

## The impact of the Covid-19 pandemic on domestic payment habits – Part 2

**Vivien Deák – Kristóf Takács – Lóránt Varga:**

### ***The impact of the Covid-19 pandemic on changes in electronic payments during January–June 2020***

*In 2020, the Covid-19 pandemic caused significant economic and social turbulence, which also strongly affected payment habits. Therefore, the Magyar Nemzeti Bank (The Central Bank of Hungary) is publishing a comprehensive analysis of domestic payments, the aim of which is to present the effects of the Covid-19 pandemic and related measures in terms of both cash and electronic payments. In the [first part<sup>1</sup>](#) of the two-part series, the Bank presented developments in cash payments between January and August 2020, whereas in this study we are analysing the effects of the pandemic on electronic payments in the first half of 2020.*

*Because of the Covid-19 pandemic, the turnover of most payment methods declined in the first half of 2020. Due to the general caution on travel and the restrictions imposed, the largest decrease was seen in cross-border payments in physical retail situations and domestic transactions with foreign-issued cards. By contrast, both the number and value of online card payments showed an extraordinary increase during this period. In terms of card types, transactions with domestically issued credit cards declined much more than debit card payments with only a very moderate decrease. A part of electronic payments was regrouped from the range below HUF 5,000 into the higher value ranges due to the increase in the average value of consumption baskets. As a result of raising the limit for contactless payments without a PIN code to HUF 15,000, 91 per cent of card transactions could be paid without a physical connection.*

*Due to the significant decrease in cash payments and the moderate decline in card purchases, the proportion of the number and value of electronic transactions increased significantly within payments registered on online cash registers in the first half of 2020. It can therefore be said that the need for electronic payments was amplified by the pandemic situation, but only in the longer term will it be possible to determine how much of the faster increase will be lasting. At the same time, a further increase in the proportion may be supported by the introduction of mandatory acceptance of electronic payments in retail on 1 January 2021 and by the increased market penetration and spread of convenient, fast and cheap payment solutions based on instant payment.*

#### **1. INTRODUCTION**

In our study, we analyse the effects of the Covid-19 pandemic on electronic payments. For this, we have used data from the data collection from domestic banks, transaction data of domestic

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<sup>1</sup> The first part is only available in Hungarian.

payment systems and the National Tax and Customs Administration of Hungary's online cash register database containing receipt data for the first half of 2020. Bank data collection describes transactions with domestically issued payment cards in different breakdowns, such as location (purchase at physical acceptance point/online purchase; foreign-/domestic transaction) or type of card. Furthermore, on the basis of transactions carried out in the Hungarian payment card acceptance network, transactions with cards issued domestically and abroad in Hungary can be examined separately. From the receipt-level transactions of online cash registers, the proportion of transaction purpose card and cash use at merchants obliged to use an online cash register in Hungary can be examined broken down by different regions or value categories.

In the second chapter, we present the main changes in the development of electronic payment turnover at the aggregate level, and then in the third chapter, based on the bank data collection, we analyse in more a detailed breakdown what changes took place during the wave of the virus in the first half of 2020. Next, in the fourth chapter, based on the receipt data of merchants and service providers obliged to use an online cash register, we are illustrating developments in the proportion of card and cash in various – monthly, regional and value-based – breakdowns.

## **2. CHANGES IN THE TURNOVER OF ELECTRONIC PAYMENT METHODS**

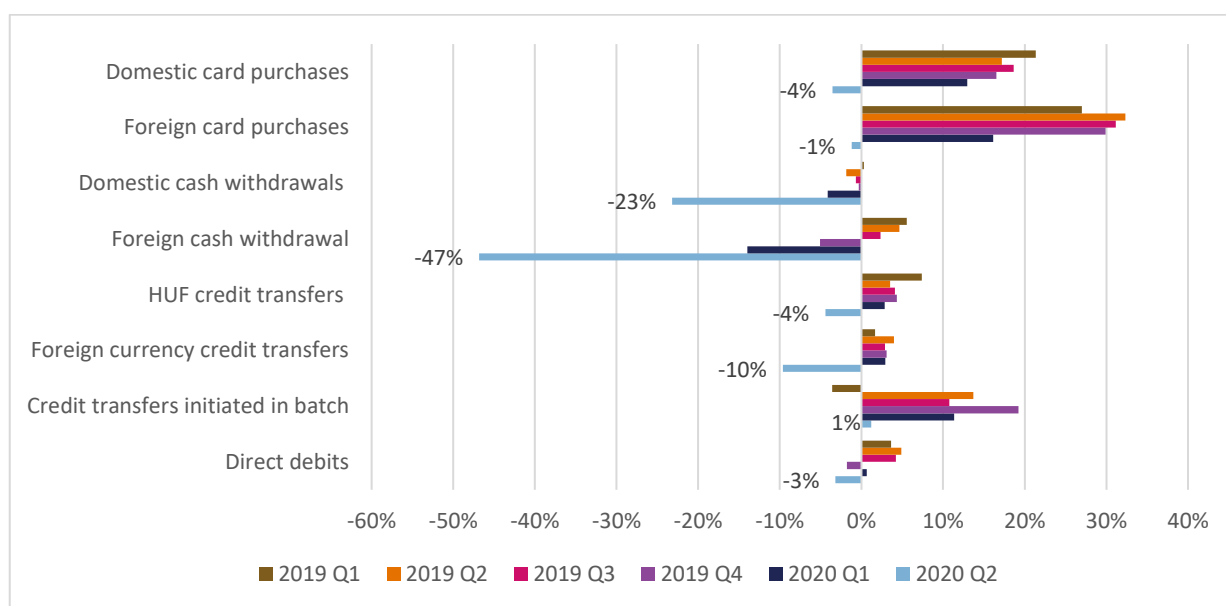
### **2.1. Card payments**

Because of the protracted Covid-19 pandemic, there was a notable decline in the turnover of most payment methods due to consumers' precautionary considerations and a slowdown in economic activity. In that context, in addition to the significant decrease in cash payments, the previous dynamic expansion of purchases with domestically issued payment cards also came to a halt. While the annual change in the value of transactions carried out in the first quarter of 2020 still reached the value of 23 per cent typical of the previous year, the second quarter showed only a much lower increase of 9 per cent. In terms of the number of purchases, annual growth of around 20 per cent typical of 2019 declined to 13 per cent already in the first quarter of 2020, and then the number of transactions decreased by 3 per cent in the second quarter compared to the same period in 2019. As a result, in the second quarter of 2020, customers made a total of 236 million purchase transactions with domestic cards, in a total value of HUF 2,018 billion.

Within the total number of purchases, the previous growth rate of the number of domestic card transactions, the number of foreign card transactions and the value of foreign transactions also declined in the first quarter of 2020 (Chart 1), while the growth rate of the value of domestic purchases during the period was slightly higher than in the same period in 2019. Then, in the second quarter, the growth rate of the value of domestic purchases also moderated, even though it still reached 12 per cent. In the other cases, however, there was a decrease: the number of purchases made with domestic payment cards in Hungary fell by 4 per cent, whereas the number of cross-border physical and online purchases declined by 1 per cent and their value by 11 per cent in the second quarter compared to the same period of the previous year.

In the second quarter of 2020, there was a sharp decline in terms of cash withdrawals with domestic payment cards, which had shown a slight downward trend to date in the annual change. The number of domestic cash withdrawals declined by 23 per cent and the value of cash withdrawn decreased by 13 per cent compared to the second quarter of 2019. In the case of foreign cash withdrawal transactions, the decline was 47 per cent and 37 per cent, respectively.

**Chart 1: Changes in the number of electronic transactions in 2019 and the first half of 2020 compared to the same period of the previous year**



## 2.2. Credit transfers and batch transactions

Within credit transfers initiated at Hungarian payment service providers, in the second quarter of 2020, the number of HUF credit transfers decreased by 4 per cent, while their value declined by 3 per cent compared to the same period of the previous year, which is not drastic compared to an increase of 4 per cent and a decline of 2 per cent, respectively, observed in the second quarter of 2019. In the case of foreign currency credit transfers, despite the 10 per cent decrease in the number of transactions, there was a 21 per cent increase in value, which is a significant increase after a 4 per cent decline in the second quarter of 2019.

The decline in HUF credit transfers affected the intraday and instant payment systems the most. The number of small value (HUF 0–50,000) credit transfers within the turnover of these systems exceeded the value for 2019 to a significant extent, for example by 13 per cent in March, which increased by a further 4 per cent in April, while in the other value ranges there was already a decrease of 2–8 per cent in April. This may suggest that, partly due to the pandemic situation, a part of low-value cash transactions may have been channelled into the instant payment system launched in early March 2020.

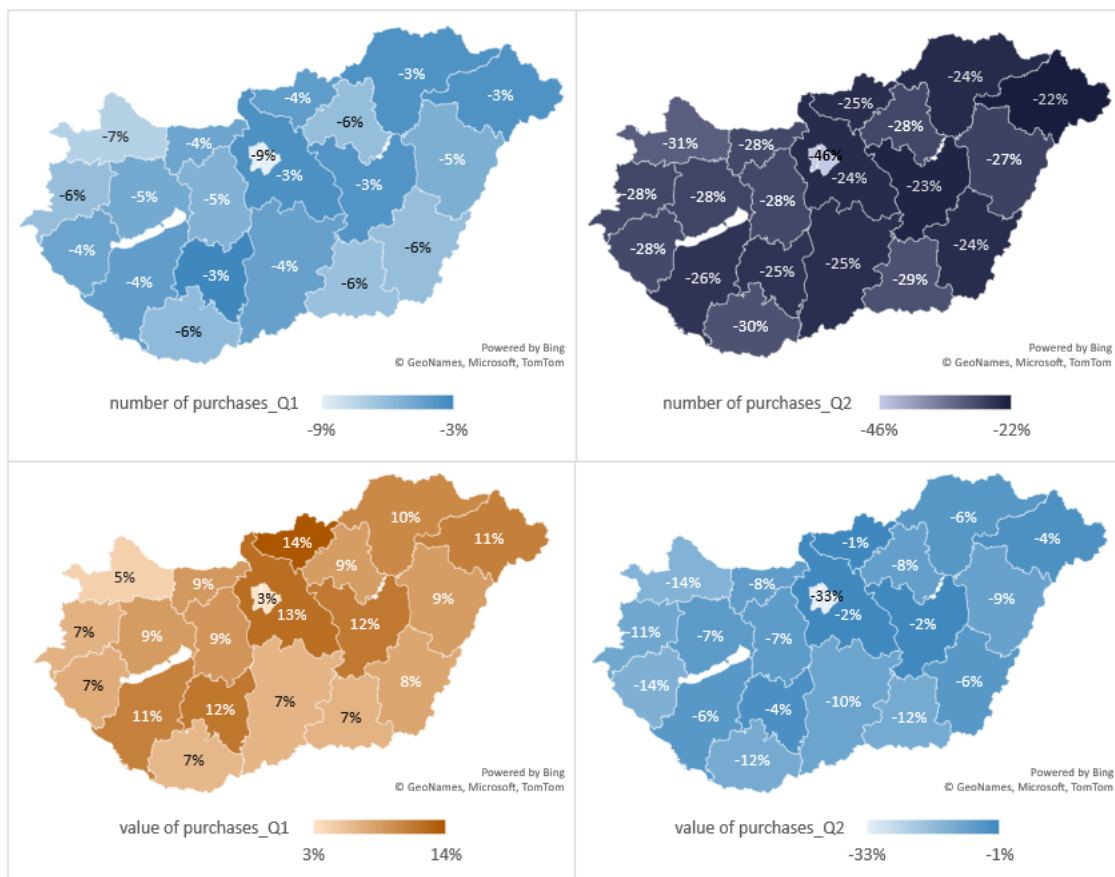
Batch items consist mainly of wage payments, loan repayments, bill payments and other regular credit transfers, and thus these transactions include a significant portion of transactions paid by or sent to companies. In the case of batch credit transfers, we have seen an increase in both the

number and the value. The rates were 1 per cent and 10 per cent, respectively. This is much lower than the 14 per cent increase in the number of transactions in the second quarter of 2019, but in terms of value, the growth rate did not change. In the second quarter of 2020, the number and value of direct debits, in contrast to batch credit transfers, decreased by 3 per cent and 9 per cent, respectively, while a year earlier this type of transaction was characterised by an increase of 5 per cent and 9 per cent, respectively.

### 2.3. Online cash register payment turnover

The number and value of purchases registered on online cash registers and vending machines fell significantly during the virus period. While in the first quarter, the number of purchases already decreased by 6 per cent, but their value still increased by 8 per cent, in the second quarter there was already a decrease of 31 per cent and 14 per cent, respectively, at the national level. Within this, the number and value of cash payments fell more significantly, by 36 per cent and 23 per cent, respectively. The decline in the number of card purchases was smaller, at 10 per cent, and the value of card purchases was able to rise by 3 per cent even in the second quarter of 2020. Looking at the changes in the total purchase transactions (made with cash and electronic payment methods) regionally, we can say that in the second quarter, the biggest decline – 46 per cent in number and 33 per cent in value – was in Budapest. In other regions, the rate of decline was between 22 and 30 per cent in number and between 1 and 14 per cent in value (Chart 2).

**Chart 2: Changes in number and value of purchases in the first and second quarter of 2020**



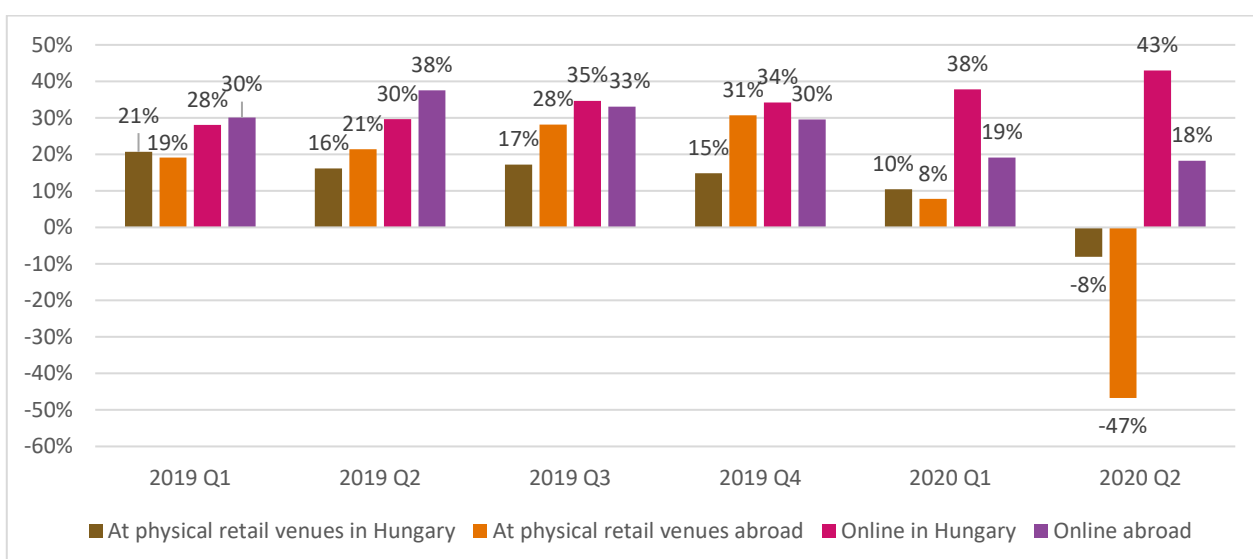
### 3. CHANGES IN CARD PAYMENT TURNOVER

#### 3.1. Card purchases made online and at physical retail venues

In terms of payments, the clear winners of the protracted Covid-19 pandemic were the domestic online retailers. Internet purchases – even compared to the previous ones – grew significantly in the second quarter of 2020. In Hungary, with respect to the number of transactions, the expansion was 43 per cent, surpassing even the 30 per cent increase seen in the second quarter of 2019, and in terms of value, after the 42 per cent increase, the expansion was almost 50 per cent compared to the same period of the previous year (Chart 3). For cross-border online transactions, the data shows growth of 18 per cent and 12 per cent, respectively, which is lower than the 38 per cent and 43 per cent growth observed in the second quarter of 2019, respectively. In terms of number and value of domestic payment card purchase transactions, the share of online purchases as a whole, exceeded 19 per cent in Hungary and 27 per cent abroad.

As far as payments at physical retail venues are concerned, domestically, after an annual increase of nearly 20 per cent in both the number and value of transactions, which had been typical of the previous year, there was an 8 per cent drop in the number of transactions, while the value of purchases still showed an expansion of more than 5 per cent in the second quarter of 2020 compared to the same period of the previous year. Consequently, the value per card payment increased notably, from HUF 6,703 to HUF 7,669. This is presumably due to government measures, consumers’ precautionary considerations and slowing economic activities, which resulted in significantly fewer visits by customers to physical shops and, subsequently, an increase in the size of the average consumption basket. Because of the general caution on travel and the restrictions imposed, there can be seen a significant decline, mainly in cross-border transactions in physical retail situations, where the number of transactions was nearly 47 per cent below and their value was 60 per cent below the data for the same period of the previous year.

**Chart 3: Changes in the number of transactions made at physical retail venues and online in Hungary and abroad compared to the same period of the previous year**

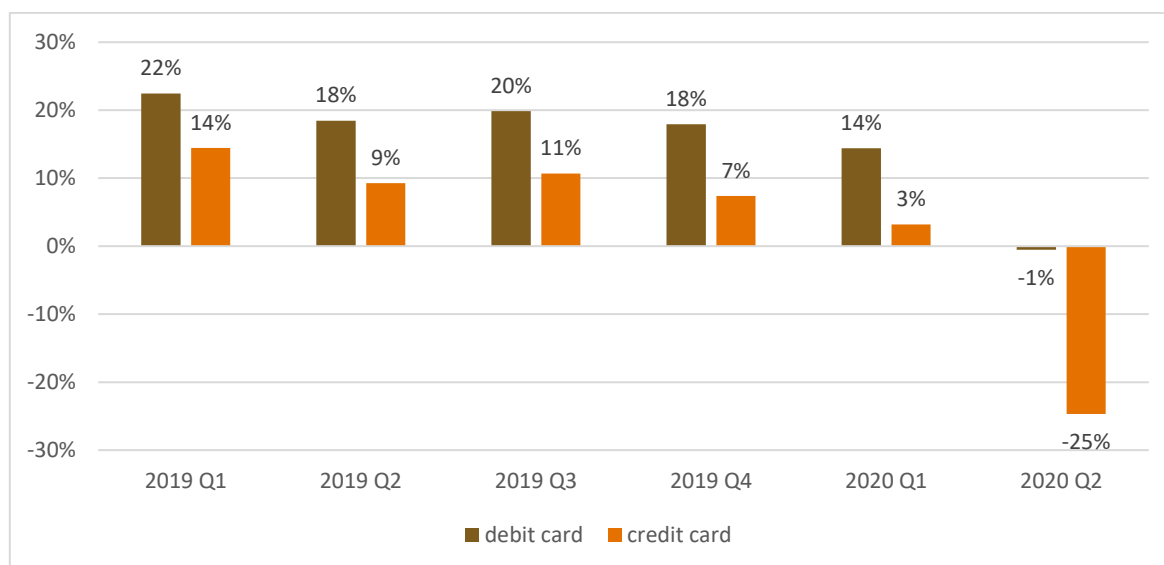


As for the distribution of transactions with domestic cards between physical and online purchases, while the share of online payments increased by 2 percentage points in the second quarter of 2019, the growth rate in the second quarter of 2020 was already at 5 percentage points compared to the same period of the previous year. Thus, in the second quarter of 2020, the share of online payments within all transactions was already 19 per cent, i.e. almost every fifth card payment was related to online shopping. Looking at the changes in the proportion separately, in domestic and foreign terms, we can see that, while domestically the change was smaller – 4 percentage points – in foreign countries, the data shows 14 percentage points. Therefore, the share of online payments within all card payments was 13 per cent domestically and 84 per cent abroad.

### 3.2. Purchases made with domestically issued payment cards by card type

After examining the transactions within card payments by type of card, it can be concluded that the number of credit card transactions decreased more – by 25 per cent – and that of debit card transactions declined by only 1 per cent in the second quarter of 2020 compared to the same period of the previous year (Chart 4). In terms of the relative proportions of debit card transactions and credit card transactions within all transactions, the proportion of debit cards to credit cards increased by an average of 1 percentage point in the quarters of 2019 compared to the previous year’s proportion, and in the second quarter of 2020 this proportion change was 3 percentage points. Thus, the share of transactions with debit cards was 90 per cent, while that of transactions with credit cards was 10 per cent within all transactions made with domestically issued payment cards in the second quarter of 2020.

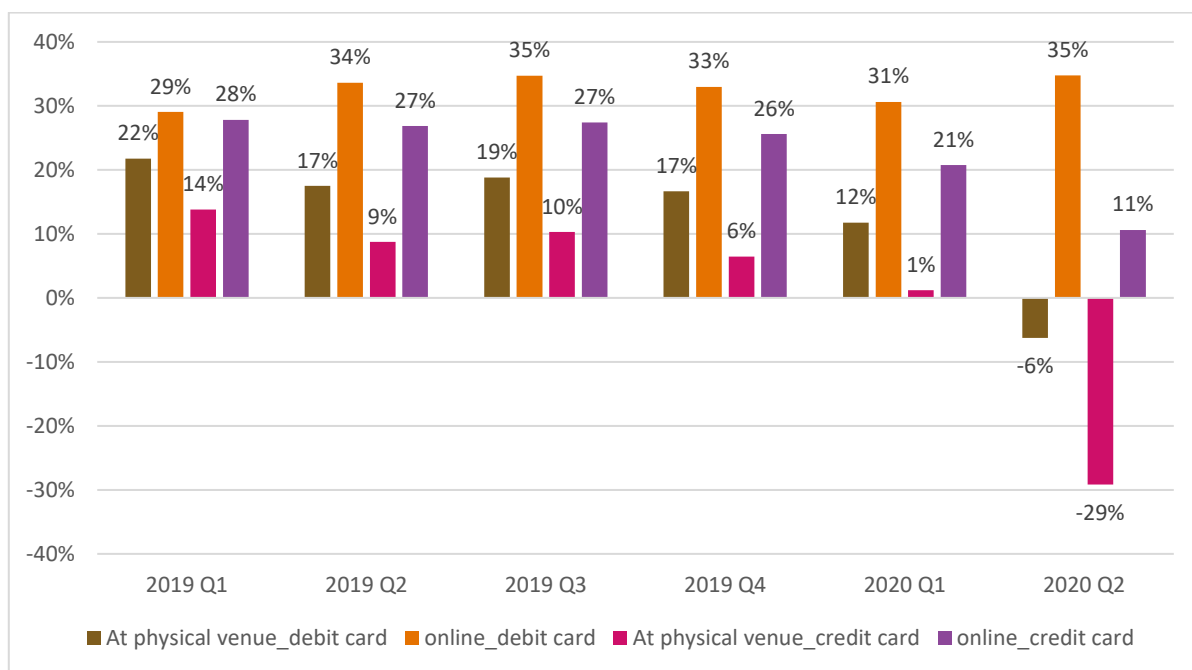
**Chart 4: Annual change in the number of debit and credit card purchase transactions between the first quarter of 2019 and the second quarter of 2020**



Looking at debit and credit card transactions by venue, we can see that the number of domestically issued debit card transactions at physical acceptance points decreased by 6 per cent, while in online space it increased by 35 per cent. In terms of value, the growth was 8 per cent and 47 per cent, respectively (Chart 5). For credit card transactions, regarding their

number, there was a 29 per cent decrease at physical acceptance points, an 11 per cent increase in online purchases, and in terms of value, there was a 16 per cent decrease and a 32 per cent increase. Looking separately at the proportion of debit and credit card transactions at physical acceptance points and within online transactions, it can be stated that the share of debit card transactions grew at a slightly faster rate: by 3 percentage points at physical points and by 2 percentage points in online space in the second quarter of 2020 compared to the 0.5–1 percentage point change in 2019. Thus, the share of debit card transactions within all card payments was 90 per cent at physical points and 92 per cent in online space.

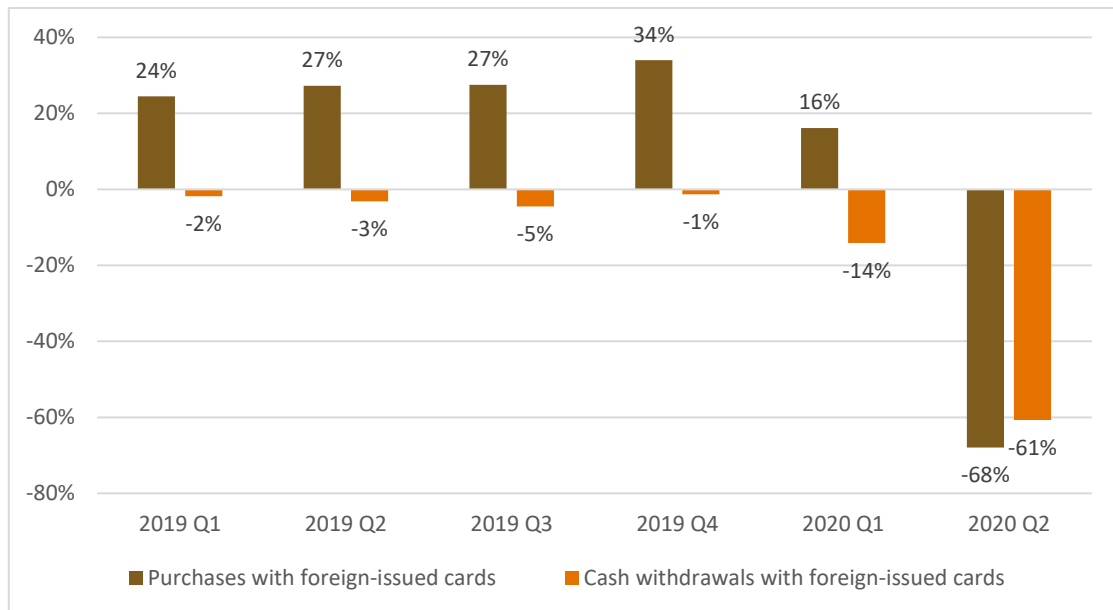
**Chart 5: Annual change in the number of debit and credit card purchase transactions between the first quarter of 2019 and the second quarter of 2020 by transaction venue**



### 3.3. Payments made with domestic and foreign cards in Hungary

In addition to payments made with domestically issued cards, we have also examined transactions made with foreign cards in Hungary. The impact of travel-related restrictions can also be clearly seen in this breakdown, the number and value of purchases made with foreign-issued cards declined significantly. In both cases, there was a 68 per cent decrease in the second quarter of 2020 compared to the same period of the previous year (Chart 6). As a result, during this period, the share of purchases made with domestically issued cards increased by almost 5 percentage points to 98 per cent within card purchases in Hungary. The number and value of cash withdrawals with foreign-issued cards in our country fell sharply, by 61 per cent and 47 per cent, respectively.

**Chart 6: Changes in the number of transactions with foreign-issued cards in Hungary compared to the same period of the previous year**



#### 4. CHANGES IN THE PROPORTION OF PAYMENT METHODS

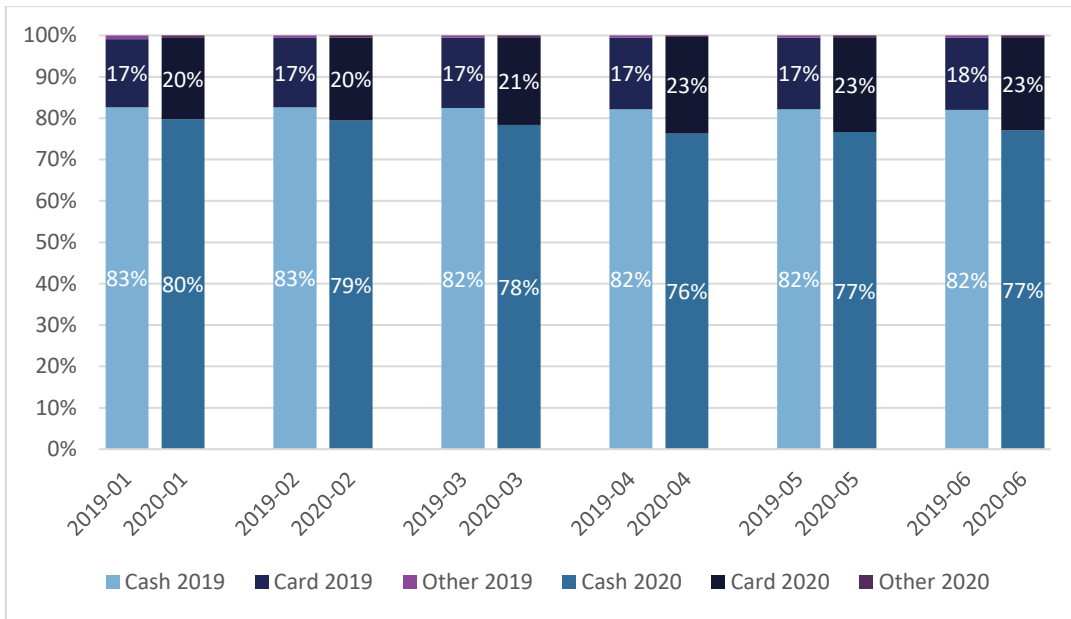
As for payments made in retail sales and in case of using other services in Hungary, we have examined them in more detail on the basis of a database of receipt-level data on online cash registers operated by the National Tax and Customs Administration of Hungary. In addition to changes in the aggregate values, we have also analysed the changes in the proportion of payment methods in terms of regional, temporal and value-based categories.

##### 4.1. Aggregate changes in the proportion of payment methods

Because of the changed payment habits due to the Covid-19 pandemic, the share of card purchases within the payments made on online cash registers increased much more than in the previous years. As a result, the share of card payments in the second quarter of 2020 was already 23 per cent compared to the 17 per cent in the previous year (Chart 7). Accordingly, in the second quarter, the share of cash payments fell to 77 per cent from the 82 per cent of the previous year.

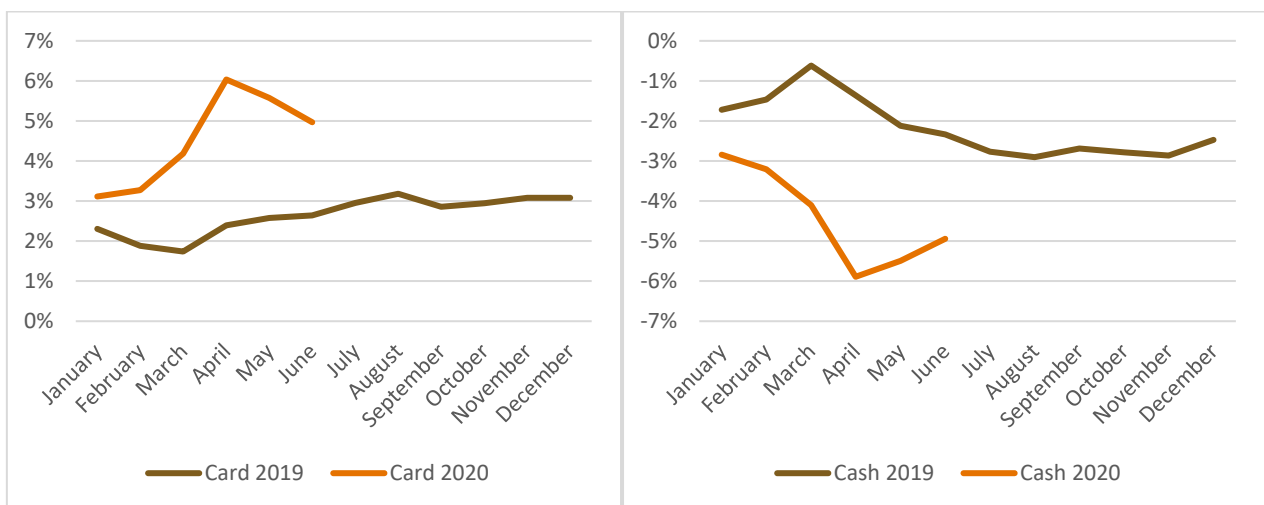


**Chart 7: Proportion of payment methods in the first half of 2019 and 2020**



In addition to the annual change, the monthly shifts also show that the share of card payments increased notably as early as March, but mainly in April, compared to the previous months (Chart 8). Although the growth rate of the proportion of card payments decreased somewhat in May and June compared to the same period of the previous year, the annual increase in the proportion of around 5 percentage points in June was still significantly higher than the 2–3 percentage point growth observed in previous years. This may mean that, while cash remains the most commonly used household payment method, as a result of the changed payment habits in the pandemic situation, some of the substantial increases in the proportion of electronic payment methods may become fixed permanently. However, at present, we cannot estimate the expected extent of this, because we do not yet have enough information to do so.

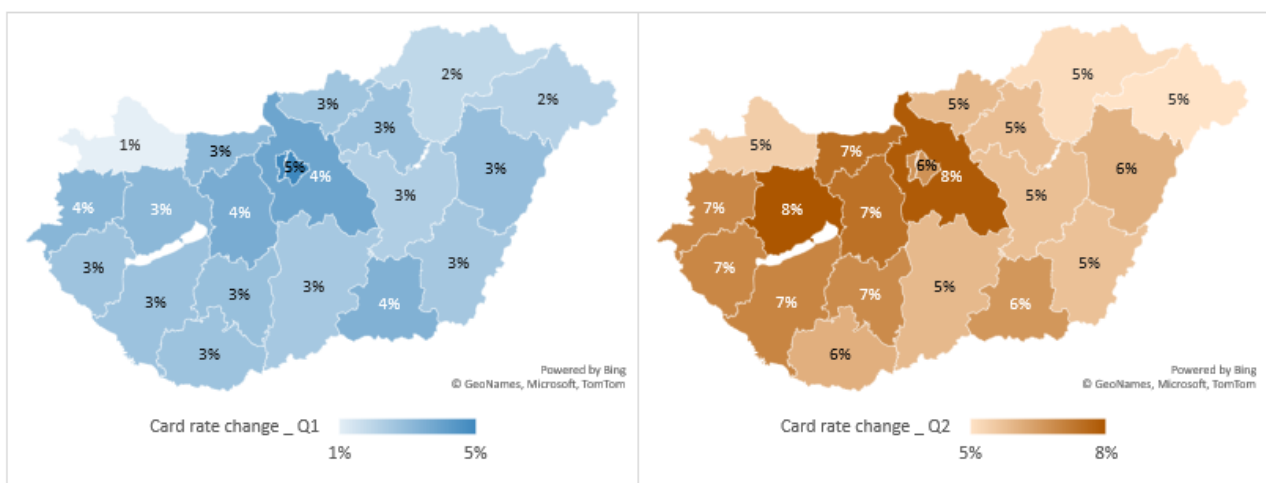
**Chart 8: Percentage point changes in the proportion of card and cash payments in the first half of 2019 and 2020 compared to the same period of the previous year**



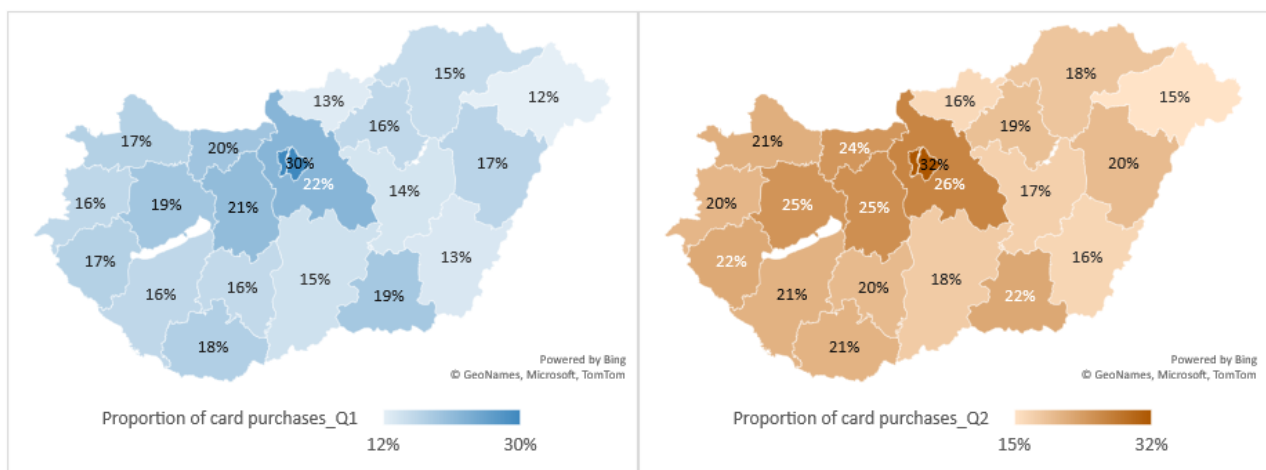
## 4.2. Regional changes in the proportion of card payments

The upward trend in the share of card payments within the number of purchases was regionally different. In the first quarter of 2020, an increase of 1 to 5 percentage points was observed, and in the second quarter, the annual change was between 5 and 8 percentage points (Chart 9). While in the first quarter, the largest increase was in Budapest, in the second quarter, it was observed in Pest County and Veszprém County. Thus, the 12 to 30 per cent card usage proportion in the first quarter of 2020 ranged from 15 to 32 per cent in the second quarter of 2020 in the regions (Chart 10). In both quarters, Szabolcs-Szatmár-Bereg County had the lowest card usage proportion, and the highest one was observed in Budapest and Pest County.

**Chart 9: Percentage point changes in the proportion of card purchases in the first and second quarter of 2020 compared to the same period of the previous year**



**Chart 10: Proportion of card purchases in the first and second quarter of 2020 compared to the same period of the previous year**

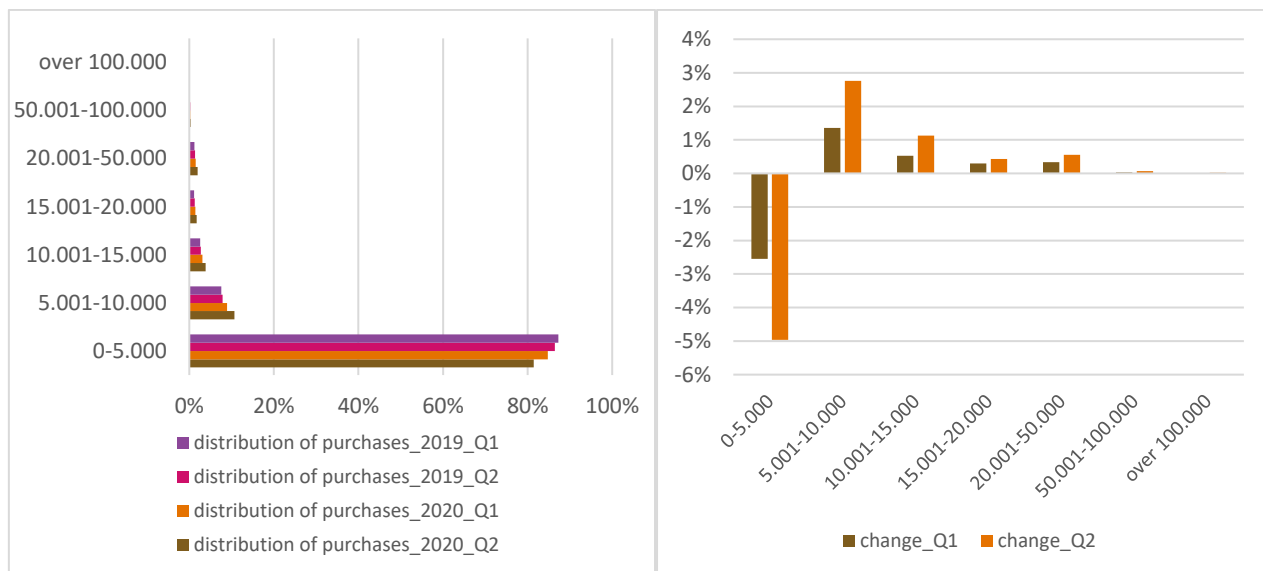


## 4.3. Distribution by value threshold

When examined by transaction value threshold, a large proportion – 96 per cent – of purchases in the first half of 2020 were below HUF 15,000. In the second quarter, the proportion of purchases in the ranges of different values changed more than usual. A part of purchase transactions was

regrouped from the range below HUF 5,000 into the higher value ranges, probably because of the changed purchasing habits due to the virus (Chart 11).

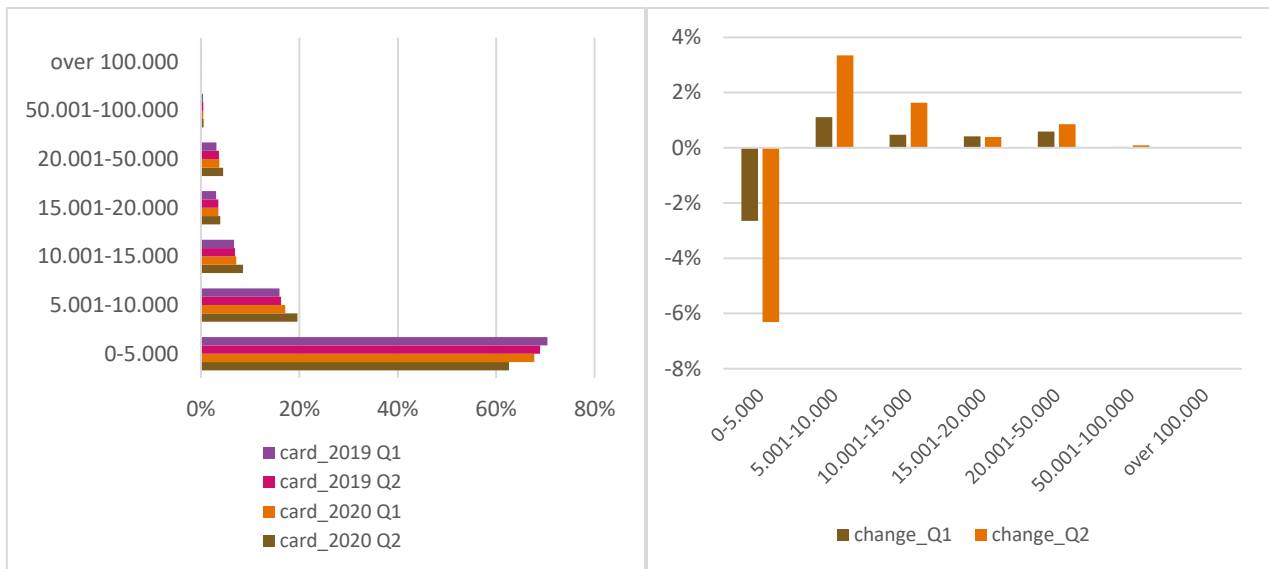
**Chart 11: Distribution of the number of purchases and annual percentage point change in the distribution within the given payment categories**



We have also looked at the distribution of payment categories specifically for cards. It is also true for card payments that in the first half of 2020, 91 per cent of them were below HUF 15,000. Within this, in the more detailed value categories, however, the proportions differ more from the distribution of all purchases (Chart 12). While 81 per cent of all purchases are below HUF 5,000, this proportion is only 63 per cent for card payments, i.e. a larger value of payment is more typical for card purchases than for cash payments.

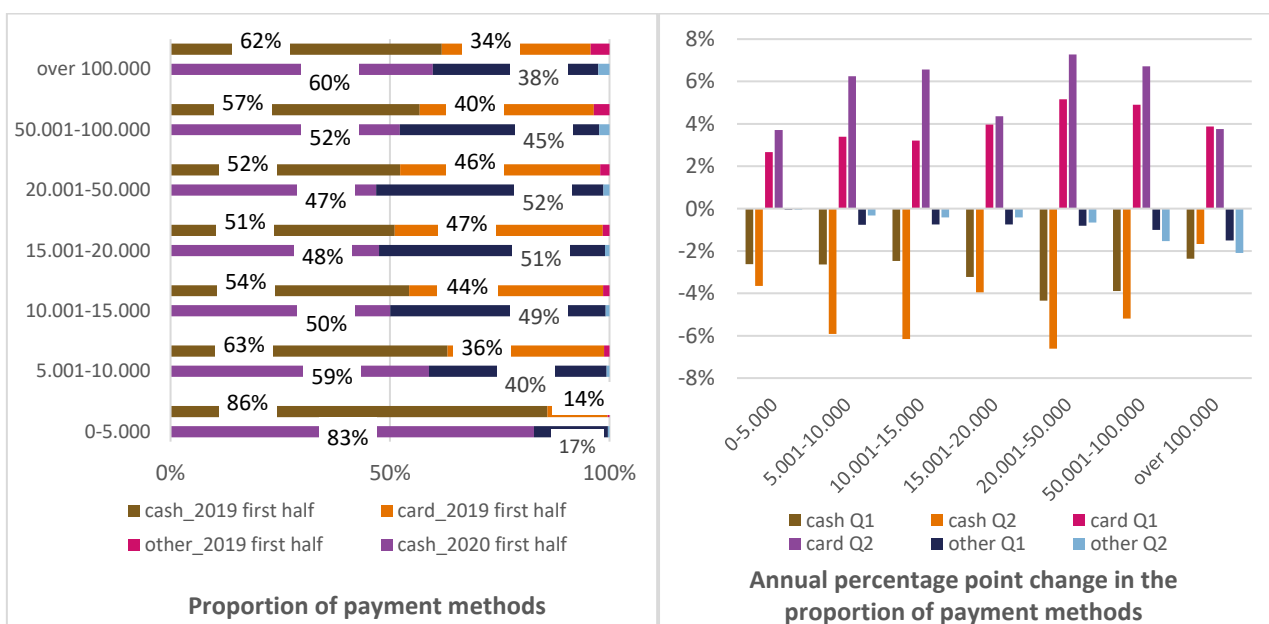
In terms of regrouping among value ranges, in the first quarter, in card payments there was a change of similar magnitude to all purchases. However, in the second quarter, compared to total turnover, the decrease in proportion below HUF 5,000 and the increase in the share of larger value categories (mainly in the share of payments between HUF 5,000–10,000 and HUF 10,000–15,000) were greater. As a result of raising the HUF 5,000 limit for contactless payments without a PIN code to HUF 15,000, initiated by the MNB, and the change in purchasing habits in the second quarter, 91 per cent of card transactions could be paid without a physical connection, which means 28 percentage points more coverage than would have been the case for the HUF 5,000 limit.

**Chart 12: Distribution of the number of card purchases and annual percentage point change in the distribution within the given value categories**



Looking at the distribution of the different payment methods, we can see that up to about HUF 50,000, a higher proportion of card payments is present for higher value payments (Chart 13). In the case of payments over HUF 50,000, which are typically not everyday expenses, the card proportion starts to decrease slightly, but it is still higher than for purchases below HUF 5,000. All the value ranges show an increased growth in the proportion of card payments at various rates, ranging from 3 to 7 percentage points in the second quarter of 2020, while in the first quarter, the change rate was 2 to 5 percentage points.

**Chart 13: Proportion of payment methods in the first half of 2019 and 2020 and annual percentage point change in the proportion of payment methods in the first and second quarter of 2020 within the value categories**



## 5. SUMMARY

Because of the Covid-19 pandemic, in the first half of 2020, there was a notable decline in turnover of most payment methods due to consumers' precautionary considerations and a slowdown in economic activity. In the case of electronic payment methods, the growth rate was typically lower than usual already in the first quarter, and in the second quarter, the number of transactions even decreased in a year-on-year comparison. However, looking at the monthly data, we can also see that, after the decrease in April and May, there was a renewed increase in credit transfers and card payments in June.

In terms of payments, the clear winner of the protracted Covid-19 pandemic was online card payment. The value of internet purchases, especially domestically, grew, exceeding significantly the already strong expansion seen previously. Due to the general caution on travel and the restrictions imposed, there was a significant decline, mainly in cross-border card payments in physical retail situations and domestic transactions with foreign-issued cards. In terms of card types, transactions with domestically issued credit cards declined much more than debit card transactions with only a slight decrease.

A part of electronic payments was regrouped from the range below HUF 5,000 into the higher value ranges, probably because of the change in purchasing habits due to the virus. As a result of raising the limit for contactless payments without a PIN code to HUF 15,000, initiated by the MNB, and the change in consumer habits in the second quarter, 91 per cent of card transactions could be paid without a physical connection, which means 28 percentage points more coverage than would have been the case for the HUF 5,000. Based on the changes in the value distribution of credit transfers, it is probable that, partly due to the pandemic, a part of low-value cash transactions may have been channelled into the instant payment system launched in early March 2020.

In terms of the proportion of payment methods, according to the receipt data of online cash registers, the proportion of the number of card payments increased already in the first months of 2020, significantly exceeding the values of the previous years, and the annual growth was particularly extraordinary in April and May. The growth rate of the proportion of electronic payments slowed down slightly in June, but it still meant a proportion of 23 per cent for card payments, which was substantially, 5 percentage points higher than the value for the first half of 2019. Over the same period, the proportion of the value of card payments also rose remarkably: within the total value of payments made on online cash registers, it increased from 34 per cent to 40 per cent.

Overall, it can be said that, in terms of the proportion of payment methods, the need for electronic payments was amplified by the pandemic situation, but only in the longer term will it be possible to determine how much of the growth in proportion will be lasting. However, several factors are likely to increase the proportion further. First, due to legal requirements, as of 1 January 2021, the possibility of electronic payment must be provided for all payments at online cash registers, which will allow customers in tens of thousands of new stores to choose an electronic payment method instead of cash. Second, since the launch of instant payment in March 2020, in addition to card

payment, credit transfer has also been a possible option as a real alternative to cash payment in most payment situations, and in 2021, more and more banks and other payment service providers will be expected to emerge with new payment services that, based on instant payment, provide convenient, fast and cheap electronic payment solutions for individuals, businesses and merchants as well.