

DANMARKS NATIONALBANK

16 SEPTEMBER 2020 — NO 16

Payments before, during and after the corona lockdown



More electronic payments during corona lockdown

The lockdown and infection fears caused consumers to change their consumption patterns and payment habits radically. Cash payments fell, while contactless payments and online payments gained more ground.

[Read more](#)



The use of cash has increased gradually during the reopening

End-August, the use of cash in supermarkets saw higher numbers than during the corona lockdown, but cash was still not used to the same extent as before the lockdown.

[Read more](#)



Online payments back at pre-lockdown levels

Although online payments are back at pre-lockdown levels, consumers' payment habits online were not the same at the end of August as before corona.

[Read more](#)

Danes changed their payment habits during the corona lockdown

The corona pandemic and the lockdown of Danish society in spring 2020 gave rise to considerable uncertainty for many households as well as a sharp decline in economic activity, see Chart 1.¹ Shortly after the lockdown, the value of payments by payment card fell about 30 per cent compared with the same period last year. The lockdown and infection fears caused radical changes in consumption patterns and payment habits.

This analysis looks at consumer payment habits before, during and after the corona lockdown. The analysis is based on a number of data sources used to draw information on the main trends in payment behaviour in Denmark during the lockdown and the first phases of the reopening, see appendix 1.

The lockdown led to a decline in consumption, and the consumption that did take place was characterised by a change in payment behaviour in three different ways while society was shut down:

- Cash payments fell in supermarkets
- More contactless payments in stores
- Online payments rose sharply

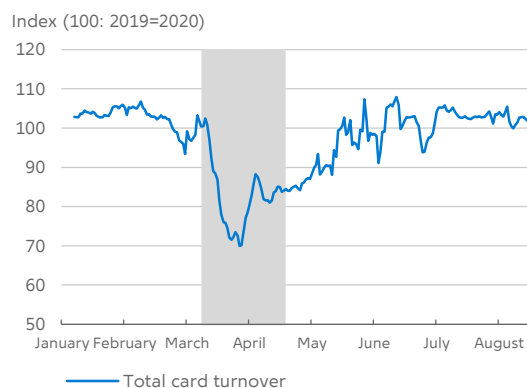
Fewer cash payments during lockdown

The use of cash in supermarkets fell significantly during the spring lockdown.² According to data from retail chains Coop Danmark and Salling Group, the proportion of cash payments fell from about 28 per cent of payments in early 2020 to just over 17 per cent of payments in mid-April, when the use of cash was at its lowest. This equates to more than one in three cash payments disappearing in spring 2020. The lion's share of this decline occurred in the first weeks of the lockdown, see Chart 2, left.

The picture of a shift away from cash during the lockdown was also seen in a survey on Danes' payment

Large decline in activity during corona lockdown

Chart 1



Note: Index=100: 2019 equals 2020. This means that the development through 2020 is shown relatively to the development through 2019. Card turnover includes transactions in Denmark using payment cards issued in Denmark. The series shows a seven-day moving average with the last observation on 23 August.

Source: Nets Denmark A/S and own calculations.

habits during the corona crisis that Danmarks Nationalbank conducted in May.³ In this survey, 30 per cent of the respondents said that they used card payments more frequently during the lockdown than in the period leading up to it. Similarly, 41 per cent replied that they used cash less frequently to pay for their purchases during the corona lockdown, see Chart 2, right.

The survey also showed that it was predominantly Danes over the age of 50 who stopped using cash payments. Pre-lockdown, this was the segment of the population that used cash most frequently.⁴

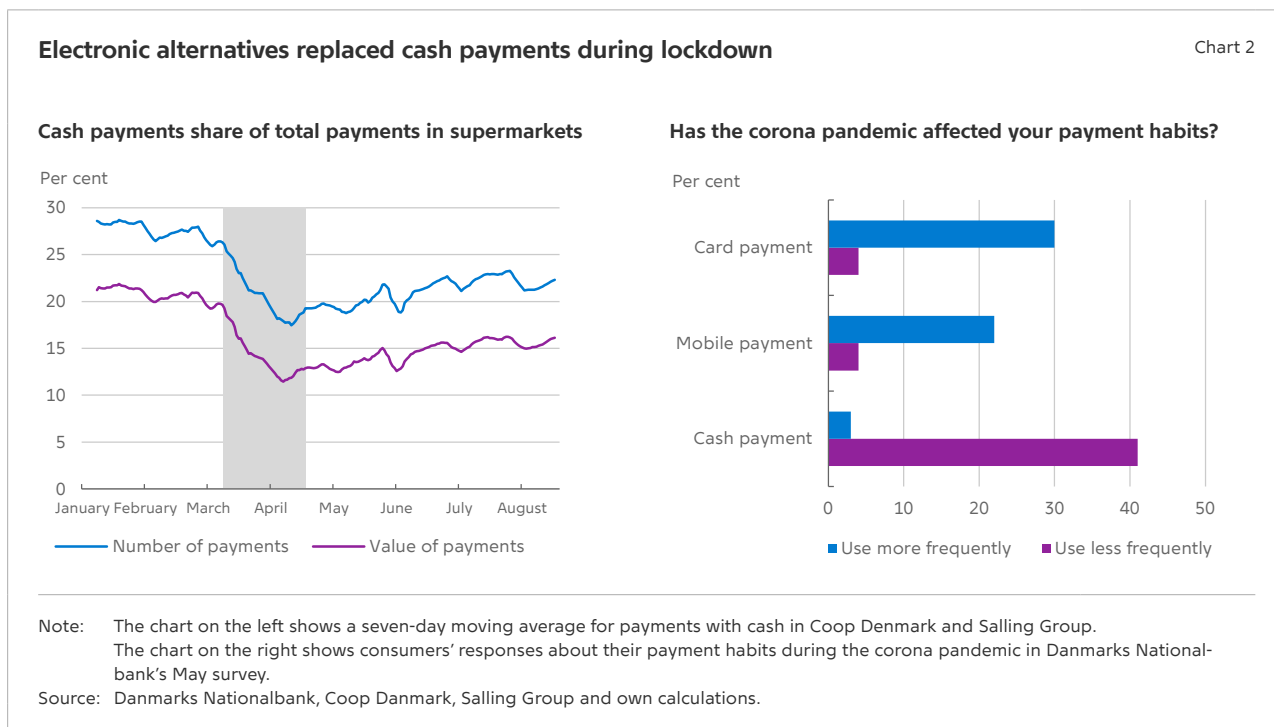
Although more people chose not to use cash during the lockdown, the Danish health authorities say

1 For more information on the economic development during the lockdown and its consequences, see Coronavirus temporarily lowers private consumption, *Danmarks Nationalbank Economic Memo*, June 2020 ([link](#)) and Prospects of gradual economic recovery, *Danmarks Nationalbank Analysis (Outlook for the Danish economy)*, June 2020 ([link](#)).

2 The majority of cash payments in physical trade are made in supermarkets.

3 The survey was conducted by Wilke in May 2020 on a representative sample of 1,021 Danes.

4 See Jakob Mølgaard Heisel, Cash payments are declining, *Danmarks Nationalbank Analysis*, No. 3, February 2020 ([link](#)).



that there is no indication that there is a particular risk of infection associated with cash. In the official guidelines, touching cash is likened to touching other contact points in the public domain such as door handles, buttons etc.⁵ Similarly, laboratory tests carried out on behalf of the European Central Bank have indicated that the coronavirus survived longer on steel surfaces such as door handles than on ordinary cotton-fibre banknotes.⁶ The shift away from cash towards electronic payments in connection with the lockdown can presumably be explained by general insecurity and fear of infection. The focus on a possible risk of infection was seen in both retailers and customers. The Danish cash rule that gives Danes the right to pay in cash has been in force throughout the period.⁷

Use of cash increased gradually through the different phases of the reopening

During spring and summer 2020, the use of cash slowly increased in supermarkets. One explanation

is that cash gradually regained ground with some of the consumers who typically preferred to pay with cash before the corona pandemic.

Comparing the average use of cash in supermarkets before, during and after the corona lockdown, it can be seen that the use of cash in supermarkets went up from an average of 19 per cent of payments during the lockdown to 22 per cent in the post-lockdown period, see Chart 3. Also, cash was not used to the same extent as before the corona lockdown.

It is still too early to say whether the corona lockdown will have lasting effects on our payment habits. Firstly, it is only a few months ago that Danish society was shut down. Secondly, the period after the reopening coincided with the summer holidays for many people, which is typically synonymous with other consumption behaviours. Furthermore, over the summer, tourists came to visit Denmark, and they may have other payment preferences. Last but not

5 See coronasmitte.dk.

6 ECB blog post, Beyond Monetary Policy – Protecting the Continuity and Safety of Payments during the Corona Virus ([link](#)).

7 See statement by the Consumer Ombudsman of 12 May 2020 ([link](#)).

least, Danish society is still characterised by restrictions and concerns about corona infection, and it remains widespread among businesses to encourage customers to pay electronically.

More contactless payments in physical trade despite already high prevalence

In Denmark, a large proportion of payments in physical trade are contactless. Even before the corona lockdown, contactless payments were widespread in Denmark, with just over seven out of 10 card transactions in physical trade being contactless in 2019. Nevertheless, according to Danmarks Nationalbank's payments statistics, the proportion of contactless payments increased by approximately two percentage points from Q1 2020 to Q2 2020, see Chart 4. A significant development is likely to have taken place during the first half of 2020 as the corona situation developed. This is also supported by data from Nets, which shows that the proportion of contactless card payments in physical trade increased by five percentage points immediately after the lockdown in March.⁸

Contactless payments may be either a card payment or a mobile payment, see Box 1.⁹ It is currently not easy to quantify whether more mobile payments in particular contributed to the increase, but mobile payments have increased in physical trade in recent years.¹⁰

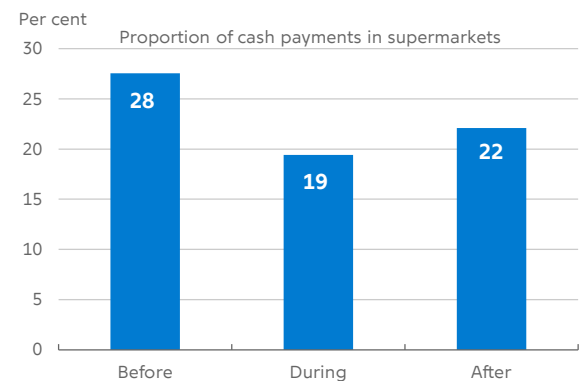
More online payments during lockdown

Online payments have been increasing for a number of years, as more and more consumers shop more online. According to Danmarks Nationalbank's payments statistics, the number of online payments increased by 11 per cent from 2018 to 2019.

During the corona lockdown in spring 2020, there was a clear shift from physical trade to e-commerce. In April, e-commerce was so widespread that it

Cash is not used to the same extent as before the corona lockdown

Chart 3

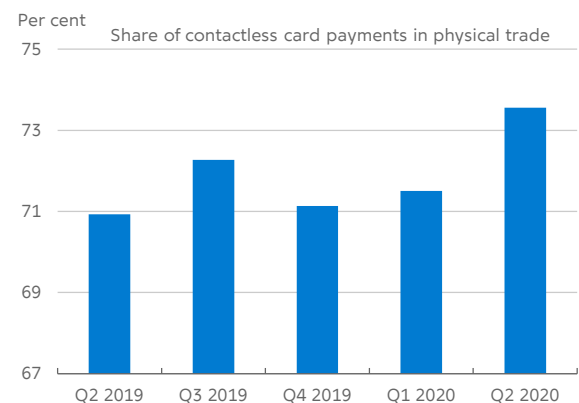


Note: 'Before' indicates the period from the end of the year through week 10. 'During' indicates the period from week 12 and until the reopening of restaurants, cafes etc. in phase 2 on 18 May. 'After' indicates the period from 18 May until the last data observation of the analysis on 23 August.

Source: Coop A/S, Salling Group A/S and Danmarks Nationalbank.

Contactless payments increased during lockdown

Chart 4



Source: Danmarks Nationalbank.

⁸ See press release from Nets, 'Markant vækst i kontaktløse betalinger' (Significant growth in contactless payments), 20 May 2020 ([link](#)).

⁹ Contactless technology was introduced in 2014 on international payment cards, while the first contactless Dankort was introduced in summer 2015.

¹⁰ In 2019, one in 10 payments in physical trade was a mobile payment. For more information, see Jakob Mølgaard Heisel and Stefan Bak Pedersen, Danes primarily opt for electronic payment solutions, *Danmarks Nationalbank Analysis*, No. 15, September 2020 ([link](#)).

accounted for more than 40 per cent of total card turnover at the beginning of the month, see Chart 5. This was about 10 percentage points higher than in previous months.

The shift towards more e-commerce can likely be explained by both a reduction in the number of consumption options in physical trade due to restrictions in society and by a change in demand caused by, among other things, the risk of infection and general uncertainty.¹¹

Comparing the average volume of online payments before, during and after the corona lockdown, online payments have stabilised at about 27 per cent of total card turnover in the post-lockdown period, excluding card turnover from hotel and travel activity. This corresponds to the e-commerce levels before the lockdown, see Chart 6.

Online payments are back to pre-lockdown levels, but the consumption pattern is not as before corona

At the end of August, the total volume of online payments had returned to pre-corona lockdown levels. This does not mean, however, that e-commerce usage is the same as before the corona lockdown. During and after the lockdown, consumers paid for far fewer trips and hotel stays online. Turnover in the hotel and travel industry accounted for 3 per cent of total online card turnover during and after the lockdown, compared with 16 per cent in the period leading up to the lockdown.¹² Thus, seen in isolation, the lack of travel activity contributed to the decline in the total volume of online payments. At the same time, after the lockdown, consumers continued to buy more other goods online than before, such as household goods and services and groceries.¹³

The payments illustrate the continued change in the consumption mix after the lockdown, partly in

11 Sales in supermarkets and demand for takeaway surged at the expense of restaurants and bars that were shut down. In April, restaurants, bars and the like saw a reduction of about 60 per cent in total card turnover compared to 2019 levels. For more details, see Coronavirus temporarily lowers private consumption, *Danmarks Nationalbank Economic Memo*, June 2020 ([link](#)).

12 Data and period delimitation are based on Chart 6 of the analysis.

13 For more information on consumption patterns during the corona pandemic, see Danmarks Nationalbank, Coronavirus temporarily lowers private consumption, *Danmarks Nationalbank Economic Memo*, June 2020 ([link](#)).

Contactless payments and e-commerce

Box 1

Consumers have a number of options when paying for an item by electronic means. However, regardless of how the consumer initiates payment, the payment transaction is carried out either as a card payment or a credit transfer in the payments infrastructure. For example, payments with Apple Pay and Google Pay are technically made as card payments, while payments with MobilePay are made as credit transfers when the solution is used in physical trade, and as card payments when the solution is used online.

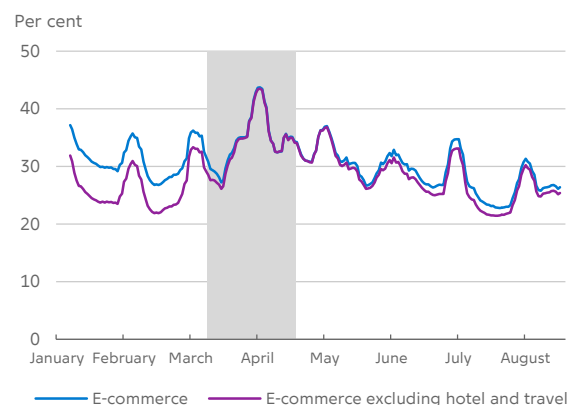
The analysis is based on information from the card infrastructure. This means that contactless payments in the analysis include all card payments in physical trade, i.e. also mobile payments from Apple Pay and Google Pay, while payments made with, for example, MobilePay, are not included.

Conversely, all mobile payment solutions are included in e-commerce, as all these payments are made as card payments¹.

1. The method used in the analysis is different from that used in Jakob Mølgaard Heisel and Stefan Bak Pedersen, Danes primarily opt for electronic payment solutions, *Danmarks Nationalbank Analysis*, No. 15, September 2020, where the payment types were categorised from the user perspective.

Consumers switched to e-commerce during lockdown

Chart 5



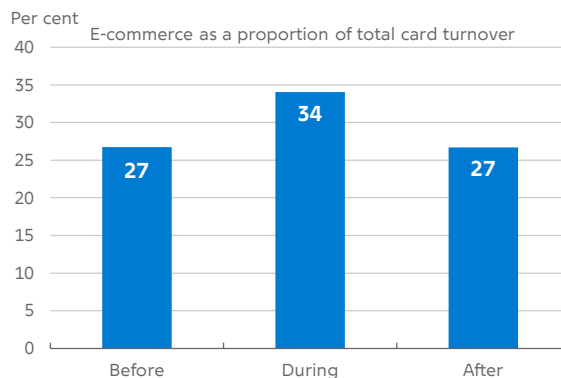
Note: The chart shows e-commerce as a share of total card turnover based on a seven-day moving average. The chart is not adjusted for seasonal fluctuations over the year. For more information on e-commerce, see Box 1.
 Source: Nets Denmark A/S.

the form of a shift towards more VISA and Dankort transactions in total online card turnover and fewer credit card payments.¹⁴ This is probably mainly due to the low turnover within hotel and travel, as these are more often paid for using credit cards.

Danes' consumption patterns and payment behaviour online were thus still affected by the corona pandemic at the end of August. This is true even though the volume of e-commerce at the aggregate level was back to pre-corona lockdown levels.

Online payments are back to pre-lockdown levels, but the consumption pattern is not as before corona

Chart 6



Note: E-commerce excluding hotel and travel. 'Before' indicates the period from the beginning of January through week 10. 'During' indicates the period from week 12 and until the reopening of restaurants, cafes etc. in phase 2 on 18 May. 'After' indicates the period from 18 May until the last data observation of the analysis on 23 August. The chart is not adjusted for seasonal fluctuations. E-commerce includes seasonal fluctuations over the year, as Danes make online payments more frequently in the first three months of the year.

Source: Nets Denmark A/S.

¹⁴ For more information on the development of the use of payment cards online, see Danmarks Nationalbank's payments statistics, table DNBST5.

Appendix 1

Corona lockdown and reopening phases

Box A

Lockdown:

11 March: Denmark temporarily shut down. All public employees with non-critical functions were sent home. All schools, day care centres and institutions were closed. Gatherings of more than 1,000 people were banned.

14 March: Denmark closed its borders to persons without Danish citizenship or a legitimate purpose.

17 March: The assembly ban was reduced to 10 people. Malls, hairdressers, restaurants etc. were ordered to shut down.

Reopening

Phase 1:

15 April: Nurseries, kindergartens, leisure facilities and schools for pupils in class 0 to class 5 reopened.

20 April: Reopening of certain professions such as hairdressers and dentists as well as the courts.

Phase 2:

11 May: Reopening of retail stores, including malls from 18 May.

18 May: Restaurants, cafes, libraries and schools for older pupils reopened.

27 May: In the regions west of the Great Belt, all public employees were allowed to go back to their physical workplaces.

Phase 3:

8 June: The assembly ban was increased to 50 people. For major events such as weddings and the like, the assembly ban was increased to 500 people. Gyms and fitness centres, swimming pools and sports halls reopened.

15 June: Entry for tourists from Norway, Iceland and Germany was reopened. Public employees in the Capital Region and Region Zealand were allowed back to work.

27 June: Entry for tourists from countries with a low effective reproductive rate was reopened.

8 July: The assembly ban was increased to 100 people.

Phase 4:

14 August: The six-day rule for tourists was abolished, and the opening hours for restaurateurs were extended to 2 a.m. on the condition that no new guests were let in after 11 p.m.

Note: This edition closed for contributions on 23 August 2020.

Source: The Danish Health Authority and the Ministry of Foreign Affairs.

PUBLICATIONS



NEWS

News offers a quick and accessible insight into an Analysis, an Economic Memo, a Working Paper or a Report from Danmarks Nationalbank. News is published continuously.



ANALYSIS

Analysis from Danmarks Nationalbank focuses on economic and financial matter. Some of the analyses are published with a regular frequency e.g. *Outlook for the Danish economy and Financial stability*. Other analyses are published continuously.



REPORT

Report comprises recurring reports and reviews of the functioning of Danmarks Nationalbank. For instance Report includes the *Annual report* and the annual publication *Danish government borrowing and debt*.



ECONOMIC MEMO

Economic Memo is a cross between Analysis and Working Paper and it often shows the ongoing study of the authors. The publication series is primarily targeted at professionals. Economic Memo is published continuously.



WORKING PAPER

Working Paper presents research projects by economists in Danmarks Nationalbank and their associates. The series is primarily targeted at professionals and people with an interest for academia. Working Paper is published continuously.

The analysis consists of a Danish and an English version. In case of doubt regarding the correctness of the translation the Danish version is considered to be binding.

DANMARKS NATIONALBANK
LANGELINIE ALLÉ 47
DK-2100 COPENHAGEN Ø
WWW.NATIONALBANKEN.DK

This edition closed for
contributions on 23 August 2020



**DANMARKS
NATIONALBANK**

Jakob Mølgaard Heisel
Retail Payments Expert
jmhe@nationalbanken.dk

Marianne C. Koch
Head of Retail Payments
and Data
mck@nationalbanken.dk
FINANCIAL STABILITY

Stefan Bak Pedersen
Economist
STATISTICS

CONTACT

Ole Mikkelsen
Communications
and Press Officer

omi@nationalbanken.dk
+45 3363 6027

SECRETARIAT
AND COMMUNICATIONS