Jon Nicolaisen: Challenges for the payment system

Speech by Mr Jon Nicolaisen, Deputy Governor of Norges Bank (Central Bank of Norway), at the Finance Norway's payments conference, Oslo, 12 November 2014.

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Introduction

The modern history of payments in Norway began 200 years ago. A clause was included in the Constitution stipulating that the Storting (Norwegian parliament) should "supervise the monetary affairs of the realm". Two years later, in 1816, Norges Bank was founded. The Storting delegated "supervisory authority" over monetary affairs to the Bank. Today, private banks perform payment services for the general public. Norges Bank has become the bankers' bank.

According to the Norges Bank Act, Norges Bank shall promote an efficient payment system. The Bank issues cash and ensures efficient settlement between banks' accounts with Norges Bank. In addition, the Bank has responsibility for overseeing and supervising those parts of the payment system located outside of Norges Bank. Finanstilsynet (Financial Supervisory Authority of Norway) has responsibility for supervising the retail payment systems.[1]

Payment services play a unique role in the economy. The payment system can be compared to the plumbing system in a house. As long as it functions, we do not give it a second thought. But if it fails, the consequences are immediate and serious.

The Norwegian payment system is efficient and up-to-date. Fast, cheap and reliable payments save time and provide security to households and the business sector. It gives the nation a competitive advantage over many other countries. To preserve this advantage, Norway needs to be a leader. Technological developments pave the way for new possibilities – new means of payment are introduced and existing means of payment become faster and cheaper. While most changes result in a more efficient system, they also pose new challenges. New technology and outsourcing require stricter standards for both the risk management framework and contingency preparedness. Responsibility rests with system owners.

As supervisory and oversight authority, Norges Bank has a duty to point out any deficiencies and weaknesses. There are also challenges associated with the pricing of payment services. When given a choice of payment solution, customers are not charged prices that reflect actual costs. Does this make the system more expensive than necessary? Banks operate most of their payment solutions at a loss. Does this have to be? Are banks' incentives to invest in secure and forward-looking solutions being weakened?

Risk and costs are drivers of change

The main structure of the payment system has remained fixed for a number of years, but there have been changes, both to the part of the system customers encounter and to interbank settlement. Behind many of the changes is a desire to reduce risk or costs, often both.[2]

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1 See the Payment Systems Act.

2 The discussion of trade-offs between costs and risk is inspired by Kahn et al. (2014): "Central banks and payment systems: The evolving trade-off between cost and risk" and Norman's comments at [Norges Bank's conference "Of the uses of central banks: lessons from history"](), 5–6 June 2014.

Allow me to give two examples. Just before the turn of the millennium, Norges Bank introduced a real-time gross settlement (RTGS) system that allowed large payments to be settled far faster than earlier. This also resulted in less uncertainty and lower risk. Another example is the introduction of the foreign exchange settlement system CLS just over ten years ago. Before CLS was established, one party could risk paying his leg of a trade without receiving anything from the counterparty. With CLS, this counterparty risk was eliminated.

In both cases, the introduction of the new systems increased costs for private participants. This prompted criticism. But over time, the reduction in risk has more than offset the increase in costs. The financial crisis in autumn 2008 showed that the gains were real. Where there were adequate settlement systems without counterparty risk, markets functioned better.

The core of the Norwegian payment system is the Norwegian Interbank Clearing System (NICS) and Norges Bank's settlement system (NBO). On average, over NOK 200 billion passes through NBO each day. Without this system, payments in Norway would come to a halt. This would quickly have serious consequences. Norges Bank therefore has a target of 100-percent availability for the settlement system during opening hours. In recent years, the Bank has been successful in ensuring this. Almost no disruptions have occurred. We are steadily working on improvements to ensure a robust and efficient system also in the years ahead.

Payments often start when an individual or firm makes a payment using an online banking service or using a payment card. Most payments are relayed from the data processing centre in the customer's bank to NICS. On the basis of all payments we as customers have made, NICS calculates a position for each bank vis-à-vis the other banks. The result of this clearing is sent four times a day to NBO. There the balances of banks' accounts with Norges Bank are adjusted. When the banks have been notified that the settlement in Norges Bank is in order, the banks adjust their customers' accounts. All the large banks participate in these settlements. DNB and SpareBank 1 SMN also participate in the settlement in Norges Bank on behalf of smaller banks.

Today, Norges Bank has published a new survey of payment costs using data from 2013. The overall social costs of using cash, payment cards and giro payments amount to just under NOK 15 billion,[3] or 0.6 percent of mainland GDP. The estimate includes the costs for both providers and users of payment services. These costs have declined since they were last estimated in 2007. Compared with other countries, the costs of the Norwegian payment system are low. This is a benefit to customers and represents a comparative advantage for the Norwegian business sector.

There are several reasons why payment costs are low in Norway. New technology resulted in an early introduction in Norway of cost-efficient electronic systems. Banks led with new solutions, and the public adopted them quickly. Banks have collaborated on both the establishment and the operation of new services. The resulting economies of scale made it possible to keep costs low. Norwegian and Nordic banks are at the forefront of developments in this area.

Norway is among the world leaders in the use of payment cards. Eight out of ten card transactions take place using BankAxept, one of the solutions that banks have developed. According to Norges Bank's estimates, the social cost of using BankAxept is around NOK 3 per payment. By comparison, payments using international payment cards cost society NOK 13, or four times as much.

Credit card use is increasing. It is the point of sale, typically a shop, which pays the costs connected with use, and not the cardholder. While the merchant pays around NOK 0.10 when the customer uses BankAxept, the merchant must usually pay between 1 and

[3] See Norges Bank Papers 5/2014.

2 percent of the purchase amount when the customer chooses Visa or MasterCard. Merchants are free to pass on this cost to card users, but this seldom happens in Norway. Customers are thus not charged correct prices when given a choice of payment solution. The result can be that an inexpensive solution – BankAxept – is supplanted in favour of more expensive solutions.

In Denmark, merchants charge a fee to customers who use a credit card. A similar practice in Norway could keep down payment costs. The profit banks earn on the use of international payment cards is higher than on BankAxept. It is therefore likely that, in isolation, it is in the interest of many banks for customers to choose international payment cards. New European regulations that will set a cap on the fees issuers of payment cards can charge are in the pipeline. This will likely weaken banks' incentive to promote international payment cards.

Banks continue to lose money on payment services. The cost survey we are presenting today does show that banks' cost coverage has increased somewhat over time. But income still amounts to only 76 percent of the costs associated with payment services.

Banks lose money on all main types of payment instruments, except for international cards. The losses must be covered by income from other banking activities. Pricing that does not cover costs may be a conscious choice by banks. Some customers may believe that they should not have to pay for using their own money. At the same time, mispricing and losses weaken banks' ability and willingness to promote efficient solutions and invest in new infrastructure. That is not a forward-looking approach.

We must invest now to ensure efficient and secure payments also in the future. The establishment of the company BankAxept AS is promising in this regard. Norges Bank will closely follow developments and continue to publish information on costs, prices and market conditions.

Contactless payments are making their way into the Norwegian payments market. Contactless payment allows customers to make a payment by holding a mobile phone or a card over a terminal without entering a PIN.[4] While this is a new means of payment, the underlying payment solution is not new. The solutions are often based on the use of credit cards, with a low price for users. If contactless payments based on credit cards supplant payments with BankAxept, the social costs of payment services may rise. Norges Bank has noted that the new owner company of BankAxept is considering developing a solution for contactless payments. This may bolster competition and help to lower costs of this type of payment too.

Efficiency is more than low costs. Payment services have become faster and more user-friendly in recent years. For example, there has been an increase from two to four daily clearings and settlements. Contactless payments make small payments faster. Soon, online bank transfers will also become faster. With the new service "instant payment", funds will be available in the payee's account within seconds, while interbank settlement does not take place until afterwards. But there is still a way to go – in this area, other countries have come further than Norway. Hopefully, payment services in Norway will be even faster in the coming years.

Assessment of the Norwegian financial infrastructure

The financial crisis was a reminder that increasingly complex financial instruments and demanding technological solutions have increased risk in the financial infrastructure. In the

[4] Within certain amounts. Customers must still enter their PIN code in connection with large payments.

aftermath of the crisis, the international recommendations for the financial infrastructure have been tightened.[5]

The new principles provide a comprehensive standard for the financial infrastructure across borders and across various systems. The purpose is to promote a robust and efficient financial infrastructure[6] that supports the stability of the global financial system. The new principles devote considerable attention to such areas as operational risk, derivate exposure and the use of central counterparties.

Norges Bank oversees financial infrastructure and supervises interbank clearing and settlement systems. There are two systems that are licensed by Norges Bank to provide clearing or settlement: NICS and DNB as a private settlement bank. For these systems, Norges Bank, as supervisory authority, may require that owners take corrective action for noncompliance with licence terms or the Payment Systems Act.

In collaboration with Finanstilsynet, Norges Bank has recently conducted an assessment of important parts of the financial infrastructure in Norway in accordance with the international principles.[7]

The main conclusion is that the financial infrastructure in Norway is robust and efficient. Nevertheless there is a need for some improvements. In particular, two areas are emphasised:

First, some of the systems have a deficient framework for monitoring and managing risk. Such a framework is necessary for assessing risk and measures in aggregate. Otherwise, one cannot be certain whether the measures implemented are appropriate.

The framework should cover all aspects of operations, also the parts outsourced to other providers. This is an essential tool for controlling the overall risk in the system. It is not sufficient to indicate that an operating services provider has a separate risk management framework in place. The board of the owner company has ultimate responsibility.

Second, it is not always clear how operational risk is managed and controlled. If operational risk is not managed appropriately, there is a risk that operations are disrupted – and in the worst case come to a halt. A failure in the delivery of electronic communications is an example of an operational risk that may have serious consequences. System owners must ensure that the various operational risks are identified and analysed. The system owner must implement the necessary measures on that basis.

The assessment is now being followed up. System owners have drawn up plans for measures. The NICS Operations Office has responded to Norges Bank that work relating to the principles concerning the risk management framework and operational risk will be completed by the turn of the year. Norges Bank will ensure that progress and measures are satisfactory. As the operator of NBO, Norges Bank is also working on measures that will strengthen the settlement system centrally.

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5 Committee on Payments and Market Infrastructures (CPMI) – previously the Committee on Payment and Settlement Systems (CPSS) – and International Organization of Securities Commissions (IOSCO).

6 The financial infrastructure comprises the payment system and securities settlement system, including central counterparty systems.

7 The following systems were evaluated: Clearing and settlement systems for payments, the securities settlement system, the VPS registry function and the central counterparty Oslo Clearing, the latter two in collaboration with Finanstilsynet. The evaluation was presented in the Norges Bank Financial Infrastructure Report 2014.

Outsourcing

Today's financial infrastructure is based on advanced technical solutions. This places considerable demands on system developers and operators. This expertise is costly and may be difficult to retain. Owners have largely outsourced technical operations. This provides greater flexibility. At the same time, outsourcing can make it more challenging to manage operational risk.

The fixed costs associated with operation and development can be high. This allows operators to exploit economies of scale. A possible result of outsourcing is that several systems use the same service provider. This may reduce costs. On the other hand, such a concentration may weaken competition, while risk is concentrated in a single provider. Any failure in the service provider may then impact large parts of the financial infrastructure.

The systems are vulnerable to technical failure and to external attacks. With several layers of service providers, risk increases while at the same time becoming more difficult to uncover. In 2015, Norges Bank will evaluate the outsourced operations of key participants in the financial infrastructure in Norway. This assessment, too, will be based on international principles.[8]

A fundamental prerequisite is that the owners of systems have the ultimate responsibility for operation. This responsibility also covers backup solutions. The owners' responsibility does not change because all or parts of system operation are managed by others. Owners must therefore retain sufficient expertise in-house.

Both for the system owner and the authorities, the ability to set requirements and follow up activities is more of a challenge the more remote they are. When parts of the financial infrastructure are operated outside of Norway, system owners should implement special measures to address these additional challenges. A situation must be avoided where infrastructure critical to Norway is affected by incidents in other countries. Norges Bank will give weight to these considerations in its supervisory role.

Contingency preparedness

The consequences of disruptions in a payment system may be more serious for society than for the individual operator. For that reason, the authorities set strict requirements for contingency preparedness. Contingency arrangements shall both reduce the likelihood of incidents and mitigate the consequences if an incident has occurred. The requirements for contingency preparedness may entail increased costs in the short term. In the longer term, adequate contingency preparedness is crucial for society. This is reflected in the trade-offs between long-term risk and short-term costs.

IT systems and websites are vulnerable to attack by criminals. Attacks can put services out of order and reduce confidence in the systems. Attacks take ever newer forms. This requires that system owners keep updated on the various kinds of attack. The establishment of FinansCERT by Finance Norway is a sound measure in this regard. In addition, participants must ensure robust defences against attack. This will not be any easier in the period ahead. Nevertheless: if we are to reap the benefits of IT and online services, a substantial use of resources on monitoring and security is a price we must pay.

Banks and Norges Bank must in the worst case deal with situations where all or part of the payment system has been put out of action. New technology may in the longer term usher in new contingency arrangements. Even so, to date no sufficiently adequate alternatives have been documented to allow cash to be written off as a part of the overall solution.

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8 Appendix F in the CPMI-IOSCO principles.

Finanstilsynet and Norges Bank are now examining closely contingency preparedness for both electronic payment and banks' contingency arrangements for cash distribution.

Norges Bank shall ensure that society has access to cash as a means of payment. Banks can make cash withdrawals based on deposits in Norges Bank. The general public go to their banks to withdraw cash. The Government presented a bill for a new Financial Institutions Act before summer. The bill states that banks will have an obligation to accept cash from customers and make deposits available to customers in the form of cash. This is a further specification of banks' responsibility for cash handling. The bill also gives banks the freedom to choose how services are to be organised, as long as they are able to meet customer demand.

Conclusion

Let me sum up: The Norwegian payment system is efficient and up-to-date. It gives the nation a competitive advantage over many other countries.

The owners must have management systems that enable them to have sound control of operations. The owners' responsibility also includes backup solutions. This responsibility does not change if all or parts of operations are managed by others.

Payments can become cheaper, faster and more user-friendly than they are at present. Banks should price payments so that they achieve acceptable earnings and promote profitable investments. This will also serve the interest of customers. It is of benefit to us, as a society, that banks and other operators are now investing in secure and forward-looking solutions. The aim must be to remain at the forefront of international developments. There is growing urgency to put in place new solutions. In this respect, the system owners – the banks – have collective interests that go beyond pure private financial considerations of the individual bank.

Thank you for your attention.