



Paying in times of crisis

Coronavirus, cards and cash

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Cash was in high demand throughout Europe at the start of the coronavirus crisis. In March, euro circulation skyrocketed by EUR 36 bn month on month. Nearly half of that volume consisted of smaller banknotes, which people use to pay for their everyday purchases. During the financial crisis, cash demand also increased, but mainly for larger banknotes, as savers were looking for a “safe haven”.

One-third of the recent increase in cash circulation was not withdrawn by customers, but instead resulted from a rise in cash at banks which found it more difficult to estimate private demand.

In Germany, consumers have increasingly been using contactless payment methods rather than cash since March as they wish to protect themselves against infection and because the retail sector requests that they avoid cash.

Contactless card payments may have replaced a certain share of cash payments permanently. However, the new payment mix at German tills will not become fully apparent until consumer habits normalise after the pandemic.

Not all customers who prefer cash will change their payment behaviour. Moreover, research indicates that cash does not pose a higher risk of infection than other everyday objects.

The rapid spread of the coronavirus led many European countries to impose significant restrictions on the social and economic lives of citizens in order to contain the pandemic. A direct reaction was widespread panic buying of food, but many people also hoarded cash in the wake of the uncertainty.

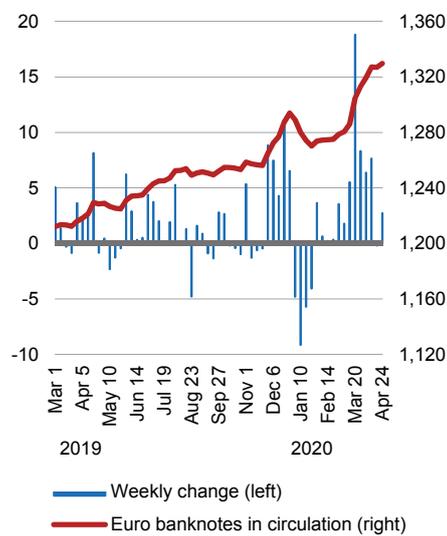
In March 2020, euro currency in circulation skyrocketed by EUR 36 bn to EUR 1,344 bn, the sharpest monthly rise in the euro’s history apart from the financial crisis in October 2008 (+ EUR 44 bn). Year on year, euro circulation increased by 8% – the highest rate since 2015. Between then and now, the annual growth rate had averaged just under 5%. Leaving out the typical seasonal increase of around EUR 8 bn, the unusually high demand for cash was probably due to the coronavirus crisis, as it coincided with the adoption of restrictions on public life. The uptrend peaked in the week of 16 March, when many businesses in Spain, France and Germany had to close. In early April, cash demand returned to normal levels in the euro area. Several countries are now seeing cash



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Cash demand surged in mid-March and returned to normal in early April

EUR bn, March 2019 - April 2020



Sources: ECB, Deutsche Bank Research

withdrawals below expected levels for this time of the year.¹

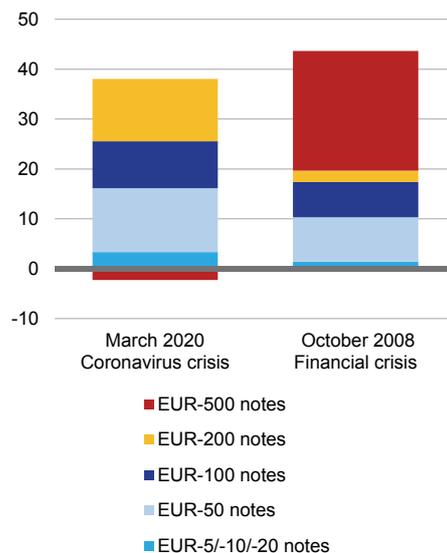
As with the financial crisis, the coronavirus pandemic is likely to have triggered a desire for financial flexibility and security. However, a look at the denominations in demand reveals a significant difference to October 2008, when 75% of the increase in cash was attributable to larger banknotes that make it possible to hoard larger amounts. In the recent month of crisis, these banknotes accounted for a mere 55%. The number of 500-euro notes decreased slightly, as the Eurosystem's central banks stopped putting them into circulation on 27 April 2019. Smaller banknotes with a nominal value of EUR 5, 10, 20 and 50, which are mainly used to pay for purchases, accounted for 45% of the increase. Unlike during the financial crisis, when the store-of-value function for concerned savers was the main factor fuelling cash demand, much of the current uptick was probably earmarked directly for buying food or for use as cash reserves in order to remain able to pay for everyday purchases in uncertain times (transaction function).

Not all of the increase in cash was actually used by non-banks. Private individuals and other non-banks withdrew merely two-thirds at ATMs and bank counters. One-third remained with banks. As a result, cash reserves at banks increased by EUR 12.2 bn to EUR 91.7 bn. Normally, banks keep such a large amount on hand only in December. Banks in the euro area stocked up on cash significantly in March in order to avoid bottlenecks in the cash supply chain, as it is difficult to predict how much cash customers will withdraw during a phase of uncertainty.²

Cash demand in Germany

Coronavirus crisis: More small banknotes for paying

Currency in circulation, change mom in EUR bn



Sources: ECB, Deutsche Bank Research

In Germany as well, the Bundesbank provided commercial banks with a larger amount of cash for a short period starting in the week of 16 March, when school closures and enforced social distancing began. By early April, however, cash supplies had returned to normal.³

Initial data indicates that customer demand for cash also grew – at least to a certain extent. In the first week of the shutdown (the week of 16 March), the amount of cash withdrawn rose by roughly 50% due to a significant increase in the value of cash withdrawals at bank counters. Larger amounts can only be withdrawn at a counter, as payouts at ATMs are capped for security reasons. Although the total amount withdrawn at ATMs was in line with trends in the past, the number of transactions decreased. In the second week of enforced social distancing (the week of 23 March), cash demand was only slightly higher than normal. However, high payouts at counters more than outweighed the decrease in demand at ATMs. Thereafter, cash withdrawals were up to one-fifth below the pre-crisis level.⁴

Cash withdrawals were therefore only elevated for a short period of time, likely because public trust in the functioning of infrastructure, including the cash supply chain and other financial services, quickly stabilised. The subsequently lower demand for cash appears to be the result of the high withdrawals and private stocks, which will be “used up” for payments in the weeks ahead. Moreover, the number of transactions has decreased, as many retailers and service providers are closed or have only recently reopened. At the same time, the use of cards at the till has increased.

¹ Panetta, Fabio, in: The ECB Blog, Beyond monetary policy – protecting the continuity and safety of payments during the coronavirus crisis, 28 April 2020.

² ECB, own calculations.

³ Beermann, Johannes, in: wallstreet:online, Machen sich deutsche Bargeld-Hamster umsonst Sorgen um den Nachschub? 14 April 2020.

⁴ Deutsche Bank, own calculations.



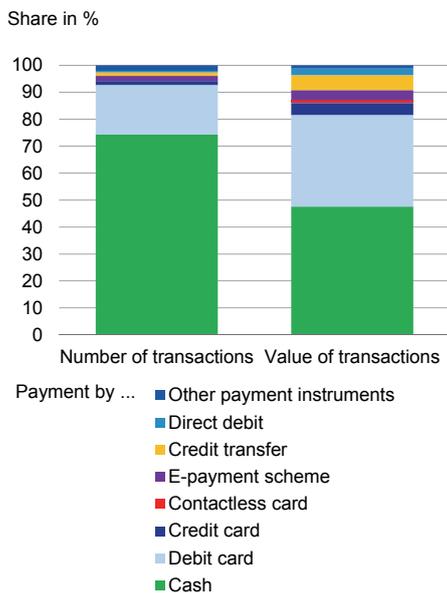
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The short-term impact of the coronavirus crisis on payments at the point-of-sale is not clear. On the one hand, some payment service providers have said that their customers used girocards (former EC cards, German debit card scheme) more often in March than before.⁵ On the other hand, initial information from retailers indicates that store closures in March led to a decrease in the number and value of card payments. In fact, the share of cashless payments by turnover fell substantially in March, as non-food businesses were closed where card payments usually account for a high share. In the food retail sector, 55% of sales may have been paid for using debit cards, Visa or Mastercard – a marked increase from a share of 45% in March last year. More than half of card payments were contactless, with 84% of retail businesses asking their customers to use cashless or contactless methods of payment.⁶

Various surveys since the end of March suggest that between one-quarter and just under half of Germans are currently using cards far more often than cash to pay for their purchases, with contactless cards being particularly popular. This shift is apparent in all age groups, but especially for middle-aged people. Customers are forgoing cash payments to avoid contact and protect themselves from infection – and because businesses are asking them to do so. Roughly one-third of Germans appear not to have changed cash use, and another one-third were already making most of their payments by card even before the pandemic.⁷

How Germans paid their in-store and online purchases in 2017

3



Contactless payment gains ground

Thanks to its speed and ease, contactless payment was already attracting more and more customers last year. To avoid touching objects during the pandemic, an ever larger number of consumers are trying this option and using it more often. In a contactless payment transaction (also known as mobile payment), a payment card equipped with a contactless payment function, or a smartphone on which a corresponding app has been installed, is held up to a card reader at the till.⁸ The required data is transferred using NFC technology, thereby triggering payment. Contactless payments are capped by law at EUR 50. After no more than five contactless payment transactions, or a total amount of EUR 150, the cardholder has to authorise the next payment, even if it is below EUR 50.⁹ For payments made by card, this requires entering a PIN into the card terminal. For payments made by smartphone, the user has to enter a PIN on his or her phone or to confirm the transaction by way of biometric authentication (such as a fingerprint or facial recognition). By using their smartphones, customers can indeed pay for purchases without ever having to touch a single foreign object.

Despite being virtually unknown in 2017, 15% of customers already reported using their debit card to make contactless payments in a survey in the second quarter of 2019, even though only half had debit cards equipped with this

Sources: Deutsche Bundesbank, Deutsche Bank Research

⁵ DSGVO, Corona-Pandemie: Sparkassen-Kunden zahlen Einkäufe deutlich häufiger mit der girocard, 27 April 2020; Handelsblatt, Abschied vom Bargeld, 29 April 2020.
⁶ EHI Retail Institute, Lieber keine Scheine, 9 April 2020; LEH: Mehr mit Karte, 30 April 2020; Blitzumfrage zu Hygienemaßnahmen im Einzelhandel, 4 May 2020.
⁷ Deutsche Bundesbank, Forsa survey April 2020; Association of German Banks, Die Corona-Krise als Katalysator: Kontaktloses Bezahlen auf dem Vormarsch, 27 April 2020; Initiative Deutsche Zahlungssysteme, infas quo-Studie: girocard-Zahlung in Zeiten von Corona, 23 April 2020.
⁸ Smartphone payments essentially use the same technology as card payments: users must have a (digital) debit or credit card that is linked to the payment app.
⁹ EU, Commission Delegated Regulation 2018/389 of 27 November 2017 supplementing Directive 2015/2366 with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication.

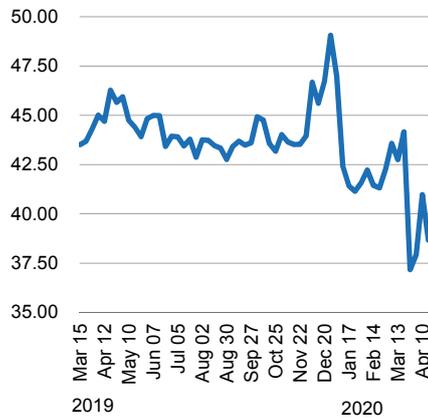


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Girocard used for smaller purchases in coronavirus crisis

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Average value of a girocard payment in EUR



Sources: Deutsche Bank, K&A analysis 4725

function.¹⁰ Contactless payment – which was, until recently, limited to transactions worth no more than EUR 25 in the girocard system – offers an alternative to cash payment. While not subject to a cap, cash is mainly used to make smaller purchases and was the fastest option at the point-of-sale until the introduction of contactless payment. Purchases of up to EUR 30 are faster when paid for in cash rather than by card.¹¹ On average, cash payments take 22.3 seconds, compared with 29.4 seconds for card payments using a PIN or 38.6 seconds for card payments requiring a signature. However, contactless payments (without authentication) take only half as long as cash payments at the till.¹²

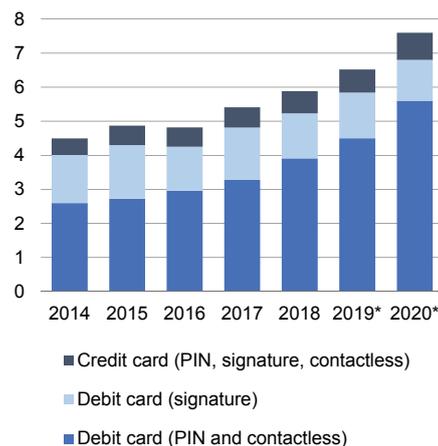
By December 2019, most bank customers in Germany already had the option of contactless payment. More than 75 million out of 100 million girocards were equipped with a contactless function for transactions of up to EUR 25. Of 871,000 card terminals, 755,000 could accept contactless payments.¹³ The pandemic has accelerated this trend. In December 2019, contactless transactions accounted for 35% of all debit card payments. But by late March 2020, that figure had increased to more than half.¹⁴ The higher share goes hand in hand with a lower amount of the average transaction. Customers increasingly appear to be making smaller purchases by card rather than cash – something that has become convenient by contactless payment methods.

In light of the marked shift in consumer preferences, girocard announced in late March that it would raise the limit for contactless payments to EUR 50.¹⁵ However, converting point-of-sale terminals and the IT systems at the card-issuing banks will take a few weeks to complete. Credit card providers such as Visa, Mastercard and American Express also offer contactless payments for purchases up to EUR 50, provided the appropriate technical infrastructure is available.

More card payments at the tills

5

Number of transactions in bn



* Estimate

Sources: Deutsche Bundesbank, Deutsche Bank Research

Is cash on its way out?

Cash – hitherto the payment method of choice for Germans – is therefore likely to lose more ground to contactless payments at the till due to the coronavirus pandemic. The long-term trend towards cashless payment has received a massive boost from the desire for protection against infection and from the retail sector's demands to pay cashless. Due to a lack of data, the extent of the shift is difficult to quantify. However, much of the recent increase in contactless card payment appears to be here to stay. Many customers will continue to use cards more and cash less. Going forward, the growth rate of card payments could slow, though, to the extent that the use of cards was motivated by a fear of infection.

Such fears seem largely unjustified. Epidemiologists believe that airborne transmission plays the dominant role in spreading the coronavirus rather than contact with infected surfaces, such as card readers or banknotes. Most tills have now been equipped with screens or shields to protect checkout staff. Theoretically, people may be at risk of contracting the virus if they touch their mouth, nose or eyes with their hand after touching a surface recently contaminated by coughing or sneezing, for example. However, no such cases have been recorded yet. Because the coronavirus is not very stable outside the

¹⁰ Deutsche Bundesbank, Zwischenerhebung zum Zahlungsverhalten in Deutschland 2019, 15 January 2020.

¹¹ Deutsche Bundesbank, The costs of cash payments in the retail sector, 28 March 2019.

¹² girocard, GfK-Messung: Bezahlgeschwindigkeit, 15 April 2019.

¹³ www.girocard.eu.

¹⁴ Süddeutsche Zeitung, Los, los, kontaktlos, 26 March 2020.

¹⁵ The German Banking Industry Committee, Kreditwirtschaft wird Limit für kontaktlose Zahlung im girocard-System ohne PIN-Eingabe auf 50 Euro erhöhen, 30 March 2020.



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body, infection through this route of transmission is possible only within a short time frame.¹⁶ According to the ECB, euro banknotes do not pose an increased risk of infection compared to other objects that people touch in their everyday lives. In fact, the virus appears to survive longer for instance on door handles than on banknotes. Generally speaking, transmission via porous surfaces such as euro banknotes seems to be more difficult than via smooth surfaces such as plastic.¹⁷

Such findings will encourage customers who prefer using cash not to change their payment behaviour during the pandemic or to return to cash. People paying with cash often choose this method because of the ease of use, data protection and to better keep track of spending. All of these are personal preferences that may not have changed as a result of the coronavirus. Also, the view that cash is “safe money” is widespread, as seen again at the start of the coronavirus crisis.

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¹⁶ German Federal Institute for Risk Assessment, Can the new type of coronavirus be transmitted via food and objects? 30 April 2020.

¹⁷ Panetta, Fabio, 28 April 2020.



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