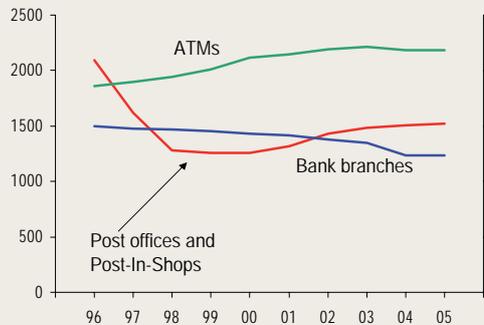
Source: Norges Bank

Chart 2.2 Payment instruments 1996-2005. In millions of transactions



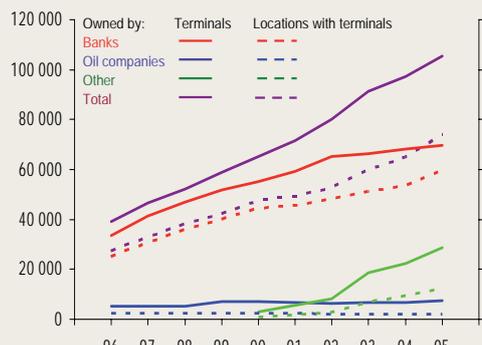
Source: Norges Bank

Chart 2.3 Number of ATMs and bank and post office branches 1996-2005



Source: Norway Post and Norwegian Financial Services Association

Chart 2.4 Number of payment terminals and locations with payment terminals 1996-2005



Source: Norges Bank

The increase in the use of electronic payment instruments recorded in previous years continued in 2005, with an associated fall in the use of paper-based services. However, the transition was slower than previously (see Chart 2.1). The number of non-cash payment transactions rose by 8% in 2005 to NOK 1.2 billion, but the corresponding value fell by 7% to NOK 8 133 billion. The use of payment instruments is shown in Chart 2.2. Statistics showing these trends in the payment system are presented in the statistical annex.

2.1 Access to cash and deposit money

Cash is primarily available from bank branches, Norway Post outlets, ATMs and payment terminals in shops. At end-2005, there were 1 234 bank branches in Norway, which is unchanged from 2004. The number of post office outlets has increased by 1% to 1 523, of which 1 196 were Post-In-Shop outlets. Until 2003, there was a year-on-year rise in ATMs, but since then the number of ATMs has remained relatively stable and stood at 2 184 at end-2005 (see Chart 2.3).

The number of payment terminals (EFTPOS) rose by 8% to 105 500, whereas the number of locations accepting payment cards increased by 14% to 74 000. Most terminals are owned by banks (66%), which rent out the terminals to shops. The remaining terminals are owned by grocery chains and oil companies (see Chart 2.4). Deposit money can be accessed using, among other things, the telephone (telegiro), Internet (Internet banking), post (Brevgiro) and closed networks. Bank customers have to enter into agreements with their bank to access and use these services.

Nearly 248 million cash withdrawals were registered in Norway in 2005. Cash withdrawals in connection with the purchase of goods (cashback) accounts for 55% of all withdrawals in Norway (see Chart 2.5). The number of cashback withdrawals fell by 6% compared with 2004, but the corresponding value rose by 2%. Such withdrawals account for around 21% of the total value of cash withdrawals. The average amount per cashback withdrawal was NOK 364 in 2005, a 9% increase on the previous year.

The total value of cash withdrawals was around NOK 231 billion, which is 4% down on 2004. Nearly half of the value is withdrawn from ATMs. Both the total value withdrawn from ATMs and the number of ATM transactions fell by 1% compared with 2004. The average amount withdrawn from an ATM was NOK 1 135 in 2005.

Cash withdrawals at the counter are less usual and only account for 5% of withdrawals. In 2005, the value of at-the-counter cash withdrawals fell by 14%, see Chart 2.6.

When a bank customer wants to withdraw a large amount, this is withdrawn at the counter. This is probably because ATMs and payment terminals have an upper limit for withdrawals. The average value of at-the-counter withdrawals was NOK 5 157.

2.2 Cash

The Norges Bank Act vests Norges Bank with responsibility for issuing banknotes and coins and for promoting an efficient payment system. In 2005, Norges Bank further clarified the Bank's role in the cash supply chain. The objective is to achieve the most efficient division of responsibilities and work between the various participants. Conditions for banks' deposits and withdrawals of cash from Norges Bank's depots have changed, with effect from 1 January 2005. An arrangement was also established whereby Norges Bank pays interest compensation to banks for any cash holdings they own and store in their own depots, see frame.

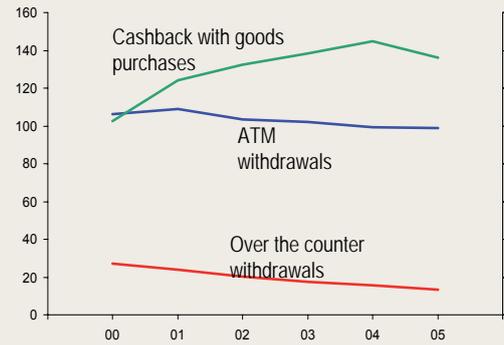
Banknotes and coins in circulation

Following a slight fall in the circulation of banknotes and coins from 2000 to 2003, the trend turned in 2004 when the value of cash in circulation rose by more than 5%. In 2005, the value of cash in circulation increased by a further 5%. The average value was NOK 45.9 billion, of which NOK 41.4 billion was in banknotes and NOK 4.5 billion was in coins (see Chart 2.7). However, the total, nominal value of banknotes and coins in circulation accounts for a diminishing share of private consumption, means of payment used by the public (M1) and mainland GDP (see Chart 2.8).

The composition of notes in circulation has changed somewhat in recent years (see Chart 2.9). In 2005, the 1000-krone banknote accounted for 60% of banknotes in circulation. The share of 500-krone notes continued to rise, due to increased use of 500-krone notes in ATMs. In 2005, the value of notes in circulation was lowest in May (NOK 39.9 billion) and highest in December (NOK 47.2 billion).

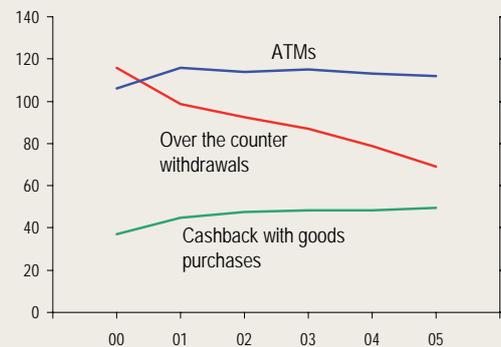
The value of coins in circulation has risen steadily each year for the past 20 years. The average value of coins in circulation was NOK 4.5 billion in 2005, a 5% increase on 2004. The increase in the value of coins in circulation is primarily due to the 20-krone coin. The 20-krone coin has increased its share of coins in circulation and now accounts for nearly 40% (see Chart 2.10).

Chart 2.5 Number of cash withdrawals in Norway 2000-2005. In millions of withdrawals



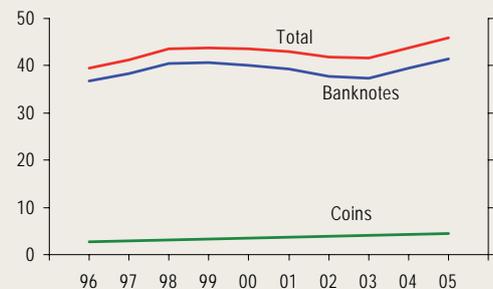
Source: Norges Bank

Chart 2.6 Value of cash withdrawals in Norway 2000-2005. NOK billions



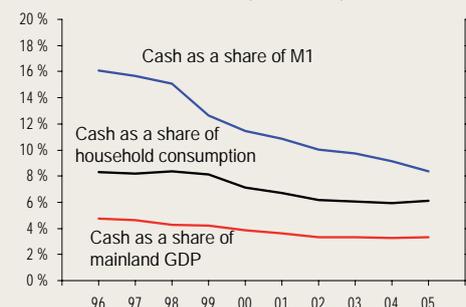
Source: Norges Bank

Chart 2.7 Cash circulation 1996-2005. Annual average. NOK billions



Source: Norges Bank

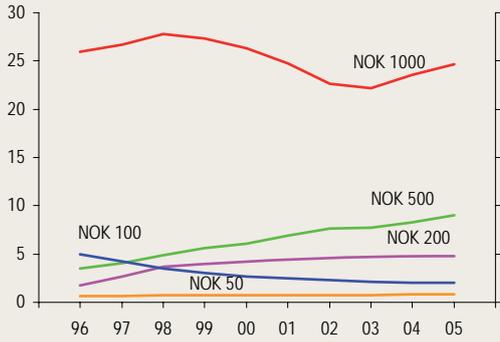
Chart 2.8 Value of banknotes and coins in circulation as a share of M1*, household consumption and mainland GDP 1996-2005 (December). Per cent



Source: Statistics Norway and Norges Bank

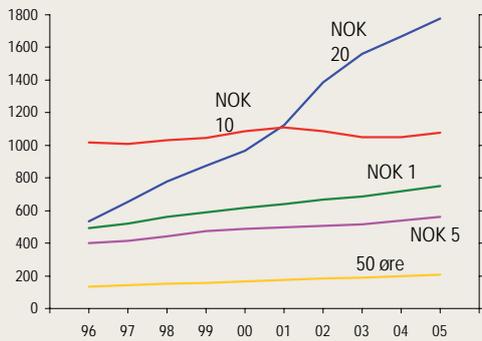
*M1 is the money-holding sector's holding of Norwegian banknotes and coins, as well as the sector's deposits in current accounts in Norges Bank and commercial and savings banks (in NOK and foreign currencies).

Chart 2.9 Composition of banknotes in circulation 1996-2005. Annual average. NOK billions



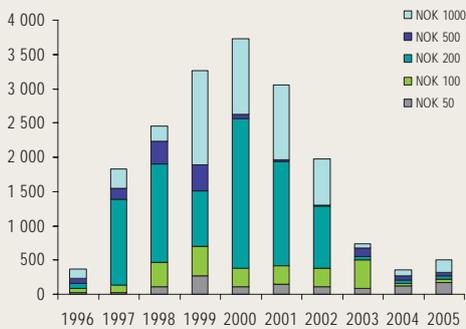
Source: Norges Bank

Chart 2.10 Composition of coins in circulation 1996-2005. Annual average. NOK millions



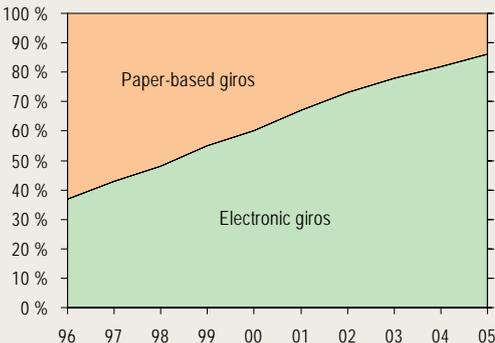
Source: Norges Bank

Chart 2.11 Number of seized counterfeit notes 1996-2005



Source: Kripos (Norwegian Police)

Chart 2.12 Giro transactions 1996-2005. Share



Source: Norges Bank

Counterfeit money

In order for cash to function as an efficient and secure means of payment, participants in the payment system must have 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 3 736 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 13% of the level recorded in 2000 (Chart 2.11). With an average of 103.7 million banknotes in circulation, counterfeit notes accounted for roughly 4.8 per 1 million notes in 2005, a small increase compared to 2004. The level of counterfeiting in Norway is low compared with other countries. For example, total counterfeit notes in euro accounted for around 56 notes per 1 million in 2005. Around half of the counterfeits were 50-euro notes.

2.3 Giros

In 2005, giro payments⁴ accounted for 37% of total transactions using deposit money. The trend favouring electronic services over paper-based services continued. Chart 2.12 shows the distribution of electronic and paper-based giro transactions. A total of 385 million electronic giro transactions were made in 2005, a 7% increase on 2004. But the value fell by 8% to NOK 7 506 million (see Chart 2.13). The number of paper-based giro transactions declined by 22% to NOK 63 million. The number of electronic giro transactions has nearly quadrupled since 1995. 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 error than paper-based services.

Electronic giro services for companies

In 2005, a number of banks changed their closed company network solutions (terminals with fixed telephone lines) to Internet banking solutions. For this reason, the number of transactions using business Internet banking solutions rose from 26 to 96 million, i.e. nearly quadrupled in 2005. Consequently, the value more than quadrupled from NOK 915 billion to NOK 3 756 billion. This was accompanied by

⁴ In this report, giro is used as an umbrella term for electronic and paper-based credit transfers and direct debits.

a 40% fall in closed network transactions to NOK 96 million, whereas turnover fell by 55% to NOK 2 977 billion (see Chart 2.14).

Electronic giro services for retail customers

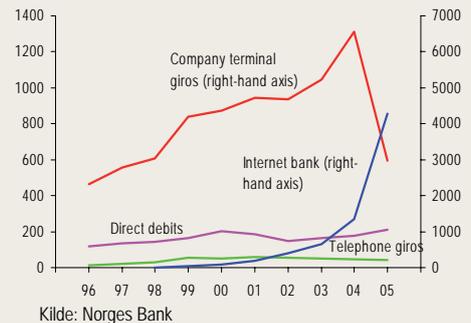
By end-2005 there were 3 million registered retail agreements for Internet banking solutions. The number of Internet banking agreements has been rising for several years. From 2000 to 2004, the number increased more than three-fold, but now the growth seems to be levelling off. Recorded growth from 2004 to 2005 was 6%, against 23% the year before. However, it seems that those customers who do have Internet banking agreements, use these services more than before, as the number of Internet banking transactions rose by 18% to 132 million in 2005 (see Chart 2.15).

According to a survey carried out by the Norwegian Savings Banks' Association, there were around 2.3 million Internet banking users in Norway in February 2006, i.e. 66% of the population (from 15 years up). This is a 12% increase in the course of one year. Growth in the past twelve months has been predominantly in the age group 40-59 and 78% of this age group are now Internet banking users. The share of Internet banking users varies according to age: 85% of the age group 20-39 said that they used Internet banking services, whereas this share is 30% in the age group 60+. The figures from the Norwegian Savings Banks' Association show that Internet banking services are being used more frequently. Three out of four Internet banking customers now use Internet banking services at least once a week, primarily to pay bills, check their balance and enter into agreements for direct debits (Avtalegiro) and electronic invoicing (eFaktura).

There has been a gradual increase in the number of agreements for direct debit services between private individuals and businesses (Autogiro and Avtalegiro) since 2000, rising by 57% from 2000 to 2004. In 2005, the number increased by a further 15% to 6.3 million agreements, whereas the number of transactions rose by 12% to 40 million. At end-2005, around 8 800 businesses offered direct debit solutions. The number of giro payments by telephone (telegiro) has declined gradually since 2000 and 22 million telegiro transactions were carried out in 2005, i.e. a 12% reduction.

Electronic invoicing (eFaktura) has simplified the handling of giro payments through Internet banks (see frame). Use of eFaktura is growing rapidly. Statistics from BBS show that 5.4 million bills were presented as eFaktura to Norwegian Internet banking customers in 2005, compared with 2.8 million in 2004, i.e. the number has nearly doubled. By end-2005, 9.4 million eFaktura transactions had been completed since the service was introduced in 2001. The number of users rose from 260 000 to 460 000 in 2005. This means

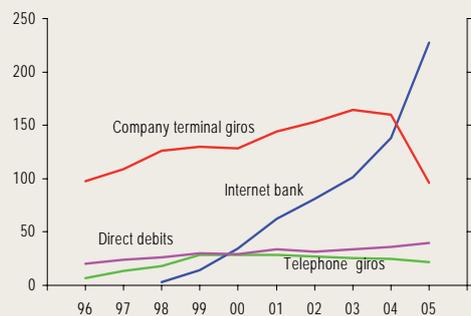
Chart 2.13 Use of electronic giro services 1996-2005. NOK billions*



Kilde: Norges Bank

* Up to and including 2002 only includes Internet bank retail customers.

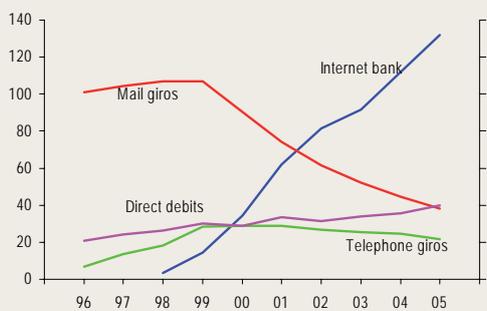
Chart 2.14 Use of electronic giro services 1996-2005. Millions of transactions*



Source: Norges Bank

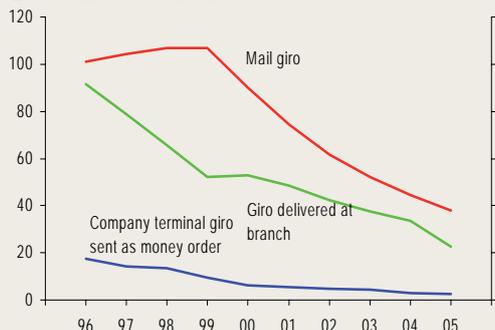
* Up to and including 2002 only includes Internet bank retail customers

Chart 2.15 Use of selected giro services for retail customers 1996-2005. Millions of transactions



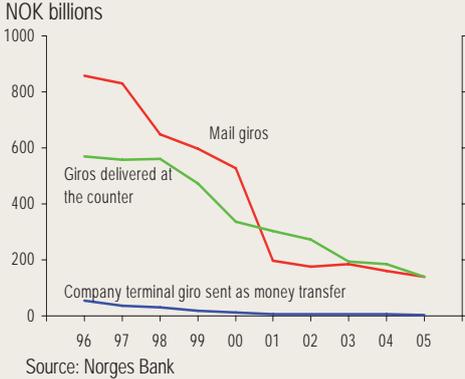
Source: Norges Bank

Chart 2.16 Use of paper-based giro services 1996-2005. Millions of transactions



Source: Norges Bank

Chart 2.17 Use of paper-based giro services 1996-2005. NOK billions



that 20% of Internet banking customers now use eFaktura. The reason for the robust growth in 2005 was, among other things, that several big businesses and public organisations started to offer eFaktura. According to BBS, this strong growth has continued in 2006.

Use of paper-based giro services for retail customers

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 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.

There was a 43% reduction in the number of mail giro agreements from 2000 to 2004. The number fell by a further 6% from 2004 to 2005, to just under 1.5 million. The use of mail giros also declined by 15% in 2005. Giros delivered at the counter (cash payments and account debits) fell by 33% in 2005 and now only account for 5% of total giro payments, whereas they accounted for 33% of giro transactions in 1995 (Chart 2.16). The turnover value of paper-based giros diminished by 19% in 2005 (Chart 2.17).

Chart 2.18 Number of payment cards. Thousands of cards

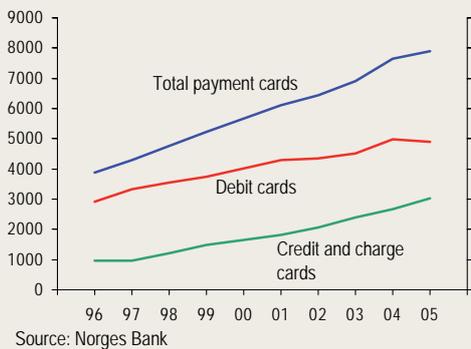
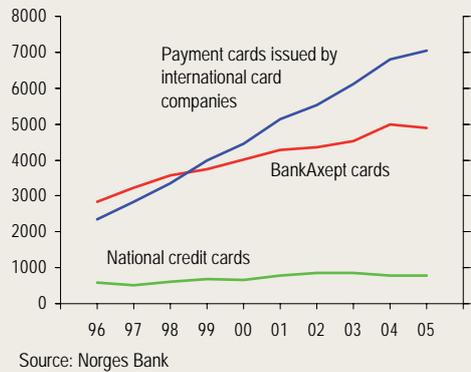


Chart 2.19 Number of issued cards at year-end 1996-2005. Thousands of cards



2.4 Payment cards

Most Norwegians have several payment cards and in an international context, Norwegians' use of cards is high. At end-2005, a total of 4.8 million combined cards had been issued in Norway. These cards include two functions on the same physical card, usually BankAxept and an international payment card. In addition, there were 0.1 million "pure" BankAxept cards. The total number of BankAxept cards issued was therefore 4.9 million and they are all debit cards. There were also 3 million credit and charge cards (see Chart 2.18), bringing the number of actual cards to a total of 7.9 million.

Taking into consideration the fact that the 4.8 million combined cards have two functions, the number of cards in terms of functions is 12.7 millions (see Table 18 in the Statistical Annex). This number consists of 4.9 million BankAxept cards, around 0.8 million domestic credit cards and 7 million international cards (see Chart 2.19). International payment cards can be debit, credit and /or charge cards (see Table 2.1).

Table 2.1 Overview of payment cards

	BankAxept	Domestic credit cards	International cards
Network used for payment	Domestic network	Domestic network	Domestic or international network
Type of card	Debit card	Credit card	Debit, credit and/or charge card
Number (millions)	4.9	0.8	7

The use of cards rose by 74% from 2000 to 2005. In 2005, the number of card transactions in connection with purchase of goods and cash withdrawals from ATMs increased by 10% to 864 million (see Chart 2.20), whereas the corresponding value rose by 11% to NOK 486 billion. The busiest day was 23 December with 3.8 million card transactions, peaking at 290 card transactions per second, according to BBS.

When paying by card, the payment can be registered manually or electronically. In 2005, 98% of transactions were electronic.

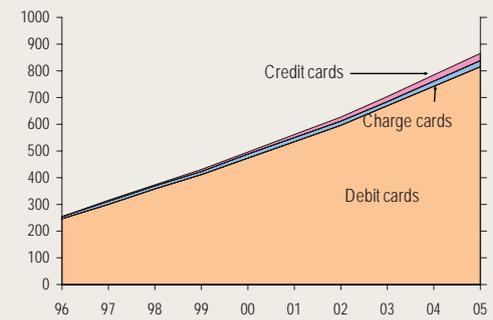
Debit cards

Debit cards are used for around 94% of transactions in connection with cash withdrawals and the purchase of goods in Norway. BankAxept is the Norwegian debit card solution. In 2005, there was a reduction in the number of these cards for the first time since the card was introduced. The decline was 2% to 4.9 million cards (see Chart 2.19). BankAxept is often included in combined cards, usually together with a VISA debit card. Some points of sale, for example restaurants and taxis, are not linked to BankAxept. When customers pay with combined BankAxept/VISA debit cards in such places, the payment is debited from the VISA part of the card. The total number of goods purchases and cash withdrawals with debit cards rose by 10% in 2005 to 816 million transactions, of which BankAxept accounted for 750 million, i.e. 92% (see Chart 2.21).

The number of goods purchases with BankAxept cards rose by 12% in 2005 to 658 million, whereas the corresponding value increased by 19% to NOK 240 billion, equivalent to 87% of all goods purchases made with cards issued in Norway and 77% of the total value. BankAxept cards are often used to pay small amounts. In 2005, the average amount was NOK 365, which is NOK 22 more than the previous year. The use of debit cards is widespread in countries with solutions similar to the Norwegian BankAxept (Denmark and Finland).

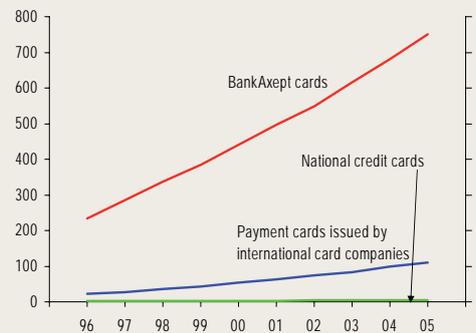
In 2005, the Norwegian banks agreed on a framework for BankAxess. This is a payment service that will guarantee settlement between two parties in connection with the purchase of goods and services over the Internet. The service makes it possible for the buyer to consent to the seller/payee debiting the customer's account for the given amount. BankAxess is based on the use of BankID. When a buyer has specified what he/she wishes to buy and has chosen BankAxess as the payment method, the buyer is given a specification of the actual debit, which he/she can then approve with his/her BankID. There was a sharp increase in the number of users with access to BankID in 2005. Around 500 000 cardholders now have access to BankID. BankID is an electronic signature that makes it possible for the user to sign different types of agreements over the Internet.

Chart 2.20 Use of different payment cards for goods purchases and cash withdrawals 1996-2005. Millions of transactions



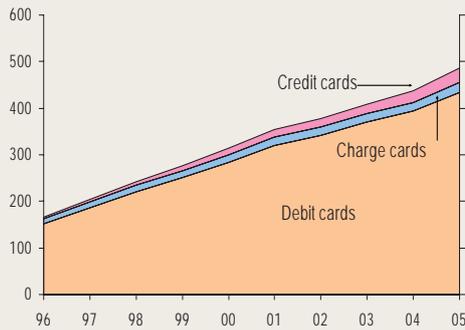
Source: Norges Bank

Chart 2.21 Use of Norwegian payment cards 1996-2005. Goods purchases and ATM withdrawals. Millions of transactions



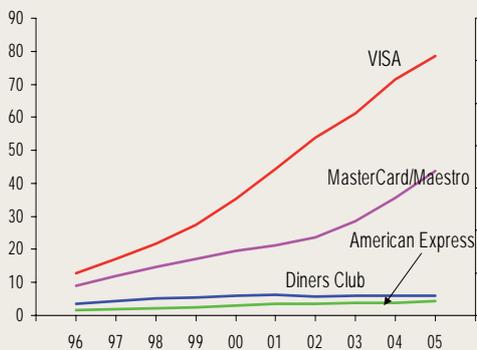
Source: Norges Bank

Chart 2.22 Use of different payment cards for goods purchases and cash withdrawals 1996-2005. NOK billions



Source: Norges Bank

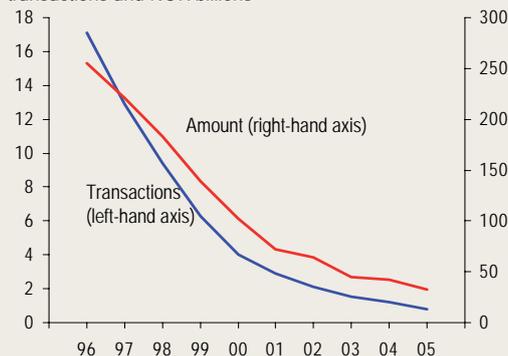
Chart 2.23 Use of payment cards issued by international card companies 1996-2005. Millions of transactions



Source: Norges Bank

Towards end-2005, it was discovered that some banks' credit card agreements did not comply, among other things, with the Act relating to the Sale of Goods on Credit etc. In the agreements studied, the banks disclaimed any liability for the warranty of goods and services. If the customer is dissatisfied with the goods or services bought with a credit card, the credit card holder has the right to complain to the bank or credit card company. The Norwegian Consumer Council is dealing with the issue.

Chart 2.24 Use of cheques 1996-2005. In millions of transactions and NOK billions



Source: Norges Bank

Credit cards and charge cards

The use of credit cards and charge cards is not very widespread in Norway. Such cards only account for 6% of card transactions in connection with cash withdrawals and goods purchases. However, the number of credit cards and charge cards increased by 13% in 2005 to around 3 million. There was a 2% rise in the number of domestic credit cards to just under 0.8 million cards.

The total number of credit card and charge card transactions in connection with cash withdrawals and goods purchases rose by 24% to 51 million transactions in 2005, of which transactions using domestic credit cards accounted for 4.2 million (see Chart 2.21). The value of goods purchases and cash withdrawals using credit cards and charge cards rose by 20% to NOK 52 billion (see Chart 2.22).

The purchase of goods with domestic credit cards increased by 33% to 2.9 million transactions and the value rose by 54% to NOK 3.4 billion. However, these cards only accounted for 0.4% of the number of goods purchases made using cards issued in Norway and 1% of the value. Domestic credit cards are used for more expensive purchases and the average transaction was NOK 1 172.

International payment cards

International payment cards can be debit, credit and/or charge cards. Chart 2.23 shows the distribution between the various international card companies. There was 4% increase in the number of international cards to 7 million (see Chart 2.19). This represents a slowdown in growth compared with recent years, when growth has been about 10% each year. International payment cards accounted for 13% of total goods purchases made with cards issued in Norway, and for 22% of the corresponding value. The number of goods purchases made with international payment cards increased by 11% to 95 million transactions, while the corresponding value increased by 16% to NOK 67 billion. The average amount per transaction using international payment cards was NOK 702 in 2005.

2.5 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 2.24 shows that 0.8 million cheques were written in 2005, which is equivalent to under 0.1% of total non-cash payment transactions in Norway. Cheques are suited for payments that require immediate settlement. The average amount for cheques is over NOK 41 000. 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.

Improving efficiency in the cash supply

In the Annual Report on Payment Systems 2004, changes in the central bank's role and responsibilities in the cash supply chain in recent years were discussed. The main changes are as follows:

- The winding up of commercial services for banks
- Changes in the terms for banks' delivery and withdrawal of cash from Norges Bank (including the requirement that banknotes should be quality sorted before they are delivered)
- Changes in the depot structure

The depot structure was changed in 2005, with 6 of the 11 central bank depots being closed down. At the same time, Norges Bank introduced, under certain circumstances, the payment of interest compensation for cash holdings in private depots for interim storage or distribution. Previously (with the exception of the period 1983-1988), banks had to transport cash to a central bank depot and deposit banknotes and coins overnight in an account in Norges Bank in order to get interest on their cash holdings. This new arrangement will result in less transport and a more efficient handling of cash.

The background for these changes is Norges Bank's objective to fulfil its obligation to supply cash in a way that promotes efficiency in the payment system. In order to achieve efficient solutions, the various functions should be carried out by those participants who are best qualified to do so. These participants should then be given incentives to continuously develop solutions that provide the best overall efficiency. This means that Norges Bank now only has responsibility for the functions that it is assumed Norges Bank is better qualified to develop than other banks and participants.

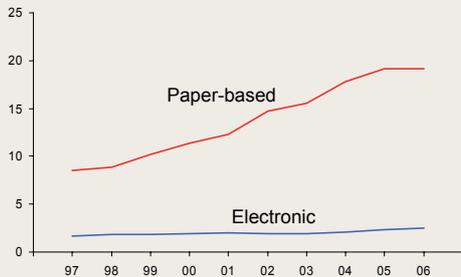
As issuer, Norges Bank must ensure that banks are able to collect banknotes and coins when there is an overall need for an increased supply. In addition, banks should be able to deliver banknotes and coins when they have excess holdings overall and to exchange banknotes and coins that are damaged or are no longer legal tender with good quality cash. As regards the further distribution to users and the distribution between banks and branches, banks are better qualified than Norges Bank to find efficient solutions. In this connection, Norges Bank has decided that it is vital that banks are responsible for all the logistics, including the choice of location and conditions for interim storage and distribution depots. The fact that banks then carry the costs of this is an important incentive for them to constantly strive to find optimal solutions.

See also article in Economic Bulletin, no. 4/2005: *Norges Bank's Role in Cash Distribution*.

3. Prices in the payment system

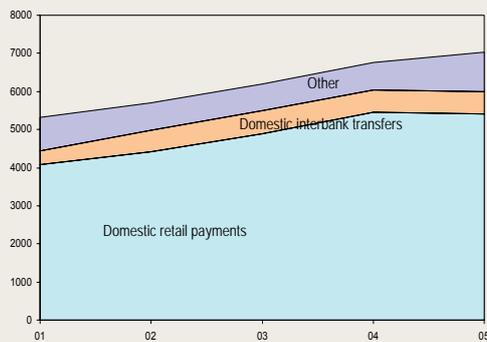
3.1 Main developments in prices

Chart 3.1 Weighted average of prices for electronic and paper-based payment services 1997-2006. Nominal prices in NOK



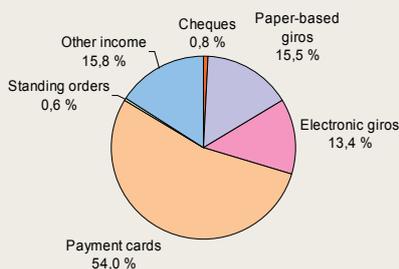
Source: Norges Bank

Chart 3.2 Banks' income from the payment system 2001-2005. In NOK millions



Source: Norges Bank

Chart 3.3 Income from retail payment services by service type 2005. Per cent¹



¹Income shown in the chart totals NOK 5.4 billion

Source: Norges Bank

In recent years, banks' average list prices for electronic payment services have remained low and relatively stable, whereas prices for paper-based payment services have increased (see Chart 3.1). The development in prices shown in Chart 3.1 gives incentives for more widespread use of electronic payment services. As customers have increasingly switched to electronic payment services at the expense of manual payment services, the average cost per transaction for consumers has fallen. However, changes in list prices vary from service to service.

Banks' income from the payment system has risen (see Chart 3.2) over time, whereas production costs for the services have fallen. This has reduced the need to cover these costs from other business areas.

In 2005, banks' income from retail payment services was around NOK 5.4 billion, which represents a slight decline on 2004, even though the number of transactions has risen. A large part of banks' income from payment services derives from payment cards and different types of giro (Chart 3.3). The distribution of income has remained relatively stable in recent years. Income from giros accounted for just under 30% of total income from domestic retail payments in 2005.

Customer programmes

The changes shown in Chart 3.1 are based on banks' list prices. Many customers have signed up to customer programmes that provide discounts on payment services⁵. Customers can have access to these programmes when they satisfy certain conditions regarding customer relations, customer groups or by paying an annual, quarterly or monthly fee.

Banks' customer programmes are designed so that most bank customers can sign up to the programmes and thereby get discounts on payment services. Both retail and corporate customers may be offered services at a price that is lower than the list prices published in this report.

The calculated average price for goods purchases with a card in the most favourable customer programmes offered by the banks in our selection is under 15% of the average list price. A review of the largest banks' customer programmes shows that discounts primarily apply to electronic services (e.g. card payments and Internet banking services), which

⁵ According to a survey carried out by TNS Gallup for the Norwegian Financial Services Association (FNH) in January 2006, 38% of bank customers are signed up to a customer programme with their main bank. In 2004, the corresponding figure was 28%.

indicates that customers in customer programmes are still motivated to use the most cost-effective payment services.

Customer programmes are often designed to reward customers for their loyalty and for using several financial services offered by the same group. These programmes can make it difficult for customers to compare prices between banks. This means that the incentive to switch bank may be reduced, particularly when the customer uses several of the financial services included in the customer programme.

In this chapter, we look at changes in list prices for the 24 banks included in Norges Bank's survey. These banks had an overall market share of 87% based on deposits in current accounts on 30 November 2005. The prices are shown in the statistical annex. Prices for banks' domestic payment services are collected on 1 January every year (see Table 39 in the statistical annex).

3.2 List prices for cash withdrawals

Banks have to pay for the deposit and withdrawal of cash from Norges Bank and for services delivered by cash centres such as NOKAS (Norsk Kontantservice AS) and Securitas. Shops also have to pay for cash services delivered by banks or cash centres. And in many instances, consumers have to pay for cash withdrawals. However, the withdrawal of cash in connection with purchase of goods (cashback) is free of charge. Nor do customers pay for withdrawing cash from their own bank's branches or ATMs in opening hours. However, most banks do charge for ATM withdrawals outside opening hours or withdrawals from other bank's ATMs.

Every ATM in Norway is owned by a bank. All card users can withdraw cash from ATMs owned by banks where they do not have an account, but the customer's bank then has to pay an interbank fee of NOK 6.90 to the bank that owns the ATM.⁶ The average list price was still slightly lower than the interbank fee at start-2006, despite a considerable rise in prices charged to the public in 2005. Withdrawals from other banks' ATMs in opening hours cost NOK 6.38, which represents a 24% increase. The price for the same service outside opening hours rose by 23% to NOK 6.78 (see Chart 3.4).

The average list price for withdrawals from own bank's ATMs outside opening hours has remained relatively stable for the past five years. In 2005, the price was reduced by 5% to NOK 3.86.

It is possible for bank customers in Norway to withdraw

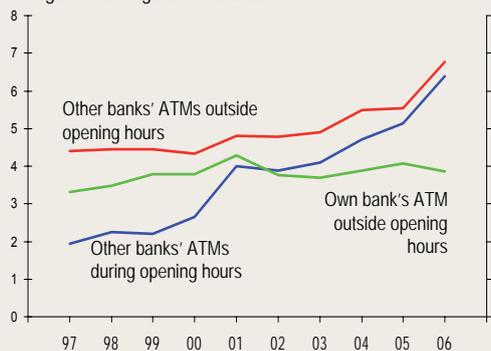
⁶ Interbank fees are regulated by an agreement between the Norwegian Financial Services Association (FNH) and the Norwegian Savings Banks' Association. Due to efficiency considerations, the Norwegian Competition Authority has granted a waiver from the Competitions Act until 1 July 2006, even though the agreement is in principle price-fixing.

Information problems in connection with the provision of financial services

In 2004, the Consumer Council, the Consumer Ombudsman and Kredittilsynet (Financial Supervisory Authority) published a report on measures to improve the information offered to end-users in the financial market. Among other things, the report assessed information problems in connection with the pricing of everyday banking services. It points out that information is available but that it is unstructured and not easily acceptable. In order to improve this situation, it is recommended that the possibility of an information portal for the financial market should be assessed.

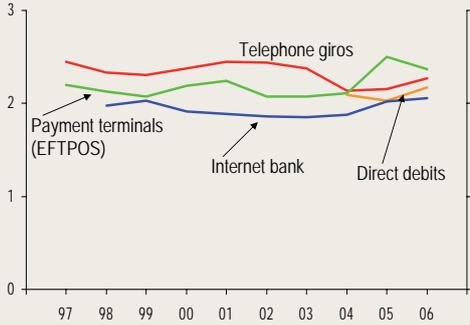
In 2005, the Consumer Council, the Consumer Ombudsman and Kredittilsynet conducted a feasibility study on how to establish, finance and operate such an information portal. A recommendation that the portal should be established under the auspices of a public institution will be submitted to the Ministry of Finance and the Ministry of Children and Equality.

Chart 3.4 List prices for ATM withdrawals 1997-2006. Weighted average for all banks. In NOK



Source: Norges Bank

Chart 3.5 List prices for electronic payment services for retail customers 1997-2006. Weighted average for all banks. Prices in NOK



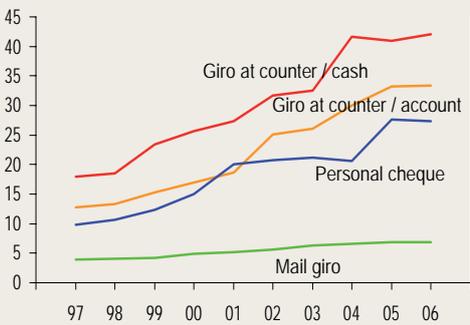
Source: Norges Bank

cash at the counter in banks other than the one in which they have an account. The service is relatively costly and is therefore rarely used.

3.3 List prices for using payment instruments

Average prices for electronic payment services targeted at retail customers have been between NOK 2 and NOK 2.50 in recent years, as shown in Chart 3.5. Following a relatively sharp increase in average prices for card payments at shop terminals (EFTPOS) in 2004 (18% increase), prices for this service fell by 5% in 2005 and stood at an average of NOK 2.37 at start-2006. Prices for other electronic services for retail customers edged up in 2005. There was a moderate increase in prices for the cheapest service, paying bills via the Internet, of 2% to NOK 2.06. The price for telephone giros rose by 6% to NOK 2.27 and for direct debit (Avtalegiro) by 7% to NOK 2.17.

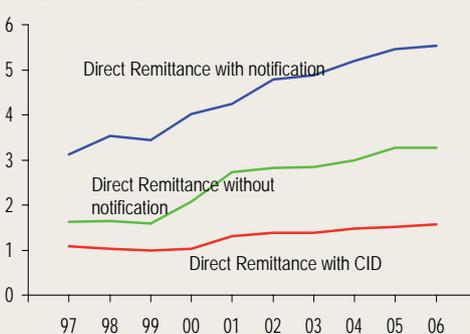
Chart 3.6 List prices for paper-based payment services for retail customers 1997-2006. Weighted average for all banks. Prices in NOK



Source: Norges Bank

The rise in prices for paper-based retail services has been considerable in recent years (Chart 3.6), but levelled off somewhat in 2005. The most expensive paper-based service in the retail market is giros paid with cash. The average price for this service increased by 3% to NOK 42. This is followed by giros handed in at the counter, which rose by 1% to NOK 33.37. The cheapest paper-based service is mail giro. The list price for this service remained more or less constant in 2005. At start-2006, the service cost on average NOK 6.92.

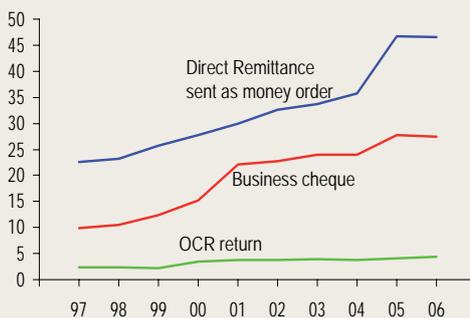
Chart 3.7 List prices for Direct Remittance 1997-2006. Weighted average for all banks. Prices in NOK



Source: Norges Bank

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 (see Chart 3.7). The most automated services (with CID) generally have the lowest prices. The price for direct remittance with CID went up by 4% to NOK 1.57. When payments with notification are sent to the payee, the payer's bank is charged an interbank fee by the payee's bank. At start-2006, direct remittance with and without notification cost on average NOK 5.53 and NOK 3.27, respectively, which is more or less the same as one year earlier.

Chart 3.8 List prices for paper-based payment services for businesses 1997-2006. Weighted average for all banks. Prices in NOK



Source: Norges Bank

Changes in prices for paper-based corporate services are shown in Chart 3.8. The rise in prices for these services was relatively steep to 2004. Prices for business cheques and direct remittance sent as a money order remained more or less unchanged in 2005, whereas charges for optically readable forms (OCR Return) that are filled in incorrectly rose by 8%.

Norges Bank has previously published prices for electronic and paper-based payments for closed network giros. In 2005, a number of banks switched their company terminal giro solutions to corporate Internet banking solutions. Prices for this service were published for the first time in 2005, see Table 39. However, in this transition period, the number of banks offering company terminal giros has fallen, while only

some of the banks in the selection offer Internet banking services to companies. The figures for 2005 therefore do not provide a sound basis for evaluating changes in prices.

3.4 Annual fees and start-up fees

Banks normally charge an annual fee for combined payment cards. The average annual fee customers paid for this service remained stable at NOK 255 from 1 January 2005 to 1 January 2006. At start-2006, the annual fee varied between NOK 150 and NOK 300 in the 24 banks surveyed by Norges Bank. 13 banks charge NOK 250.

Some banks charge customers a monthly or annual fee for access to Internet banking services. Some banks also have start-up fees for access to Internet banks. At start-2006, a total of 10 banks in the survey charged a monthly/annual fee for access. The average price in these banks was reduced from NOK 183 to NOK 146 per annum, a reduction of 20%. At the start of the year, the fees were between NOK 100 and 300. The number of banks that charge set-up fees and annual/monthly fees has fallen since Internet banking services were first introduced.

3.5 Price spread

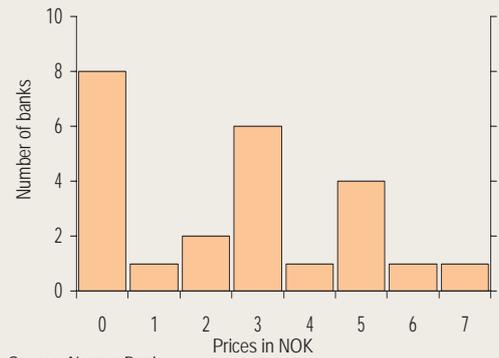
At start-2006, list prices varied considerably between banks. A large spread may imply that banks have different market strategies, e.g. they are focusing on different market segments. A smaller spread in prices for a service may indicate stronger competition for customers for that particular service. Data on the price spread for some services in selected banks is presented below.⁷ The spread in list prices varies from service to service. In order to establish the competitive situation for these services or in the market for payment services in general, it is necessary to carry out a more detailed analysis.

Nearly all of the 24 banks in the survey offer free cash withdrawals when the customer uses his/her own bank's ATMs in opening hours. The price spread for withdrawals from own ATMs outside opening hours is high. This service is free in 8 banks, whereas 13 banks charge NOK 3 or more (Chart 3.9). There is also a relatively large spread in prices for withdrawals from other banks' ATMs; 6 banks offer this service free of charge in opening hours, whereas 13 banks charged NOK 7 for this service (Chart 3.10). Free ATM withdrawals, regardless of when and where they are made, are offered by 2 of the banks in the survey.

The price spread for using payment cards in connection with goods purchases is relatively small. Most banks in the selection price this service somewhere between NOK 2 and NOK 2.50 (Chart 3.11). Bill payments via Internet banks had a greater price spread (see Chart 3.12). A total

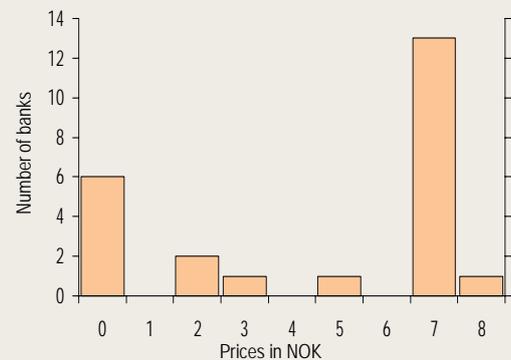
⁷ All average prices in this section are based on arithmetic, unweighted averages.

Chart 3.9 Spread in list prices for withdrawals from own bank's ATMs outside opening hours in 2005. Prices in NOK



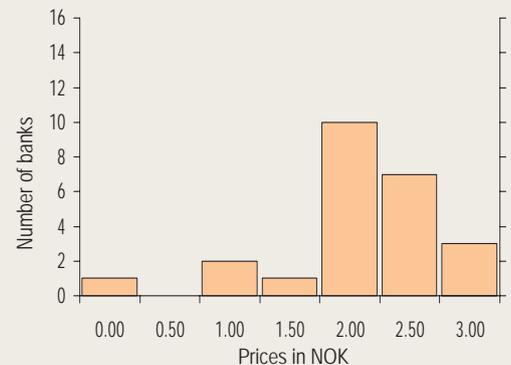
Source: Norges Bank

Chart 3.10 Spread in list prices for withdrawals from other banks' ATMs during opening hours in 2005. Prices in NOK



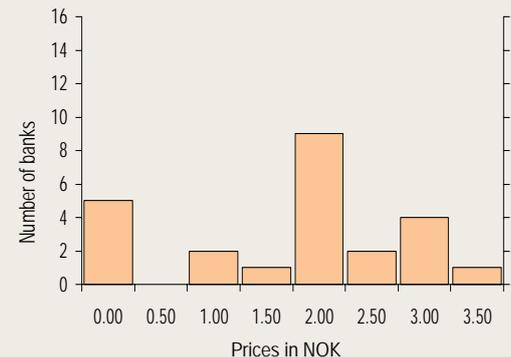
Source: Norges Bank

Chart 3.11 Spread in list prices for use of BankAxept card in payment terminals (EFTPOS) in 2005. Prices in NOK



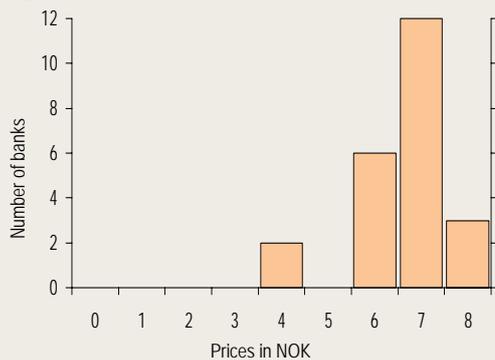
Source: Norges Bank

Chart 3.12 Spread in list prices for giros paid over the Internet in 2005. Prices in NOK



Source: Norges Bank

Chart 3.13 Spread in list prices for mail giro in 2005. Prices in NOK



Source: Norges Bank

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). A Norwegian IBAN account number includes NO followed by 13 characters.

BIC, the bank's identification 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).

Euro Regulation

Regulation no. 2560 from 2001 entered into force in the EU on 1 July 2002 for cross-border electronic payment transactions and on 1 July 2003 for credit transfers. Pursuant to the Regulation, prices for cross-border payments in euro shall not be higher than for corresponding domestic euro payments within the EU/EEA. The Regulation initially applied to amounts up to EUR 12 500. This limit was increased to EUR 50 000 on 1 January 2006.

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's identification code). Prices for paper-based cross-border payments can still deviate from domestic prices.

of 5 banks offer this service free of charge to their customers, whereas 9 banks charge NOK 2 for each bill paid via an Internet bank. In the other banks, the list price varied between NOK 1 and NOK 3.50.

There was a smaller price spread for mail giros. In 21 of the banks included in the survey, the list price was between NOK 6 and NOK 8 (see Chart 3.13).

We have classified the 24 banks included in the survey into large and small banks. A bank is deemed to be large if its share of the banks' combined total assets or deposits in NOK was higher than 2% on 30 November 2005. Of the banks in the selection, 9 are large and 15 are small. For most of the 26 services analysed, list prices were slightly higher in the large banks than in the small. However, we cannot draw conclusions about the banking industry as a whole from the selection included in our survey. The reason for this is that the price differentials between the two groups of banks are relatively small. Furthermore, there was considerable variation in prices within each group of banks.

3.6 Prices for cross-border payments

More resources are required to carry out payments across national borders than for domestic payments. Every country has its own payment system. Cross-border payments often involve several banks and payment systems that are not integrated, which results in multiple manual operations. The international card systems are one exception. Wholly automated payment transfers between countries require that both the customers and banks use international standards that facilitate communication. Banks in the EU/EEA now use two such standards: IBAN (customer's international bank account number) and BIC (bank's identification code), see text in margin for a more detailed explanation.

Pursuant to the Euro Regulation, which entered into force in Norway on 1 January 2005, prices for cross-border electronic euro payments shall not be higher than for corresponding domestic euro payments (see text in margin). In other words, if a Norwegian converts a sum of money from Norwegian krone into euro and transfers it to a payee in the EU/EEA, this should not cost any more than if the euro amount was sent to a payee in Norway. However, only a very limited number of euro transfers are effected within Norway.

The Euro Regulation has not been implemented for the Norwegian krone. The Ministry of Finance is, however, monitoring changes in prices for cross-border payments in NOK and assessing possible measures - including extending the scope of the Regulation to include NOK - if prices do not fall within a reasonable period of time. The implementation of such a measure would mean that the price for transferring NOK from a payer in Norway to a payee in the

EU/EEA should not be higher than for a corresponding transfer between two parties within Norway. However, an exchange charge will also accrue if the person who receives Norwegian krone abroad converts this money into the local currency.

The European banking industry has developed systems for automatic transfer of cross-border euro payments. These systems help to reduce costs in connection with cross-border euro payments. However, the systems cannot be used to transfer amounts in NOK. Thus, transferring NOK to another country would require considerably more resources from banks than transferring euro abroad. A cross-border payment will also be considerably more expensive than a domestic NOK payment. If cross-border payments were priced at the same level as domestic payments the cost differential between the two payments would not be reflected in the price.

Norges Bank has studied developments in prices for euro payments and NOK payments in 24 banks. The survey was carried out on 1 December 2004 (before the Euro Regulation was implemented in Norway), 1 January and 1 March 2005, and 1 January 2006. Table 3.1 shows that prices for services covered by the Regulation (electronic euro payments with BIC and IBAN to EU/EEA countries) have fallen after the Regulation was introduced. The average price for euro transfers for amounts equivalent to NOK 100 and NOK 2 500 fell by 18% in the period from 1 December 2004 to 1 January 2005, falling a further 8% in the period to 1 January 2006. However, prices for these services were still over NOK 30 on 1 January 2006 (see Table 3.1).

Prices for electronic transfers of NOK from Norway to the EU/EEA fell by 1% from 1 December 2004 to 1 March 2005.⁸ From 1 March 2005 to 1 January 2006, there was a 27% reduction in prices. However, prices were still over NOK 40 at start-2006. A cross-border transfer in NOK was thus around 25% more expensive than a euro transfer at 1 January 2006. Compared with a domestic transfer, the price level was still high for all services.

For the sake of comparison, Norges Bank also collected prices for semi-automated and manual transfers, transfers without BIC and IBAN, and transfers to countries outside the EU/EEA, see Table 3.2 and Tables 40 and 41 in the statistical annex. The more manual a transfer is and the more urgent it is, the more expensive it will be. For example, an express cross-border transfer in euro or NOK cost between NOK 255 and NOK 300 on 1 January 2006, for the amounts included in Norges Bank's survey. Prices have not changed much over the period.

The prices for the transfers mentioned above are the prices

⁸ Prices quoted relate to transfers of NOK 100 and NOK 2 500, given that BIC and IBAN is included. Currency exchange is carried out by the payee.

Table 3.1 Prices for electronic payments from Norway to EEA countries

	2004	2005	2005	2006
	1.12.	1.1.	1.3.	1.1.
Payments in NOK with BIC and IBAN				
NOK 100	55.55	55.48	55.17	40.21
NOK 2500	55.93	55.87	55.55	40.62
Payments in euro with BIC and IBAN				
Equivalent to NOK 100	42.77	34.91	34.17	31.96
Equivalent to NOK 2500	43.16	35.29	34.55	32.37

Table 3.2 Prices for semi-automated payments from Norway to EEA countries

	2004	2005	2005	2006
	1.12.	1.1.	1.3.	1.1.
Payments in NOK with BIC and IBAN				
NOK 100	68.12	68.12	65.99	71.47
NOK 2500	86.78	86.78	71.08	73.26
Payments in euro with BIC and IBAN				
Equivalent to NOK 100	68.12	68.12	65.99	64.60
Equivalent to NOK 2500	86.78	86.78	71.08	66.39

paid by the payer. In several of the 24 banks included in the survey, there was also a charge for receiving an amount in foreign currency from abroad. The prices for payees are shown in Table 42 in the statistical annex. The table shows that prices for receiving an amount in euro from abroad have fallen slightly since the Euro Regulation was implemented in Norway. Prices for receiving amounts in currencies other than euro have remained more or less stable in the same period. In addition, there is an exchange charge for converting the amounts into NOK.

Card payments abroad

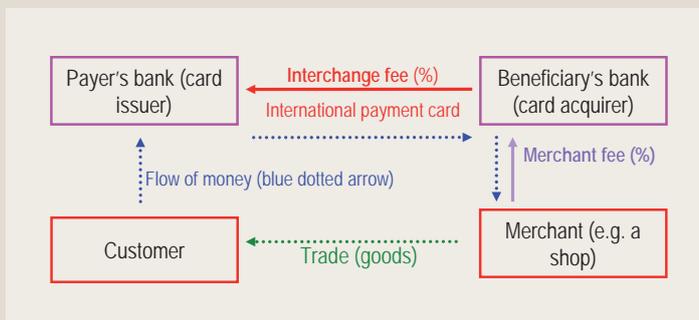
When paying with a card abroad, the card user can sometimes choose whether the payment shall be debited in NOK or the local currency. If the payment is debited in NOK, the exchange rate given at the point of sale will apply. There is nothing to regulate how high the foreign currency mark-up can be and this solution may be relatively expensive for the payer. If the payment is debited in the local currency, the exchange rate and currency mark-up is regulated by the agreement between the card user and the card company / cardholder's bank.

Prices for using Norwegian cards abroad vary between issuing banks and card types. Norges Bank has not systematically collected information about this, but information from some banks' websites shows that payment for goods purchase abroad costs between NOK 0 and NOK 5. There is an additional exchange charge. Cash withdrawals abroad are more expensive, although prices vary. Some card transactions have a fixed price, whereas for other transactions, the fee represents a percentage of the withdrawal amount (or a combination of the two). For example, a cash withdrawal with a VISA card might cost the cardholder between NOK 25 and NOK 35, with additional costs of between 0.5% to 1% of the withdrawal amount and a foreign currency mark-up.

Regulation of interchange fees for credit cards

When using a credit card issued by one of the two largest international card companies, VISA and MasterCard, four parties are involved in the payment¹: 1) the merchant, 2) the merchant's bank, also called the acquirer, 3) the payer (cardholder) and 4) the cardholder's bank, also called the card issuer. The card company does not participate directly in the transaction. The chart below illustrates that every time a customer pays with a card, two kinds of charges accrue: the interchange fee and the merchant fee. The merchant's bank has to pay the interchange fee to the customer's bank. This is financed by the merchant's bank charging the merchant a fee, which thus comprises the interchange fee paid to the customer's bank, plus the provision charged by the merchant's bank.

The interchange fee is set on a multilateral basis between the participating banks. Card companies and banks both benefit from high interchange fees. The interchange fee is set high to encourage banks to issue cards. If the interchange fee is high, the issuer can use some of the earnings to attract new card customers by offering cheap or free supplementary services. Income for both the card company and the banks increases in line with the number of cards issued.



The authorities in several countries have noted that the high fees generate considerable earnings for card companies and banks, while many merchants have complained about high merchant fees. The possibility of regulating the interchange fee has therefore been considered.

A regulation on the level of interchange fees was introduced in Australia in 2003, based on a proposal from the Australian central bank. The regulation stipulates that interchange fees shall

be cost-based and no more than 0.55% of the purchase sum. The costs that are covered include processing, authorisation, anti-fraud measures and financing of interest-free credit to cardholders.

A similar decision has been taken by the EU Commission in July 2002 (2002/914/EC) relating to transactions within the EU/EEA using VISA, which is the world's largest credit card company. The resolution imposed the following obligations on VISA: 1) VISA shall gradually reduce the level of the average interchange fee to 0.7% of the purchase sum over a period of 5 years, 2) the card acquirer can provide the merchant with information about interchange fees and 3) VISA shall measure certain issuer costs and forward this information to the EU Commission.

The process has not progressed as anticipated by the EU Commission. The Commission therefore published a new report on payment cards on 12 April 2006 (EU Commission, 2006a). The report concludes that income for card issuers is very high and points out several factors that may hinder competition. The Commission has proposed a raft of possible measures and has invited market participants to submit their comments on the report by 21 June 2006.

In 2005, the authorities in Spain, the UK and Switzerland implemented national regulations on interchange fees² and the authorities in Portugal, Italy and Poland are currently assessing whether to introduce such measures. The national regulations vary somewhat from country to country, but are generally more extensive than the 2002 EU resolution.

The regulation of interchange fees is also being considered in Norway.

¹ American Express and Diners Club operate with a three-party system, where the issuer and the acquirer are one and the same.

² See competition authorities in the respective countries: www.weko.admin.ch, www.mineco.es, www.ofst.gov.uk.

4. International payment systems

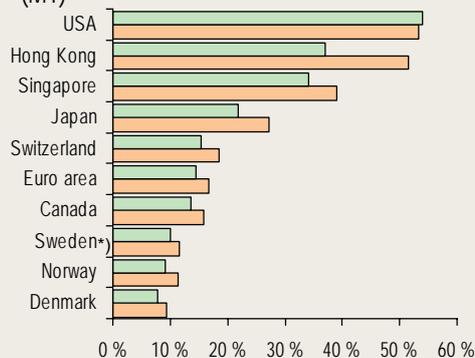
Work is ongoing in Europe in several areas to make payment systems more efficient. The European central banks' settlement system, TARGET, is currently being modernised. According to plan, the new version, TARGET2, will be in operation in 2007. However, the results of the SEPA project (Single Euro Payments Area) are likely to be more noticeable for consumers and enterprises. European banks and banking associations are working together to replace systems for payment services in each country with one efficient joint system based on shared standards and legislation. The EU Commission recently submitted a proposal for a new joint legal framework for payments in Europe ("New Legal Framework for Payments"). A more efficient payment system in Europe is assumed to give cost savings and contribute to a smooth-functioning internal market. According to the EU Commission this would help to make the European economy more competitive.

In the first part of this chapter, some features of the Norwegian payment system will be compared with corresponding features for a number of countries. In the second part of the chapter, we will look at important developments in European payment systems within the last year.

4.1 Payment patterns vary between countries

There are considerable differences in how means of payment and payment instruments are used in different countries. The differing payment patterns are the result of several factors, including general economic and technological developments, price levels and the price structure for different payment services, competition in the market, traditions and regulatory terms and conditions. The information in this chapter is taken from the ECB's Blue Book and the BIS' Red Book.

Chart 4.1 Cash's share of means of payment (M1)



*) Figures for 2001

Source: Norges Bank, ECB Blue Book and BIS Red Book

Cash

Cash is a widely used means of payment in all countries, but the relative importance of cash does vary. Use of cash depends on how widespread alternative means of payment are and how these services compare to cash in terms of cost, speed and security. The size of the black economy is another important factor. A common feature for most countries in recent years is cash's diminishing share of the means of payment used by the public (M1⁹), see Chart 4.1. Norway is one

⁹ The narrow money supply (M1) is defined as the money-holding sector's holdings 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 currency). Bank deposits in current accounts include deposits (in NOK or other currency) that can be immediately converted into banknotes and coins or can be used to make direct payments without incurring costs other than the normal transaction and set-up charges.

of the countries where the cash share is low in relation to the total means of payment in society. The cash share is generally lower in Northern and Western Europe than in Central and Eastern European countries. In the US and some Asian countries, the cash share is relatively high. As regards the US, it is usually estimated that around 50-70% of banknotes in circulation are outside the US. The corresponding figure for the euro area is 10-15%.

Deposit money

In modern society, the transfer of money between bank accounts is a very common way of settling claims and obligations. A number of payment instruments provide access to deposit money. Use of some of the main types of payment instruments in a selection of countries is shown in Chart 4.2. Credit transfers (payer initiates a transfer from his/her own account) are the most used payment instrument for paying bills in Norway, Sweden and Finland. Direct debits (payments initiated by the payee¹⁰) are less widespread in Norway than in a number of other European countries, Germany in particular. In some countries, the use of cheques is still widespread. In Europe, this is the case in France and the UK, but cheques are also frequently used in the US and Canada.

Use of payment cards

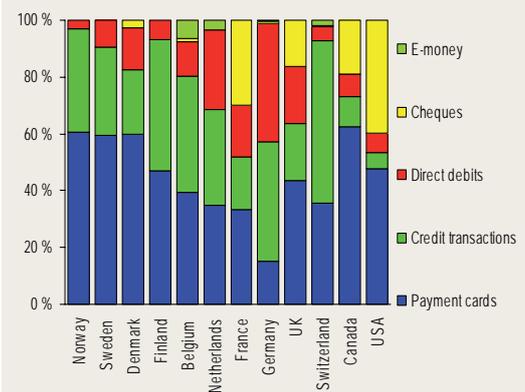
Norway is one of the countries in the world where cards are used most (see Chart 4.3). However, use is even greater in Iceland. In 2004, around 170 card transactions were made per inhabitant per year in Norway, whereas the number of registered transactions in Iceland was 295 per person. Countries that are similar to Norway with regard to card use include the US and Canada. A special feature of card use in Norway is the large share of debit cards. In Iceland, the US and Canada, the use of credit cards is far greater. Debit cards are widely used in Denmark, Sweden and Finland.

From 2000 to 2004, total card use per inhabitant in Norway rose by 53%. In Sweden, card use jumped by 169% over the same period, whereas in Finland the increase was 82% and in Denmark 51%. Iceland appears to have a mature card market and was one of the countries to register the lowest growth in the given period.

Payment cards are a good alternative to cash for the purchase of goods. In countries where there are good alternatives to cash, the use of cash is lower than in countries where the alternatives are poor. The use of cards for goods' purchases or cash withdrawals from ATMs depends, among other things, on the number of places where cards can be used. Compared with other countries, Norway has a very high number of payment terminals at points of sale. Chart 4.4 shows the number of ATMs and terminals per million inhabitants.

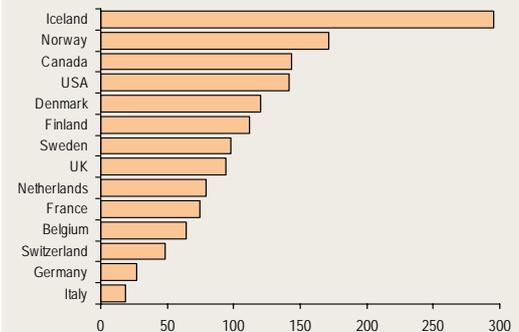
¹⁰ E.g. arrangements similar to the Norwegian Avtalegiro.

Chart 4.2 Use of payment instruments in selected countries in 2004. Percentage share



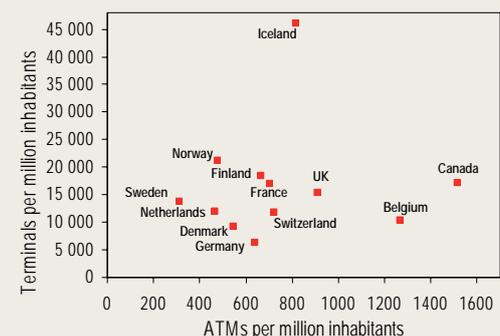
Source: Norges Bank, ECB Blue Book and BIS Red Book

Chart 4.3 Number of card transactions per inhabitant in 2004



Source: Norges Bank, ECB Blue Book, BIS Red Book and Sedlabanki Islands

Chart 4.4 ATMs and payment terminals per million inhabitants at end-2004



Source: Norges Bank, ECB Blue Book, BIS Red Book and Sedlabanki Islands

one million inhabitants in a selection of countries. There are considerable differences between countries. Canada has the most ATMs, whereas Iceland, followed by Norway, has the highest number of payment terminals. The possibility to withdraw cash through payment terminals (cashback) means that access to deposit money is very good in Norway.

Table 4.1 Some key figures for payment systems in Europe (2004)									
	EU	Euro area	Sweden	Denmark	Finland	UK	Germany	France	Norway (2005)
Cash and bank deposits									
Banknotes and coins in circulation, % of GDP	-	5.5	3.7	2.9	-	2.8	-	-	2.4
Banknotes and coins in circulation, % of M1	-	14.5	10.0	7.8	-	5.0	-	-	8.4
Deposits in current accounts, % of GDP	71.1	34.6	35.2	40.3	31.0	258.6	30.9	24.8	26.7
Branches									
No. branches offering payment services per million inhabitants	602	651	297	374	304	501	578	643	598
ATMs									
No. ATMs per million inhabitants	709	788	312	545	664	909	638	703	474
No. ATM withdrawals per year per inhabitant	23	22	38	-	42	42	29	20	21
Average ATM withdrawal (EUR)	106	116	92	-	78	94	142	68	142
Payment cards									
No. POS terminals per million inhabitants	13 362	15 087	13 749	9 280	18 366	15 376	6 303	17 048	22 881
No. payment cards per 1000 inhabitants:									
- Debit cards	745	754	831	668	836	1 116	1 081	740	1 062
- Credit and charge cards	403	332	392	146	492	1 242	248	-	654
Card transactions:									
- No. transactions per year per inhabitant	45	41	98	120	112	94	27	75	188
- Average amount per payment (EUR)	60	56	50	50	37	71	67	47	51
Payment instruments' share of number of non-cash transactions									
Credit transfers (various giro services)	30	30	31	23	46	20	42	19	34
Direct debits (Avtalegiro, etc.)	26	29	10	15	7	20	42	18	3
Cheques	11	11	0	3	0	16	1	29	0
Payment cards	32	28	59	59	47	44	15	33	63
Card-based e-money	1	1	0	-	0	-	0	0	-

Source: Norges Bank and ECB Blue Book

4.2 Need to improve efficiency in payment services

A common European legal framework for payments

In December 2005, the EU Commission tabled a proposal for common legislation for payment services in Europe, "New Legal Framework for Payments (NLF)" (EU Commission 2005). The purpose of the new framework is to lay the foundations for a single European payment area by:

- Helping to level the playing field and improve competition between payment service providers
- Removing legal obstacles to the development of pan-European payment services and infrastructure
- Developing consistency in relation to consumer protection and increasing openness

The new framework will probably be made applicable to Norway through the EEA Agreement. The framework is expected to be implemented around 2010.

Weaknesses in the existing European payment infrastructure

- Higher costs than necessary for payment transmission services due to inefficient use of means of payment and payment instruments.
- Deficient infrastructure and payment services. National systems are not suited for producing cross-border payment services as efficiently as domestic ones. There is a lack of shared standards.
- Considerable differences in efficiency. Prices, costs and service levels for payment services vary substantially between countries.
- Lack of competition and difficult for new participants to enter the market.
- Fragmented legal framework, which among other things, creates barriers to competition.

Potential for efficiency improvements in the EU

In connection with its work on the preparation of the NLF, the EU Commission has pointed to several areas in European payment systems where there is room for improvement. The challenges are greatest in the area of cross-border transactions. The existing systems involve substantial costs for users, long transactions times and uncertainty in relation to the contractual and legal terms for transactions.

The socio-economic costs of the payment system are estimated to be around 1-3% of GDP in the EU. The costs of the payment system account for a considerable part of banks' costs. According to the EU Commission, making the payment system more efficient will improve the potential for cost savings. Based on the experience in Norway, among other things, the EU Commission is of the opinion that if the most efficient services are used more, average unit costs for payment services could be halved. It also maintains that if unit costs could be reduced - by means of new payment solutions, standardisation and consolidation - to a level around 20% higher than "best practice" internationally, this would generate savings equivalent to EUR 10 billion. It has been calculated that banks could save over EUR 5 billion if all EU countries reduced their use of cash, for example, by increasing the use of debit cards to the level usual in countries where debit cards are used most.

High costs in banks translate into higher prices for consumers. The EU Commission refers to a study (Capgemini 2005) where it is calculated that an average bank customer pays EUR 108 per year to carry out normal payment-related banking services. Prices varied between EUR 252 and EUR 34. However, it is impossible to draw any conclusions about variations in costs in different countries in connection with the payment system on the basis of such price comparisons. Although in the final instance, customers have to cover the costs that banks incur as a provider of payment services, the costs are covered in different ways in different countries. In Norway, it is usual to price each payment transaction. In other countries, it is more common to charge a fixed fee for account management or to offer zero interest on current accounts. The extent to which banks use float (i.e. interest income that accrues to banks in the time that lapses between the payer's account being debited and the payee's account being credited) to finance the production of payment services also varies. Even if all this "payment-related" income is added up, the degree to which it covers the costs of providing payment services will still vary from bank to bank and country to country. Banks that do not have sufficient income have to cover their costs from other business areas, e.g. through lower interest rates on savings or higher interest rates on loans.

The quality of services also varies between countries. One important factor is the time that lapses from the moment a payment is initiated until the funds are available in the payee's account. Long transfer times and uncertainty regarding

when the payment is likely to be completed translate into considerable costs for users of the payment system. In Norway, a payment between two customers in different banks can be completed on the same day that the payment order is initiated. Furthermore, statutory provisions exist in Norway that forbid the use of float. Payments within the EU countries can be completed on the same or following day in some countries, whereas in other countries it can take up to three days. And cross-border payments within the EU may take even longer to complete. In instances where banks' income is largely from float and it is difficult to replace this with income from other sources, the banks' incentive to shorten the transfer time may be weak. The EU Commission has proposed that credit transactions within the EU shall take a maximum of one day by 2010. The one-day requirement will also apply to other payment services unless otherwise agreed. It is assumed that this will help to ensure a higher and more uniform quality in payment services in Europe.

Transmission of payment information (STP)

An important factor for the efficiency of payment systems is the extent to which the information in a payment transaction can flow from the payer to the payee without having to be re-registered. If the payer, the payer's bank, the payee's bank and the payee all have to register the same information, considerable resources are required and efficiency is reduced. This is unnecessary in a system that facilitates the re-use and efficient flow of information. Straight Through Processing (STP) is a concept used to describe the extent to which electronic processing is used at all stages of the payment process. STP can cover the process from bank to bank, but can also include the payer and the payee (end to end STP). STP requires the use of standards and communication agreements between banks. International standards are needed for cross-border STP.

With STP, all the information necessary for carrying out the transaction is registered at the start of the payment process (for example, by a customer in an Internet bank). The rest is automatic. When using electronic invoicing all the information is contained in the invoice and the payer simply needs to approve the completion of the transaction. Thus, the information accompanies the payment through the entire process and can be made available to the payee in electronic format and automatically integrated in the payee's financial system. The payee therefore does not need separate manual procedures for registering incoming payments from customers. Banks also offer solutions where information about enterprises' outgoing payments over the Internet can be automatically registered in their general ledger.

In Norway, STP from bank to bank has been a generally accepted practice for all payment transactions for many years. The standards used by Norwegian banks also allow for STP to include the banks' customers. An example of this is the customer identification number (CID). CID was introduced as early as 1973 so that payees could receive electronic notification of payments carried out using OCR giro forms. It was then developed further so that payees could also receive notification of direct debit payments and payments over the Internet. The CID clearly identifies who has made the payment and can include variables such as customer number, invoice number and due date. The payee is free to choose the CID combination within a limit of 25 characters. To ensure that the CID field is correctly registered, the last digit is a control digit. It is calculated according to special calculation rules based on the other digits in the CID. Thus, if an Internet banking customer types in the CID incorrectly, a message on the screen indicates an error.

STP between banks is widely used in most European countries. The extent of STP between banks and customers varies. Cross-border transactions constitute a particular challenge. Several international standards have been developed (BIC, IBAN and SWIFT standards) to facilitate cross-border STP, but the share of such payments is still small. The work on the Single Euro Payments Area (SEPA) has identified a need for pan-European standards and regulations in order to increase STP shares.

Historical overview of Norges Bank's role in the payment system

Norges Bank was established by an act of parliament in 1816. In addition to issuing banknotes and coins and providing banking services for the state, the Bank was to provide lending, discounting¹ and settlement services. The act included detailed provisions regarding the execution of debits and transfers from customer accounts. The first savings banks were established in 1822. Two years later, the Storting (Norwegian parliament) passed the Savings Banks Act and in 1848, the first commercial bank, Christiania Bank and Creditkasse, was established.

To facilitate the circulation of money between towns where Norges Bank had branch offices, account holders in Norges Bank could 'send' money between these towns as early as 1825. The account holder paid the amount at the branch from which the money was to be sent. They then received a money order with a claim on the Norges Bank branch in the town to which the money was to be sent. The money orders were sent by post and the account holder was charged a moderate fee. The service was practical and it gradually became widespread. The arrangement was expanded early in the 1850s (Rygg 1901).

In 1886, the Board of Directors (today's Executive Board) discussed whether other banks should be permitted to carry out this service and how, in principle, the payments should be made. In 1892, the original central bank act was replaced by new legislation, which placed less emphasis on operative banking functions and gave Norges Bank responsibility for serving as the banks' bank and as an intermediary for private participants. Banks now took over some of Norges Bank's previous responsibilities.

As time passed, there was an increasing need to ease the transfer of larger sums between banks in different towns. To this end, a special draft (a type of bill of exchange) was issued, the so-called 8-day collect. Norges Bank drew up a draft on the bank that was in a debit position. These drafts had a maturity of eight days and had to be paid to Norges Bank on maturity. Norges Bank then paid the bank that was in a credit position when the debtor bank had paid (Rules and Regulations for Norges Bank, 1901).

At the end of the 1890s, the managing director of Creditkassen, Mr. Castberg, suggested that a central clearing office should be established for domestic payments in Norway, based on a model developed by the Bank of England in 1864. Director Bomhoff of Norges Bank did not think that the time was right for this, but in 1898, Christiania Bank-Clearing-Office² was established (Engebretsen, 1949). The office was in operation until 1989 and had premises in Norges Bank. The largest commercial banks and Oslo Sparebank all participated in the clearing. Representatives of the participating banks met every day in Norges Bank to offset their positions vis-à-vis one another. The results were then registered in their accounts in Norges Bank. Activity in Oslo Bank Clearing Office increased steadily throughout the 1900s.

Norges Bank later assumed a key role in clearing and settlement operations between Norway and other countries, particularly after 1931, when most countries abolished the gold standard. Activities were formalised in the Payment Equalisation Act of 1935. Operations were based on bilateral clearing agreements that Norway had signed with a number of other countries. By means of this arrangement, assets and obligations generated by export and import were cleared. The different agreements included provisions concerning the size of the trade deficit in relation to the counterparty. It was originally thought that this facility would be temporary. The facility operated until the 1960s, when activity was dramatically reduced.

In the first half of the 1900s, Norges Bank also operated as an issuing bank. The facility allowed Norwegian importers and exporters to handle payment and delivery of freight documents through their banks. The seller's bank made the freight documents available and the buyer's bank then issued a letter of credit. "Payment versus delivery" was carried out in this manner. Another service was 'cambio trades' or travellers' letters of credit for bank customers. When a customer used these letters of credit abroad, the bills were sent to Norges Bank to be redeemed. Similarly, foreigners in Norway could withdraw funds from Norges Bank using their letters of credit (Rygg and Hertzberg, 1907).

Prior to the Second World War, cheques were in general only issued in connection with business and interbank transactions. This was also the case immediately after the war. Gradually, however wage earners began receiving their pay in a cheque account and the use of cheques rose sharply. OCR cheques were introduced around 1970 and from 1975, the processing of these cheques was taken over by the commercial and savings banks' data centres. However, Norges Bank continued to process non-OCR cheques, which largely comprised interbank cheques. Settlement was still carried out in the banks' accounts in Norges Bank.

When the Central Securities Depository (VPS) was established in the mid-1980s, settlement of the cash leg of securities trades was also carried out in banks' accounts in Norges Bank. At about the same time, the current Norges Bank Act entered into force. Pursuant to the Act, the Bank is responsible for 'promoting an efficient payment system domestically as well as vis-à-vis other countries'. In the latter part of the 1980s, Norges Bank contributed to the coordination work between the commercial and savings banks and the post office (Postsparebanken, Postgiro, Posten). This work was completed in 1995.

Around 1990, it was decided that large and small transactions should be processed differently. The banking industry started to clear small and medium-sized transactions through the Norwegian Interbank Clearing System (NICS), whereas Norges Bank assumed responsibility for the clearing and settlement of large-value transactions. The NICS clearing system and Norges Bank's settlement system (NBO) were linked so that banks could see their positions in the settlement at any time. In 1999, Norges Bank introduced real-time gross settlement for large-value transactions.

Pursuant to the Payment Systems Act of 1999, Norges Bank is responsible for ensuring that interbank systems are organised in such a way that the objective of financial stability is upheld. In its work in this area, the Bank places particular emphasis on counteracting risk in connection with liquidity and solvency problems. Systems operators must be authorised to establish and operate these systems, unless Norges Bank has granted a waiver from the authorisation requirement.

¹ Discounting, in this context, is a concept that was used when the settlement of a transaction involved the use of drafts. A draft is a special kind of debt instrument that was frequently used as settlement for commercial transactions. The buyer could issue a draft as settlement for a transaction. The recipient of the draft could 'sell' it on to a bank, for example, for a slightly smaller sum than the draft's nominal value (sale value). This is called discounting. Thus, the bank took over the asset, and settlement with the seller was effected in cash. The use of drafts therefore entailed a financing leg and a payment transfer leg. The legal aspect of using drafts was (and is) highly regulated.

² The Office was neither a company nor a part of the Norges Bank organisation, but consisted entirely of participants from the largest banks in the capital city.

European banking industry initiatives

Both the EU Commission and the European Central Bank have placed considerable emphasis on the development of an efficient payment system that covers the whole EU area. This will be important to the realisation of the objective of the Lisbon Declaration 2000, that the EU will be the most dynamic and competitive knowledge-based economy by 2010.

The development of a single payment system for Europe will require a considerable amount of work on the part of the European banking industry. It is probably the largest bank project ever to be carried out and is comparable to the introduction of the euro.

For this reason, the European banking industry established the European Payments Council (EPC) as the strategic and coordinating body for work in connection with the Single Euro Payments Area (SEPA). The EPC has defined SEPA to include the 25 EU countries, Norway, Iceland, Liechtenstein and Switzerland. The aim of the work on SEPA is to coordinate general conditions for cross-border payments in euro by 2010. In its "road map" for the period 2004-2010, the EPC has committed to laying the foundations for banks, settlement systems and similar participants to develop joint infrastructure, payment instruments and procedures. The "road map" sets out prioritised tasks and milestones. The framework and regulations defined by the EPC may have consequences for the Norwegian payment structure. However, the Norwegian banking industry has greater flexibility than euro-countries when it comes to implementing the EPC's decisions.

In September 2005, the EPC adopted a framework for payment cards. A framework for the use of cash followed and in December, the EPC presented its schemes for direct debits and credit transfers. The schemes were adopted in March 2006 and are considerably more detailed than the frameworks for cards and cash. The schemes and frameworks are currently subject to consultations with the banking industry in relevant countries. The Norwegian banking industry will ensure that conditions are in place for the harmonisation of the schemes on electronic credit transfers with Norwegian legislation. The schemes on direct debits will, however, require changes in Norwegian solutions and amendments to existing legislation.

In the short term, the changes mentioned above will have some consequences for cross-border payments. Over time, the changes will also affect the way the Norwegian banking industry operates in the European market.

In February 2006, the EU Commission held an open consultation (EU Commission 2006b) on the schemes and frameworks proposed by the EPC. The Commission set

Global cooperation - international reports

The work of the Committee on Payment and Settlement Systems (CPSS) is carried out under the auspices of the Bank for International Settlement (BIS). The Committee includes representatives from the central banks in Belgium, Canada, France, Germany, Hong Kong, Italy, the Netherlands, Singapore, Sweden, Switzerland, the UK and the USA. The European Central Bank is also represented.

The purpose of the Committee's work is to strengthen the infrastructure of financial markets by proposing general measures for the development of robust and efficient clearing and settlement systems. The Committee is responsible for the "Red Book" for payment systems. This includes extensive information about the most important payment systems in the countries represented in the Committee. The Committee has published a number of reports in 2005 and thus far in 2006.

- No. 67: "New developments in large-value payment systems"
- No. 68: "Central bank oversight of payment and settlement systems"
- No. 69: "General guidance for national payment system developments" (preliminary report)
- No. 70: "General guidance for national payment system developments" (final report)
- No. 71: "Cross-border collateral arrangements"
- No. 73: "General principles for international remittance services" (preliminary report)

out a number of questions relating to the proposals in order to gather comments from as many of the affected participants as possible. The Commission intends to have a new consultation before summer 2006. This will identify actual areas for improvement in the schemes and frameworks, so that the economic potential of SEPA can be realised.

The ECB published its fourth progress report on SEPA (ECB 2006b) in February 2006, which looked at initiatives in the industry and the progress of the SEPA project. The report points out, among other things, that the services offered in SEPA must take due consideration of the needs of the various user groups. The solutions will require changes to users' established habits. The solutions must therefore be forward-looking and exploit all the possibilities offered by modern information technology. The report looks at the expectations of European banks and users regarding payment services and sets targets for SEPA. The report also reviews the status of the different instruments in SEPA. The SEPA project is somewhat delayed, but the ECB sees no reason to change the milestones that have been set for implementation.

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

The TARGET system is at the centre of the European payment infrastructure. TARGET is the Eurosystem's real-time gross settlement system for payments in euro. With an average daily turnover of EUR 1700 billion, TARGET is the world's biggest system for large-value payments, followed by the American Fedwire system, CLS (Continuous Linked Settlement) and the UK system, CHAPS. A new system, TARGET2, is now being developed and will, according to plan, be in operation in 2007 (ECB 2005b). In TARGET2, a single technical platform (Single Shared Platform) will be implemented in all central banks in the euro area. This will contribute to a more efficient settlement system in the euro area. The French, Italian and German central banks will develop and operate the platform on behalf of the Eurosystem. The national central banks will continue to be responsible for account management and business relations between banks in their respective countries. As previously, SWIFT will be used for messages and there will be no transaction value limits for transactions.

Risk in connection with changes in the Norwegian payment system

The Norwegian clearing and settlement system has remained more or less unchanged since the late 1990s. However, in the period from 2006 to 2008, considerable changes will take place in the three largest inter-bank systems in Norway, i.e. Norges Bank's systems, NICS and DnB NOR Bank. The system changes will improve efficiency, in terms of technology, functionality and finance. The changes do, however, entail some risk. Operational risk normally increases in periods when systems are being replaced, but then diminishes again. The fact that several systems, that communicate with each other are to be replaced within a couple of years, may increase operational risk in the Norwegian clearing and settlement system during this period. Kredittilsynet and Norges Bank will therefore monitor the projects carefully.

Pursuant to the Payment Systems Act, Norges Bank is the authorisation and supervisory authority for clearing and settlement systems. Kredittilsynet is responsible for the supervision of financial institutions, use of information and communication technology, as presented in Kredittilsynet's annual report for 2005.

Since the merger in January 2004, DnB NOR Bank has operated both the original banks' interbank systems. The systems were authorised and subject to supervision by Norges Bank. Since the merger, a process has been underway to merge the two systems. This work was completed in April 2006. In autumn 2005, Norges Bank granted a new authorisation to DnB NOR Bank. This entered into force on completion of the coordination project. According to the terms of authorisation, the bank is required to report on operational risk, including procedures for managing change.

NICS (Norwegian Interbank Clearing System) is the banks' joint clearing system. NICS is also the most important transaction route for transactions settled in Norges Bank. The system is authorised and subject to oversight by Norges Bank. The technology and functionality of the system will be upgraded in 2007. This will prevent the settlement of individual large-value transactions together with ordinary payment transactions. NICS SWIFT Netting will be discontinued at the same time. As the authorisation and supervisory authority, Norges Bank will oversee the project. Kredittilsynet has carried out an onsite inspection at BBS, which is the operations centre for NICS.

Norges Bank is in the process of acquiring a new version of Norges Bank's settlement system, NBO. The system will be a standard system and communication with participants and other systems will be carried out via a very limited number of internationally accepted standardised interfaces. The upgrade will be carried out in 2008. NBO is not subject to authorisation pursuant to the Payment Systems Act.

Norwegian financial institutions have to a large extent outsourced the operation and development of their information and communication technology solutions. The main providers are EDB Business Partner AS, Sparebanken Data Central - Udvikling in Denmark and IBM Nordic. Kredittilsynet also supervise the operational risk inherent in outsourcing.

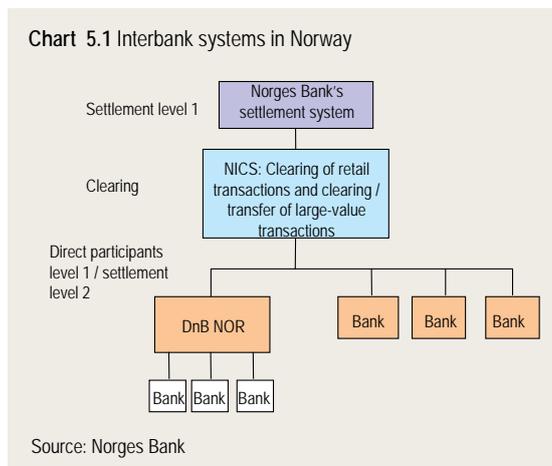
5. Oversight of the payment and settlement systems

Banks play a central role in the payment system. A smooth-functioning payment and settlement system makes it possible to transfer money securely and at the agreed time from an account in one bank to an account in another bank. Banks participation in the payment system exposes them to different kinds of risk. If the payment system is organised such that problems in one bank can spread to another, this can give rise to systemic risk. This spill-over effect can threaten the stability of the financial system and for this reason, central banks are involved with the organisation and functioning of payment and settlement systems.

In this chapter, we describe the payment and settlement systems in Norway, we then report on Norges Bank's oversight work to ensure that Norwegian systems comply with international standards and recommendations.

5.1 Description of interbank systems

Chart 5.1 Interbank systems in Norway



Source: Norges Bank

Clearing

Several transactions are offset against each other and a net position is calculated for each bank. If several banks are involved it is called a multilateral clearing and if only two banks are involved it is called a bilateral clearing.

Gross settlement

In gross settlement, payments between banks are settled individually without prior clearing. When this happens in real time, the system is called a RTGS system (Real Time Gross Settlement).

Interbank systems, participants and payment flows

Banks in Norway are linked together by interbank systems that make it possible for them to settle their mutual claims. The structure of the interbank systems in Norway is illustrated in Chart 5.1. Norges Bank's settlement system (NBO) constitutes the highest settlement level. There are 149 banks in Norway, including Norwegian commercial and savings banks, foreign subsidiaries and branches of foreign banks. They can all establish accounts in Norges Bank and thereby participate in NBO. A total of 147 banks currently have accounts in Norges Bank and 146 banks participate in the Norwegian Interbank Clearing System (NICS), the most important system for interbank clearing. The banks decide themselves whether they want to settle their mutual obligations over accounts in Norges Bank (level 1) or in a private settlement bank (level 2). DnB NOR Bank and Swedbank Oslo participate at level 1, but also carry out settlement for banks at level 2.

Different types of payments are settled in different ways. Ordinary customer payments (e.g. payment card, giro and ATM transactions) are included in a multilateral netting called NICS Retail. This multilateral netting is settled in Norges Bank at 5.45am and at 3pm. Larger transactions and interbank transactions are cleared in a separate multilateral netting (NICS SWIFT) or sent individually to settlement in NBO in real time, either through NICS RTGS or directly to Norges Bank.

Continuous Linked Settlement (CLS) is an international settlement system for foreign exchange trades. In order to avoid credit risk, CLS is operated on a payment-versus-payment basis. In connection with the settlement of foreign exchange trades involving NOK, participants in NBO have pay-in obligations to the CLS Bank's account in Norges Bank.

The securities settlement (VPO) is a system for settling securities trades. VPO includes participants' positions in both cash and securities. The Norwegian Central Securities Depository (VPS ASA) calculates participants' multilateral net cash and securities' positions. VPS records the securities and Norges Bank settles the associated cash positions. In order to avoid credit risk, VPO is based on the delivery-versus-payment principle. A total of 20 banks and 21 brokers (investment firms) participate in the securities settlement. Only banks can have settlement accounts in Norges Bank, so all brokers have signed an agreement with a bank in order to access liquidity in the securities settlement. Brokers' positions are then settled over the relevant banks' accounts in NBO.

NOS Clearing ASA is a clearing house for financial derivatives traded on the Oslo Stock Exchange and freight derivatives traded on the International Maritime Exchange (Imarex ASA). The Executive Boards in NOS ASA¹¹ and Imarex have decided to merge the two companies into one new holding company. VPS Holding ASA has entered into an agreement with NOS/Imarex to take over NOS' activities linked to the clearing of financial derivatives (see press releases of 3 April 2006). According to the press releases, the NOS/Imarex group will comprise one company for the market place and one for clearing. VPS Holding ASA plans to establish a new subsidiary that will offer clearing services for financial derivatives. According to the plan, this company should be operational on 1 September 2006.

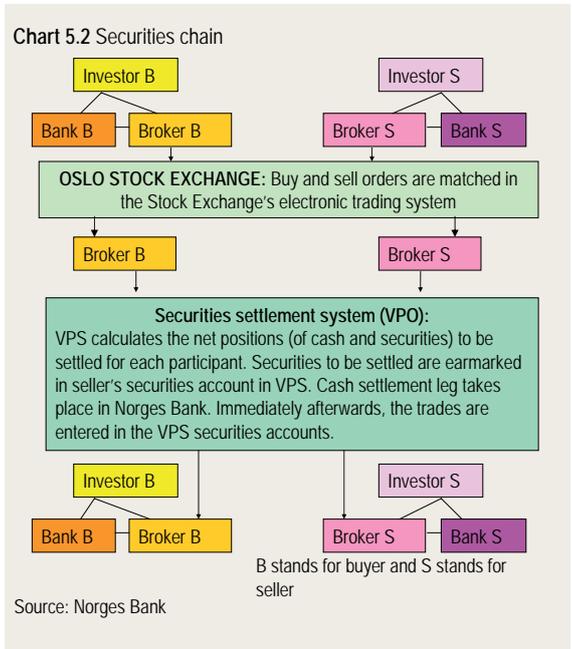
Turnover and liquidity

In industrialised countries, the value passing through the payment systems is normally comparable to the country's GDP in the course of five to seven days. This was also the case for NICS up to end-2003 (GDP in 6.3 days). However, following the merger between DnB and Gjensidige NOR, many transactions are now processed internally in the merged bank. Turnover in NICS therefore fell by around 20% from 2003 to 2004. The figures for 2005 show that average daily turnover in NICS was NOK 201 billion, i.e. equivalent to GDP every 8.7 days.

The clearing of banks' positions in NICS (NICS Retail and NICS SWIFT) reduces banks' need for liquidity in the settlement. The average daily turnover is NOK 66 billion. After clearing, an average of NOK 9.4 billion is settled in

CLS

CLS was introduced in autumn 2002 for settlement of the seven key currencies. The Scandinavian currencies were included a year later. At end-2005, a total of 15 currencies were included in CLS.



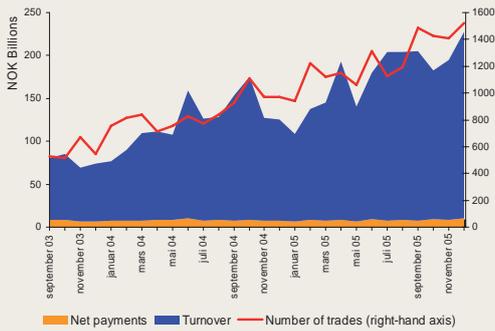
Central Counterparty (CCP): A central counterparty is an entity that steps in as a legal counterparty between the buyer and the seller in a trade and assumes both parties' obligations.

Table 5.1 Distribution of turnover and transactions in NICS

	Share of transactions	Share of amount
NICS Retail	99.89 %	27.00 %
NICS Swift Netting	0.10 %	2.50 %
NICS RTGS	0.01 %	70.50 %

¹¹ NOS ASA owns NOS Clearing ASA.

Chart 5.3 NOK in CLS. September 2003 - December 2005. Daily average



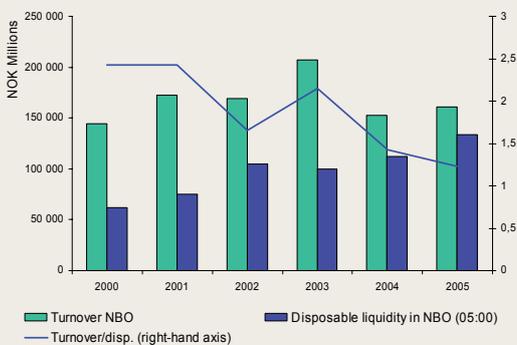
Source: Norges Bank

NBO. The liquidity required for settlement is thus only 14% of the gross value.

The daily value of banks' pay-in obligations to CLS Bank was on average NOK 9 billion in 2005, see Chart 5.3.

Average daily turnover in Norges Bank for VPO was around NOK 3.5 billion in 2005, whereas average turnover in the NOS settlements was NOK 150 million. However, the value of these multilateral nettings gives little indication of gross turnover on the Oslo Stock Exchange. Average daily turnover in securities on the Oslo Stock Exchange totalled around NOK 24.7 billion in 2005. An average of roughly 21 700 securities transactions and 24 500 derivatives trades were carried out daily on the Oslo Stock Exchange.

Chart 5.4 Turnover and liquidity in NBO



Source: Norges Bank

In 2005, banks had on average NOK 133 billion available in NBO at start-of-day (5am) in the form of sight deposits and borrowing facility in Norges Bank, compared with NOK 112 billion in 2004 (see Chart 5.4). Most of the increase in liquidity may be explained by a higher borrowing facility. Banks' borrowing facilities rose from an average of NOK 91 billion in 2004 to NOK 106 billion in 2005. The percentage rise for liquidity was greater than for turnover in NBO. The settlement system had a wider liquidity to turnover ratio in 2005 than in any of the five preceding years.

Daily turnover figures for NBO and VPO are available on Norges Bank's website.

5.2 Oversight

A core responsibility for all central banks is the oversight of payment and settlement systems. The systems should be designed in such a way that the problems of one participant do not spill over to other participants. Central banks follow international recommendations in this work. Under the auspices of the Bank for International Settlements (BIS), recommendations has been drawn up for the oversight of payment systems, securities settlement systems and central counterparties.

In May 2005, the BIS published the report, "Central Bank Oversight of Payment and Settlement Systems" (BIS 2005). The report sets out principles for the oversight of both domestic and cross-border systems. For domestic systems, it is recommended, among other things, that central banks should have both the authority and the capacity to carry out oversight, that the assessment of systems should be based on internationally accepted standards and that these standards should be applied equally to similar systems, including systems operated by the central banks themselves.

Norwegian legislation satisfies the report's recommendation that central banks should have the authority to carry out oversight. The Payment Systems Act entered into force on 14 April 2000 and gives Norges Bank responsibility for the authorisation and supervision of payment systems. Requirements for authorised systems build on the internationally accepted Core Principles for systemically important payment systems, as recommended by BIS.

In accordance with provisions in the Act, authorised systems must report on turnover and operating conditions and the Bank has biannual meetings with the operators responsible for each system. In addition, systems operators are also obliged to report any major changes to Norges Bank.

Norges Bank's own settlement system, NBO, is not subject to authorisation. However, Norges Bank does place importance on adhering to international best practice. The structure of NBO is therefore based on the BIS Core Principles. In 2005, NBO was assessed in relation to these principles by the International Monetary Fund (IMF).

Systems for clearing and settlement of securities and derivatives trades are embedded in the payment infrastructure, but are not subject to the authorisation requirement pursuant to the Payment Systems Act. These systems should also be constructed in such a way that problems experienced by one participant do not spill over to other participants. In line with international recommendations, Norges Bank also oversees these systems. Norges Bank's oversight is focused on the system rather than the individual participating institutions. Information on this is made available to Kredittilsynet, which is responsible for the supervision of institutions.

The oversight of interbank systems is based on an assessment of whether they fulfil the 10 Core Principles for systemically important payment systems recommended by the BIS. Securities settlement is assessed on the basis of 19 international recommendations (BIS/IOSCO 2001, 2002). Clearing in NOS is assessed on the basis of 15 recommendations for central counterparties (BIS/IOSCO 2004).

5.3 Norges Bank's settlement system (NBO)

A total of 147 banks participate in Norges Bank's settlement system, NBO. Average daily turnover in NBO was NOK 161 billion in 2005.

In 2005, the IMF carried out a FSAP (Financial Sector Assessment Program) review of the Norwegian financial system. Most of the IMF member states have been assessed in this way. The Norwegian payment system was analysed

Authorised interbank systems

In 2001, three systems were granted authorisation to operate pursuant to the Payment Systems Act: the clearing system, Norwegian Interbank Clearing Systems (NICS) and the settlement banks, Den norske Bank (DnB) and Gjensidige NOR. Three settlement banks (Swedbank Oslo, Sparebank 1 Midt-Norge and Sparebank 1 Vest) were exempted from the authorisation requirement as the systems were deemed to be too limited to constitute any threat to financial stability. Clearing in EDB Fellesdata was also exempted from the authorisation requirement as the clearing was included as an integral part of Gjensidige NOR's authorisation. Norges Bank's own settlement system, NBO, is not subject to authorisation, but is still constructed based on BIS principles.

BIS key principles for interbank systems:

1. The system should have a wellfounded legal basis under all relevant jurisdictions.
2. The system's rules and procedures should enable participants to have a clear understanding of the system's impact on each of the financial risks they incur through the participation in it.
3. The system should have clearly defined procedures for management of credit risks and liquidity risks, which specify the respective responsibilities of the system operator and the participants and which provide appropriate incentives to manage and contain those risks.
4. The system should provide prompt final settlement on the day of value, preferably during the day and at a minimum at the end of the day.
5. A system in which multilateral netting takes place should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single settlement obligation.
6. Assets used for settlement should preferably be a claim on the central bank; where other assets are used, they should carry little or no credit risk and little or no liquidity risk.
7. The system should ensure a high degree of security and operational reliability and should have contingency arrangements for the timely completion of daily processing.
8. The system should provide a means of making payments which is practical for its users and efficient for the economy.
9. The system should have objective and publicly disclosed criteria for participation, which permit fair and open access.
10. The system's governance arrangements should be effective, accountable and transparent.

as part of the FSAP (IMF, 2005). The IMF deemed NBO to be the only systemically important payment system in Norway and therefore focused their work on assessing NBO in relation to the BIS Core Principles.

Prior to the IMF review, Norges Bank had carried out a self-assessment of NBO. Norges Bank's conclusion was that the system complied with all relevant international standards. The IMF agreed with Norges Bank's assessment, but also recommended some minor changes that they felt could improve the system even further. These recommendations and the action taken are presented in a separate frame.

Central bank responsibilities

Recommendations for central bank responsibilities

- A. The central bank should define clearly its payment system objectives and should disclose publicly its role and major policies with respect to systemically important payment systems.
- B. The central bank should ensure that the systems it operates comply with the Core Principles.
- C. The central bank should oversee compliance with the Core Principles by systems it does not operate and it should have the ability to carry out this oversight.
- D. The central bank, in promoting payment system safety and efficiency through the Core Principles, should cooperate with other central banks and with other relevant domestic and foreign authorities.

In addition to the review of payment systems, the IMF assessment programme contains an analysis of how central banks exercise their responsibility in the area of payment systems. This analysis is made by assessing each central bank in relation to four recommendations from the BIS (see margin text). The IMF found that Norges Bank observes three of these recommendations (A, C and D), but that B is only broadly observed. The IMF pointed out that Norges Bank should document that NBO complies with the BIS Core Principles. It further recommended that the organisational responsibility for overseeing that these principles are fulfilled should be separated from the operational responsibility.

Norges Bank will follow up the IMF's recommendations regarding formal procedures: the department responsible for the oversight of authorised systems will oversee that NBO continues to at least comply with the BIS' Core Principles in the future. Operational responsibility for NBO lies within another department. NBO will be subject to reporting requirements and formal oversight procedures that at a minimum will be in line with the authorised systems. The reporting requirements and oversight procedures are published on Norges Bank's website.

Although the IMF was of the view that Norges Bank fulfilled its responsibility in relation to point C, the following additional comments were made on this point: Norges Bank should systematise the necessary information for payment system operators in relation to i) a sound legal basis, ii) risk management, iii) operational reliability, iv) effective governance, v) sound financial basis and vi) crisis management. Reporting requirements should also be systematised and published. The requirements should be differentiated according to the systems' role in the economy.

In May 2000, Norges Bank drew up guidelines for authorisation applications pursuant to the Payment Systems Act. These guidelines contain information about the areas to which the IMF recommendations refer. The guidelines are available on Norges Bank's website.

The IMF's assessment of NBO

The IMF's assessment of Norges Bank's settlement system, NBO, is presented in the report, "Norway: Financial System Stability Assessment, including Reports on the Observance of Standards and Codes on the following topics: Banking Supervision, Insurance Regulation, and Payment Systems" (IMF Report No. 05/200, June 2005, see www.imf.org).

The IMF's recommendations - Action points

The regulations for NBO should specify that when credit institutions outside EEA apply for access to the NBO system, they must provide a legal opinion with respect to possible conflicts of law.

Action: Norges Bank is working on a new account management and settlement agreement for cross-border participants. This point will be included in the new agreement.

When the new system becomes operational, a brochure should be published with information on the functioning of the system, risk management, providing of credit, crisis management etc. The rules and regulations for the existing system should be published on the website of Norges Bank to make it easily available to the public.

Action: Norges Bank has collected and systematised all the information about the existing settlement system on its website, in line with the IMF's recommendation. Information about the new settlement system will be published when the system is launched.

NICS constitutes an important part of the infrastructure. The authorities should consider the vulnerability of the infrastructure due to the fact that the contingency facilities of the NICS system could not deal with a wide area disaster.

Action: Norges Bank has discussed the issue of the location of contingency facilities with NICS Operatørkontor. The latter pointed out that analysis of the risk of a wide area disaster occurring in the vicinity of the production facilities on the outskirts of Oslo has been carried out. It was found that the risk does not justify the establishment of new contingency facilities, given the costs that this would entail. Norges Bank has taken due note of this decision.

Analyse whether existing guidelines for the coordinated exchange of transactions should be replaced by other more efficient measures such as throughput guidelines or price incentives for early settlement.

Action: The industry has stated that the banks are satisfied with the liquidity effect of the coordinated exchange of large-value transactions and there are therefore no plans to change this. Norges Bank has taken due note of this decision.

The phasing out of NICS-SWIFT Netting should be considered.

Action: The industry decided in 2005 that NICS-SWIFT Netting should be abolished when the new functionality and technology platform is introduced in BBS.

Large and time-critical client-to-client payments should be included in the NBO gross settlement.

Action: The industry decided in 2005 to develop new functionality in NICS in order to separate all large one-to-one transactions (over NOK 25 million) from the retail netting and submit them for gross settlement. This will be implemented when the new technology platform is in operation in BBS.

There may be a need for organizing gross settlement of securities transactions on an online, real-time, trade-for-trade basis in order for participants to provide collateral for interbank money market loans.

Action: The need for gross settlement of securities trades is being assessed in connection with the review of the securities settlement, see separate section. Norges Bank is of the opinion that it would be expedient for banks to demand collateral for their interbank loans, but will not require it. Instead, Norges Bank will continue to oversee banks' exposures to one another in the payment system and ensure that credit risk is not reintroduced to the Norwegian payment system.

5.4 Norwegian Interbank Clearing System (NICS)

NICS Retail Netting

No. participating banks: 146
Daily turnover: approx. NOK 60 billion
No. daily transactions: approx. 4.7 million
No. daily settlements in Norges Bank: 2

NICS SWIFT Netting

No. participating banks: 18
Daily turnover: approx. NOK 6 billion
No. daily transactions: approx. 4700
No. daily settlements in Norges Bank: 3

NICS SWIFT RTGS

No. participating banks: 18
Daily turnover: approx. NOK 136 billion
No. daily transactions: approx. 530
Transactions settled individually in Norges Bank

Shutdown policy in the event of labour conflicts in banks

In the event of extensive labour conflicts in the banking industry, key parts of the payment system will be closed down. The reason for this is that the industry believes that banks will be exposed to too great a risk if the payment system remains open and there is no staff in the banks to ensure that risk is maintained at a manageable level and to correct any errors. In terms of the public, the closure of payment systems will make it difficult to pay bills. Goods purchases will have to be paid in cash.

NICS, represented by the operator NICS Operatørkontor, was granted authorisation for the establishment and operation of an interbank system in 2001. One of the terms of authorisation is that the operator reports on participation, turnover and exposure in the system at the end of each year, and carries out annual tests of contingency solutions. The system is subject to supervision by Norges Bank. Pursuant to the Payment Systems Act, NICS Operatørkontor was in 2004 required to submit an annual report on the results of risk and vulnerability analyses, contingency testing, with confirmation from auditors that procedures for dealing with changes and disruptions were adhered to.

In addition to the regular reports, Norges Bank normally holds biannual supervision meetings with NICS Operatørkontor. At these meetings, operations and any disruptions, developments in turnover and exposure, etc. are discussed. In 2005, the following topics were also discussed:

- Development of vulnerability analyses as banks may have to implement complete shutdown in the event of labour conflicts (shutdown policy)
- Advance customer crediting
- Replacement of technology platform by NICS' provider (BBS) – changes in functionality in NICS
- Agreement on the clearing and settlement of BankAxept card transactions in ATMs and EFTPOS-terminals - amendments in order to notify ESA of the interbank system

Shutdown policy

The industry is responsible for planning how to deal with the interbank systems in the event of a major labour conflict and the system operators are responsible for ensuring that the interbank systems manage to deal with the situation before, during and after the conflict. On the basis of this, Norges Bank asked the systems operators to carry out a vulnerability analysis of the operational consequences of shutting down the payment systems. Particular focus was given to this at supervision meetings in 2004 and 2005 and both NICS Operatørkontor and DnB NOR Bank have submitted vulnerability analyses. Both systems operators are of the view that, as a result of the analyses and risk-reduction measures, procedures have been established for dealing with a situation where systems are shut down. Norges Bank has taken note of their views.

Advance customer crediting

Up until 2000, customer accounts in banks were credited before net settlement in Norges Bank. This entailed a credit risk for banks. Therefore, in 2000, the banks as a group

changed these routines so that they would not credit customer accounts until they had received settlement from the payer's bank. In 2005, Norges Bank discovered that some banks still credited their customer accounts before net settlement. This is partly due to technical issues. As long as this practice is not widespread, it is of no great significance to financial stability. However, if advance customer crediting is practised on a wider scale, it could result in an unacceptable level of credit risk in the retail settlement. If some banks or some systems were to make advance customer crediting a competitive parameter, it could have a negative effect on risk in the Norwegian payment system. Norges Bank will therefore follow up on this issue.

Change in technology platform for NICS

At the supervision meetings, NICS Operatørkontor reported on the imminent changes in technology at BBS and changes in functionality that will be implemented in NICS. Norges Bank requested formal notification of the changes from NICS Operatørkontor, in accordance with the Payment Systems Act. The notification of changes was received in April 2006.

Card settlement (BankAxept settlement)

The NICS agreement framework is designed to ensure the settlement of card transactions even if one of the banks is subject to insolvency proceedings. However, Norges Bank has not approved this agreement and has asked NICS Operatørkontor to draw up a new agreement. When the agreement has been approved by Norges Bank, the ESA will be notified. Banks will then have legal protection for the clearing result linked to card transactions.

Comments from the IMF

In connection with the IMF's review of the Norwegian payment infrastructure, NICS was not assessed specifically in relation to the BIS Core Principles. However, some of the IMF's recommendations do refer to NICS, see section on NBO. In addition, the IMF pointed out that the following areas should be reviewed more closely:

- *Measures to reduce the liquidity risk in NICS Retail netting should be considered.*

The majority of customer accounts are credited after net settlement in Norges Bank. Therefore, credit risk has nearly been eliminated in this settlement. NICS has routines for re-running the clearing when a participant lacks cover in its settlement account. However, if a settlement is re-run, other participants' liquidity requirements may differ from the original calculations and could thus constitute a liquidity risk. Norges Bank will investigate possible solutions for reducing this risk together with representatives from the industry.

Legal protection for clearing

Pursuant to §§4-2, cf. 4-1, of the Payment Systems Act, an interbank system can enter into an agreement on the completion of clearing and settlement even if insolvency proceedings are opened against a participant in the system when the payment order was entered into the system before the opening of insolvency proceedings. This is the case on the condition that certain criteria are satisfied, including the registration of the system with EFTA's supervisory organ, ESA, by Norges Bank.

BankAxept settlement

When payment transactions are carried out with a debit card (bankcard), the payer receives the service (cash or goods) when the card is used in the payment terminal. In accordance with the banks' general agreement framework, the merchant will also be guaranteed settlement when payment is carried out using a bankcard. This settlement guarantee applies regardless of whether the issuing bank can cover its obligations in the settlement. This means that the customer will be credited before the BankAxept settlement.

- *Organizing several clearing cycles per day in the NICS Retail netting.*

The banking industry has also considered whether more than two settlements per day would be desirable. Norges Bank is of the view that this is not necessary with regard to risk, but realises that it may be expedient with regard to the public's increasingly high expectations of a swift completion for payments. In Norges Bank's view, it is therefore first and foremost a question of improving the service to bank customers, without increasing risk in settlement. Norges Bank is positive to the possibility of carrying out more settlements per day in NBO should the industry request it.

5.5 DnB NOR Bank ASA

In 2001, Gjensidige NOR Sparebank was authorised to operate an interbank system. As with NICS Operatørkontor, one of the terms of authorisation was a reporting requirement and the system is also subject to supervision and notification obligations. Den norske Bank (DnB) was also granted authorisation to establish and operate an interbank system in 2001, subject to the same reporting requirement and oversight and notification obligations. In 2004, DnB NOR became subject to the same reporting requirements as NICS regarding the results of risk and vulnerability analyses and contingency tests, etc.

Following the merger between DnB and Gjensidige NOR, DnB NOR Bank requested that both authorised systems continued to operate for the time being, as technically, the systems functioned separately. Norges Bank accepted this. The two systems were combined into one system in April 2006. DnB NOR Bank applied in 2005 for authorisation to operate this new joint system when it became operational and was granted authorisation. One condition set in the authorisation letter is that DnB NOR Bank carries out a self-assessment of the system in relation to the BIS Core Principles within one year of the changeover.

In 2005, joint supervision meetings were held for both the DnB and NOR systems. The following topics were given particular attention:

- Development of vulnerability analysis, as banks may have to implement full shutdown of systems in the event of a labour conflict (see section on NICS).
- Coordination of DnB and Gjensidige NOR Sparebank's interbank systems - conditions regarding application for new authorisation.
- Vulnerability in the Norwegian payment system in the event of problems in DnB NOR Bank - concentration risk.

In its review, the IMF recommended that Norges Bank continue to monitor the risk that problems in a settlement bank may spill over to the many small banks participating at level 2. However, the IMF pointed out that the risk is reduced by the fact that most of the banks have settlement accounts and borrowing rights in Norges Bank, so that they can settle at level 1 (i.e. directly in Norges Bank), should the settlement bank experience any problems.

Norges Bank has discussed with NICS Operatørkontor and DnB NOR Bank whether there are any obstacles to level 2 banks channelling their transactions directly into a settlement in Norges Bank, if the settlement bank is not functioning as it should. Technically a solution is now in place, but there are still issues that need to be clarified regarding the underlying agreement structure between participating banks and clearing houses. Norges Bank will follow up on this in 2006.

5.6 Follow-up of other systems overseen by Norges Bank

Securities settlement (VPO)

During the FSAP of Norway, the IMF also examined the system for securities settlement (VPO), but did not assess it in detail according to international recommendations. VPO is designed as a system with participants at two levels, as investment firms settle their positions via their bank's account in NBO. The IMF pointed out that there is a concentration risk as the largest bank provides guarantees for a large number of the investment firms. The IMF recommended that measures be implemented to reduce the market and liquidity risk in VPO. VPS, Kredittilsynet and Norges Bank analysed VPO in autumn 2005 and have investigated possible measures to satisfy the IMF's recommendations.

VPS will now assess which measures are to be implemented. Kredittilsynet and Norges Bank, as supervisory and oversight authorities, will have access to information on the ongoing work. When the changes in VPO are implemented, Norges Bank will publish an assessment of the extent to which the system complies with the international principles.

NOS Clearing

In a joint letter in summer 2005, Norges Bank and Kredittilsynet asked NOS Clearing to assess the system in relation to the BIS/IOSCO recommendations (BIS/IOSCO, 2004). NOS Clearing wrote a report in autumn 2005. The report concluded that the recommendations are largely satisfied, but that there is room for improvement on some points. NOS Clearing will therefore continue this work in 2006. Kredittilsynet and Norges Bank will be kept up to

International recommendations for securities settlement:

BIS/IOSCO (Bank for International Settlement/International Organization of Securities Commissions) published *Recommendations for Securities Settlement Systems* in November 2001. The report contains 19 recommendations. BIS/IOSCO published a supplementary report in November 2002.

ECB/CESR (European Central Bank/Committee of European Securities Regulators) published *Standards for Securities Clearing in the European Union* in September 2004. This report builds on the BIS/IOSCO recommendations, but sets out somewhat stricter requirements for Europe.

International recommendations for central counterparties:

BIS/IOSCO (Bank for International Settlement/International Organization of Securities Commissions) published *Recommendations for Central Counterparties* in November 2004. The report contains 15 recommendations.

date regarding this work.

Continuous Linked Settlement (CLS)

In connection with its oversight responsibility regarding CLS, Norges Bank cooperates with the other central banks that have currencies that are included in the CLS settlement. As the CLS head office is in New York, the US central bank has primary responsibility through the Federal Reserve Bank of New York. Norges Bank does not carry out its own oversight, but participates in the coordinated oversight under the auspices of the BIS' Committee on Payment and Settlement Systems.

SWIFT

SWIFT (Society for Worldwide Interbank Financial Telecommunication):

SWIFT supplies messaging services to more than 7500 financial institutions in 202 countries and thus accounts for an important part of the financial infrastructure both nationally and internationally.

SWIFT has its head office in Belgium and the Belgian central bank oversees the system together with the G10 group in the BIS. The central bank in Belgium has primary responsibility for oversight. The work focuses on assessing security, operational stability, vulnerability and contingency plans. The Belgian central bank has regular meetings with SWIFT and has access to SWIFT's internal reports on relevant operational conditions.

Norges Bank does not oversee SWIFT's activities separately, but lends support to the oversight carried out by the Belgian central bank under the auspices of the G10 group in the BIS.

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A General data

Table 1: Basic statistical data: Norway

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Population (per 1 Jan., millions)	4.37	4.39	4.42	4.45	4.48	4.50	4.52	4.55	4.58	4.61
GDP, market value (NOK billions)	1,026.9	1,111.3	1,132.1	1,233.0	1,469.1	1,526.2	1,519.1	1,576.7	1,716.9	1,906.1
Mainland GDP, market value (NOK billions)	843.1	908.2	981.3	1,035.5	1,101.5	1,167.2	1,212.6	1,257.6	1,332.3	1,411.3
GDP per capita (NOK thousands)	235.0	253.0	256.3	277.4	327.9	339.2	336.1	346.5	374.9	413.5
1 USD in NOK (year-end)	6.44	7.32	7.60	8.04	8.85	9.01	6.97	6.68	6.04	6.77
1 euro in NOK (year-end, ECU to end-1998)	8.09	8.06	8.90	8.08	8.23	7.97	7.29	8.42	8.24	7.99

Table 2: Technological infrastructure in Norway

	1996	1997	1998	1999	2000	2001 (July)	2002 (July)	2003 (July)	2004 (July)	2005 (July)
Fixed network telephone subscribers	2,484,173	2,474,964	2,475,490	2,445,734	2,400,785	2,362,625	2,316,556	2,259,077	2,196,612	2,149,898
PSTN	2,440,185	2,325,010	2,165,530	1,913,657	1,682,603	1,603,525	1,496,119	1,438,603	1,388,240	1,339,215
ISDN 2B+D	41,819	146,005	304,636	524,999	696,289	734,117	792,778	788,276	757,037	669,848
ISDN 30B+D	2,169	3,949	5,324	7,078	7,554	7,483	7,673	8,002	8,305	8,502
Cable TV network telephone subscribers					14,325	17,500	19,986	23,301	23,155	22,037
Other types of fixed network links (IP telephone networks, etc.)					14			895	19,875	110,296
Mobile telephone subscribers	1,261,445	1,676,763	2,106,414	2,744,793	3,367,763	3,484,455	3,766,366	4,002,531	4,379,343	4,810,704
NMT	444,614	387,751	310,582	216,272	133,272	86,400	60,883	44,693	29,004	0
GSM	816,831	1,289,012	1,795,832	2,528,521	3,206,664	3,398,055	3,705,483	3,957,838	4,350,339	4,810,704
Broadband subscribers						44,852	136,153	280,111	517,148	835,695

Source: Norway Post and Telecommunications Authority

B Settlement media in Norway

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Banknotes and coins	39,865	42,215	42,142	43,366	42,523	42,038	40,282	41,687	43,340	46,571
Deposits in current accounts	208,073	227,382	237,047	300,128	328,816	344,110	360,341	387,309	430,092	509,668
Narrow money supply (M1)	247,938	269,597	279,189	343,494	371,339	386,148	400,623	428,996	473,432	556,239
Other deposits	294,741	278,741	292,820	295,820	326,350	370,171	409,704	407,337	423,193	434,960
Certificates of deposit	21,686	30,200	33,322	30,802	34,152	39,048	45,001	36,806	37,068	35,718
M1 + other short-term deposits (M2)	564,365	578,538	605,331	670,116	731,841	795,367	855,328	873,139	933,686	1,026,917

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Banks' cash holdings (NOK and other currencies)	3,893	4,240	4,395	5,116	4,879	5,290	5,063	4,980	4,649	5,725
<i>Cash holdings, annual average</i>	3,568	3,835	3,940	4,519	4,431	4,817	4,675	4,409	4,457	5,104
Banks' sight deposits in the central bank	9,597	8,139	4,716	18,330	11,540	17,438	33,348	22,117	35,240	30,854
<i>Sight deposits, annual average</i>	4,826	6,463	6,986	8,016	9,233	11,804	15,647	24,690	21,337	28,666
Central bank lending (F-loans + D-loans)	98	547	6,918	13,600	14,160	12,443	19	10,460	7	13
<i>Lending (F-loans + D-loans), annual average</i>	6,351	790	1,225	4,385	5,104	13,356	538	2,978	18,788	17,769
Banks' deposits from money-holding sector	14,153	14,828	13,421	13,594	15,774	16,633	16,027	19,982	18,383	21,423
<i>Deposits from money-holding sector, annual average</i>	15,595	16,107	15,830	18,538	18,173	20,420	16,737	23,148	23,897	18,954

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	39,588	41,221	43,578	43,837	43,571	42,947	41,767	41,562	43,728	45,887
Total banknotes	36,812	38,284	40,487	40,566	40,119	39,271	37,811	37,429	39,429	41,382
1000-krone	25,985	26,711	27,773	27,290	26,336	24,713	22,599	22,167	23,555	24,649
500-krone	3,465	4,068	4,875	5,588	6,107	6,921	7,626	7,732	8,278	9,060
200-krone	1,771	2,630	3,650	3,949	4,275	4,446	4,573	4,674	4,792	4,819
100-krone	4,962	4,246	3,473	3,027	2,684	2,464	2,270	2,091	2,012	2,021
50-krone	629	629	717	712	717	727	744	765	793	833
Total coins	2,776	2,937	3,090	3,271	3,452	3,676	3,955	4,132	4,299	4,506
20-krone	532	655	779	873	966	1,124	1,387	1,561	1,667	1,778
10-krone	1,020	1,010	1,030	1,046	1,087	1,111	1,085	1,051	1,049	1,076
5-krone	401	415	440	474	487	497	505	515	538	563
1-krone	492	518	561	590	617	641	666	686	718	753
0.5 krone	134	142	150	157	165	174	182	191	199	208
0.25 krone	40	40	:	:	:	:	:	:	:	:
0.10 krone	132	131	131	130	130	130	130	129	128	128
Copper	26	26	:	:	:	:	:	:	:	:

C Payments infrastructure

Table 6: Institutional infrastructure

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
All banks										
Number of banks	148	146	146	144	143	144	145	144	140	140
Number of foreign bank branches	3	6	6	8	9	8	8	8	8	8
Number of bank branches	1,500	1,477	1,468	1,457	1,429	1,414	1,376	1,348	1,234	1,234
Number of Norway Post branches	2,091	1,618	1,280	1,257	1,261	1,320	1,433	1,480	1,504	1,523

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

	1999	2000	2001	2002	2003	2004	2005
Total	147.2	144.0	172.1	169.2	206.8	152.3	160.9
VPO and NOS	2.4	2.2	2.3	2.5	3.1	3.7	3.8
NICS retail netting	ca 4	5.5	6.8	6.9	6.7	7.6	8.5
NICS SWIFT netting	5.2	3.8	5.3	5.5	2.1	1.0	0.9
Total gross/RTGS	135.6	132.5	157.7	154.3	194.9	140.0	147.6
<i>Of which</i>							
SWIFT gross/RTGS	127.3	123.2	150.7	149.5	187.7	128.9	135.5
Other gross/RTGS	8.3	9.3	6.9	4.8	7.2	11.1	12.1

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

	1999	2000	2001	2002	2003	2004	2005
SWIFT Total	4,589	4,626	5,022	5,225	5,751	5,091	5,276
SWIFT gross/RTGS	331	282	303	300	596	611	532
SWIFT netting	4,258	4,344	4,719	4,925	5,155	4,480	4,744
NICS retail netting (in millions)	2.3	3.0	3.4	3.7	4.0	4.3	4.7

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

	1999	2000	2001	2002	2003	2004	2005
SWIFT Total	145	140	167	165	201	134	142
SWIFT gross/RTGS	127	123	151	149	188	129	136
SWIFT netting	18	17	16	16	13	5	6
NICS retail netting (approximately)	20.25	35	44	47	48	61	60
NICS Total	165-170	175	211	212	249	196	201

Table 10: Participation in SWIFT

	2001		2002		2003		2004		2005	
	Norwegian	Total								
Members	21	2,241	22	2,203	22	2,312	14	2,280	14	2,229
Sub-members/domestic users covered by members abroad	8	3,027	7	3,079	7	3,051	12	3,019	11	3,060
Participants	5	1,931	4	2,183	5	2,164	8	2,368	7	2,574
Total	34	7,199	33	7,465	34	7,527	34	7,667	32	7,863

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

	1999	2000	2001	2002	2003	2004	2005
Number of messages sent	8,124	9,238	10,521	11,239	12,931	18,590	22,060
Number of messages received	6,051	6,920	8,163	8,747	10,391	13,650	13,500
Global SWIFT traffic	1,058,836	1,273,913	1,533,906	1,817,444	2,047,564	2,299,074	2,518,290

Table 12: Number of ATMs

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	1,861	1,896	1,944	2,007	2,119	2,144	2,188	2,217	2,180	2,184
Commercial banks	796	808	867	900	1,026	1,018	992	972	:	:
Savings banks	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)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	97.7	104.0	107.2	107.4	106.1	109.0	103.5	102.1	99.3	98.7
<i>Of which</i>										
Withdrawals from other banks' ATMs	:	50.5	52.1	51.3	49.0	47.3	48.5	50.3	49.1	47.3
BankAxept cards	95.2	100.9	103.2	102.3	98.6	102.0	96.6	95.6	93.2	91.7
National credit cards	0.6	0.7	0.8	0.9	1.0	1.2	1.0	1.4	1.1	0.8
Payment cards issued by international card companies	1.9	2.4	3.2	4.2	6.6	5.8	5.9	5.1	4.9	6.2
Commerical banks' ATMs, total	41.6	44.2	46.4	45.8	46.3	46.2	43.5	43.0	:	:
BankAxept cards	39.7	41.9	43.6	42.5	42.1	42.1	39.4	39.0	:	:
National credit cards	0.6	0.7	0.8	0.9	0.8	0.8	0.8	1.1	:	:
Payment cards issued by international card companies	1.3	1.6	2.0	2.4	3.4	3.3	3.4	3.0	:	:
Savings banks' ATMs, total	56.1	59.8	60.8	61.6	59.8	62.8	60.1	59.1	:	:
BankAxept cards	55.5	59.0	59.6	59.8	56.4	59.9	57.2	56.6	:	:
National credit cards	-	-	-	0.0	0.2	0.3	0.3	0.3	:	:
Payment cards issued by international card companies	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)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	84.6	94.5	102.1	105.6	106.3	115.8	114.0	115.0	113.1	112.0
<i>Of which:</i>										
Withdrawals from other banks' ATMs	:	46.0	47.6	48.1	45.4	46.1	48.4	51.0	50.7	50.4
BankAxept cards	81.5	90.5	97.2	99.2	97.9	107.0	105.0	105.7	104.2	101.9
National credit cards	0.6	0.7	0.9	1.1	1.4	1.4	1.4	2.1	1.7	1.3
Payment cards issued by international card companies	2.4	3.2	4.0	5.3	7.0	7.3	7.6	7.3	7.2	8.8
Commerical banks' ATMs, total	37.1	41.4	45.7	47.1	49.0	52.2	51.3	51.4	:	:
BankAxept cards	34.9	38.5	42.2	42.9	43.7	47.0	45.8	45.6	:	:
National credit cards	0.6	0.7	0.9	1.1	1.1	0.9	1.1	1.6	:	:
Payment cards issued by international card companies	1.7	2.2	2.6	3.1	4.3	4.3	4.3	4.2	:	:
Savings banks' ATMs, total	47.4	53.1	56.4	58.5	57.2	63.6	62.8	63.6	:	:
BankAxept cards	46.7	52.0	54.9	56.3	54.2	60.1	59.2	60.1	:	:
National credit cards	-	-	-	0.0	0.3	0.5	0.3	0.5	:	:
Payment cards issued by international card companies	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 BankAxept cards

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Payment terminals, total	39,033	46,592	52,235	58,742	65,326	71,688	80,106	91,239	97,230	105,482
Payment terminals owned by banks	33,679	41,299	46,849	:	55,208	59,184	65,374	66,207	68,197	69,536
Payment terminals owned by oil companies	5,354	5,293	5,386	7,124	7,093	6,752	6,439	6,554	6,706	7,390
Other payment terminals	-	-	-	:	3,025	5,752	8,293	18,478	22,327	28,556
Locations with payment terminals, total	27,048	32,761	38,029	42,164	47,434	49,328	52,705	59,786	64,663	73,844
With payment terminals owned by banks	24,841	30,607	:	:	44,468	45,573	47,995	51,041	53,204	59,513
With payment terminals owned by oil companies	2,207	2,154	2,168	2,186	2,050	2,129	2,024	1,997	2,045	2,039
With other payment terminals	-	-	:	:	916	1,626	2,686	6,748	9,414	12,292

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	182.5	234.7	288.6	:	:	:	500.8	575.6	638.5	722.3
Banks' payment terminals, total	120.6	162.7	210.7	254.7	302.4	329.1	368.3	411.0	454.1	476.1
BankAxept cards	116.5	156.8	202.9	244.8	291.8	317.8	357.2	398.6	441.7	463.7
National credit cards	0.4	0.7	1.0	1.3	0.6	0.6	0.6	1.4	1.0	0.9
Payment cards issued by international card companies	3.8	5.2	6.8	8.5	10.0	10.7	10.5	11.0	11.4	11.5
Oil companies' payment terminals, total	61.9	72.0	77.9	82.6	84.1	91.9	90.8	98.0	102.9	110.4
BankAxept cards	21.1	27.4	31.9	36.4	45.6	51.8	57.2	64.9	69.3	75.7
National credit cards	-	-	-	-	-	-	-	-	0.0	0.4
Payment cards issued by international card companies	1.5	1.8	2.2	2.5	3.1	3.0	3.1	2.7	4.8	6.5
Oil companies' cards	39.3	42.8	43.8	43.8	35.4	37.1	30.5	30.4	28.8	27.8
Other payment terminals, total	-	-	-	:	:	:	41.6	62.2	81.5	135.9
BankAxept cards	-	-	-	1.5	5.1	25.1	37.3	56.2	77.4	119.0
National credit cards	-	-	-	:	:	:	0.1	0.1	0.1	0.5
Payment cards issued by international card companies	-	-	-	:	:	:	4.2	5.8	4.0	16.3

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	75.4	100.8	127.1	:	:	:	231.0	259.5	279.5	327.0
Banks' payment terminals, total	58.6	81.0	105.5	129.9	153.2	167.7	181.5	197.5	212.3	215.8
BankAxept cards	54.6	75.4	98.6	121.5	143.5	156.8	171.4	186.5	200.1	203.8
National credit cards	0.5	0.8	0.8	0.9	0.7	0.8	0.8	0.9	0.7	0.6
Payment cards issued by international card companies	3.4	4.7	6.1	7.5	9.0	10.1	9.3	10.1	11.4	11.4
Oil companies' payment terminals, total	16.9	19.9	21.6	23.6	29.1	29.1	27.2	29.5	31.8	35.1
BankAxept cards	5.4	7.3	8.6	10.1	13.7	14.6	15.2	16.8	17.8	19.8
National credit cards	-	-	-	-	-	-	-	-	0.0	0.0
Payment cards issued by international card companies	0.2	0.3	0.3	0.4	0.5	0.4	0.5	0.8	1.6	2.2
Oil companies' cards	11.3	12.3	12.6	13.1	14.9	14.2	11.6	12.0	12.4	13.1
Other payment terminals, total	-	-	-	:	:	:	22.3	31.9	35.5	76.1
BankAxept cards	-	-	-	1.6	4.7	13.4	18.1	26.6	32.0	66.2
National credit cards	-	-	-	:	:	:	0.0	0.2	0.2	0.3
Payment cards issued by international card companies	-	-	-	:	:	:	4.1	5.1	3.3	9.6

Table 18: Number of payment cards (thousands)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Number of physical cards	3,888	4,296	4,768	5,220	5,658	6,108	6,435	6,918	7,645	7,909
Debit cards	2,912	3,320	3,563	3,733	4,020	4,287	4,362	4,527	4,985	4,894
Credit and charge cards	976	976	1,205	1,487	1,638	1,822	2,073	2,391	2,659	3,015
Functions, total	5,766	6,583	7,527	8,406	9,156	10,210	10,751	11,501	12,548	12,717
BankAxept cards	2,835	3,227	3,561	3,734	4,020	4,287	4,362	4,527	4,985	4,894
National credit cards	589	514	620	687	672	779	850	862	771	783
Payment cards issued by international card companies	2,343	2,842	3,346	3,985	4,464	5,145	5,539	6,112	6,791	7,040
Combined cards	1,879	2,287	2,759	3,186	3,497	4,102	4,316	4,582	4,904	4,807
Oil companies' cards	1,592	1,713	1,772	1,633	1,429	1,259	1,211	1,300	1,216	1,106

Table 19: Number of agreements

	2000	2001	2002	2003	2004	2005
Internet banking agreements	933,335	1,340,661	1,934,318	2,429,694	2,976,690	3,157,367
Mail giro agreements	2,687,420	2,361,031	1,787,462	1,707,428	1,540,768	1,453,825
Direct debit agreements (Avtalegiro and Autogiro)	3,500,000	4,044,848	4,483,286	4,901,219	5,505,933	6,305,218
Direct debit - payees	6,041	6,473	6,883	7,194	7,905	8,761
Direct debit where payees have power of attorney	558	541	534	548	542	573
Direct debit where payees have no power of attorney	616	659	731	684	645	670

D Cash withdrawals in Norway

Table 20: Cash withdrawals (in millions of transactions)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	:	:	:	144.5	236.1	256.9	256.2	257.9	259.3	248.0
Cash withdrawals at the counter	:	:	:	37.2	27.3	23.8	20.1	17.6	15.5	13.4
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	97.6	103.9	107.1	107.3	106.0	108.8	103.5	102.1	99.3	98.7
Commercial banks	41.5	44.1	46.3	45.7	46.2	46.1	43.5	43.0	:	:
Savings banks	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	135.9

Table 21: Cash withdrawals (in NOK billions)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	:	:	:	192.4	258.7	259.1	253.8	250.3	240.2	230.5
Cash withdrawals at the counter	:	:	:	86.9	115.7	98.6	92.3	87.0	78.9	69.1
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	84.6	94.5	102.1	105.5	106.1	115.8	114.0	115.0	113.1	112.0
Commercial banks	37.1	41.4	45.7	47.0	48.8	52.2	51.3	51.4	:	:
Savings banks	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	49.4

E Use of payment services

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

	2002	2003	2004	2005
Total	940.2	1,037.5	1,142.9	1,232.3
Payment instruments	917.6	1,014.1	1,117.7	1,205.8
Giro	401.8	419.4	440.4	448.5
Payment cards	513.8	593.2	676.1	756.5
Cheques	2.0	1.5	1.2	0.8
Payment orders	22.6	23.4	25.1	26.4
Standing orders	22.6	23.4	25.1	26.4

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

	2002	2003	2004	2005
Total	6,175.7	6,903.1	8,937.9	8,288.9
Payment instruments	6,019.4	6,752.7	8,786.4	8,132.9
Giro	5,750.5	6,474.6	8,482.4	7,789.5
Payment cards	204.5	233.2	261.5	310.5
Cheques	64.4	44.9	42.5	32.9
Payment orders	156.3	150.4	151.5	155.9
Standing orders	156.3	150.4	151.5	155.9

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	508.4	564.3	634.1	695.3	760.3	847.4	917.9	1,014.1	1,117.7	1,205.8
Giros, total	335.2	343.9	360.0	371.3	370.4	397.5	402.0	419.4	440.4	448.5
Electronic giros	125.1	146.5	173.9	202.7	221.0	268.1	292.8	325.5	359.1	385.4
Paper-based giros	210.1	197.4	186.2	168.5	149.3	129.3	109.3	93.9	81.3	63.2
Payment cards	156.1	207.5	264.6	317.7	385.9	447.0	513.8	593.2	676.1	756.5
Electronic	151.5	200.9	256.0	307.3	377.5	437.9	503.8	582.9	662.1	740.1
Manual	4.5	6.6	8.6	10.4	8.3	9.1	10.0	10.4	14.0	16.4
Cheques	17.1	12.9	9.4	6.3	4.0	2.9	2.0	1.5	1.2	0.8

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	4,257.4	4,683.4	4,781.9	5,837.0	5,860.3	5,928.0	6,019.4	6,752.7	8,786.4	8,132.9
Giros, total	3,921.5	4,358.8	4,464.6	5,534.0	5,595.1	5,673.0	5,750.5	6,474.6	8,482.4	7,789.5
Electronic giros	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	7,506.1
Paper-based giros	1,480.9	1,423.2	1,241.4	1,089.5	875.2	516.9	459.6	383.0	350.4	283.4
Payment cards	80.4	104.1	134.6	164.1	162.8	182.5	204.5	233.2	261.5	310.5
Electronic	74.6	97.4	125.3	151.2	153.9	172.8	194.2	224.0	250.1	294.5
Manual	5.8	6.7	9.3	12.9	8.9	9.7	10.3	9.3	11.5	16.0
Cheques	255.5	220.5	182.7	138.9	102.4	72.5	64.4	44.9	42.5	32.9

Table 26: Giro services (in millions of transactions)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Giros, total	:	:	360.0	371.3	370.4	397.5	402.0	419.4	440.4	448.5
Electronic giros, total	:	:	173.9	202.7	221.0	268.1	292.8	325.5	359.1	385.4
Company terminal giros	97.8	109.1	126.1	129.9	128.7	143.8	153.2	164.4	160.2	95.8
Internet banking	:	:	3.2	14.5	34.6	62.0	81.4	101.5	138.4	227.8
<i>Of which:</i>										
Internet banking - solutions for retail customers	:	:	3.2	14.5	34.6	62.0	:	91.6	112.0	131.8
Internet banking - solutions for corporate customers	-	-	-	-	-	-	:	9.9	26.4	96.0
Telephone giros	6.7	13.4	18.2	28.3	28.8	28.7	26.8	25.5	24.8	21.8
Direct debits	20.6	24.0	26.3	30.0	29.0	33.6	31.3	34.1	35.8	39.9
Paper-based giros, total	210.0	197.4	186.2	168.5	149.3	129.3	109.3	93.9	81.3	63.2
Mail giros	101.1	104.3	106.9	107.0	90.2	74.4	61.7	52.1	44.6	38.0
Giros delivered at the counter, total	91.4	78.8	65.6	52.2	52.9	48.6	42.3	37.6	33.6	22.5
<i>Of which:</i>										
Cash payments	46.3	37.1	28.1	22.9	20.4	19.5	15.0	13.2	11.6	8.9
Account debits	27.1	27.4	24.5	29.2	32.4	28.3	27.1	24.4	22.0	13.7
Miscellaneous giros registered in banks	18.1	14.2	13.0	-	0.0	0.8	0.3	0.0	0.0	0.0
Company terminal giro and Internet banking as money order	17.5	14.3	13.7	9.4	6.3	5.6	4.9	4.2	3.0	2.6

Table 27: Giro services (in NOK billions)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Giros, total	:	:	4,464.6	5,534.0	5,595.1	5,673.0	5,750.5	6,474.6	8,482.4	7,789.5
Electronic giros, total	:	:	3,223.2	4,444.4	4,720.0	5,156.0	5,290.9	6,091.6	8,132.0	7,506.1
Company terminal giro	2,310.6	2,779.2	3,041.1	4,185.7	4,372.2	4,716.2	4,678.4	5,225.3	6,553.4	2,976.6
Internet banking	:	:	7.3	39.7	93.3	197.3	409.1	650.7	1,351.8	4,272.8
<i>Of which:</i>										
Internet banking - solutions for retail customers	:	:	7.3	39.7	93.3	197.3	:	332.6	436.4	517.3
Internet banking - solutions for corporate customers	-	-	-	-	-	-	:	318.1	915.4	3,755.6
Telephone giros	11.3	22.8	31.0	55.6	52.5	57.6	54.3	51.0	48.4	43.8
Direct debits	118.7	133.6	143.8	163.5	202.0	184.8	149.2	164.6	178.5	212.9
Paper-based giros, total	1,480.9	1,423.2	1,241.4	1,089.5	875.2	516.9	459.6	383.0	350.4	283.4
Mail giros	858.0	830.2	649.8	597.6	527.7	195.5	175.7	184.6	161.1	139.0
Giros delivered at the counter, total	569.7	557.2	561.0	473.9	336.1	301.6	273.8	193.3	184.0	139.8
<i>Of which:</i>										
Cash payments	188.4	179.1	126.5	143.8	111.5	99.7	79.8	57.2	81.0	83.9
Account debits	206.5	247.8	308.5	330.1	224.6	189.0	190.0	136.1	103.1	55.9
Miscellaneous giros registered in banks	174.8	130.3	126.0	-	0.0	12.9	3.9	0.0	0.0	0.0
Company terminal giro and Internet banking as money order	53.2	35.8	30.6	18.1	11.4	7.0	6.1	5.2	5.2	4.5

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total card use	255.4	314.4	374.7	429.1	496.3	562.9	625.0	703.2	784.8	864.4
<i>Of which:</i>										
Debit cards	244.9	301.2	358.0	410.0	473.7	536.5	596.4	669.5	743.6	815.7
Charge cards	7.8	10.6	11.7	12.5	13.9	14.8	13.9	14.8	16.6	21.1
Credit cards	1.7	2.6	4.9	6.7	8.7	11.6	14.6	18.8	24.7	30.0
BankAxept cards	232.8	285.1	337.9	385.0	441.1	497.0	548.3	615.3	681.7	750.1
National credit cards	1.2	1.4	1.7	1.9	2.4	2.8	3.5	3.7	3.9	4.2
GE Money Bank AS	:	:	:	0.7	0.8	0.9	0.9	0.8	0.8	0.8
DnB NOR Kort	:	:	:	1.2	1.5	1.8	2.1	2.2	2.3	2.4
Entercard AS	-	-	-	-	-	0.1	0.5	0.7	0.8	1.0
Payment cards issued by international card companies	21.4	27.9	35.1	42.2	52.8	63.0	73.2	84.2	99.2	110.1

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total card use	166.4	204.6	242.6	277.1	314.6	354.3	378.0	408.6	436.9	485.8
<i>Of which:</i>										
Debit cards	151.1	186.1	219.9	251.2	283.4	320.0	341.7	371.0	393.5	434.0
Charge cards	10.7	12.8	14.3	15.3	17.2	18.1	17.5	16.9	18.1	21.8
Credit cards	4.5	5.7	8.4	10.8	14.0	16.2	18.8	20.7	25.3	30.1
BankAxept cards	141.5	173.3	204.4	232.3	259.8	292.3	309.7	335.7	354.1	391.8
National credit cards	3.8	4.2	4.5	5.1	5.4	6.0	6.2	4.5	4.5	5.3
GE Money Bank AS	1.4	1.5	1.7	1.9	2.1	2.4	2.5	1.0	1.0	1.6
DnB NOR Kort	2.4	2.6	2.6	3.2	3.2	3.5	3.4	3.2	3.2	3.3
Entercard AS	-	-	-	-	-	0.1	0.3	0.3	0.4	0.4
Payment cards issued by international card companies	21.1	27.1	33.7	39.7	49.4	56.0	62.0	68.4	78.2	88.8

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total use of payment cards issued by international card companies	25.2	32.5	40.4	48.5	59.6	70.5	81.3	93.0	109.3	123.1
American Express	1.6	2.0	2.2	2.4	3.0	3.4	3.4	3.8	3.9	4.4
Diners Club	3.7	4.3	5.1	5.4	5.9	6.2	5.8	6.0	6.1	6.1
MasterCard/Maestro	7.1	9.3	11.4	13.3	15.3	16.5	18.3	22.1	27.6	34.0
VISA	12.8	17.0	21.7	27.3	35.3	44.4	53.9	61.1	71.6	78.7
<i>Of which:</i>										
Use of foreign payment cards in Norway	3.8	4.6	5.3	6.2	6.7	7.5	8.1	8.8	10.0	13.0
Use of Norwegian payment cards in Norway and abroad	21.4	27.9	35.1	42.2	52.8	63.0	73.2	84.2	99.2	110.1

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total use of payment cards issued by international card companies	24.3	30.9	38.1	45.2	54.8	61.9	68.0	75.3	86.7	101.1
American Express	2.6	3.1	3.5	4.3	4.2	4.7	4.6	4.6	4.6	4.8
Diners Club	4.1	4.8	5.6	6.0	6.8	7.1	7.0	6.8	6.8	7.2
MasterCard/Maestro	7.1	9.6	12.1	14.0	16.8	18.1	19.5	22.5	26.5	31.0
VISA	10.5	13.4	16.9	20.8	27.0	32.0	36.9	41.4	48.8	58.1
<i>Of which:</i>										
Use of foreign payment cards in Norway	3.2	3.8	4.4	5.5	5.4	5.8	5.9	6.9	8.5	12.3
Use of Norwegian payment cards in Norway and abroad	21.1	27.1	33.7	39.7	49.4	56.0	62.0	68.4	78.2	88.8

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Goods purchases, total	156.1	207.5	264.6	317.7	385.9	447.0	513.8	593.2	676.1	756.4
BankAxept cards	137.6	184.2	234.8	282.7	342.5	394.7	451.7	519.7	588.4	658.4
National credit cards	0.5	0.4	0.7	0.8	0.9	1.3	1.9	2.1	2.2	2.9
Payment cards issued by international card companies	18.1	22.9	29.1	34.2	42.4	51.1	60.2	71.4	85.5	95.1

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Goods purchases, total	80.4	104.1	134.6	164.1	162.8	182.5	204.5	233.2	261.5	310.6
BankAxept cards	60.0	82.8	107.2	133.1	125.0	140.1	157.2	181.6	201.7	240.4
National credit cards	2.1	1.9	3.1	3.5	3.3	3.7	4.0	2.2	2.2	3.4
Payment cards issued by international card companies	18.3	19.4	24.3	27.5	34.5	38.7	43.3	49.4	57.7	66.8

* Figures to 1999 include cashback withdrawals at payment terminals

Table 34: Cheques (in millions of transactions)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total use of cheques	17.1	12.9	9.4	6.3	4.0	2.9	2.1	1.5	1.2	0.8
Savings banks	9.8	7.4	5.6	3.9	2.5	1.9	1.3	1.0	:	:
Commercial banks	7.3	5.5	3.8	2.4	1.5	1.0	0.8	0.5	:	:

Table 35: Cheques (in NOK billions)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total use of cheques	255.5	220.5	182.7	139.0	102.4	72.5	64.4	44.9	42.5	32.9
Savings banks	103.9	87.8	72.6	65.9	47.1	37.1	29.7	21.9	:	:
Commercial banks	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)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	13,483	17,280	21,419	25,647	29,702	34,003	40,125	45,729	55,604	64,382
Use of Norwegian payment cards abroad	9,573	12,530	15,800	18,986	22,560	26,153	31,480	36,188	44,825	50,742
National credit cards	0	1	1	2	1	-	-	0	0	0
American Express	610	750	844	968	722	714	708	691	700	731
Diners Club	725	816	899	900	927	893	874	1,128	1,053	849
MasterCard/Maestro	1,936	2,747	3,500	3,983	4,393	4,514	4,988	5,496	6,043	8,021
VISA	6,168	8,042	10,326	12,805	16,132	19,638	24,704	28,496	36,703	40,965
Eufiserv	134	174	230	328	385	394	206	377	326	176
<i>Of which:</i>										
Cash withdrawals	1,752	3,845	4,528	5,806	6,286	7,129	8,299	9,187	10,153	11,129
Use of foreign payment cards in Norway	3,910	4,750	5,618	6,661	7,142	7,850	8,645	9,541	10,779	13,640
American Express	246	279	289	605	578	758	768	415	440	718
Diners Club	186	231	256	269	260	246	220	198	194	189
MasterCard/Maestro	1,508	1,730	1,983	2,096	2,266	2,412	2,541	3,105	3,268	4,691
VISA	1,872	2,359	2,798	3,262	3,627	4,089	4,576	5,118	6,139	7,440
Eufiserv	98	151	293	429	411	345	540	705	738	602
<i>Of which:</i>										
Non-residents' cash withdrawals in Norway	717	539	1,296	1,561	1,155	1,304	1,384	1,418	1,495	1,259

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total	12,463	16,109	20,294	24,980	28,708	31,390	35,273	40,557	48,236	58,160
Use of Norwegian payment cards abroad	9,269	12,336	15,846	19,484	23,280	25,557	29,341	33,640	39,774	45,902
National credit cards	0	1	1	2	2	-	-	0	0	0
American Express	718	861	905	1,490	977	952	870	878	891	923
Diners Club	769	892	1,033	1,038	1,135	1,095	1,243	1,483	1,628	1,662
MasterCard/Maestro	1,958	2,794	3,725	4,301	4,905	4,883	5,214	5,851	6,411	8,168
VISA	5,824	7,788	10,182	12,653	16,261	18,627	22,014	25,428	30,844	35,149
<i>Of which:</i>										
Cash withdrawals	2,515	5,333	6,490	8,388	9,509	10,598	11,917	13,287	14,934	16,085
Use of foreign payment cards in Norway	3,194	3,773	4,448	5,496	5,428	5,833	5,932	6,917	8,462	12,258
American Express	467	513	560	1,159	594	623	504	508	532	610
Diners Club	141	170	187	201	198	186	167	149	139	131
MasterCard/Maestro	1,196	1,387	1,615	1,694	1,928	2,078	2,133	2,670	2,914	3,659
VISA	1,390	1,703	2,086	2,442	2,708	2,946	3,128	3,590	4,877	7,858
<i>Of which:</i>										
Non-residents' cash withdrawals in Norway	915	716	1,478	1,504	1,518	1,700	1,708	1,923	2,155	1,847

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

	1999	2000	2001	2002	2003	2004	2005
Transfers from Norway to other countries	588	452	239	80	71	68	149
Transfers to Norway from abroad	578	392	299	158	234	231	268

F Prices in the payment system

Table 39: List prices in NOK for domestic payment transactions, receipt of payments and cash withdrawals. Weighted average in selected banks on 1 January each year

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Payment transactions										
Giros										
<i>Electronic giro services</i>										
Telephone giros	2.45	2.33	2.31	2.38	2.45	2.44	2.38	2.14	2.15	2.27
Internet banking - solutions for retail customers		1.98	2.03	1.91	1.89	1.86	1.85	1.88	2.02	2.06
Direct debits (Avtalegiro)								2.09	2.03	2.17
Direct Remittance without notification	1.62	1.64	1.59	2.07	2.73	2.82	2.85	2.99	3.28	3.27
Direct Remittance with notification	3.12	3.53	3.44	4.02	4.25	4.78	4.88	5.19	5.46	5.53
Direct Remittance with CID	1.09	1.02	0.99	1.03	1.31	1.38	1.38	1.47	1.52	1.57
Other company terminal giro without notification	1.20	1.26	1.20	1.91	1.96	2.07	2.03	1.62	2.78	1.71
Other company terminal giro with notification	2.78	3.08	3.03	3.14	3.58	3.61	3.68	3.80	3.62	3.74
Other company terminal giro with CID	0.93	0.91	0.92	0.88	0.98	0.99	1.01	1.02	1.54	1.81
<i>Internet bank - solutions for corporate customers</i>										
Payment of wages										1.21
Payment without notification										0.68
Payment with CID										1.40
Payment with notification										3.48
Payment sent as money order										46.87
<i>Paper-based giro services</i>										
Mail giros	3.88	4.04	4.25	4.84	5.14	5.67	6.36	6.52	6.91	6.92
Giro, account debits	12.73	13.30	15.28	16.92	18.59	25.10	26.01	29.99	33.17	33.37
Giro, cash payment	17.95	18.46	23.40	25.67	27.37	31.69	32.50	41.58	40.89	42.00
Direct Remittance sent as money order	22.52	23.12	25.72	27.78	30.01	32.64	33.70	35.69	46.65	46.54
Other company terminal giro sent as money order	22.35	23.41	25.01	26.06	30.11	32.61	33.58	35.27	46.06	37.31
Payment cards										
Payment terminals (EFTPOS)	2.20	2.13	2.07	2.19	2.24	2.07	2.07	2.11	2.50	2.37
Cheques										
Personal cheques	9.79	10.72	12.30	15.00	20.07	20.70	21.13	20.64	27.58	27.32
Business cheques	9.82	10.46	12.31	15.13	22.05	22.79	23.94	24.01	27.78	27.48
Receipt of payments										
Giros										
<i>Electronic giro services</i>										
Direct debits (Avtalegiro)	1.52	1.60	1.51	1.38	1.42	1.42	1.42	1.53	1.39	1.41
Optical Character Recognition (OCR) - File	0.82	0.80	0.79	0.93	1.15	1.15	1.17	1.15	1.22	1.23
GiroFax							0.02	0.16	0.09	0.08
GiroMail							0.00	0.06	0.01	0.01
<i>Paper-based giro services</i>										
Optical Character Recognition (OCR) - Return	2.38	2.40	2.12	3.39	3.81	3.70	3.85	3.82	4.05	4.39
Cash withdrawals										
ATMs										
Own bank's ATMs outside opening hours	3.31	3.49	3.79	3.78	4.28	3.76	3.69	3.89	4.07	3.86
Other banks' ATMs in opening hours	1.95	2.25	2.19	2.64	4.00	3.89	4.09	4.72	5.14	6.38
Other banks' ATMs outside opening hours	4.40	4.44	4.46	4.32	4.81	4.79	4.91	5.49	5.53	6.78

Table 40: Prices in NOK for transfers from Norway to countries in the EU/EEA. Weighted average in selected banks

	Electronic payment order / wholly automated processing				Electronic payment order / Bank performs some operations manually				Manual payment orders			
	01.12.2004	01.01.2005	01.03.2005	01.01.2006	01.12.2004	01.01.2005	01.03.2005	01.01.2006	01.12.2004	01.01.2005	01.03.2005	01.01.2006
Ordinary SWIFT transfer in NOK												
Without BIC and IBAN, NOK 100	66.39	66.50	66.90	58.52	77.86	77.76	77.52	80.57	125.50	125.71	130.28	131.20
Without BIC and IBAN, NOK 2 500	66.78	66.88	67.28	59.87	82.76	82.66	78.40	81.36	132.66	132.83	134.71	136.37
With BIC and IBAN, NOK 100	55.55	55.48	55.17	40.21	68.12	68.12	65.99	71.47	114.55	114.76	119.33	119.77
With BIC and IBAN, NOK 2 500	55.93	55.87	55.55	40.62	86.78	86.78	71.08	73.26	121.71	121.88	123.76	125.00
Ordinary SWIFT transfer in euro												
Without BIC and IBAN, equivalent to NOK 100	66.39	66.50	66.90	58.52	77.86	77.76	77.52	80.57	125.50	125.71	130.28	131.20
Without BIC and IBAN, equivalent to NOK 2 500	66.78	66.88	67.28	59.87	82.76	82.66	78.40	81.36	132.66	132.83	134.71	136.37
With BIC and IBAN, equivalent to NOK 100	42.77	34.91	34.17	31.96	68.12	68.12	65.99	64.60	114.55	98.11	102.67	104.88
With BIC and IBAN, equivalent to NOK 2 500	43.16	35.29	34.55	32.37	86.78	86.78	71.08	66.39	121.71	105.22	107.11	110.11
SWIFT express transfer in NOK												
Without BIC and IBAN, NOK 100	279.93	280.55	288.66	260.05	279.93	280.55	292.39	301.49	341.84	346.37	356.62	351.70
Without BIC and IBAN, NOK 50 000	296.64	292.11	296.21	291.78	296.64	292.11	299.94	311.26	360.72	360.10	366.90	363.88
Without BIC and IBAN, NOK 150 000	311.63	311.01	307.45	298.73	311.63	311.01	312.41	328.36	375.84	377.69	379.50	367.30
With BIC and IBAN, NOK 100	269.55	270.17	278.01	277.17	269.55	270.17	281.74	271.41	331.46	336.00	346.25	342.12
With BIC and IBAN, NOK 50 000	286.27	281.73	285.55	287.23	286.27	281.73	289.29	302.12	350.34	349.73	356.52	354.30
With BIC and IBAN, NOK 150 000	301.25	300.63	296.80	289.44	301.25	300.63	301.76	353.48	365.46	367.31	369.12	357.72
SWIFT express transfers in euro												
Without BIC and IBAN, equivalent to NOK 100	279.93	280.55	288.66	260.05	279.93	280.55	292.39	301.49	341.84	346.37	356.62	351.70
Without BIC and IBAN, equivalent to NOK 50 000	296.64	292.11	296.21	291.78	296.64	292.11	299.94	311.26	360.72	360.10	366.90	363.88
Without BIC and IBAN, equivalent to NOK 150 000	311.63	311.01	307.45	298.73	311.63	311.01	312.41	328.36	375.84	377.69	379.50	367.30
With BIC and IBAN, equivalent to NOK 100	269.55	270.17	278.01	269.59	269.55	270.17	281.74	263.92	331.46	336.00	346.25	332.93
With BIC and IBAN, equivalent to NOK 50 000	286.27	281.73	285.55	279.66	286.27	281.73	289.29	294.64	350.34	349.73	356.52	345.11
With BIC and IBAN, equivalent to NOK 150 000	301.25	300.63	296.80	281.86	301.25	300.63	301.76	346.00	365.46	367.31	369.12	348.53
Cheques to other countries												
Equivalent to NOK 100	-	-	-	-	149.84	157.51	157.51	155.83	193.29	199.80	199.80	193.36
Equivalent to NOK 2 500	-	-	-	-	151.53	159.20	159.20	162.04	201.27	205.73	205.73	202.53

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

	Electronic payment order / Wholly automated processing				Electronic payment order / Bank performs some operations manually				Manual payment order			
	01.12.2004	01.01.2005	01.03.2005	01.01.2006	01.12.2004	01.01.2005	01.03.2005	01.01.2006	01.12.2004	01.01.2005	01.03.2005	01.01.2006
	Ordinary SWIFT transfer in NOK											
Without BIC and IBAN, NOK 100	64.29	65.28	66.90	55.57	75.67	80.63	77.38	79.69	123.46	128.62	130.28	129.91
Without BIC and IBAN, NOK 2 500	64.67	65.66	67.28	56.92	81.00	84.72	78.31	80.48	130.62	134.50	134.71	134.70
With BIC and IBAN, NOK 100	55.55	55.66	55.34	40.95	65.99	70.01	65.30	73.77	114.55	118.88	119.33	120.21
With BIC and IBAN, NOK 2 500	55.93	56.04	55.72	41.36	71.31	74.10	66.24	75.56	121.71	124.76	123.76	125.00
Ordinary SWIFT transfer in euro												
Without BIC and IBAN, equivalent to NOK 100	64.29	65.28	66.90	55.57	75.58	80.54	77.38	79.69	123.46	128.62	130.28	129.91
Without BIC and IBAN, equivalent to NOK 2 500	64.67	65.66	67.28	56.92	80.54	84.25	78.31	80.48	130.62	134.50	134.71	134.70
With BIC and IBAN, equivalent to NOK 100	42.77	42.88	42.56	40.69	53.30	57.33	52.71	73.52	114.55	118.88	119.33	120.21
With BIC and IBAN, equivalent to NOK 2 500	43.16	43.26	42.95	41.10	58.25	61.04	53.65	75.31	121.71	124.76	123.76	125.00
SWIFT express transfer in NOK												
Without BIC and IBAN, NOK 100	277.89	279.35	288.66	255.00	277.89	279.35	292.39	299.89	339.80	345.17	356.62	350.09
Without BIC and IBAN, NOK 50 000	294.60	290.91	296.21	286.72	294.60	290.91	299.94	309.66	358.68	358.90	366.90	362.27
Without BIC and IBAN, NOK 150 000	309.59	309.81	307.45	293.67	309.59	309.81	312.41	326.75	375.00	376.48	379.50	365.69
With BIC and IBAN, NOK 100	269.55	270.17	278.01	277.17	269.55	270.17	281.74	271.41	331.46	336.00	346.25	342.12
With BIC and IBAN, NOK 50 000	286.27	281.73	285.55	287.23	286.27	281.73	289.29	302.12	350.34	349.73	356.52	354.30
With BIC and IBAN, NOK 150 000	301.25	300.63	296.80	289.44	301.25	300.63	301.76	353.48	365.46	367.31	369.12	357.72
SWIFT express transfer in euro												
Without BIC and IBAN, equivalent to NOK 100	277.89	279.35	288.66	255.00	277.89	279.35	292.39	299.89	339.80	345.17	356.62	350.09
Without BIC and IBAN, equivalent to NOK 50 000	294.60	290.91	296.21	286.72	294.60	290.91	299.94	309.66	358.68	358.90	366.90	362.27
Without BIC and IBAN, equivalent to NOK 150 000	309.59	309.81	307.45	293.67	309.59	309.81	312.41	326.75	375.00	376.48	379.50	365.69
With BIC and IBAN, equivalent to NOK 100	269.55	270.17	278.01	269.59	269.55	270.17	281.74	263.92	331.46	336.00	346.25	332.93
With BIC and IBAN, equivalent to NOK 50 000	286.27	281.73	285.55	279.66	286.27	281.73	289.29	294.64	350.34	349.73	356.52	345.11
With BIC and IBAN, equivalent to NOK 150 000	301.25	300.63	296.80	281.86	301.25	300.63	301.76	346.00	365.46	367.31	369.12	348.53
Cheques to other countries												
Equivalent to NOK 100	-	-	-	-	149.84	157.51	157.51	155.83	193.29	199.77	199.80	193.36
Equivalent to NOK 2 500	-	-	-	-	153.96	159.20	159.20	162.04	201.27	205.73	205.73	202.53

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

	Receipt of payments from countries in EEA				Receipt of payments from countries outside EEA			
	01.12.2004	01.01.2005	01.03.2005	01.01.2006	01.12.2004	01.01.2005	01.03.2005	01.01.2006
	Receipt of payments in euro							
Without BIC and IBAN, equivalent to NOK 100	37.35	35.76	37.57	27.20	37.35	35.76	38.77	29.53
Without BIC and IBAN, equivalent to NOK 50 000	97.48	96.43	92.97	86.38	97.48	97.89	96.84	93.02
Without BIC and IBAN, equivalent to NOK 150 000	97.48	97.89	96.84	93.02	97.48	97.89	96.84	93.02
With BIC and IBAN, equivalent to NOK 100	37.35	8.95	9.50	7.31	37.35	35.76	37.53	10.79
With BIC and IBAN, equivalent to NOK 50 000	97.48	21.57	18.57	13.18	97.48	97.89	93.54	39.94
With BIC and IBAN, equivalent to NOK 150 000	97.48	95.81	94.76	29.58	97.48	97.89	96.84	45.03
Receipt of payments in other currencies								
Without BIC and IBAN, equivalent to NOK 100	37.35	37.35	38.77	32.97	37.35	37.35	38.77	32.97
Without BIC and IBAN, equivalent to NOK 50 000	97.48	97.89	96.84	96.47	97.48	97.89	96.84	96.47
Without BIC and IBAN, equivalent to NOK 150 000	97.48	97.89	96.84	96.47	97.48	97.89	96.84	96.47
With BIC and IBAN, equivalent to NOK 100	37.35	36.87	38.29	32.97	37.35	37.35	38.77	32.97
With BIC and IBAN, equivalent to NOK 50 000	97.48	95.81	94.76	96.47	97.48	97.89	96.84	96.47
With BIC and IBAN, equivalent to NOK 150 000	97.48	95.81	94.76	96.47	97.48	97.89	96.84	96.47

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

Annual fees									
Participant category	Retail settlement	SWIFT settlement	Securities settlement	NOS settlement	Infra-structure fees ¹	Basic fee for collateral for loans	Supplementary fee for collateral deposited abroad	Scandinavian Cash Pool	Cash
	Banks with total assets over NOK 100 billion	100,000	100,000	100,000	100,000	550,000	200,000	150,000	15,000
Banks with total assets between NOK 40 and 100 billion and branches of foreign banks	80,000	80,000	80,000	80,000	450,000	150,000	125,000	15,000	
Banks with total assets between NOK 10 and 40 billion	60,000	60,000	60,000	60,000	350,000	100,000	100,000	15,000	
Banks with total assets under NOK 10 billion	40,000	40,000	40,000	40,000	20,000	15,000	75,000	15,000	
Investment firms / brokers			100,000	100,000	20,000				
Transaction fees ²									
Participant category	Manual gross transactions		STP transactions		Changes in collateral				
Banks	45		3		150				
Money brokers	45								

(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 counter-party (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 fee, 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* includes both paper-based and electronic payments between customers.

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

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

CID: Customer Identification Number. A series of digits that uniquely identifies the payment. Several pieces of information about the payment can be contained in CID.

Company terminal giro: Payment solutions for businesses on fixed communication lines. Solutions require the installation of software in the user's/business' computer system. Used for individual payments, retail payments to payees with and without accounts, account adjustments, etc.

Direct debits: Autogiro and Avtalegiro; and to 2002, DataGiro Direkte Trekk, DataGiro Terminbetaling and DataGiro Medlemsbetaling.

Direct Remittance: Service equivalent to Company terminal giro, established by BBS.

e-Faktura: Electronic invoice containing CID, the payee's account number, etc. and sent to customer's Internet bank. The customer only has to confirm the payment him/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.

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

Mail giro: Payer sends a paper-based giro in an envelope in the post to BBS, either via the bank or directly to BBS, rather than delivering the form to his/her bank.

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:

BankAxept card: Debit card issued by Norwegian banks and linked to bank accounts for use in Norway.

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.

Combined payment cards: Payment cards with two of the following three functions: BankAxept card, domestic credit card and/or payment card issued by an international card company.

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

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.

Domestic credit card: A card with a credit limit attached. Cards are designed for use in Norway and are issued by or in cooperation with DnB NOR Kort, Entercard AS or GE Money Bank.

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.

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.

Guide to tables:

Payment card: Debit, charge and credit cards.

Payment card issued by an international card company: Payment cards issued on the basis of a direct licence from the international card companies (Visa/MasterCard/American Express/Diners Club).

Money transfers:

Credit transfer: Money transfer initiated by the payer.

Debit transfer: Money transfer initiated by the payee.

Systems and institutions:

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 retail payments and small SWIFT payments. The system is also the most important transaction route into Norges Bank and is jointly owned by the banks and operated by BBS.

NOS: Norwegian Futures and Options Clearing House.

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.

VPS: The Norwegian Central Securities Depository.

VPO: Securities settlement system.

The purpose of this overview is to provide more detailed information about sources for figures, data quality, calculation methods for averages and the contents of some of the 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 in the period 1996-2005, as well as list prices for different payment services in the period 1997-2006.

Sources:

- Source for statistics on *cash:* Norges Bank.
- Information about *giros, cheques, BankAxept cards, ATMs, payment terminals owned by banks and retail chains and cross-border transfers* is 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, Sparebanken Sør, Fexco Money Transfer Norway AS and Western Union Int. Bank GmbH NUF.
- Information about *payment cards other than BankAxept cards and payment terminals owned by oil companies* is obtained from Teller A/S, SEB Kort AB (Oslo branch), DnB NOR Kort, Nordea Bank Norge ASA, GE Money Bank, Ikano Finans AS, Statoil ASA, Esso Norge A/S, A/S Norske Shell, Hydro Texaco AS and Conoco Jet Norge A/S.
- Information about *clearing and settlement* is 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 survey comprising 24 commercial and savings banks. The commercial and savings banks in the survey account for 87% of the bank groups' market shares measured in deposits in current accounts on 30 November 2005. The prices were taken from banks' price lists on 1 January in the period 1997-2006.
- Information about *banks' income from the payment system* is obtained from Norges Bank's database for bank statistics (ORBOF) and is thus based on the banks' official accounts.

General comments:

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.

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.

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 and later cover the whole year. There is some uncertainty about the statistics on NICS retail settlement.

Tables 13 and 14. Use of ATM network: The figures regarding withdrawals from other banks' ATMs in period to 2002 have been estimated by Norges Bank and are therefore uncertain.

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. The number of locations with payment terminals refers to each shop, each post office branch, etc. Statistics only include terminals that accept BankAxept cards.

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. The table shows that the number of physical cards is lower than the number of functions in the cards. This is due to the high number of combined cards (i.e. cards with two functions, see Definitions).

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 BankAxept cards 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: Turnover figures for electronic giro, including company terminal giros, to end-2002, have in some cases been estimated by Norges Bank and are uncertain. Figures for cash payments for paper-based giros in 2005 have been in part estimated by Norges Bank and BBS.

Payment cards: Payments, including goods purchases, with Norwegian cards in Norway and abroad. Turnover with BankAxept cards to end-1999 includes withdrawals from payment terminals (cash back) 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.

Table 33. Goods purchases with Norwegian payment cards: Figures for turnover with BankAxept cards for goods purchases to end-1999 include cash withdrawals. From 2000, the cashback element has been differentiated and presented in a separate table (Table 21), so that turnover in Table 33 now 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.

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 36 and 37. Cross-border use of payment cards: Tables refer primarily to use (cash withdrawals and goods purchases) of payment cards issued by international card companies. BankAxept cards are also used in the Eufiserv network in less than 1% of cases. Some registered foreign MasterCard / Maestro transactions in Norway refer to JCB cards (Japan Credit Bureau). The share of such transactions has been marginal to date. The distribution of cash withdrawals and goods purchases for American Express to end-2004 has been estimated by Norges Bank and is therefore uncertain.

Tables 39 - 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 payment transaction, receipt of payment and cash withdrawal. 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 deposits in current accounts. 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 fixed sum transfers 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. *Payments over the Internet – 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

