

# Payment behaviour in Germany in 2017

Fourth study of the utilisation of cash  
and cashless payment instruments





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## ■ Preface

Dear reader,

This is the Deutsche Bundesbank's fourth study on payment behaviour in Germany. Since 2008, the Bundesbank has been investigating every three years the attitudes of people in Germany towards various payment instruments and how they pay for goods and services at the point of sale – be it in cash, by card or using other means of payment. The 2017 survey marks an important milestone; for the first time, results can be compared over a period of almost ten years, thus enabling a number of trends to be identified. Cash remains the most preferred means of payment in Germany; however, cards are being used more and more. These results are consistent with the picture in Europe as a whole. According to a study published by the ECB<sup>1</sup>, in nine other Eurosystem countries cash is used more frequently than in Germany, whereas nine further member countries have a lower percentage of cash payments. Payment behaviour in Germany is therefore not a special case in Europe.

The use of debit cards, such as the girocard, has seen the strongest growth. Yet, smaller amounts, in particular, are still primarily settled in cash. The importance of new payment methods, such as contactless card payments or smartphone payments, is growing and the use of e-payment schemes for online shopping is already firmly established. However, it is also clear that consumers in Germany are only gradually changing their payment habits. The many tables and charts in this study not only reflect the results of the 2017 survey, but also illustrate the development over time. While the Bundesbank is closely following and, where appropriate, commenting on recent innovations, the use of virtual currencies (for instance, the Bitcoin) as a means of payment on a day-to-day basis is so low that it did not warrant inclusion in this study.

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<sup>1</sup> See: Esselink, H. / Hernández, L., The use of cash by households in the euro area, ECB Occasional Paper Series No 201, November 2017.



The findings of this study are likely to be of interest to all market participants: suppliers, such as payment service providers and cash-in-transit companies, users and, of course, the Bundesbank itself, which is responsible for the security and efficiency of cash and cashless payments in Germany. The people of Germany are free to choose whichever means of payment they wish to use. However, as preferences change over time, new means of payment become available and political discussions continue (for instance, considerations with regard to the introduction of an administrative restriction on the use of cash or the implementation of measures

to promote the digital economy), the objective data presented here form an excellent basis for well-founded decisions.

I wish you an interesting and informative read.

A handwritten signature in blue ink that reads "Carl-Ludwig Thiele". The signature is written in a cursive, flowing style.

**Carl-Ludwig Thiele**

Mitglied im Vorstand der Deutschen Bundesbank

## ■ 1 Summary

Since 2008, the Deutsche Bundesbank has been conducting a household survey on “Payment behaviour in Germany” at three-year intervals. The primary goal of this series of studies is to collect representative statistics on the use of cash and cashless payment instruments. Moreover, the study depicts the attitudes of people in Germany towards various political and social issues concerning their choice of payment method. The main findings are as follows:

- **Cash** remains the most preferred means of payment in Germany. In 2017, 74% of all **transactions** were made using banknotes and coins; this constitutes a fall of five percentage points on 2014. Cash is still used to settle 96% of smaller payment amounts of up to €5, in particular, and for the bulk of payments of up to €50. Payments at certain places or for certain purposes, eg between individuals, at restaurants, bars and cafés (including delivery services) or at vending machines are primarily settled in cash.
- For the first time since the first survey was conducted, the **proportion of cash in relation to overall turnover** has fallen below 50%. The figure of just under 48% calculated from the expenditure recorded in the payments diary means a drop of six percentage points on 2014. The trend towards replacing cash payments with cashless payment instruments, which declined between 2011 and 2014, has now picked up again somewhat.
- It is again **debit cards** (predominantly the girocard, with PIN, signature or contactless)<sup>2</sup> that are mainly benefitting from this development, expanding their share of turnover by just under six percentage points on 2014 to 35%. In terms of the number of transactions, debit cards now have a share of 19% (an increase of

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<sup>2</sup> In the 2017 questionnaire (as in previous surveys), the term “EC card” was used as this is still the more common name for the girocard. Respondents were also shown a list containing the logos of all debit cards available in Germany. This includes the girocard as well as debit card products offered by international card systems (see the glossary).

four percentage points on 2014). 57% of cardholders use their debit cards once or more a week – an increase of six percentage points on 2014.

- **Credit cards** are being used a little more frequently than three years ago. Their corresponding share of turnover was up slightly to just under 5%. Credit cards are mostly used for larger payment amounts (of €81 on average).
- **High growth rates recorded for contactless card payments.** For the first time, their share of overall turnover was above 1%. If use is to become more wide-spread, all credit institutions will have to issue contactless girocards as standard and the level of acceptance among retailers will have to be further improved. Furthermore, consumers will have to be encouraged to familiarise themselves with how they work.
- Very few payments are made by smartphone and with customer or prepaid cards at present. The ownership and use of canteen and stadium cards as well as the degree of knowledge about apps that can be used to send money to friends and family were recorded separately for the first time in 2017. 5% of respondents already use such apps even though most of them were only introduced in the year of the survey itself (2017).
- The use of **e-payment schemes** for online shopping has since become established. Their share of overall turnover and in relation to the total number of payment transactions continued to rise to just under 4% and 2%, respectively. 44% of all respondents use e-payment schemes, but often because of a lack of free-of-charge alternatives. 13% of those who are familiar with these instruments say that they would also like to use such schemes in shops or restaurants.
- The **majority of respondents** (88%) would like to **continue** to be able to **pay in cash in the future** and reject calls to do away with or restrict the use of cash. Overall, all four studies on payment behaviour thus show a high level of satisfaction with classic payment instruments and only a slow – albeit steady – shift in payment habits.

- Nevertheless, **the growth rates for modern payment methods**, such as contactless cards, e-payment schemes and mobile payment methods, are high. Young consumers, in particular, are looking for alternatives to classic payment instruments. Overall, 15% of respondents can imagine holding their current account with, for instance, an internet provider rather than a bank or direct bank. 24% of 18–24 year olds would like to be able to send money to friends and family using their mobile phone.
- 38% of respondents are of the opinion that in the case of credit transfers, it takes too long for the money to be credited to the recipient's account. The introduction of **European real-time payments** (increasingly referred to as instant payments) is a response to calls by consumers for faster payments. It is now up to the credit institutions to create convenient, secure and cost-effective applications so that people will soon be able to make credit transfers in real time.

## 2 Classification, issue to be discussed and study design

The topic of payment behaviour is currently attracting a great deal of public interest. A tendency towards restricting cash payments is emerging as a putative response to politically pressing issues such as finding a more effective way to combat the financing of terrorism and the shadow economy. The Eurosystem's decision to stop manufacturing and issuing €500 banknotes as well as the current debate concerning the EU-wide introduction of a cash ceiling to complement existing money laundering regulations can be cited here by way of example. Nevertheless, the Bundesbank remains unaware of any reliable studies that prove the effectiveness of cash ceilings. There are also debates in the EU as to whether to phase out one and two cent coins as a cost-cutting measure. Moreover, the persistent low-interest-rate environment is forcing commercial banks to adjust their cost and fee structures and this may have a long-term impact on the relative appeal of payment instruments. In addition, market developments, innovations and, in particular, advancing digitalisation may give rise to fundamental changes in the use of payment instruments. For instance, the use of contactless payments by card as well as e-payment schemes and mobile payment methods (ie payment by smartphone) may expand over time.

Against this background, the 2017 payment behaviour study focuses on the following topics:

- How has payment behaviour changed since the first study in 2008? Which payment methods are available to consumers in Germany and which of these methods are becoming more or less popular?
- Which criteria govern the choice of which payment instrument to use?
- Have commercial banks adapted their payment transaction fees and what consequences does this entail for consumers?
- What do people in Germany think about the possibility of restricting cash payments?
- What role do innovative payment methods now play in the area of cashless payments?

In terms of methodology, the 2017 study is broadly in keeping with the three preceding studies compiled in 2008<sup>3</sup>, 2011<sup>4</sup> and 2014<sup>5</sup>. It is made up of two parts; a computer-assisted personal interview (CAPI) in which respondents are asked to give a self-assessment of their payment habits, and a payments diary to be completed by the participants themselves in the seven days following the interview.<sup>6</sup> In total, 2,106 individuals filled out the questionnaire and 2,061 individuals completed the diary in full (see Table 1). This study uses the questionnaires only if the participant also submitted a complete diary.

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**3** See: Deutsche Bundesbank, Payment behaviour in Germany – An empirical study of the selection and utilisation of payment instruments in the Federal Republic of Germany, Frankfurt, 2009.

**4** See: Deutsche Bundesbank, Payment behaviour in Germany in 2011 – An empirical study of the utilisation of cash and cashless payment instruments, Frankfurt, 2012.

**5** See: Deutsche Bundesbank, Payment behaviour in Germany in 2014 – Third study of the utilisation of cash and cashless payment instruments, Frankfurt, 2015.

**6** The study was conducted by the market research institute “MARPLAN” and is representative of persons over the age of 18 residing in private households in Germany. The random sample of respondents was taken on the basis of the ADM master sample in a three-stage selection process. At the beginning, this is a random sample of households by necessity but it is subsequently transformed into a sample of individuals by means of weighting according to household size. As an additional step, the sample weighting is adjusted in such a way that the distribution of respondents’ socio-demographic criteria corresponds with the official statistics.

Table 1: **Overview of payments diary**

2017

Number of completed payments diaries	2,061
Of which completed online	57
Average number of transactions per person per week	10.4
Average number of transactions per person per day	1.5
Average amount per transaction	€29.31

In this series of studies, the shares of the individual payment instruments are based on the purchases at the point of sale (POS) – ie the place where goods or services are purchased and paid for – that are recorded in the payments diary. The POS is usually a retail outlet, but can also apply to other places, such as the payment of tradesmen contracted to work in households, online or mail order purchases, or travel bookings. The data also include expenditure between individuals (eg at flea markets, pocket money). Regularly recurring payments (eg rent, insurance, loan repayments, subscriptions, savings), which are usually debited or transferred (by standing order), are not recorded in the payments diary.

## 3 A look inside a consumer's wallet: cash and payment cards

### 3.1 Cash holdings and cash supply

On average, private individuals carry around roughly €107 on their person, of which around €101 is in the form of banknotes and about €6 in coins. This shows that the amount of cash they carry on them has barely changed since the study was first launched in 2008, when the amount in question had stood at €118, with €7 accounted for by coins (see Figure 12 in the annex).

#### Intensity of use of places of withdrawal

Figure 1

Figures in per cent, as reported by respondents



Basis: survey respondents with access to a current account. The chart shows the relative use of cash dispensers (ATMs), bank counters and cashback at the point of sale (POS) as a source of respondents' average annual cash withdrawals. Question: How often do you generally withdraw cash at ATMs, bank counters or at a supermarket or petrol station POS? And what amount of cash do you withdraw on average? Deviations from 100% due to rounding.

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According to the information provided in the questionnaires, each respondent makes withdrawals averaging €7,374 per year. Of this amount, 84% is withdrawn from automated teller machines (ATMs), 14% at the bank counter and 2% at a supermarket or a petrol station cash desk (POS withdrawals, also referred to as

cashback). Since the study commenced in 2008, the significance of ATMs as a source of cash has grown by ten percentage points. Over this same period, the relative significance of the bank counter as a place of withdrawal has declined by eight percentage points, whilst POS withdrawals remain the least used option by a wide margin. Compared with the last study in 2014, the use of this alternative form of withdrawal has stagnated at a level of 2% (see Figure 1).

The cash withdrawal behaviour displayed by users of ATMs, bank counters and POS reveals distinct differences with regard to the frequency of use and the amount withdrawn (see Table 2). Averaging 42 withdrawals per year, and an average withdrawal amount of €189, ATMs are used to satisfy the user's regular cash needs. Turning to the bank counter, customers make far less frequent use of this option. With ten withdrawals per year and an average cash value of €447, they do so for substantially larger amounts. POS withdrawals are few and far between, and when they do occur, it is only for smaller amounts of cash. At eight withdrawals per year and an amount of €87, this place of withdrawal plays a minor role overall.

**Table 2: Cash withdrawal behaviour by place of withdrawal**

as reported by respondents

	Number of withdrawals per year				Average withdrawal amount			
	2008	2011	2014	2017	2008	2011	2014	2017
<b>ATM</b>	42	39	43	42	€215	€216	€180	€189
<b>Counter</b>	18	13	12	10	€378	€449	€354	€447
<b>POS</b>	–	10	12	8	–	€107	€87	€87

Basis: respondents who have access to a current account and use this place of withdrawal.  
 Questions: How often do you withdraw cash at ATMs, bank counters or at a supermarket or petrol station POS? And what amount of cash do you withdraw on average?

The withdrawal strategy also covers the question relating to the threshold amount as of which people decide to stock up with cash. As in the past, in 2017 almost all of those surveyed made sure that they always had a reserve amount of money at hand, with only just over 3% of respondents waiting until they are down to their last cent before taking action. More than half prefer to have at least €20 in their wallet, with the actual average amount lying at roughly €34. These figures have fluctuated only marginally over time (see Table 3).

**Table 3: Amount of cash remaining before next withdrawal**

as reported by respondents

	2008	2011	2014	2017
<b>Amount of cash remaining before next withdrawal</b>				
<b>Average</b>	€34	€36	€32	€34
<b>Median</b>	€20	€20	€20	€20
<b>Share of respondents that do not keep a reserve amount at hand</b>	5%	3%	6%	3%

Basis: all survey respondents.

Question: How much cash do you usually still have in your wallet before you decide to withdraw more?

## ■ Reaction to the notion of withdrawal fees

*Background: Bank customers are not generally charged for making withdrawals provided that they do so from ATMs operated by their own bank or banking group (savings banks, cooperative banks, Cash Group, CashPool, see Figure 3) or that an agreement is in place concerning the number of times they can make a withdrawal per unit of time from their direct bank. By contrast, withdrawals from other ATMs incur a fee, the details of which must, however, be shown to the user on screen beforehand. At this point, it is possible for the user to terminate the transaction.*

In the questionnaire, the respondents were asked to evaluate a hypothetical scenario: Would they modify their cash withdrawal behaviour if they were charged 50 cent for every withdrawal they make? One-third of respondents stated that they would not change their behaviour, whereas a sizeable proportion said they would. 36% of respondents would make less frequent use of an ATM and make larger withdrawals when they did so. On the other hand, 22% would look around for cheaper or cost-free alternatives (eg POS withdrawal options) with a mere 6% stating that they would withdraw less cash altogether, possibly leading to greater use of their payment cards.

### 3.2 Card ownership

Figure 2 shows the ownership of the surveyed payment cards among the population. Compared with the findings of the 2008 survey, it is apparent that payment cards are becoming more and more popular with consumers. By 2017, the share of the population owning such cards had risen by almost seven percentage points in the case of debit cards – mostly girocards – and by more than nine percentage points for credit cards. Since **debit card** ownership was already at a very high level back in 2014, the increase in ownership recorded since then has been marginal (one percentage point) and now stands at 98%. Conversely, compared with 2014, considerably more respondents – chiefly men and persons aged between 25 and 54 – were found to have additionally acquired a **credit card** (an increase of six

percentage points in each case). In 2017, 10% of those surveyed said that they own more than one debit card. At the same time, 5% reported that they own two or more credit cards (see Figure 13 in the annex).

The overwhelming majority of credit and debit cards offered by international card providers are now equipped with a **contactless payment function**. By contrast, at a current level of 34 million cards, this feature is only present in slightly more than one-third of girocards, according to figures from the German Banking Industry Committee.<sup>7</sup> That said, the aim is to ensure that most other newly issued girocards will also be equipped with this contactless function by the end of 2019.

Defying the downward trend observed since 2008, the prevalence of **customer cards with a payment function** was found to have risen again slightly since 2014. This was mainly evident among women and persons aged between 25 and 54 (an increase of eight and three percentage points, respectively). 3% of those interviewed stated that they had two or more cards of this kind in their wallets.

The number of **prepaid cards** (ie GeldKarte, girogo or prepaid credit cards) has gone up across all age groups.<sup>8</sup> Around one-third of such prepaid cards are prepaid credit cards.

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<sup>7</sup> See: Customer survey on contactless payments conducted by the market research institute Gesellschaft für Konsumforschung (GfK) on behalf of EURO Kartensysteme, October 2017 (available in German only), [https://www.girocard.eu/media/171128\\_girocard\\_management\\_summary\\_kontaktloses\\_bezahlen.pdf](https://www.girocard.eu/media/171128_girocard_management_summary_kontaktloses_bezahlen.pdf) (8 January 2018).

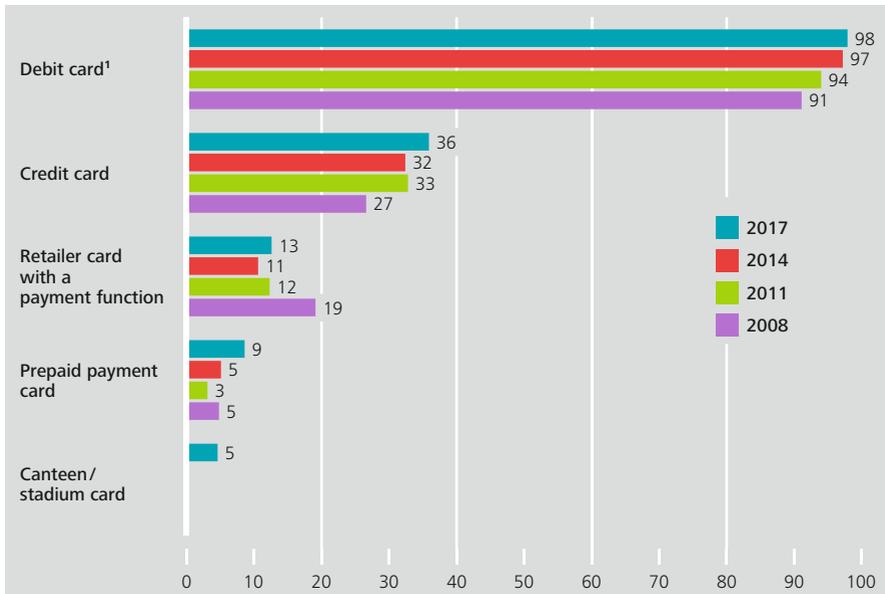
<sup>8</sup> The respondents were shown an overview of the logos of all the types of cards in this category and were then asked to compare these logos with those depicted on their own cards. The label "girogo" is used to denote contactless GeldKarte cards. At present, around 45 million cards bearing the girogo logo are in circulation (see <https://www.geldkarte.de/presse/pressemitteilungen/2017/geldkarte-jahreszahlen-2016>, available in German only). Even so, a total of just 9% of respondents reported that they own a prepaid card (of which, one-third possessed a prepaid credit card). This discrepancy between actual and perceived ownership is probably explained by the fact that only a small share of card owners are familiar with girogo. The same problem previously applied to the GeldKarte. In the 2008 and 2011 surveys, around 20% of respondents claimed to own such a card. At the same time, virtually all girocards were equipped with the GeldKarte function.

For the first time, participants in the 2017 survey were asked whether they owned a **canteen or stadium card**.<sup>9</sup> These types of card are particularly favoured by the younger generation. Just under 18% of those aged between 18 and 24 and 9% of those aged between 25 and 34 have at least one of these cards in their wallets.

## Ownership of payment cards

Figure 2

Figures in per cent, as reported by respondents



Basis: all survey respondents. Question in 2008 and 2011: Which of the following payment cards are you familiar with, and how many of them do you own? Question in 2014 and 2017: Which of the following cards with a payment function do you own, and how many? Response in each case: Respondent owns at least one of the cards shown. <sup>1</sup> girocard and debit card products offered by international card providers.

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<sup>9</sup> Including cards for staff canteens.

### 3.3 Prerequisite for cash(less) payments: Current account

In Germany, access to a current account is the prerequisite for effecting cash transactions, credit transfers, direct debits and card payments. For instance, 97% of German residents maintain a current account in their name and a further 3% have authorised access to their partner's account, allowing them to make cash and cashless payment transactions. In the maiden survey conducted in 2008, 93% of respondents stated that they made use of their own personal current account, while 6% said they had shared access to their partner's account. This increase is mainly attributable to the growing number of women who now maintain a current account of their own (89% in 2008 and 95% in 2017).

The distribution of the accounts among groups of institutions has barely changed since 2008, as shown in Figure 3.<sup>10</sup> These only minor changes derive, inter alia, from the fact that 81% of those who participated in the survey display a high or very high level of confidence in their house bank. Moreover, their willingness to switch banks is very low. Just 3% of those with access to an account said that they had changed their main current account within the past twelve months. Grounds cited for switching accounts included lower fees at the new bank (62%), dissatisfaction with the customer service at the old bank (24%) and more appealing products on the part of the new service provider (19%). The majority of those who switched accounts (54%) had been a customer of the previous bank for over ten years, with as many as one-third of them having stayed loyal for 20 years or more. Given that at just 54 respondents, the sample of those who switched accounts in the past 12 months is, however, relatively small, the findings should be interpreted with caution.

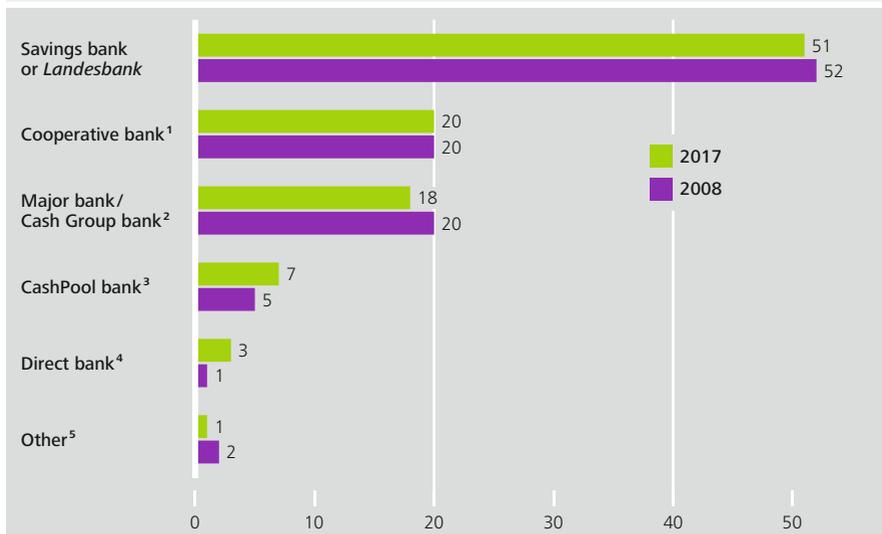
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<sup>10</sup> The Bundesbank's payment statistics present a similar picture: Whilst these do not solely focus on private current accounts, the overall trend mirrors the findings of the surveys. In 2008, 45% of all current accounts were held at *Landesbanken* and savings banks, with this number falling to just 44% in 2016. Meanwhile, the share of such accounts held at cooperative banks remained unchanged. As regards the commercial banks which, according to the Bundesbank's payment statistics, encompass all other banks (major banks, CashPool banks, direct banks and others), these institutions recorded a slight increase in their market share from 27% in 2008 to 28% in 2016.

### Breakdown of privately used accounts by group of institutions

Figure 3

Figures in per cent, as reported by respondents



Basis: all survey respondents with access to a current account. Question: At which bank do you hold the current account that you use most frequently? In 2008 only the groups of institutions were asked for, while in 2017 respondents were asked to name individual banks, which were then assigned to the groups of institutions when the questionnaires were evaluated. **1** Including apoBank, Evangelische Bank and PSD banks. **2** Commerzbank, Deutsche Bank, HypoVereinsbank, Norisbank and Postbank. **3** BBBank, Flessabank, Sparda-Bank, Targobank, Santander and Oldenburgische Landesbank. **4** 1822direkt, Comdirect, Consorsbank and ING-DiBa. **5** O<sub>2</sub> Banking, DKB and banks not specified in further detail.

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Amid the persistent low-interest-rate environment, commercial banks have begun to revise their account models and are increasingly charging fees for the use of account-related services. According to their replies to the questionnaire, around one-third of bank customers encountered higher basic current account fees over the past twelve months. In some cases, increased fees were also charged for other account-related services, with 27% of respondents reporting higher rates for paper-based credit transfer orders and 11% for online credit transfers. 23% of those surveyed reported an increase in the cost of cash withdrawals while annual fees for debit cards and credit cards rose for 18% and 8% of bank customers, respectively.

## ■ Background to online banking

As use of the internet has expanded (see section 4.6), so too has customer recourse to online banking. More than half of internet users (58%) now take advantage of such services, with 53% of them accessing the relevant online banking portal via their bank's website and 12% doing so via a dedicated bank-specific app (multiple answers possible).

Of these website users, 97% use the function to check their account balance and 95% use it to initiate a credit transfer. Although 96% of banking app users check their account balance via the app, only 65% use it to effect credit transfers. By contrast, only a small number of respondents use their bank's website (11%) or app (13%) to manage a securities deposit account.

Moreover, other apps (known as account information services) are available that provide an overview of one's accounts held at another bank. That said, no more than around 3% of internet users used such an app to check their balance.

Alongside traditional banks and direct banks, internet firms could also offer payment services provided they have the relevant licence. However, the vast majority of those surveyed (84%) considered it very or fairly unlikely that they would set up an account with any provider other than a traditional bank or a direct bank.

## ■ 4 Payment behaviour in Germany

### 4.1 Payments diaries and self-assessments

The evaluation of the payments diaries (see Tables 4 and 5) reveals that **cash transactions** as a share of all recorded payments decreased from 79% to around 74% between 2014 and 2017. In the same period, the value of cash payments – measured as a share of the total turnover recorded – declined from over 53% to less than 48%, thus dropping below the 50% mark for the first time in 2017. Since the first survey in 2008, cash payments as a share of turnover have fallen by slightly more than ten percentage points. However, in terms of the number of transactions, cash is still the most frequently used means of payment at the POS in Germany.

Compared with cash, the share of turnover accounted for by **debit cards** (primarily girocards) rose from just under 26% in 2008 to 35% in 2017.<sup>11</sup> The corresponding growth in the use of credit cards by one percentage point – from around 4% to roughly 5% – was considerably weaker, although the number of actual cards issued has increased more sharply. For the first time since the study began, **contactless card payments** made up over 1% of diary turnover in the 2017 study. Debit cards accounted for 80% of all contactless card transactions recorded and credit cards for 19%. The vast majority of the remaining contactless payments were made using retailer cards. Although transactions using retailer cards are certainly used frequently within their respective niche areas, these transactions are of very limited significance in terms of overall turnover. The same is true of canteen card, stadium card and prepaid payment card transactions (see Section 4.5).

The shares of **e-payment schemes** in terms of turnover and the number of transactions have risen significantly from a very low level since the first survey. An evaluation of **mobile payment methods** can be found in the box on pages 26 and 27.

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<sup>11</sup> Of the debit card payments, 79% were authorised by PIN entry and 18% with a signature (Electronic direct debit scheme (ELV)), while 3% were contactless.

A graphic representation of the collected diary data organised by socio-demographic characteristics can be found in the annex (Figures 14 – 17). An evaluation by transaction amount categories as well as place and purpose of payment is carried out in Sections 4.2 and 4.3 (Figures 5 and 6).

When asked whether their payment behaviour had changed in the past ten years, 55% of respondents answered that they still use cash just as frequently as they did a decade ago, and 42% claim to use banknotes and coins less often. Only 3% said they use cash more frequently than they did ten years ago. The main reasons cited by respondents for using cash less often were the increased acceptance of cards by retailers and the belief that it is simply more common to pay by card nowadays.

Table 4: Share of payment instruments broken down by turnover

according to payments diary

Payment instrument	Turnover in euro	Share in %			
		2017	2014	2011	2008
Cash payment	297,901.48	47.6	53.2	53.1	57.9
Card payment					
Debit card (except contactless)	212,576.36	34.0	29.4	28.3	25.5
... with PIN <sup>1)</sup>	172,820.22	27.6	24.3	20.9	–
... with signature <sup>2)</sup>	39,756.15	6.3	5.1	7.4	–
Credit card (except contactless)	27,578.11	4.4	3.9	7.4	3.6
Contactless card	7,103.04	1.1	0.1	0.1	–
Debit card	5,690.37	0.9	–	–	–
Credit card	1,314.22	0.2	–	–	–
Other	98.45	0.0	–	–	–
Retailer card with a payment function	411.71	0.1	0.1	0.1	0.2
Prepaid payment card	83.83	0.0	0.0	0.1	0.6
Canteen/stadium card	180.01	0.0	–	–	–
Other cashless payments					
Credit transfer	34,749.06	5.6	5.3	8.2	8.9
Direct debit	15,180.80	2.4	3.0	0.7	1.9
E-payment scheme	23,258.40	3.7	2.8	1.7	0.3
Mobile payment	123.76	0.0	0.0	0.0	–
Other	1,005.63	0.2	0.1	0.2	0.4
Cashless, using an unspecified payment instrument	5,949.32	1.0	2.3	–	1.0
<b>Total</b>	<b>626,101.51</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

1 girocard and debit card products offered by international card providers.

2 Means girocard payments using the Electronic direct debit scheme (ELV) – see glossary.

**Note:** The figures refer to the transactions made by the respondents during the diary recording week and are representative of Germany as a whole.

**Table 5: Share of payment instruments broken down by number of transactions**

according to payments diary

Payment instrument	Number of transactions	Share in %			
		2017	2014	2011	2008
Cash payment	15,864	<b>74.3</b>	79.1	82.0	82.5
<b>Card payment</b>					
Debit card (except contactless)	3,941	<b>18.4</b>	15.3	13.4	11.9
... with PIN <sup>1)</sup>	3,238	<b>15.2</b>	12.5	10.1	–
... with signature <sup>2)</sup>	703	<b>3.3</b>	2.8	3.3	–
Credit card (except contactless)	328	<b>1.5</b>	1.3	1.8	1.4
Contactless card	147	<b>0.7</b>	0.1	0.0	–
Debit card	114	<b>0.5</b>	–	–	–
Credit card	27	<b>0.1</b>	–	–	–
Other	6	<b>0.0</b>	–	–	–
Retailer card with a payment function	12	<b>0.1</b>	0.0	0.1	0.1
Prepaid payment card	6	<b>0.0</b>	0.0	0.2	0.7
Canteen/stadium card	37	<b>0.2</b>	–	–	–
<b>Other cashless payments</b>					
Credit transfer	275	<b>1.3</b>	1.0	1.3	1.8
Direct debit	135	<b>0.6</b>	0.5	0.3	0.6
E-payment scheme	398	<b>1.9</b>	0.9	0.7	0.1
Mobile payment	12	<b>0.1</b>	0.0	0.0	–
Other	33	<b>0.2</b>	0.1	0.1	0.2
Cashless, using an unspecified payment instrument	173	<b>0.8</b>	1.7	–	1.0
<b>Total</b>	<b>21,361</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**1** girocard and debit card products offered by international card providers.

**2** Means girocard payments using the Electronic direct debit scheme (ELV) – see glossary.

**Note:** The figures refer to the transactions made by the respondents during the diary recording week and are representative of Germany as a whole.

## ■ Familiarity with and use of mobile payment methods

Although many people claim to be familiar with mobile payment methods (see Figure 4), the actual number of people who use them is still low. When asked if they had ever paid for something with their smartphone (making a mobile payment in-store or outside of a store or using an app to send and/or receive money), a total of 7% of all respondents claimed to have used at least one of the mobile payment methods listed in Figure 4. This was most frequently the case for online shopping, followed by paying for travel services such as bus and rail tickets.

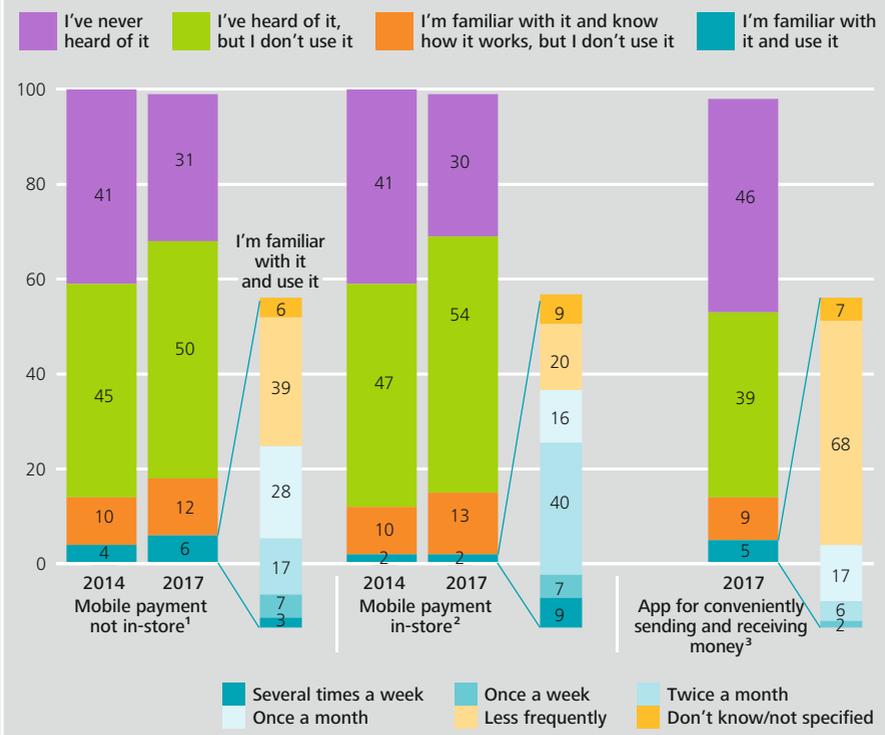
Of those respondents who shop with their smartphones, 72% use them to pay in-store once or several times a month. When not in-store, 55% do this at least once a month. For the first time, respondents were asked about the extent to which they use apps to send or receive money. Although this function was only built into the apps of various credit institutions in the year of the survey, 5% of respondents already claimed to be familiar with it and said they used it (see Figure 4).

All those who were familiar with one of the three mobile payment methods listed but did not use it (between 48% and 67% of respondents, depending on the payment method; see the green and orange segments in Figure 4) were asked why this was the case. The most frequently cited reason for all three payment methods was that respondents saw no need for such payment solutions. The second most common reason was that they did not regard the payment procedure as being secure enough. Other respondents found these new payment methods too complicated or they did not fulfil the necessary technical criteria to be able to use them.

## Familiarity with and use of mobile payment methods

Figure 4

Figures in per cent, as reported by respondents



Basis: all survey respondents. Deviations from 100% due to rounding. Questions: Which of the following payment methods are you familiar with, and which ones do you use? Follow-up question to respondents who are familiar with and use one of these methods: How often do you normally use that method? **1** eg ordering and paying for online purchases, ordering and paying for bus, rail and cinema tickets etc. **2** eg apps provided by supermarket chains, Payback. **3** eg PayPal, Cringle, Kwitt, Geld senden & anfordern.

## 4.2 Influence of the transaction amount

For payments up to a value of €5, cash is still by far the most commonly used means of payment at the POS (see Figure 5). The same holds true for amounts between €5 and €20. However, the share accounted for by debit cards has more than doubled in the past nine years. Cash is also used twice as often as debit cards for amounts between €20 and €50, although the latter means of payment dominates when it comes to transaction amounts exceeding €50. Between €50 and €100 also tends to be the transaction amount range in which many people go from paying by cash to paying by card. When respondents were asked to state the amount up to which they would always pay in cash, the average value was €67 (median: €35). Furthermore, the transaction amount as of which they would use a cashless payment method in the vast majority of cases was €100 on average (median: €60). For transactions over €100, almost twice as many debit card payments as cash payments were recorded in the payments diaries.

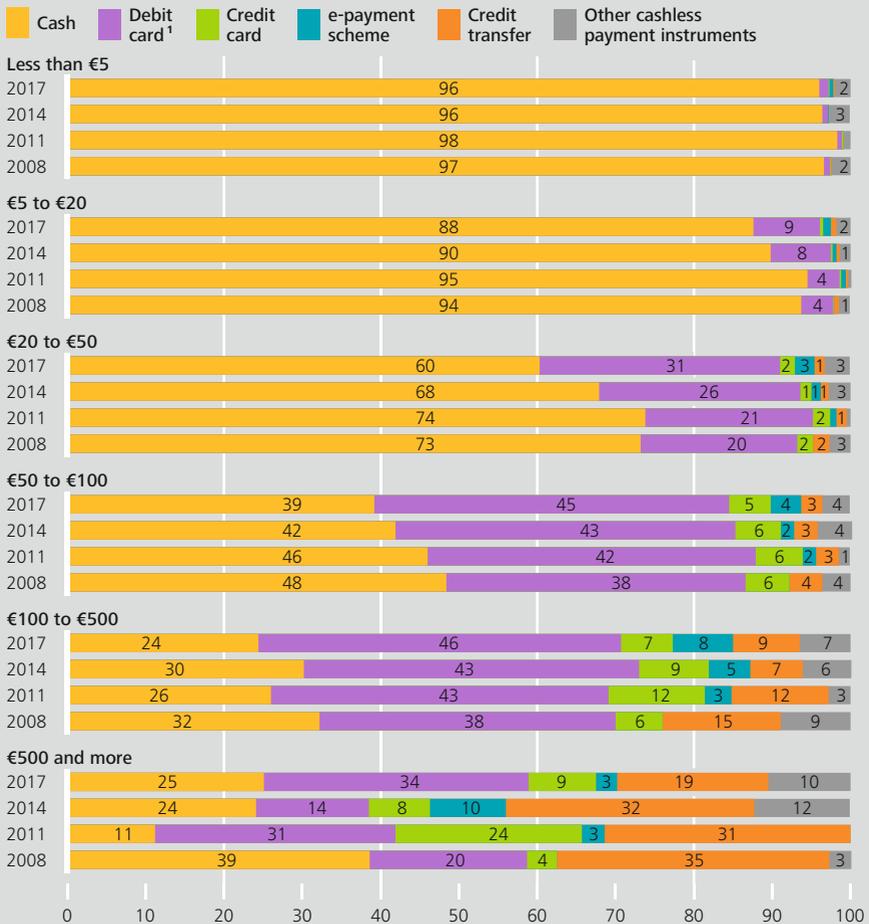
In the transaction amount category over €500, the diary results were volatile across the surveys conducted to date, which was probably due to the low number of observations. The respondents were therefore asked to provide separate information on large-value payments in the questionnaire. The majority of purchases above €500 were usually carried out only once (or at most twice) per year. Overall, such payments in the past twelve months were primarily made for retail purchases of durable goods (in 67% of cases) and holidays (61%). Payments over €500 were predominantly made using cashless payment instruments, with the exception of cash gifts, in which case 77% were given in the form of cash.

Of those interviewed, 64% stated that they had held a €500 banknote in their hands on at least one occasion, with 61% claiming that they had also used it in making a payment. According to self-assessments, the €500 banknote is used by 20% to give money to someone as a present and by 35% for saving purposes.

## Share of payment instruments broken down into various transaction amount categories

Figure 5

Figures as a percentage share of total number of transactions, according to payments diary



Basis: all transactions entered by respondents who completed the payments diary. The chart shows a breakdown of the payment instruments used in each transaction amount category, measured in terms of the total number of transactions. This means, for instance, that 96% of all payments up to a value of €5 were made in cash in 2017. For reasons of clarity, labels for a number of payment instruments (accounting for less than 1%) were omitted. Deviations from 100% due to rounding. <sup>1</sup> girocard and debit card products offered by international card providers.

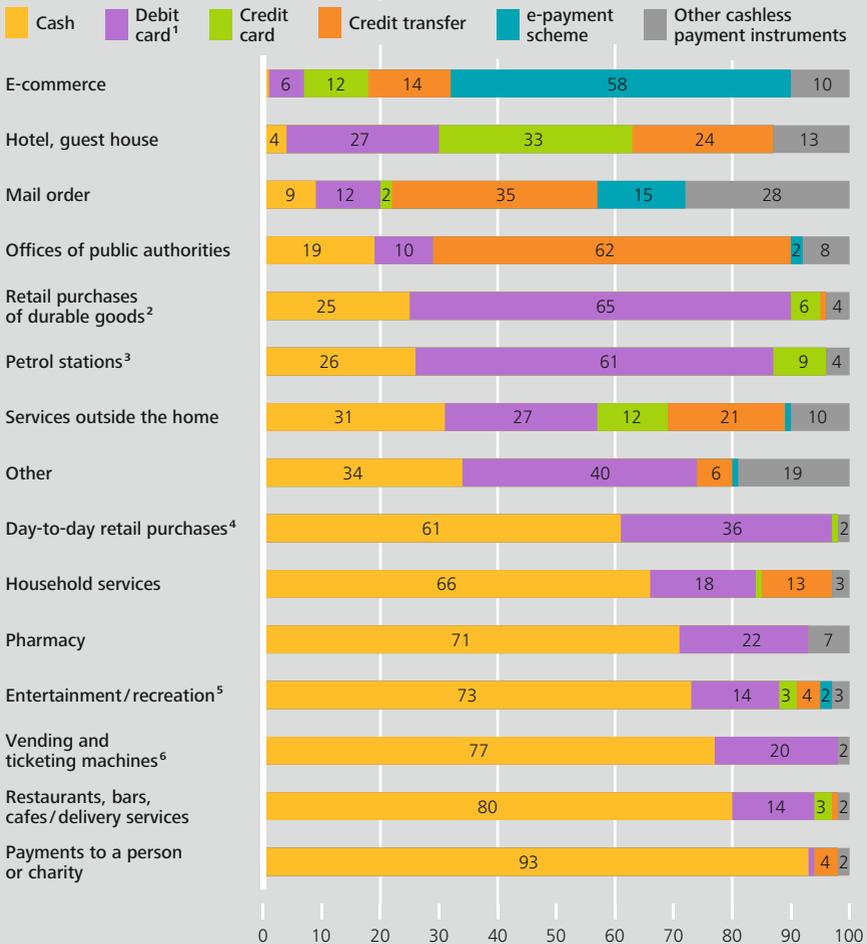
### **4.3 Significance of the place of payment**

The share of cash payments measured in terms of turnover declined at many places of payment, such as in retail outlets for day-to-day purchases, at petrol stations or in retail outlets for durable goods. In the latter two payment locations, debit card expenditure exceeded the 60% mark for the first time, whereas day-to-day purchases are still overwhelmingly paid for in cash. This is also the case for payments between individuals and at restaurants, bars and cafés (including delivery services), as well as for vending and ticketing machine payments. Credit cards only take the lead in the category of “hotels and guest houses”. In the newly surveyed category “Offices of public authorities” – which includes payments for parking fines, for instance – credit transfers are the predominant method of payment in terms of value.

## Use of payment instruments broken down by place/purpose of payment

Figure 6

2017, figures as a percentage share of turnover, according to payments diary



Basis: total turnover of respondents who completed the payments diary. For reasons of clarity, labels for a number of payment instruments (accounting for less than 2%) have been omitted. **1** girocard and debit card products offered by international card providers. **2** Before: "Longer-term retail purchases". **3** Before: "Filling station". **4** Before: "Retail purchases for day-to-day needs". **5** Before: "Leisure activities". **6** Before: "Vending machines".

#### 4.4 Criteria for choosing certain payment instruments

The number of people who own at least one cashless payment instrument and decide on a situational basis which means of payment to use at the POS rose (again) compared with the 2014 survey from 50% to 56%. This means that 44% decide on a payment instrument in advance. By contrast, 28% of the respondents pay exclusively in cash (2014: 33%), despite owning at least one payment card, while 16% (2014: 17%) primarily use cashless means of payment. The share of respondents who still described themselves as being pure cash payers three years ago has therefore shifted in favour of those respondents who choose their payment method on a situational basis.

When asked which features are essential or fairly important to the respondents when choosing their preferred means of payment, protection against loss, a clear overview of spending, ease of use, familiarity and the maintenance of privacy were stated most frequently, with each of these being mentioned by over 90% of the respondents (see Figure 7, upper part). Cash is still by far the payment instrument that best fulfils almost all of these criteria (see Figure 7, lower part). Payers are familiar with it and find it easy to use. Cash protects privacy and provides a clear overview of spending (with both criteria being specified in over 90% of the responses). According to the respondents, only debit cards provide better protection against financial loss than cash (48% of the responses compared to 44%). Other payment types, such as contactless payment or e-payment schemes, achieve much poorer results for all of the criteria surveyed and attain only low two-digit or even just single digit values. In addition to their lower level of acceptance by retailers, this assessment is probably also partly down to the fact that these instruments are (not yet) as well known and are used less frequently than cash.

This is also reflected in the responses by credit card owners, who are generally familiar with contactless payment and e-payment schemes. In some cases, this group assesses cashless payment instruments much more positively than respondents overall (see Figure 7, lower part). Cash, on the other hand, is rated slightly less favourably in all aspects by credit card owners than by respondents overall. Nevertheless, by comparison, cash continues to best fulfil basic features such as ease of use, a clear overview of spending, familiarity, maintenance of privacy and speed.

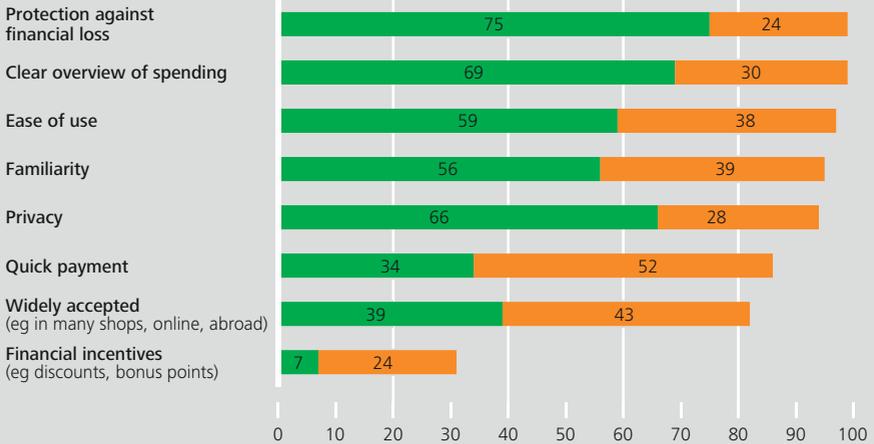
## Expected features of payment instruments

Figure 7

2017, figures in per cent, as reported by respondents

Question: In your opinion, how important are each of these features in a payment instrument? <sup>1</sup>

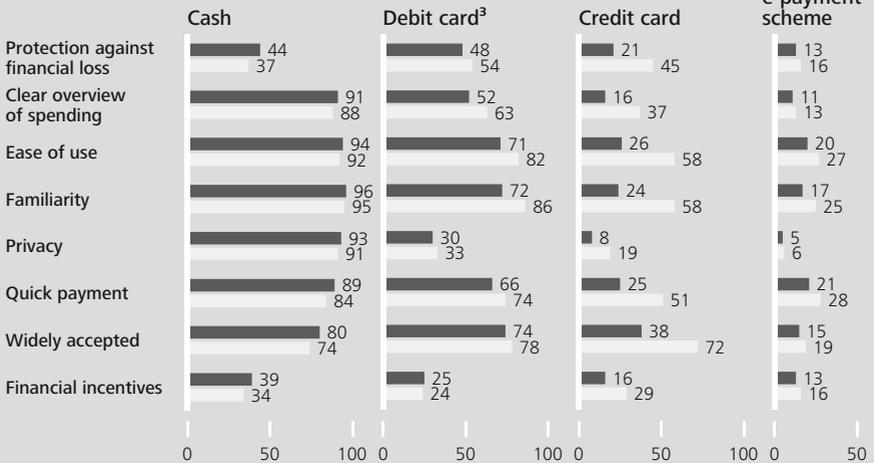
Crucial Quite important



Question: In your opinion, which payment instrument actually offers that feature? <sup>2</sup>

All respondents

Credit card holders



<sup>1</sup> Basis: all survey respondents. <sup>2</sup> Basis: all survey respondents and credit card holders only. <sup>3</sup> girocard and debit card products offered by international card providers.

#### 4.5 Frequency of payment card use

According to the survey, **debit or credit card** holders now use these cards more frequently to make payments than in the previous survey (see Figure 8). This is also reflected in the entries in the payments diaries: the share of turnover accounted for by card payments has continued to rise since 2014 (see Chapter 4.1).

Those who own a **canteen or stadium card**, which is primarily the case in the 18 – 24 year-old age group, pay with these cards particularly frequently. This is not surprising given that these cards are issued and used for a specific purpose in a distinct environment, and there is often no alternative. 33% use canteen or stadium cards several times a week and therefore behave in a similar manner as owners of debit cards, 38% of whom use them more than once a week.

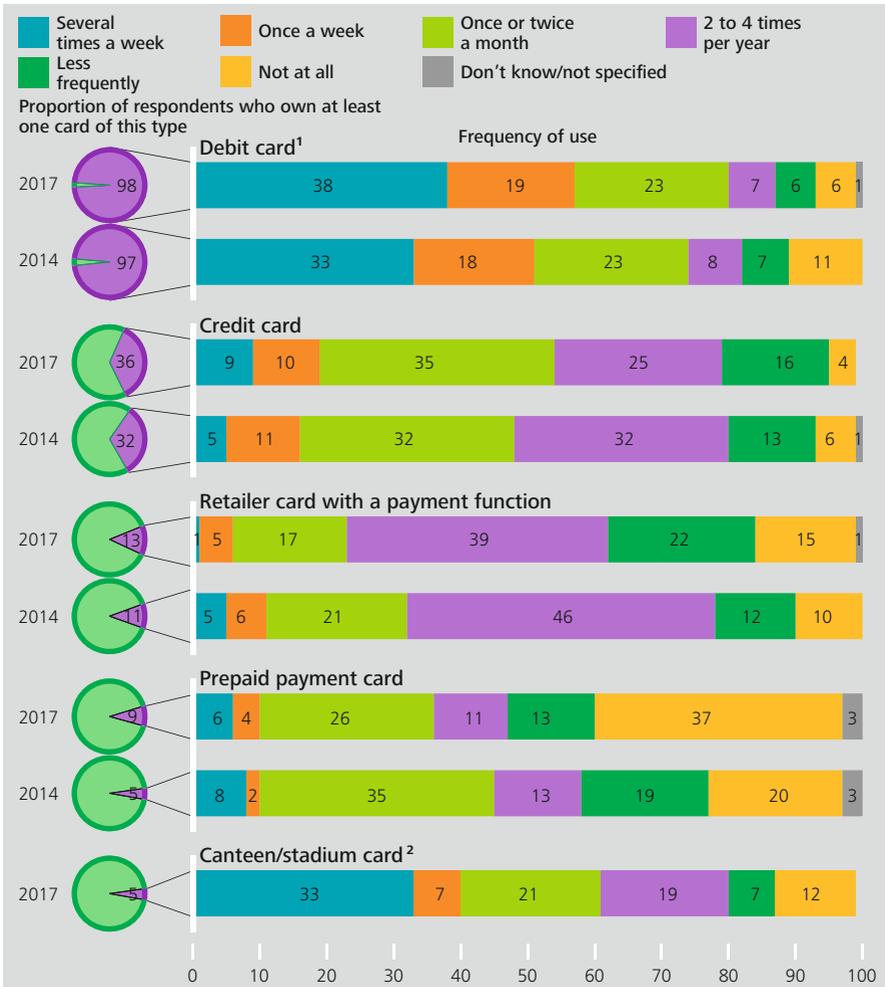
By contrast, it is striking that although the number of retailer cards with a payment function and prepaid payment cards has risen, the individual cards are used less frequently. As only a small number of these transactions were recorded in the payments diaries, no reasons for this behaviour can be inferred from the diary entries.

Compared to 2014, more respondents are aware of the option of **contactless payment using a card**; 60% have now at least heard of this function – an increase of eight percentage points. The 54% who are familiar with the payment procedure but do not use it generally ascribe this to the fact that they do not see a need for it (54%), it is not secure enough (33%) or they do not fulfil the necessary technical criteria to be able to use it (21%).

## Ownership and use of different payment cards

Figure 8

Figures in per cent, as reported by respondents



Basis: Respondents who own at least one of the cards surveyed. Deviations from 100% due to rounding. Question: Which of the following cards with a payment function do you own, and how many? Proportion of respondents who own at least one card of this type shown in the pie chart. Follow-up question: How often do you use that type of card for payments? (bar chart) <sup>1</sup> girocard and debit card products offered by international card providers. <sup>2</sup> Surveyed for the first time in 2017.

#### 4.6 Online payments

A total of more than 82% of the respondents now use the internet at least infrequently, and 57% are online once a day or more. By way of comparison with three years ago, 77% of the respondents used the internet at least infrequently, and 51% were online every day. Regarding the devices used to access the internet, laptops and smartphones are now both neck and neck in first place. Smartphones have also pushed stationary PCs down to third place compared to 2014 (tablets follow in fourth place). Smartphones are therefore becoming an ever more important access channel for online purchases and increasingly set the ergonomic criteria, such as convenience and simplicity of payment, by which e-payment schemes have to be measured.

67% of all respondents shop online, around half of whom do so at least once or more per month or per week. In the first survey in 2008, the total share of online shoppers stood at just 42% (2014: 63%). This significant rise in online shopping was accompanied by a growing awareness of e-payment schemes. According to the survey, 88% of all respondents are familiar with these e-payment schemes and 44% also use them (2014: 82% and 41%, respectively). While 57% of the survey respondents stated that they prefer to pay by credit transfer when given the choice, the majority of (actually transacted) online sales during the diary recording week (58%) were ultimately settled using e-payment schemes, eg PayPal or SOFORT Überweisung.<sup>12</sup> This represents a rise of around 17 percentage points compared to 2014. By contrast, there was a decline in the share of online purchases paid for by credit transfers (down nine percentage points) and credit cards (down six percentage points), in particular.

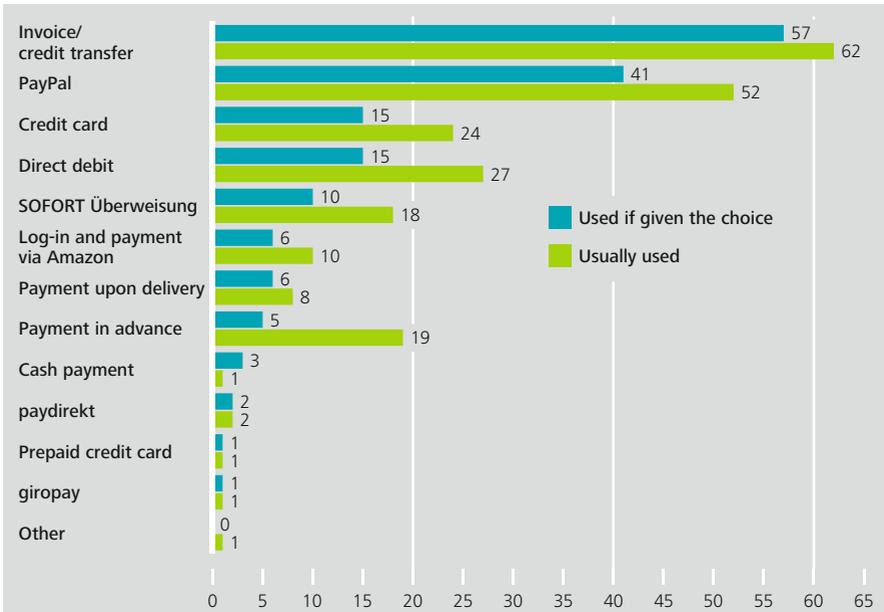
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<sup>12</sup> In order to keep the payments diary as simple as possible for the respondents, e-payment schemes were treated as a single means of payment (see Figure 6). During the interview, on the other hand, specific preferences for individual products, such as PayPal, SOFORT Überweisung, paydirekt or giropay, were recorded (see Figure 9).

## Payment of e-commerce transactions

Figure 9

2017, figures in per cent, as reported by respondents



Basis: respondents stating that they shop at least occasionally online. Multiple responses possible. Question indicated by the blue bar: Given the choice, which of these payment methods would you use? Question indicated by the green bar: How do you usually pay for your e-commerce transactions?

Deutsche Bundesbank

In addition to “traditional” online shopping, where the product is ordered online and sent by post, some retailers now offer customers the option of ordering the product online and then collecting it from the shop. Examples of this service are photo products, clothes or books. Only just under one in five respondents is aware of and uses this type of shopping. Payment is then usually made when collecting the product from the shop (82%) instead of paying online in advance.

## ■ 5 Changes in attitudes towards payments

### 5.1 Cash as a basic means of payment

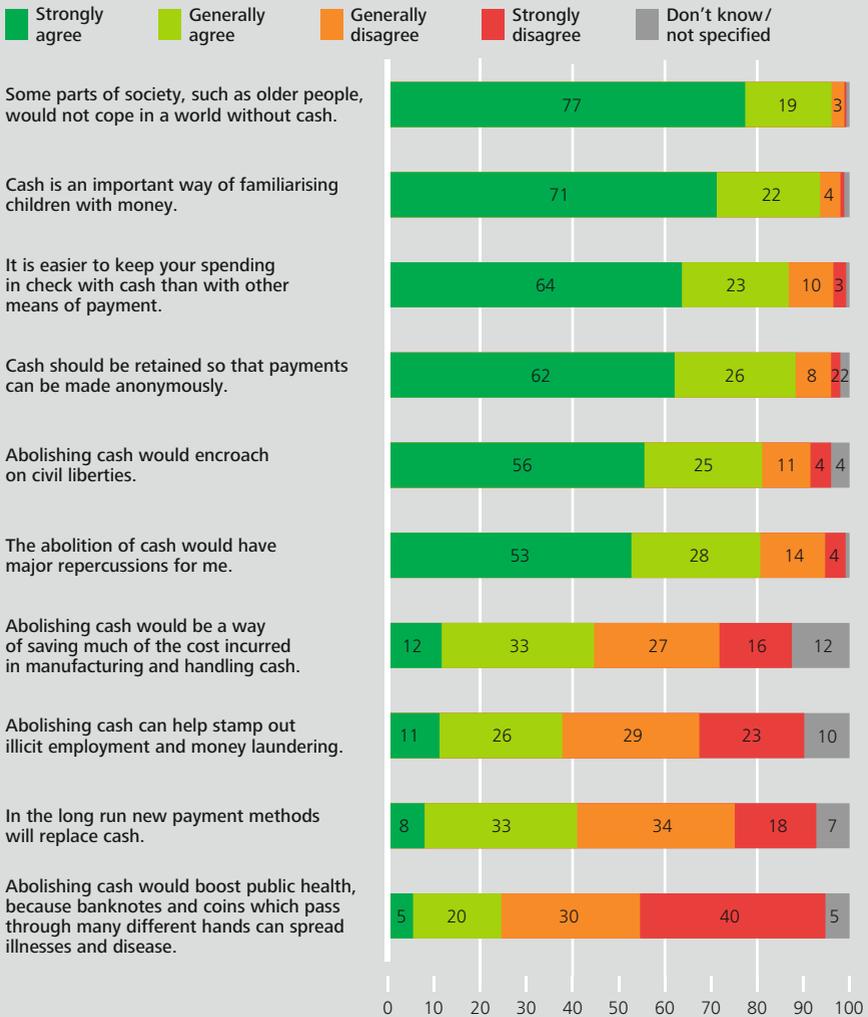
Cash is still the most widely used payment instrument at the POS, even though it now accounts for less than 50% of turnover. When asked about their future preferences, 88% of those surveyed answered that they would like to continue to have the same option of paying in cash in future as they do at present. Only 2% were in favour of it being abolished completely. The remaining 10% advocated cash being replaced as far as possible by other payment instruments. This clearly reflects the positive view of cash taken by the general public in Germany.

When asked about their attitude towards cash (see Figure 10), around 96% voiced the concern that, without cash, some members of the general public – eg older persons – would experience difficulties when making a payment. Nearly 88% cite anonymity and being able to keep a check on their spending as criteria for choosing cash. More than 80% agreed with the statement that abolishing cash would significantly restrict their range of personal choices. The arguments put forward by the opponents of cash find less support, however. The majority of the general public do not see any reason to believe that the abolition of cash would help to combat illicit work or make a contribution to preventive healthcare. It is only with regard to the argument that a cashless world would save costs that the number of those who agree and those who disagree is roughly equal.

## Opinions on cash

Figure 10

2017, figures in per cent, as reported by respondents



Basis: all survey respondents. The above statements for or against retaining cash were read out, and respondents were asked to state whether they strongly agree, generally agree, generally disagree or strongly disagree with each of them. Deviations from 100% due to rounding.

But it is not just abolishing cash altogether that is the subject of regular debate, it is also said that the small coins (1 cent and 2 cent) are inconvenient and also expensive in their production and handling.<sup>13</sup> The Bundesbank first addressed this question in its 2011 study on payment behaviour and raised it again in 2017. Compared with 2011, the negative attitude towards the introduction of a rounding rule is on the decline (see Figure 11).

The number of those who are undecided, who basically have no preference either way, is on the increase as is the number of those who are in favour. At 47% of those surveyed, there are currently more people in favour of a rounding rule in Germany than there are who reject it (36%).

As rounding (with a few exceptions<sup>14</sup>) does not take place in Germany at present, consumers were asked about how they used small coins. Of those surveyed, 63% use them in payments but almost one-quarter put the 1 and 2 cent coins to one side and hoard them at home. As many as 12% do not accept them at all or place them, say, in a donations box.

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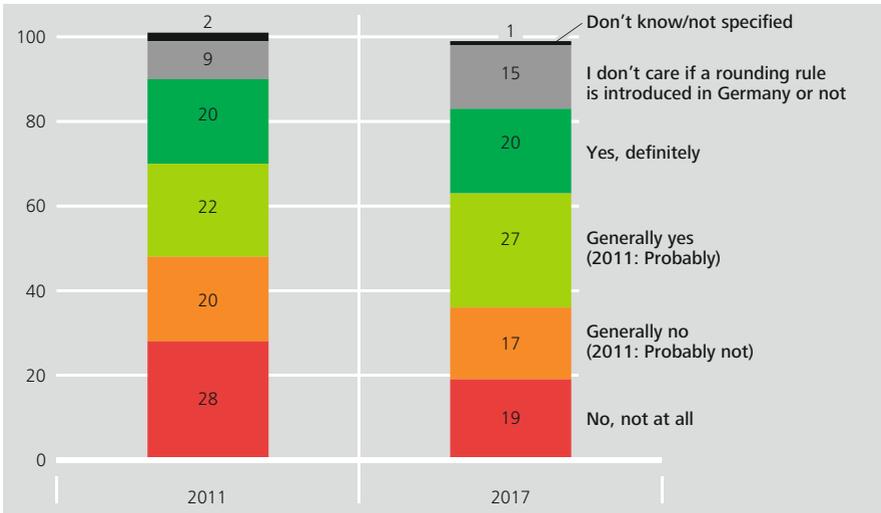
**13** See the survey undertaken by mymarktforschung.de at <https://www.splendid-research.com/ueber-uns/presse/item/studie-abschaffung-cent-muenzen.html> (15 December 2017). See also the European Commission Flash Eurobarometer 446 at [http://ec.europa.eu/economy\\_finance/articles/pdf/fl\\_446\\_en.pdf](http://ec.europa.eu/economy_finance/articles/pdf/fl_446_en.pdf) (15 December 2017) as well as the corresponding surveys of earlier years.

**14** There are individual initiatives such as “DEUTSCHLAND RUNDET AUF”, <https://deutschland-rundet-auf.de/partner-dra/> (6 December 2017) and the initiative for rounding up or down of the town of Cleves in the Lower Rhine region of north-western Germany, although this was not particularly successful and did not inspire any other towns or cities to follow suit, see <https://www1.wdr.de/nachrichten/rheinland/kleve-rundet-weiter-100.html> (18 December 2017). A few retailers in Germany have followed the example of the “dm-drogerie markt” drugstore chain, however, where rounding down of final total prices and pricing of goods in 5 euro cent increments has been practised in its outlets since 2002.

## Willingness to accept a rounding rule

Figure 11

Figures in per cent, as reported by respondents



Basis: all survey respondents. Deviations from 100% due to rounding. Question: Cash rounding rules for retail payments have been in operation in other countries, such as Finland and the Netherlands, for some time now, where the amount payable is rounded up or down to the nearest 5 cents at the point of sale. [Only in 2011: The idea is to relieve consumers, retailers and banks of the trouble of handling 1 and 2 eurocent coins.] Would you welcome a rounding rule of that kind in Germany?

Deutsche Bundesbank

## 5.2 Expected changes in payment behaviour

- For the first time since the series of studies began, more sales at the POS have been settled using cashless payment instruments than with **cash**. Furthermore, the average amount paid in cash is continuing to decline. Together with an increasing utilisation of cashless payment methods, a further decline in the use of cash is to be expected over the medium term.
- The **amount** of cash in wallets and purses remains relatively constant. The same is true of the amount of cash held in reserve as a “back-up”; if this falls below a certain threshold, cash is withdrawn again to top up the amount. ATMs are being used more and more instead of the bank counter to make withdrawals. All things considered, it is apparent that the majority of the general public wishes to retain cash as a means of payment.
- Cash is still very important when it comes to expenditure among private individuals (eg for pocket money) as well as for vending and ticketing machine payments (eg drinks, train tickets and cigarettes). Also here, however, developments in cashless alternatives are pointing to an ongoing decline in the utilisation of cash (see the box entitled “Familiarity with and use of mobile payment methods” on pages 26 and 27).
- **Card payments** at the POS are becoming more popular – among consumers as well as in the retail trade and among service providers. This higher degree of acceptance is likely to be due in part to altered expectations on the part of customers, for whom it has become more usual to pay by card. Furthermore, capping interbank fees (as a component of merchant fees) might have helped to reduce the cost of accepting card payments at least for some accepting parties.<sup>15</sup>

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<sup>15</sup> Regulation (EU) 2015/7551 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based transactions.

- **Contactless payment technology** could give a further boost to card payments, because it makes payment much quicker and more convenient. This type of payment has the potential to displace cash – even for fairly small amounts. Owing to their universal availability, the ongoing issuance of contactless **giro-cards**, in particular, will generate further growth. More active information on their functionality might significantly increase their acceptance at the POS and with customers.
- Online shopping – also via smartphone or tablet – will increase. This is likely to promote the widespread use of **e-payment schemes and mobile payment methods**. If the familiarity with the use of smartphones for banking operations shows a general growth, it is conceivable that mobile payment methods will also become more widespread at the stationary POS.
- The **Second Payment Services Directive** (PSD 2)<sup>16</sup> could promote the development and use of new payment methods. Among its provisions are regulations for payment initiation services: these initiate payments on behalf of their customers, although they do not themselves hold the customers' accounts. This could include online and mobile payment methods which, as a rule, generate a credit transfer, a direct debit, or a card payment. The fact that the legal situation is now clearly regulated could see the emergence of additional payment initiation services, generating further growth in the cited payment instruments.
- In terms of credit transfers, we are probably about to see an epochal change. The intention is that, in future, it will be possible to process them in **real time** (so-called instant payments), which means that the payment amount can be instantly credited to the recipient's account. Depending on the terms and conditions on which the credit institutions offer access to such real-time payments to their customers, the situation with regard to cashless payments will undergo a complete realignment.

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<sup>16</sup> Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market.

Despite all the existing eagerness for innovation, the key focus should be on taking into account the **needs** of the general public with regard to protecting their personal data, the security and confidentiality of their payments as well as ensuring easy and universal operability by the providers. But it is not just the providers of payment methods alone who determine payment behaviour in Germany. The final decision on which of the instruments to use is ultimately a matter for the members of the general public in Germany.

## ■ 6 Glossary

*Account information service:* Provision of information, usually in a summarised form, about one or more payment accounts held with one or more payment services providers. Since the second Payment Services Directive (Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market) entered into force, account information services require authorisation.

*ATM:* Automated teller machine.

*Canteen or stadium cards:* Cards which are issued for a specific purpose in a distinct environment where they can be used, for example cards provided to employees to pay for meals in staff canteens.

*Cashback:* See POS withdrawal.

*Contactless card:* Payment card (debit or credit card) for which the data required to make a payment are transferred via NFC just by holding the card to the card reader. A PIN is often not required for smaller amounts, although for security reasons, customers will be requested to enter their PIN after a certain number of payments have been made in this way.

*Credit card:* Payment card which normally involves an account being debited after a certain period of time has elapsed; if used several times, this entails either the deduction of a single amount or debiting in instalments. Payment to the retailer is guaranteed.

*Credit transfer:* Transfer of funds, initiated by the payer, to the payee's payment account.

*Debit card:* Payment card linked to a current account, which is debited immediately after payment is made. This card is often referred to as an “EC card”. In the study, girocards and debit card products offered by international card providers (MasterCard Debit, Maestro, Visa Debit and V Pay) are included in this category.

*Direct debit:* Instruction given by the payee to debit the payer’s payment account, with the latter’s consent.

*Electronic direct debit scheme (ELV):* Payment method where a debit is generated using a girocard and authorised by the customer’s signature. In contrast to a girocard payment with a PIN, payment is not guaranteed by the card-issuing bank because this constitutes a reversible debit from a legal and a practical perspective.

*E-money:* Monetary value stored electronically on a payment card or data carrier representing a claim on the issuer. The value is provided against payment of a sum of money (eg via credit transfer, direct debit or card payment) and is also accepted by persons or legal entities other than the e-money issuer.

*girocard:* Debit card scheme operated by the German Banking Industry Committee under which the card can be used at ATMs and POS terminals. So that they can be used abroad, girocards often need to have a co-branding arrangement in place with an international debit card provider. Once the matching PIN has been entered, payment by the card-issuing bank is guaranteed.

*Means of payment:* See Payment instruments.

*Mobile payment in-store:* Payment method where payment can be made by the customer in person using a smartphone at the POS terminal, or using an app, on the retailer’s premises. NFC technology is frequently used for this purpose, although there are other possible options, such as the use of QR codes.

*Mobile payment methods:* These include payments made using a mobile phone, either in-store or not in-store, as well as using an app to conveniently send and receive money without entering an IBAN. For more information, see the relevant glossary terms. The underlying transaction for a mobile payment is usually a credit transfer, direct debit or card payment.

*Mobile payment not in-store:* Payment method where payment is made using a smartphone at a location other than the retailer's premises. This includes, for example, ordering and paying for online purchases and buying bus, train or parking tickets.

*Near field communication (NFC):* This is a standard technology used for the contactless transmission of data over a distance of a few centimetres.

*Online banking:* Conducting banking transactions over the internet. Banks offer websites/portals and apps which customers can use to manage their current account online.

*Online payment scheme:* Method based on credit transfers using the payer's online banking setup (eg giro pay, paydirekt or SOFORT Überweisung) and special, internet-based electronic payment methods which enable the primary payment to be settled within a proprietary network (eg PayPal) and are linked to the payment account or a given payment card.

*Payment instruments:* Included here are all cash and cashless payment methods (credit transfers, direct debits, card payments) and services such as online and mobile payment methods based on these.

*Point of sale (POS):* The place at which the goods or services are sold and paid for. This usually means a retail outlet, but can also apply to other places, such as when services provided by tradesmen in households are provided on a delivery-versus-payment basis, or when online or mail order purchases are paid for.

*POS terminal:* Terminal at a retail outlet's checkout used to accept payments by card, smartphone etc.

*POS withdrawal:* The option of withdrawing cash at the POS in addition to making a purchase, eg at the supermarket checkout. This is provided a minimum purchase price has been reached and that the payment is made using a girocard and PIN. The total sum of the purchase and withdrawal is then debited from the current account.

*Prepaid payment cards:* Cards which must be topped up with funds before they can be used. They include GeldKarte, girogo and prepaid credit cards offered by international card providers.

*Retailer card with a payment function:* A customer card or reward card issued by the retailer that can be used to make payments. Payment itself is usually made at a later point in time, either by direct debit or charging the amount to a credit card.

*Using an app to conveniently send and receive money:* Online application which allows users to send money directly to friends or family members using their mobile phone (smartphone) without entering an IBAN, eg Cringle, Kwitt, PayPal and Geld senden & anfordern, or the relevant functions in banking apps.

## 7 Annex

### Cash carried by individuals

Figure 12

Figures in per cent, according to payments diary



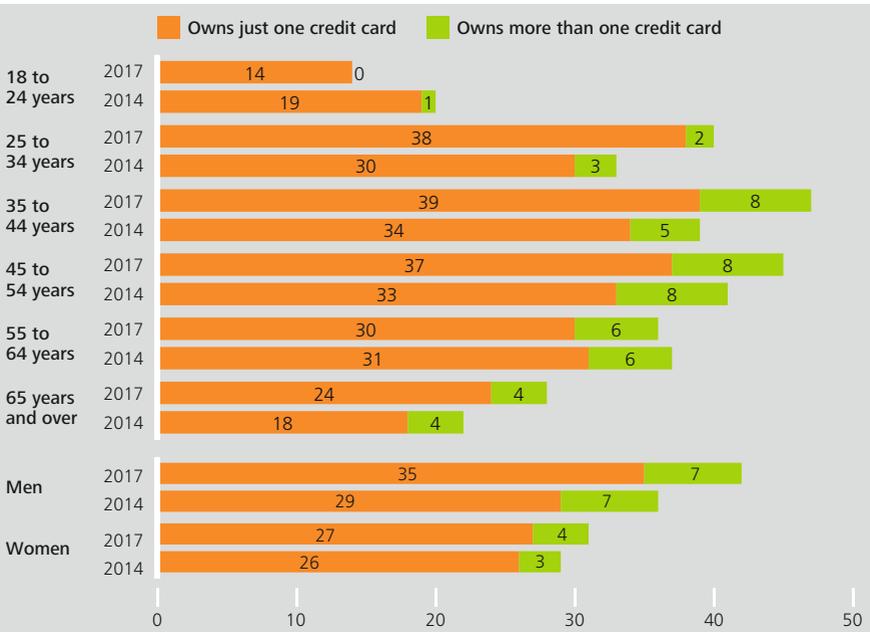
Basis: all survey respondents. Deviations from 100% due to rounding.

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### Credit card ownership broken down by age group and gender

Figure 13

Figures in per cent, as reported by respondents

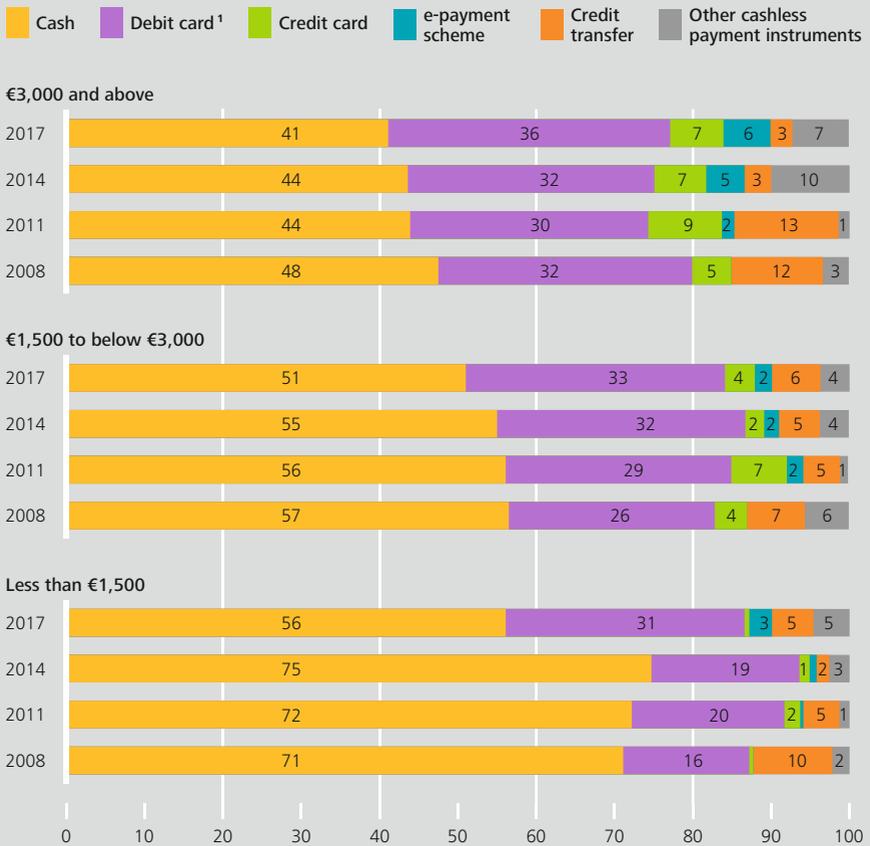


Basis: all survey respondents. Question: Which of the following cards with a payment function do you own, and how many? Chart shows respondents who own at least one credit card.

## Use of payment instruments broken down by net household income

Figure 14

Figures as a percentage share of turnover, according to payments diary

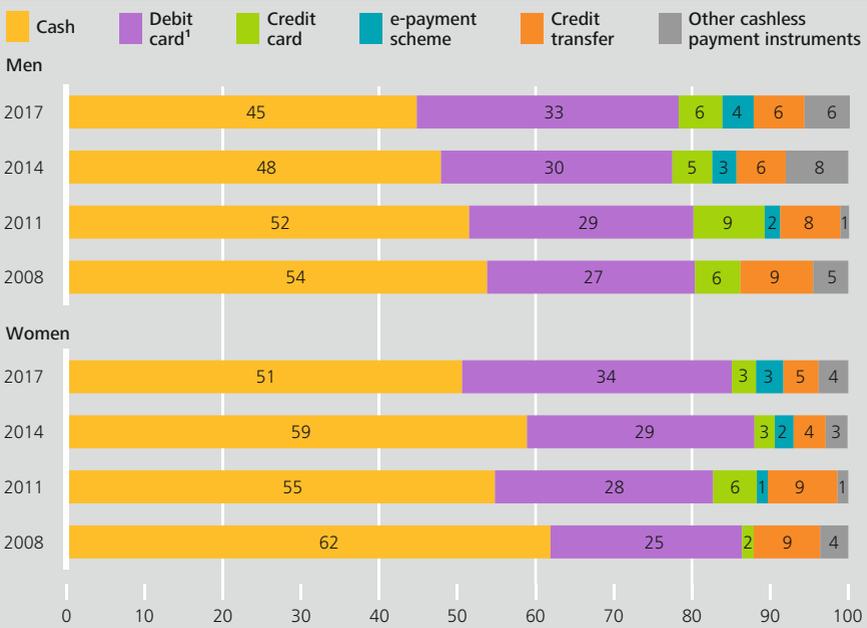


Basis: total turnover of respondents who completed the payments diary. For reasons of clarity, labels for a number of payment instruments (accounting for less than 1%) were omitted. Deviations from 100% due to rounding. <sup>1</sup> girocard and debit card products offered by international card providers.

### Use of payment instruments broken down by gender

Figure 15

Figures as a percentage share of turnover, according to payments diary

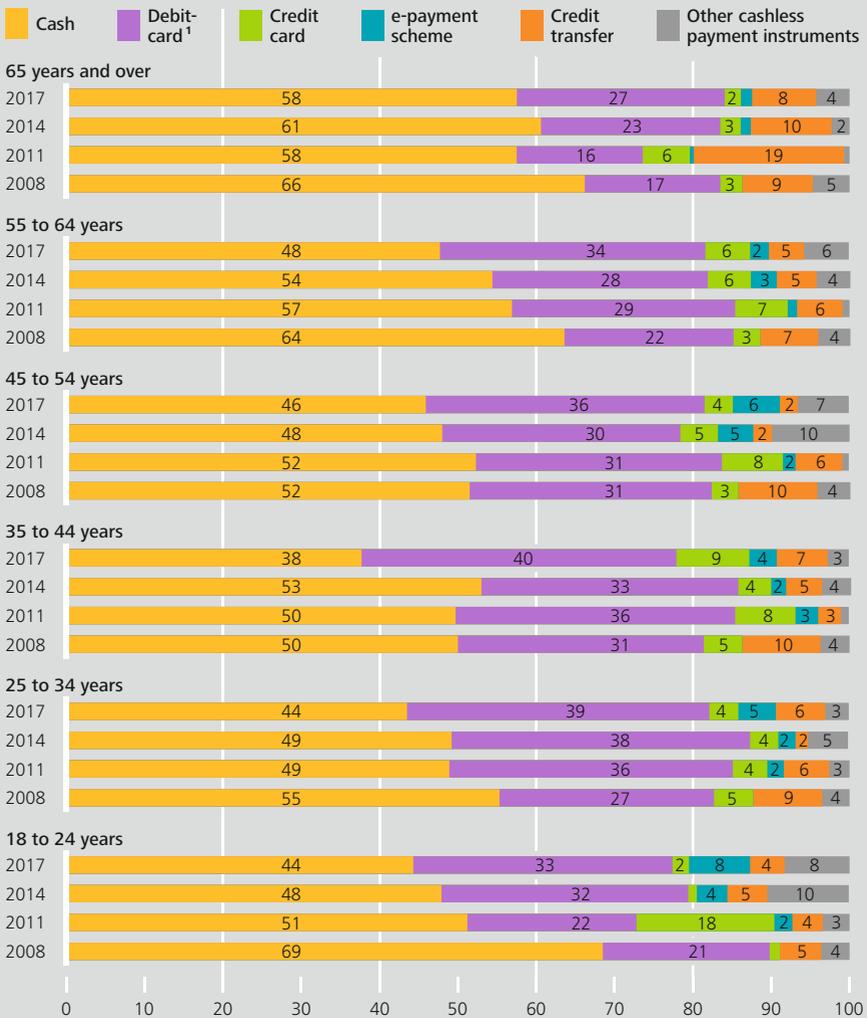


Basis: total turnover of respondents who completed the payments diary. Deviations from 100% due to rounding. <sup>1</sup> girocard and debit card products offered by international card providers.

## Use of payment instruments broken down by age group

Figure 16

Figures as a percentage share of turnover, according to payments diary



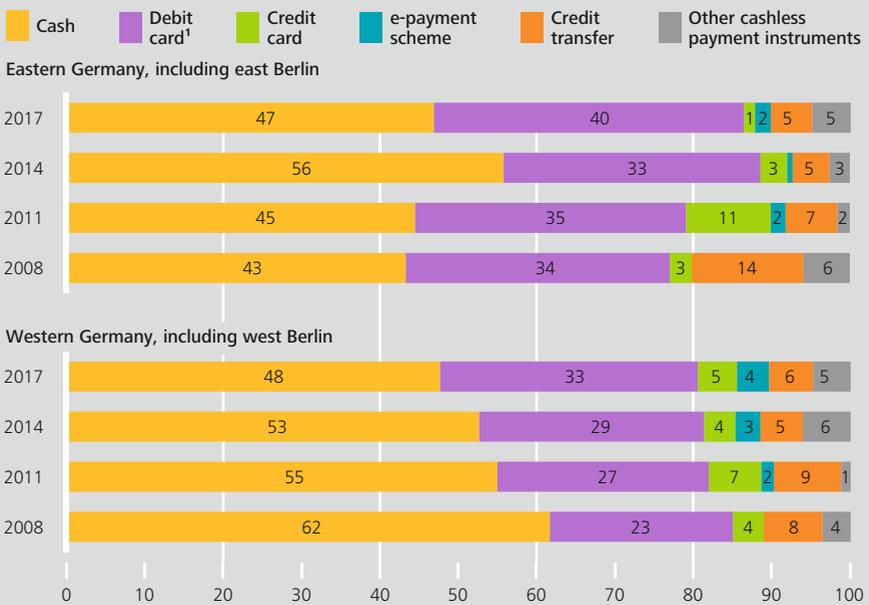
Basis: total turnover of respondents who completed the payments diary. For reasons of clarity, labels for a number of payment instruments (accounting for less than 2%) were omitted. Deviations from 100% due to rounding.

<sup>1</sup> girocard and debit card products offered by international card providers.

## Use of payment instruments in eastern and western Germany

Figure 17

Figures as a percentage share of turnover, according to payments diary



Basis: total turnover of respondents who completed the payments diary. For reasons of clarity, labels for a number of payment instruments (accounting for less than 1%) were omitted. Deviations from 100% due to rounding. <sup>1</sup> girocard and debit card products offered by international card providers.

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