Jon Nicolaisen: Challenges for the payment system

Speech by Mr Jon Nicolaisen, Deputy Governor of Norges Bank (Central Bank of Norway), at Finance Norway's payments conference, Oslo, 1 November 2018.

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Please note that the text below may differ slightly from the actual presentation.

Changing payment landscape

The way we make payments is changing. New services and operators are constantly appearing. The underlying infrastructure, our payment system, must be adapted to the changes. But where is this all heading? How will we make payments in the future? And what will the future form of money be?

The forces driving payment market developments are new technology, changes in consumer behaviour, globalisation, and new regulations, such as the new Payment Services Directive (PSD2).

PSD2 requires banks to grant third-party providers (TPPs) access to their systems to enable TPPs to offer payment and account information services. PSD2 is both a response to developments in the payments market and a catalyst for future developments.

At the same time, a number of large international technology companies are moving into the payments market. Apple offers mobile payment services to Norwegian customers. Google has just launched its own mobile payment solution in Norway. Other operators will follow suit. The role companies such as Facebook, Amazon and Alibaba may take remains to be seen.

Vipps is now the only Norwegian mobile payment solution. A planned merger of the Vipps, BankAxept and BankID systems was announced towards the end of 2017. The merger was approved by the authorities in summer 2018. One of the aims of the merger is to be better positioned to compete with global companies.

New market entrants and lower entry barriers promote competition, but there are other mechanisms that could weaken competition in the longer term. One example is if one or a small number of multinationals become dominant payment service providers at the global level. The key words are digital platforms and network effects.

Marketplaces such as stock exchanges and shopping centres have existed for a long time. But digital marketplaces, known as platforms, are far more scalable. Well-known examples of digital platforms are Google, Facebook and the classified ad portal Finn.no. These platforms achieve competitive advantage by gathering information about customers, eliminating time-consuming tasks and simplifying users' everyday lives.

Platforms have network effects. Competition can be impaired if platform companies exploit their market power. A large user base makes it profitable for other service providers to develop complementary services. Because of network effects, dominant platforms can achieve a near-monopoly position.

Operators that control parts of the payment infrastructure can shut out competitors. For instance, Apple Pay is the only option for contactless payments based on near-field communication (NFC), using Apple's iPhones. A number of countries are considering whether this constitutes abuse of a dominant market position. In Norway, this would be a matter for the competition authorities.

Payment solutions should build on a common underlying infrastructure that enables payments to be carried out swiftly, safely and at low cost. Providers can compete freely for customers through various apps and interfaces.

Future payment infrastructure

Norway was one of the first countries to modernise its payment system and still ranks at the top of international comparisons of payment system efficiency. However, some countries have caught up with us and have taken the lead in some areas.

With regard to providing real-time payments, we have lagged behind our neighbours. Real-time payments, or instant payments, provide immediate payment into the recipient's account. Instant payment is now available through the Vipps system and from many online banks. This is a positive step, but banks are still exposed to settlement risk, and the solution cannot be used for all types of payments. It is particularly problematic that the current instant payment solution is not very suitable for corporate transactions.

Norges Bank has played a catalyst role in bringing about improvements. Just over two years ago, the Bank expressed the opinion that it was necessary to step up efforts to establish a real-time payments infrastructure without settlement risk. The financial industry and Norges Bank agreed on a joint initiative called BRO, *Betalinger med Raskere Oppgjør* [payments with faster settlement]. BRO was scheduled to be in place by the end of 2019.

In February 2018, seven large Nordic banks announced their intention to establish a pan-Nordic payment infrastructure, P27. The aim is to replace existing domestic clearing and instant payment infrastructures in the Nordic countries with one common system.

When the P27 initiative was announced, the BRO project was put on hold in order to consider whether a future common Nordic infrastructure as proposed by the P27 banks could be a satisfactory replacement.

Norges Bank has engaged in joint discussions with the other Nordic central banks since P27 was launched. The central banks have given preliminary feedback on the P27 project and appreciate the project's ambition to improve payment system efficiency in the Nordic area. At the same time, there are issues that need to be addressed before the authorities can take a position on any transition from domestic infrastructures to a common Nordic solution. This process may take time and will also involve authorities other than the central banks.

Security legislation is one of these issues. If P27 is realised, it will probably be viewed as an important critical infrastructure for the countries involved. National security concerns may influence the conditions governing whether a payment system infrastructure can be operated across national borders. In the case of Norway, one likely condition could be that satisfactory contingency arrangements must be in place in Norway. Domestic control of the payment system must be possible in a crisis.

The European Central Bank has launched a European solution for real-time payment settlement in central bank money called Target Instant Payment Settlement, or TIPS. The system is scheduled to commence operations this month and may be expanded to include non-euro area countries. According to Sweden's central bank, the Riksbank, settlement of instant payments in SEK may be made available on the TIPS platform. If so, this would mean that at least some Swedish real-time payments will not be cleared through P27, which could affect the profitability of the project.

Norges Bank is aware that the industry is also assessing other possible Norwegian solutions for better real-time payments in Norway. In its letter sent in October to Finance Norway and the P27 banks in Norway, Norges Bank called upon the banks to continue this work. The objective must be to make the necessary adjustments to the Norwegian infrastructure as quickly as possible to give both businesses and private individuals in Norway access to modern real-time payments on a 24/7/365 basis. The technological set-up should be adapted to customers' needs, particularly businesses, while also eliminating interbank settlement risk. As far as possible, the set-up should also be suitable for use in future solutions, such as P27, including a system for control of reserve cover at Norges Bank. Reusing a technological set-up will keep total costs down.

Establishing a satisfactory Norwegian solution for instant payments will also decouple P27 work from any deadlines for the system in Norway, which in time may increase the chances of success for the P27 initiative.

A common infrastructure for all payments has given Norway an important competitive advantage, provided economies of scale and facilitated interaction across the banking sector. It is important to avoid fragmentation of the infrastructure for clearing payment transactions in NOK, otherwise we will lose the advantages we have today. An efficient and secure common infrastructure must still be a main feature of the Norwegian payment system, whichever solution the industry ultimately chooses.

Looking further ahead, a number of broad issues need to be addressed. Norges Bank will initiate a project to assess the payment and settlement system of tomorrow as a whole. The aim is to make active and constructive contributions to an efficient and secure payment system, today and in the future. We will seek long-term solutions to several of the issues mentioned above, in particular the following two key questions:

- Should we continue to have a completely domestic payment infrastructure in Norway, or could it become more international? How would we then solve issues related to national security?
- How should the infrastructure be changed to facilitate the services needed by end-users in the future? Should payments still be cleared before they reach the central bank, or is gross settlement the best option?

The first phase of the project is scheduled to be completed by the end of 2019.

Cyber security

As the payment system is centralised and ICT-dependent, it is vulnerable to cyber attacks. If an attack were to succeed, payments could come to a halt and financial losses could occur. An attack could also result in unauthorised access to or manipulation of sensitive information.

The system's vulnerability can be reduced in a number of ways, for example through well-established cooperation within the financial industry and between the industry and the authorities, sound security procedures and recovery capabilities. System owners are responsible for the resilience of their own systems. Norges Bank monitors the systems under its supervision to ensure that satisfactory defence mechanisms are in place.

A number of payment system participants have outsourced the operation of their systems to a few ICT service providers. This is a source of concentration risk. The failure of key service providers could bring important parts of the payment system to a halt. The problems at EVRY on 6 October 2017 affected approximately 40 banks in Norway, as well as Norway Post and Telenor. This incident illustrates the potential broad repercussions of the failure of a key ICT service provider.

Such concentration risk is difficult for individual system owners to address alone. The entire infrastructure served by the provider is exposed to risk, not merely the individual system. ICT service providers are not subject to the same regulation and supervision as licensed banking and payment system participants. It is Norges Bank's view that the authorities should explore how key ICT service providers can best be supervised. Such an evaluation must be based on the work of the ICT Security Commission, which publishes its report in December 2018.

Distributed ledger technology

Distributed ledger technology (DLT) offers interesting opportunities. A shared decentralised digital asset register can enhance efficiency, as business ledgers no longer need to be reconciled, and can reduce counterparty risk. DLT solutions can also reduce operational risk as this technology does not rely on a central operator.

DLT has many potential applications in the financial infrastructure, such as in the securities settlement system. The Australian exchange ASX is replacing the existing system for clearing and settling trades with a new DLT-based system. Another example is cross-border payments; several projects have been launched and the potential for improvement is considerable. A number of Norwegian operators are exploring opportunities for using DLT-based solutions in Norway's infrastructure.

Central banks have also explored the use of DLT. The European Central Bank and the Bank of Japan have considered how secure delivery versus payment systems could be organised where the assets are stored in a decentralised accounting system. Some central banks, such as the Bank of Canada, have evaluated and tested DLT for use in central bank settlement. At the same time, the use of DLT poses a number of challenges, including the immaturity of the technology and how to prevent unauthorised access to confidential information.

New technology also makes new forms of money possible. The functions of money as a medium of exchange, a store of value and a unit of account are dependent on public confidence in the currency. Most of our money is in the form of bank deposits or cash. So-called cryptocurrencies have attracted considerable attention in recent years. Owing to their substantial day-to-day volatility and the interfaces with money laundering and other criminal activity, cryptocurrencies are unsuitable as a universal means of payment. On the other hand, cryptocurrencies are attractive as speculative assets. Crypto-assets is therefore a better term than cryptocurrencies.

Central bank digital currencies

Another possibility is central bank digital currencies (CBDC). A CBDC is a digital form of central bank money made available to the general public. A number of central banks, including Norges Bank, are assessing whether introducing a CBDC would be advisable and, if so, in what form.

For the time being, banknotes and coins are the only form of central bank money, with a role to play both in a contingency and under normal circumstances. Effective electronic contingency arrangements are crucial for ensuring that the payment system is resilient to disruption. Cash is part of the overall contingency arrangements, in the role of last resort should the electronic contingency arrangements fail.

Banknotes and coins will continue to be in use into the foreseeable future. However, the use of cash is relatively low in Norway compared with other countries and is declining. It is not impossible that cash usage, at some point in the future, will fall to such a low level that banknotes and coins can no longer be regarded as a generally accepted means of payment.

We must therefore consider whether cash has any important characteristics that are not shared by bank deposits and whether there is a need for other forms of central bank money in addition to cash. Cash has a number of unique characteristics:

- It is a credit risk-free alternative to deposit money.
- It is an independent back-up solution if electronic systems fail.
- It is legal tender that can be used by all.

For Norges Bank, the question is whether a CBDC could supplement cash to maintain confidence in the monetary system and ensure that Norway’s future payment system is safe and efficient.

A list of factors that should be given weight in an assessment of whether Norges Bank should issue a CBDC was presented by a Norges Bank working group in May. Phase 2 of the assessment is now in progress. The working group is focusing on the purposes of a CBDC, the solutions that best serve these purposes and their impact. The working group’s report will be published in spring 2019. This is a long-term process and it is too early to draw any conclusions. A premise underlying the work is that a CBDC must not impair the ability of banks and other financial institutions to provide credit.

Conclusion

The various developments reflect a payment system in change. It is important to look up and envision the situation a few years ahead. Where do we want to be then? How will we make payments, what will our means of payment be, and what kind of payment system will we be using?

Our common goal must be that Norway has an efficient and safe payment system, today and in the future. That we have confidence in the means of payment we use, that we base our infrastructure on cost-efficient common solutions, and that we together can safeguard the interests related to efficient payments, personal privacy and security.

There are numerous challenges to be faced. The best course of action is for businesses to come together and agree on good common solutions.