
Faster Payments in Denmark

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INTRODUCTION AND SUMMARY

The Danish banking sector has initiated a comprehensive modernisation of the domestic payment systems. The modernisation project will run for three years and lead to faster settlement of payments made by citizens and firms and eventually result in a Danish payments infrastructure that fully matches those of comparable countries.

The modernisation of the Danish payments infrastructure comprises four elements: The first element – acceleration of retailers' receipt of Dankort debit card payments made during weekends – has already been implemented, and at the end of the year it will be complemented by an improvement of firms' access to fast execution of large-value payments via Danmarks Nationalbank's payment system, Kronos.

In addition, two new payment systems will be introduced, one of which will enable intraday settlement of credit transfers made on banking days. Today, transfers between customers of different banks usually take at least one day. The other system will allow certain types of transfer to be credited immediately to the payee's account – 24 hours a day, seven days a week.

These measures will improve conditions for payees, who will have funds at their disposal sooner and lose fewer interest days than today. The new opportunity of immediate transfer is also expected to support new payment types, such as mobile payments, and be useful for sellers not wishing to deliver goods until they have certainty of payment.

BACKGROUND

In Denmark it usually takes at least one day to execute a payment transfer due to the design of the Danish settlement system for payments made by citizens and firms, known as the Sumclearing, which is owned by the Danish Bankers Association. In the Sumclearing, funds are ex-

changed among the banks once a day – at night – preventing faster settlement of customer payments.¹

In several countries comparable to Denmark, intraday payment settlement has existed for some years now. In these countries, the payment systems typically allow banks to exchange funds several times a day. Since 2008, it has been possible in the UK to settle transfers below a certain size within seconds – 24 hours a day, seven days a week.

In 2009, a working group chaired by Danmarks Nationalbank was therefore set up to explore the opportunities for reducing settlement times for payments in Denmark. At the beginning of 2012, the working group published its final report, containing an overall plan for the Danish payments infrastructure.² Since then, the banks, under the auspices of the Danish Bankers Association, have been working to implement the plan.

FOUR MEASURES TO ACHIEVE FASTER PAYMENTS

The project to modernise the Danish payments infrastructure comprises four elements:

- *Faster receipt of Dankort payments made during weekends:* Since May 2012, Dankort payments made during weekends have been received by retailers on Mondays instead of Tuesdays.
- *Fast transfer of large-value payments:* From the end of 2012, there will be improved opportunities for firms to execute fast transfers of amounts exceeding kr. 1 million on banking days via Danmarks Nationalbank's payment system, Kronos.
- *Intraday transfers:* At the end of 2013, a new system – the Intradag-clearing – will be introduced for intraday transfers on banking days.
- *Immediate payment transfers:* At the end of 2014, a new system will make it possible to transfer amounts up to kr. 500,000 immediately – 24 hours a day, seven days a week.

Table 1 presents an overview of the project showing the beneficiaries of each project element.

The project process has been designed to ensure that the elements requiring the least adjustment of the banking systems are implemented first while new systems requiring major changes are implemented at a

¹ For a description of payment settlement in Denmark, see Jesper Bakkegaard, Tommy Meng Gladov and Anders Mølgaard Pedersen, *Settlement Times for Payments in Denmark*, Danmarks Nationalbank, 2nd Quarter 2011 – Part 1.

² An English summary of the report is available at Danmarks Nationalbank's website, www.nationalbanken.dk, under Publications.

OVERVIEW OF MODERNISATION PROJECT			Table 1
Measure	When is the transfer executed?	Who is the beneficiary?	Time of implementation
Faster receipt of Dankort payments made during weekends	Monday morning	Retailers	14 May 2012
Improved access to transfer of funds via Kronos	Shortly after payment ¹	Mainly firms	8 November 2012
Execution of intraday transfers (the Intradagclearing)	Few hours after payment ²	Citizens and firms	End-2013
Immediate payment transfers below a certain amount	Few seconds after payment	Citizens and firms	End-2014

Source: Danmarks Nationalbank.

¹ In Kronos, transfers are made immediately but in practice it may take longer because of the banks' liquidity management.

² It is assumed that the transfer is made on a banking day prior to the cut-off time for the last settlement of the day, which is expected to be in the early afternoon.

later stage. The banks estimate the total cost of the project at kr. 200-300 million.

Dankort payments made during weekends

The first element of the project has already been implemented. Previously, Dankort payments made during weekends were not credited to the retailer's account until the following Tuesday. Since 14 May 2012, retailers have received payments on Mondays due to the introduction of an extra settlement in the Sumclearing on Monday mornings.

This means that retailers have the liquidity from Dankort payments made during weekends at their disposal one day earlier. It also means that they lose one interest day less, while the banks no longer win an interest day in connection with these payments. The implications of the faster settlement of Dankort payments for the distribution of interest days are described in more detail in Box 1.

The faster receipt of Dankort payments made during weekends is expected to be of increasing significance to retailers due to the trend towards extending opening hours to Sundays and, hence, boosting weekend sales. Today, around one fourth of the retailers' Dankort sales are made during weekends.

Fast transfer of large amounts

The second element of the modernisation project will improve the opportunity for fast transfer of large amounts via Kronos – an opportunity that is typically used by firms. Today, this is possible only to a very limited extent as firms can only transfer amounts between own accounts

INTEREST DAYS IN CONNECTION WITH DANKORT PAYMENTS

Box 1

The settlement time for Dankort payments has a bearing on the banks' addition of interest to customer deposits. In Denmark, the rules are governed by the Payment Services Act. Pursuant to the Act, the payer's bank must add interest up to the day when the customer's account is debited. Similarly, the retailer's bank must add interest from the day the money is received.

Therefore, based on these rules, the banks typically win an interest day in connection with Dankort payments. The reason is that on banking days the banks debit the customer's account on the same day as payment is made but do not credit the retailer's account until the next banking day. In consequence, the banks save one day's interest on a deposit corresponding to the amount of the payment.

In connection with Dankort payments made during weekends, the customer's account is not debited until Monday and, previously, the retailer's account was not credited until Tuesday. As a result, the banks won an interest day and the retailers lost interest income. Accelerating the settlement of Dankort payments made during weekends means that the banks no longer win an interest day on these payments.

in different banks. The modernisation will enable firms – and, in principle, all citizens – to execute this type of transfer to all accounts in the future.

Kronos is a real-time gross settlement system, RTGS, in which payments are made individually and immediately; the system is therefore used for large, time-critical payments. With Kronos it is possible to make transfers that are received by other customers immediately instead of the next day, as is the case for settlements made in the Sumclearing. Kronos is open on all Danish banking days from 7.00 a.m. to 3.30 p.m.

The banks have decided that the new function should be available for transfers exceeding kr. 1 million. Today, the banks usually only execute transfers for customers via Kronos if the amount exceeds kr. 5 million. The large amount means that this element of the modernisation project is aimed primarily at the banks' corporate customers.

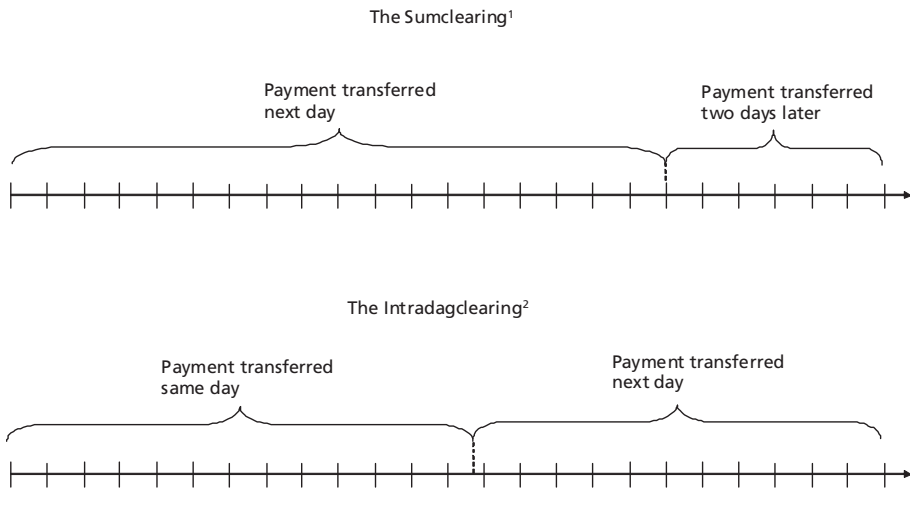
Intraday transfers

The third element of the modernisation project is the launch of a new payment system, the Intradagclearing. This system will enable intraday transfers, which, in practice, will be executed by introducing daytime settlement as a supplement to the banks' current night-time exchange of amounts at 1.30 a.m. in the Sumclearing.

In the Intradagclearing, settlement will take place at 9.00 a.m., 12.00 noon and sometime during the afternoon, presumably at 2.00 p.m. For each settlement, a cut-off time will determine when a transfer must be executed in order to be included in the settlement. All transfers made prior to the cut-off time for the last settlement will be executed on the same day, cf. Chart 1.

COMPARISON OF SUMCLEARING AND INTRADAGCLEARING PROCEDURES

Chart 1



Source: Danmarks Nationalbank.

¹ In the Sumclearing, settlement takes place only once a day at 1.30 a.m. The cut-off time for a transfer to be included in the settlement varies from bank to bank but is sometime between 6.00 p.m. and 9.00 p.m.

² The Intradagclearing system comprises one night-time settlement at 1.30 a.m. and three daytime settlements at 9.00 a.m., 12.00 noon and, presumably, 2.00 p.m. The exact time of the last settlement has not yet been determined. The cut-off time for each daytime settlement is 1 hour and 20 minutes prior to the settlement. So the last cut-off time for intraday settlements is expected to be at 12.40 p.m.

Moreover, the new system will facilitate faster settlement of the large number of transfers made by citizens in the evening, cf. Chart 2. Most of these are made after the cut-off time for the night-time settlement so at present they are not received until two days later. With the Intradagclearing, late transfers can be executed in the first settlement on the following day and be credited to the payee's account immediately afterwards.

With the implementation of this element of the modernisation project, the Danish payments infrastructure will resemble those of, for instance, Norway and Sweden, which are also based on several daily settlements.

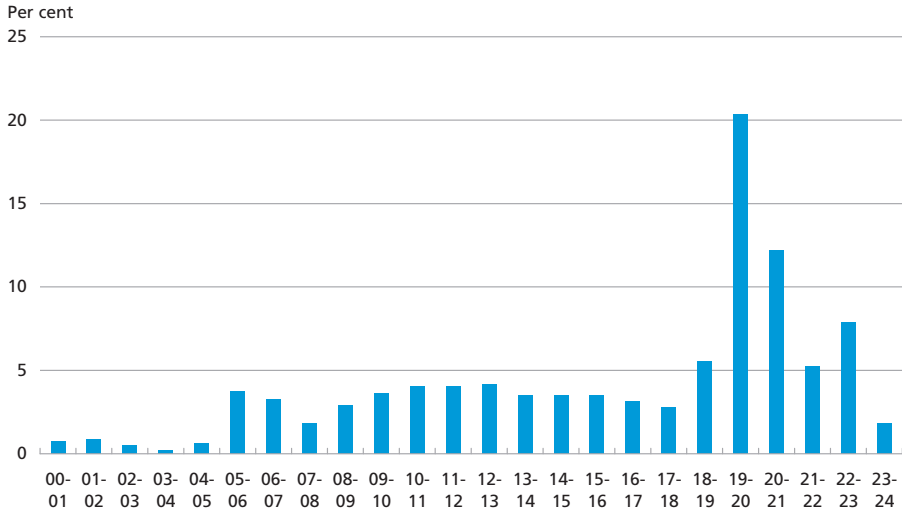
In addition to handling online transfers made by citizens, the Intradagclearing will also be handling public-sector transfers and business-sector payroll transfers, among others. Payment types such as card payments and direct debit, which will continue to be handled in the Sumclearing, could eventually be transferred to the Intradagclearing if this is considered appropriate.

Immediate payment transfers

The fourth and final element of the modernisation of the Danish payments infrastructure comprises the introduction of a new system for the settle-

BREAKDOWN OF ONLINE TRANSFERS BY TIME

Chart 2



Note: The chart shows a breakdown of retail customers' online transfers by initiation time and has been calculated on the basis of data from October and November 2011.

Source: Danish Bankers Association and Danmarks Nationalbank.

ment of payments up to kr. 500,000. This system – in the following referred to as 24/7 – will enable immediate transfers 24 hours a day, seven days a week.

The execution time for transfers settled in this system will be around 10 seconds, but in practice it may be even shorter. Consequently, the act of making payments will highly resemble the experience users have when using other electronic information services such as sending text messages and e-mails.

The system will be serving various purposes. For example, it may support the use of mobile phones for making transfers among citizens. Typically, both the payer and the payee will appreciate being able immediately to see amounts being debited from or credited to their respective accounts.

Also, the system could be useful in connection with the purchase of fairly expensive consumer goods such as cars, furniture and consumer electronics. Depending on the payment instrument used, the seller is typically only guaranteed payment up to a certain amount and is therefore often interested in ensuring that the money is received before the goods are delivered. The 24/7 system will provide an opportunity for simultaneous exchange of goods and money.

With 24/7, this part of the Danish payments infrastructure will resemble the British system, Faster Payments, introduced in 2008.

CONCLUSION

After being modernised, the Danish payments infrastructure will fully match those of comparable countries. Notably, conditions will be improved for payees, who will receive their money sooner and lose fewer interest days in connection with payments. Also, the enhanced opportunities for making immediate transfers will be useful when sellers do not want to deliver goods unless there is certainty of payment.

The overall modernisation plan for the Danish payments infrastructure will also underpin the conditions for increased penetration and use of new payment solutions such as transfers among citizens and other payments via the mobile phone. The advantages of such solutions often hinge on the possibility of transferring funds from the payer to the payee fast, preferably immediately, making an electronic payment resemble the act of sending text messages or e-mails.

Other factors than the design of the payments infrastructure may impede new payment solutions, e.g. legal restrictions. At the beginning of the year, Danmarks Nationalbank set up a Payments Council, which, as one of its first tasks, decided to examine future payment solutions in Denmark and any obstacles to the use of these. To this end the Council has set up a working group, which is expected to publish a report in 2013.