

Survey on payment methods 2017

SCHWEIZERISCHE NATIONALBANK
BANQUE NATIONALE SUISSE
BANCA NAZIONALE SVIZZERA
BANCA NAZIUNALA SVIZRA
SWISS NATIONAL BANK



Survey on payment methods 2017

Survey on payment behaviour and
the use of cash in Switzerland

Contents

	Page
Preface	4
1 Executive summary	5
2 Motivation, delimitation and methodology	8
3 Prevalence and evaluation of payment methods	10
3.1 Payer types	10
3.2 Prevalence of payment methods	11
3.3 Evaluation of the features of payment methods	14
4 Payment behaviour and choice of payment method	16
4.1 Overview of payment behaviour	16
4.1.1 Payment amount as determining factor	19
4.1.2 Place of payment as determining factor	21
4.1.3 Summary: determining factors	22
4.2 Socio-demographic differences in payment behaviour	23
4.3 Reasons for the choice of payment method	26
4.3.1 Acceptance and availability as prerequisites for free choice of payment method	26
4.3.2 Assessment of simplicity of payment procedure	27
4.3.3 Individual preferences and habits	27
4.3.4 Summary: reasons for the choice of payment method	28
4.4 Assessment of future payment behaviour	29
5 In-depth analysis of cash usage	31
5.1 Cash withdrawals and deposits	31
5.2 Use of large denomination banknotes	33
5.3 Use of cash as a store of value	35
6 International comparison	37
6.1 Payment behaviour	37
6.2 Cash usage	38
Appendix 1: Methodological notes	40
Appendix 2: Distribution of the sample according to socio-demographic characteristics	41
Glossary	42

Dear readers

The increasing digitalisation of everyday life is also evident in the world of payment transactions and retailing. Innovative payment procedures, such as paying by smartphone, and the increasing share of online purchases are good examples of this. At the same time, developments in a number of countries suggest that cash is losing its importance as a means of payment. Against this background, the Swiss National Bank (SNB) is particularly interested in obtaining in-depth information on the payment behaviour of households in Switzerland and their use of cash. What kind of payments are the various payment methods used for? What factors influence the choice of payment method? How important is cash as a payment method and as a store of value?

In order to analyse these questions, the SNB conducted a representative survey of the payment methods of households in Switzerland for the first time in 2017. The survey provides an insight into the payment behaviour and attitudes of the Swiss population in respect of the various payment options. This insight is only possible as survey respondents were prepared to be open about their payment behaviour and the underlying motives. I would therefore like to express my gratitude to all those who participated. Special thanks are also due to our colleagues at the Deutsche Bundesbank, the Austrian National Bank (OeNB) and the Netherlands Bank (DNB), from whose experiences with similar surveys in their countries the SNB benefited on a conceptual level.

The survey reveals that cash is the most commonly used payment method by households in Switzerland. At the same time, it is clear that they willingly make frequent payments with their Maestro/EC cards or PostFinance cards, whereas other cashless payment methods such as credit cards and newer payment methods are less frequently used. It is also very apparent that the various payment methods complement each other well in different situations. Thanks to a seamlessly functioning cashless payment system on the one hand, and an extensive network of ATMs for the withdrawal of cash on the other, Switzerland offers a supportive infrastructure that enables the population to choose their preferred payment method in any given situation.

The findings from this survey are likely to be of wide interest. They lay the basis for more extensive analysis and contribute to an in-depth discussion of questions concerning payment methods and cash usage. Last but not least, the SNB survey provides important information regarding the need for cash and the efficiency of the existing cashless payment transactions system. It therefore helps the SNB to fulfil two statutory tasks of equal importance: ensuring the supply of cash, and facilitating and securing the operation of cashless payment systems. Only if Swiss residents have confidence in both cashless payment transactions and cash itself can they genuinely have freedom of choice when it comes to selecting a particular payment method.

I hope you find this study interesting and informative.

Fritz Zurbrügg
Vice Chairman of the Governing Board¹

¹ This report was prepared by Anja Bühlmann, Till Ebner, Silvia Oppliger and Jörn Tenhofen under the project management of Peter Eltschinger. The project team also included Jürg Bärlocher, Alexandra Egger, Laura Felber, Nino Landerer and Philippe Schnell.

In the autumn of 2017, the Swiss National Bank (SNB) conducted a survey on payment methods for the first time. The aim of the survey is to obtain representative information on payment behaviour and the use of cash by households in Switzerland, and to ascertain the underlying motives for this behaviour.¹

As part of the survey, around 2,000 people resident in Switzerland were interviewed to obtain information on their payment behaviour generally and their use of cash in particular. Following the interview, respondents recorded all the payments made by them over seven consecutive days in a payments diary, specifying the amount, place and method of payment. Recurring payments – such as rental expenses and insurance premiums – were to be entered in the diaries separately in aggregate form as one-off monthly amounts. In total, more than 22,500 transactions were recorded in respondents' diaries.

On the one hand, the survey provides answers to questions regarding the payment behaviour of households in Switzerland, such as which payment methods households are aware of and possess, as well as how they use these in practice. On the other hand, the survey provides answers to specific questions on the use of cash, including on the use of the two highest denominations (200-franc and 1000-franc notes), and on the role played by cash as a store of value. Moreover, the findings on payment behaviour and the use of cash in Switzerland are also compared in this report with the corresponding results for the euro area.

The report sets out the survey results in primarily descriptive terms, suggesting explanations as appropriate wherever particularly striking results emerge. It thereby provides a basis for more extensive analysis.

Overall, the survey paints a picture of multifaceted use of payment methods by households in Switzerland. The results indicate the well-functioning coexistence of cash and cashless payment methods, as well as a high level of satisfaction with existing payment options on the part of households.

As most places of payment offer freedom of choice when it comes to selecting payment methods, residents in Switzerland can choose the method that is most suitable from an individual perspective. This constitutes a significant benefit to the national economy. In addition, the fact that the Swiss public is able to choose their preferred method of payment in most situations proves that the SNB fulfils its statutory tasks of ensuring the supply and distribution of cash on the one hand, and facilitating and securing the operation of cashless payment systems on the other.

In detail, the 2017 survey on payment methods highlights the following findings:

Swiss residents aged 15 years and over execute on average 1.6 payments a day, with the transaction amount averaging CHF 41. The majority of these payments are below CHF 20, whereas just 2% of transactions involve sums of more than CHF 200.

Cash is the most common method of payment for households in Switzerland. Of the payments recorded, 70% were processed with cash. When measured in terms of value, by contrast, cash accounted for just 45% of the recorded expenditure. This difference is attributable to the fact that cash is a particularly popular payment method for small amounts. That said, cash is also often used when larger sums are involved: 35% of non-recurring payments that involve amounts of more than CHF 1,000 are settled with cash.

¹ Hereafter, the terms 'households', 'resident population', 'residents' and 'respondents' are used synonymously.

When executing payments, households resort to both small and large denomination banknotes.

In particular, the 10-franc note and the 20-franc note are used very frequently in payments, but the two largest denominations are also widespread in Switzerland. 40% of respondents indicated that they had at least one 1000-franc note in their possession within the last two years, a figure that rises to 66% with respect to the 200-franc note. The two highest-value banknotes are first and foremost used for expensive, significant purchases of an infrequent nature – such as the purchase of cars, electronic goods and furniture – as well as for paying bills at post office counters.

In addition to an average cash sum of CHF 133 held in their wallets, the average Swiss resident also possesses approximately two different cashless methods of payment. The dominant methods of cashless payment are the debit card and the credit card. By comparison, more innovative payment procedures such as payment apps are still not very widespread.

The debit card (Maestro/EC card, PostFinance card) is by far the most commonly used cashless payment method in Switzerland. Of the transactions recorded in the survey, 22% were processed in this form, whereas credit card payments accounted for a share of 5%.

By contrast, the figures for usage of innovative payment procedures such as payment apps and contactless card payments are very modest. Since these payment options are used above all for small amounts, they may come to represent an interesting alternative to cash in time. That said, around half of respondents indicated that they would continue to pay in cash over the next few years just as often as they do today. In the light of this finding, it is possible that innovative payment options could actually displace existing cashless payment methods rather than cash payments.

The features of cash and debit cards as methods of payment are perceived as good to very good. Specifically, cash is highly valued from the perspective of acceptance and costs in particular, while the debit card fares very well in the area of security – i.e. the protection it offers against the financial consequences of loss or theft. These two payment methods are considered equally easy and quick to use.

On the one hand, the choice of payment method is influenced by the payment amount. Cash and payment apps are used in particular to settle small and medium-sized amounts, whereas debit card usage is increasingly common for amounts above CHF 50, and credit card use becomes widespread for amounts above CHF 200. This shows that the different methods of payment complement each other well.

On the other hand, payment method preferences vary according to place of payment. Factors such as individual preferences for a particular form of payment (cash or cashless) and the subjective evaluation of the simplicity of the payment procedure influence the choice of payment method. In particular, the evaluation of the simplicity of a payment method depends on the place of payment to a significant degree. Depending on the outcome of this evaluation, households therefore select different methods of payment at different places of payment. Thanks to the high level of acceptance of cashless forms of payment and the ready availability of cash, households in Switzerland genuinely do have the opportunity to use their preferred payment method at most places of payment.

The differences in payment behaviour that have been observed in other countries between groups with different socio-demographic characteristics are also evident in Switzerland. In particular, the aspects of age and household income are significant when it comes to preferences for specific payment methods and the choice of payment method in any given situation. People over the age of 55 and respondents from low-income households show above-average attachment to cash. By contrast, people aged 15–34 or from high-income households have a preference for card payments. Moreover, a striking regional difference in Switzerland is the greater preference for cash payment in Ticino.

Overall, Switzerland's population exhibits similar payment behaviour to the euro area population on average. However, it should be noted in this context that significant differences in payment behaviour can be observed between the individual countries of the euro area. For example, German-speaking countries and the countries of southern Europe use cash considerably more than French-speaking and northern euro area countries. By comparison, Switzerland finds itself somewhere in the middle.

In addition to its function as a method of payment, cash also plays an important role for households in Switzerland as a store of value. Cash is kept for this purpose by 37% of Swiss households. The majority of these respondents say they hold less than CHF 1,000 as a store of value, whereby the 100-franc note is most commonly held. Immediacy of availability is cited as a key motive for the use of cash as a store of value. By contrast, setting aside funds for a crisis and the persistent low interest rate environment are currently factors that play a distinctly minor role.

Definition of the evaluated payments

In their diaries, respondents recorded information on all non-recurring payments over a period of seven consecutive days. These are described in the report as 'recorded' payments.

Recurring payments – such as rental expenses or insurance premiums – were not to be recorded in this way, and were only to be provided in aggregate form as one-off 'monthly expenses'.

For both payment categories (non-recurring and recurring), the overall monthly payment volumes for the resident population aged 15 and over resulted in a similar order of magnitude (around CHF 14 billion in each case).

All statements regarding payments (such as usage proportions of different payment methods) in the report refer solely to the individually recorded, non-recurring payments.

Under the National Bank Act, the SNB is tasked with pursuing a monetary policy serving the interests of the country as a whole. It ensures price stability, while taking economic developments into account. Among other things, this requires it to ensure the supply and distribution of cash in Switzerland. At the same time, the SNB is entrusted with the task of facilitating and securing the operation of cashless payment systems. By fulfilling these equally important tasks, the SNB lays the basis for the public being able to choose their preferred payment method in any given situation.

Acquiring in-depth knowledge and analysing the use of cash and cashless payment instruments¹ as well as the associated developments helps the SNB to fulfil the above-mentioned tasks. While this is true in a general sense, it is of particular significance at the current time for two reasons. First, the world of payment transactions has been undergoing rapid technological change for a number of years now. Examples of this include new payment procedures such as payment apps and contactless payments with debit and credit cards. Second, where cash is concerned, there are a number of international developments that make it essential to gain an even better understanding of the use of cash by Switzerland's population. An example of this is the declining significance of cash as a method of payment in Nordic countries.

Against this background, the representative survey on payment methods commissioned by the SNB for the first time in 2017 pursues two overarching objectives. First, the survey is intended to provide information on the general payment behaviour of the resident population in Switzerland and on the underlying motives for this behaviour. Second, the survey aims to achieve a better understanding of the use of cash by the resident population.

The survey therefore supplements the existing analytical activities of the SNB in the cash market and in the area of cashless payment instruments. These activities include regular discussions with its key partners in the cash market (banks, cash processing facilities) as well as the collection and statistical processing of data on cashless payment transactions.

The survey answers the following questions:

- What payment methods are households aware of, and which do they possess?
- How do households rate the features of the different payment methods?
- How do households make payments, and what influence do the factors of amount and place have on their payment behaviour?
- To what extent can differences in payment behaviour be explained by socio-demographic characteristics?²
- What are the reasons for the choice of a particular payment method?
- How widespread are the two largest denominations (200-franc and 1000-franc notes) among the resident population, and for what purposes are they used?
- What role does cash play for households as a store of value?
- What are the motives for any holding of cash as a store of value?

Accordingly, the survey focuses on payment behaviour and the use of payment methods by households, and excludes the use of payment methods by banks and other companies.

The survey comprises a personal interview on payment habits and attitudes towards payment instruments, as well as the keeping of a payments diary. In the diary, respondents recorded information on all payments executed over a period of seven consecutive days, with the exception of recurring payments (rental expenses, insurance premiums and similar). These latter payments were recorded in the diary only in aggregate form as one-off total monthly amounts. The information to be recorded in the diary encompassed the amount involved, the place of payment³ and the actual payment instrument used in each case.

² Gender, age, language region, residential environment, educational level, household income, employment status; cf. Appendix 2.

³ The term 'place of payment' is broadly defined for the purposes of this survey, and encompasses specific points of sale (e.g. supermarkets, restaurants and online platforms) as well as counterparties (e.g. private individuals) and payment purposes (e.g. 'eating and drinking out').

¹ The terms 'payment method' and 'payment instrument' are used synonymously throughout this report; cf. Glossary.

When interpreting the statements contained in this report, the following should therefore be taken into account: Where information relates to the diary entries, a clear distinction can be made between non-recurring payments and recurring payments, as the latter were not to be individually recorded. By contrast, where statements relate to respondents' own assessment of their payment behaviour in the interviews, this distinction is less clear.

For the implementation of the survey, the SNB commissioned the market research institute DemoSCOPE, which interviewed some 2,000 Swiss residents aged 15 and over between August and November 2017. Table 2.1 summarises the key aspects of the survey's design. More details on the methodology can be found in Appendix 1.

Table 2.1

KEY ASPECTS OF THE SURVEY DESIGN

	Description
Method	Computer-Assisted Personal Interview (CAPI) and paper or online diary
Survey population	Language-assimilated resident population of Switzerland aged 15 and over
Sampling procedure	Random quota: sample points (postcodes/streets) and quotas (age/gender)
Field time	Mid-August to mid-November 2017
Gross sample	2,158 interviews and 2,007 diaries
Adjusted sample	1,968 interviews and diaries
Incentive	SNB giveaway and postal cheque to the value of CHF 100

Source: SNB

3

Prevalence and evaluation of payment methods

Key points in brief

- The average amount of cash held in a wallet is CHF 133.
- On average, residents possess two different cashless payment methods, whereby the debit card in particular is very widespread (ownership proportion of around 90%), followed by the credit card (around 60%).
- Overall, innovative payment procedures such as payment apps (around 10%) are not yet widely used.
- The features of cash and debit cards as payment methods are consistently perceived to be good to very good.

This chapter sets out, on the basis of the interview statements, whether respondents express a fundamental preference for the use of cash or non-cash¹ payment methods (cf. section 3.1.), which payment methods they are aware of and possess (cf. section 3.2.) and how they rate the features of these payment methods (cf. section 3.3.). This provides the framework within which households assess the way they execute payments. This is of particular importance for the later investigation of the motives behind specific payment behaviour.

3.1 PAYER TYPES

On the basis of their answers in respect of general payment preferences, respondents can initially be broken down into three payer types: cash payers, cashless payers and situational payers. Respondents are classified as cash payers if they always or predominantly use cash to make their payments. The term cashless payers describes those who always or predominantly use cashless payment methods. Respondents who do not exhibit a fixed preference in their choice of payment method and who use either cash or non-cash depending on the situation in question are classified as situational payers.

With a proportion of 39% of total respondents, the cash payer type emerges as somewhat more common in Switzerland than the situational payer type, which accounts for 34% (cf. chart 3.1). Almost one-fifth of respondents report that they pay exclusively with cash. A slightly smaller proportion (27%) consider themselves to be predominantly cashless payers. This payer type does not exhibit such a strong preference – only one in 50 respondents states that he/she always pays with non-cash methods. One plausible explanation for this difference is that cash – as a statutory payment method – is accepted virtually everywhere, whereas cashless payment methods cannot be used in every situation.²

When the payer types are broken down according to different socio-demographic characteristics, the first striking aspect is an above-average proportion of cash payers who belong to the population group aged 55 and over. Similarly significant is the preference for cash payments in Ticino, as well as among persons with low incomes. By contrast, in the case of respondents resident in French-speaking Switzerland or from households with a monthly income of more than CHF 10,000, there is a comparatively strong preference for cashless payment, whereas respondents from households with a middle income (monthly household income between CHF 6,000 and CHF 7,999) are more likely than the comparison groups to describe themselves as situational payers. Differences between genders, however, turn out to be relatively insignificant overall.³

1 The terms 'cashless' and 'non-cash' payment methods are used synonymously in this report.

2 At the same time, it cannot be ruled out that the claim to always pay with cash is subject to a certain amount of upside distortion, as in the interview environment respondents may disregard or 'forget' that they also make payments from a bank account, e.g. via standing order or direct debit. The same applies to respondents who claim to always pay with non-cash methods. However, due to their size, the former group is likely to be more significant for the overall result than the latter.

3 The investigated socio-demographic characteristics and their breakdown by group are described in Appendix 2.

3.2 PREVALENCE OF PAYMENT METHODS

The prevalence of cash is measured by the actual cash sums held by respondents in their wallets, whereas the use of non-cash payment instruments is based on a self-assessment, whereby respondents are first asked whether they are essentially aware of these instruments, and then asked whether they possess or have access to them.⁴

On average, respondents state that they carry CHF 133 of cash in their wallets, with the actual cash amounts held varying significantly depending on the socio-demographic group in question (cf. chart 3.2). For example, men carry slightly more cash around in their wallets on average than women. The differences between age groups are more significant than they are between the genders. In the group of respondents aged 55 and over, the average cash holding is more than double that of people aged 15–34. Other, significant differences are apparent between the various language regions. In Ticino, respondents carry considerably more cash around with them than they do in German-speaking and French-speaking Switzerland.

These results are in line with the disproportionately high preference shown by these groups for cash payments as established in section 3.1. It is only logical to assume that people who like to pay with cash also carry the corresponding cash sums in their wallets. Where household income is concerned, the average cash holding of the lowest income category is lower than that of the other groups. This is not least likely to be explained by the low level of income. By contrast, although the cash holdings of the other income categories are somewhat higher than in the lowest income category, they are fairly similar to one another, despite the significant differences in income. In this case, other factors – particularly the stronger preference for cashless payments on the part of persons with higher incomes – could be counterbalancing what would otherwise be expected to be higher cash holdings.

When it comes to the awareness of non-cash payment instruments, respondents spontaneously cite an average of around four alternatives to cash.⁵ The two most familiar cashless payment instruments by far are the debit card and the credit card, followed at some distance by e-banking transfers and payment apps (cf. chart 3.3).⁶

⁴ The term ‘possess’ is understood to mean both physical possession of debit or credit cards and access to non-physical payment instruments such as transfers via e-banking.

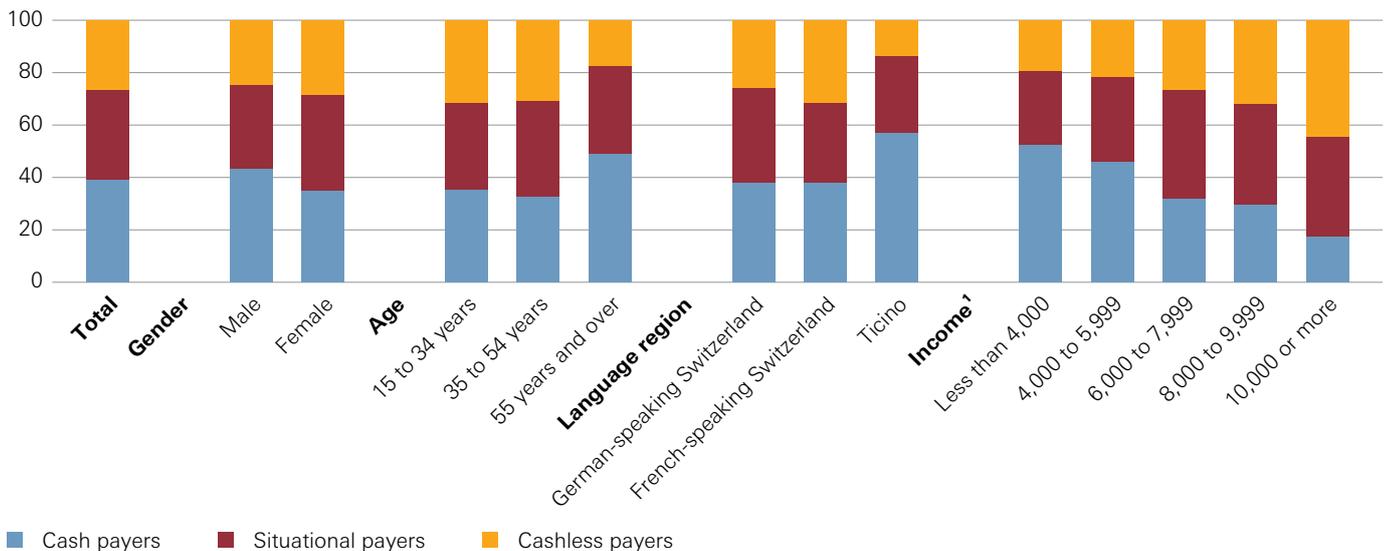
⁵ For the purposes of the survey, it was taken as a given that cash is generally familiar as a payment method. The level of awareness of cash was therefore not explicitly queried.

⁶ More detailed definitions of the individual non-cash payment instruments and procedures can be found in the Glossary.

Chart 3.1

PAYER TYPES BY SOCIO-DEMOGRAPHIC CHARACTERISTICS

Proportions in % of relevant basis; self-assessment



¹ The income indicated is the monthly gross household income of respondents in Swiss francs.

Question: “How do you normally pay in everyday life (e.g. when shopping)?”

Basis: all respondents (1,968 people) and respondents broken down by socio-demographic group (cf. Appendix 2)

Source: SNB

Contactless payment using payment cards¹

The technology for making contactless card payments (via near field communication, NFC) has existed in Switzerland since 2014. It involves amounts up to a maximum of CHF 40 being paid simply by holding the payment card against a card reader.² This has the effect of simplifying and accelerating the payment process. Due to the increasing prevalence of cards with a contactless function, an attractive alternative to cash could emerge particularly in the area in which cash is most commonly used, namely for making small payments (cf. chapter 4).

As per the end of 2017, 67% of all debit and credit cards in Switzerland were equipped with an NFC function. However, there is a significant difference between debit cards and credit cards: Whereas contactless payment could be made with 94% of issued credit cards, this was only true in the case of 51% of issued debit cards. That said, a strong rise in the number of debit cards has been evident recently, making it likely that a large proportion of these cards will also be equipped with a contactless function in the near future.

In view of the fact that the debit card is the most important non-cash method of payment, and yet – as mentioned above – only around a half of debit cards are equipped with a contactless function, it is not surprising that the use of this function is still relatively uncommon. Two-thirds of respondents who possess a payment card cannot or do not want to use the contactless payment function (cf. chart). In the case of 27% of respondents, the debit card or credit card is not yet equipped with this function, while 40% never use this function even though they have the capacity to do so. Just 15% always or usually make use of this function when they make a card payment.

Of the respondents who make use of the contactless function, 61% cite speed and 35% simplicity as the primary motivation. Due to the above-mentioned security controls, these benefits primarily come into

USE OF CONTACTLESS FUNCTION

Proportions in % of basis; self-assessment



- Always, 7%
- Predominantly, 8%
- Sometimes, 9%
- Rarely, 8%
- Never (although I could), 40%
- I don't have a card with a contactless payment function, 27%
- Don't know/No answer, 1%

Question: "When you pay with your card, how regularly do you use the contactless function?"

Basis: respondents who possess a debit or credit card (1,843 people)

Source: SNB

play when settling amounts of up to CHF 40. It is therefore not surprising that contactless payments with payment cards are mainly used for small sums of this kind. Only 21% of respondents who make use of the contactless payment function state that they also use this function when settling payments of more than CHF 40.

Overall, it is mainly young people and people with a preference for non-cash payment methods who regularly make use of this new payment procedure. For instance, the number of respondents that replied 'always' or 'predominantly' was above average in the youngest age category (24%) but also in the highest income class (25%). Respondents who are typically cashless payers are also much more likely to always or predominantly use NFC card payments (29%) than cash payers (5%). This suggests that it will initially be other non-cash payment procedures – particularly the 'traditional' card payment with PIN – that will be replaced by the contactless payment function, rather than cash.

¹ The focus here is on contactless, direct payment by debit and credit card. Systems such as Apple Pay, which likewise use NFC technology (via smartphone) and ultimately constitute a form of card payment due to the credit card details stored, are not considered.

² Amounts of more than CHF 40 can also be processed using this technology. In this case, however, the additional entry of the PIN code is required.

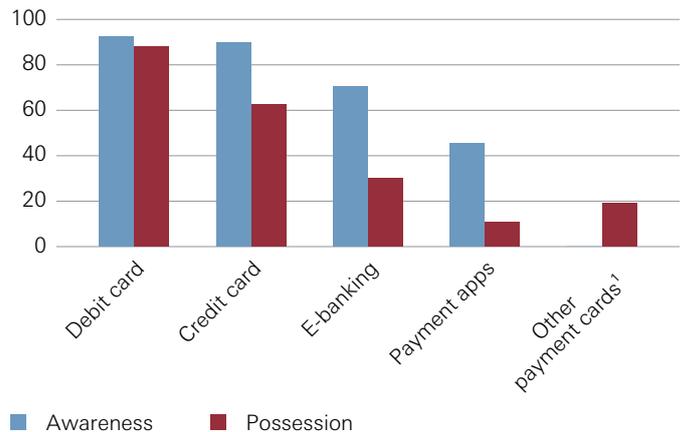
According to the survey, Swiss residents possess 2.2 different non-cash payment instruments on average.⁷ The picture that emerges with respect to possession is very similar to that of awareness. This is hardly surprising, as the most familiar payment methods for respondents are likely to be the ones they are in possession of themselves. In fact, the debit card is not only the most familiar non-cash payment instrument, it is also the most prevalent (cf. chart 3.3). In second place in terms of possession, as in the case of awareness, comes the credit card. However, the gap between the debit card and the credit card is much greater with respect to possession than it is with awareness. These are then followed by access to a system for e-banking transfers and other payment cards, such as petrol station or supermarket customer cards. In terms of possession, payment apps only come in fifth place, behind other payment cards. Compared to the debit card and credit card, the significant difference between the awareness and the prevalence of payment apps is striking. This is likely to be attributable to the very short history of these applications.

⁷ The focus here is on the number of different types of non-cash payment instruments, not the total number of instruments held. For example, the survey only ascertains whether respondents possess a certain type of card, not how many cards of this type they own. The same is true of payment apps. Furthermore, it should be borne in mind that the actual ownership of a payment card does not necessarily tally with perceived ownership. For example, it is likely that some respondents do not know exactly which cards they actually possess. This could apply in particular in the case of cards that are used less often.

Chart 3.3

AWARENESS AND POSSESSION OF NON-CASH PAYMENT INSTRUMENTS

Proportions in % of basis (multiple answers possible); self-assessment

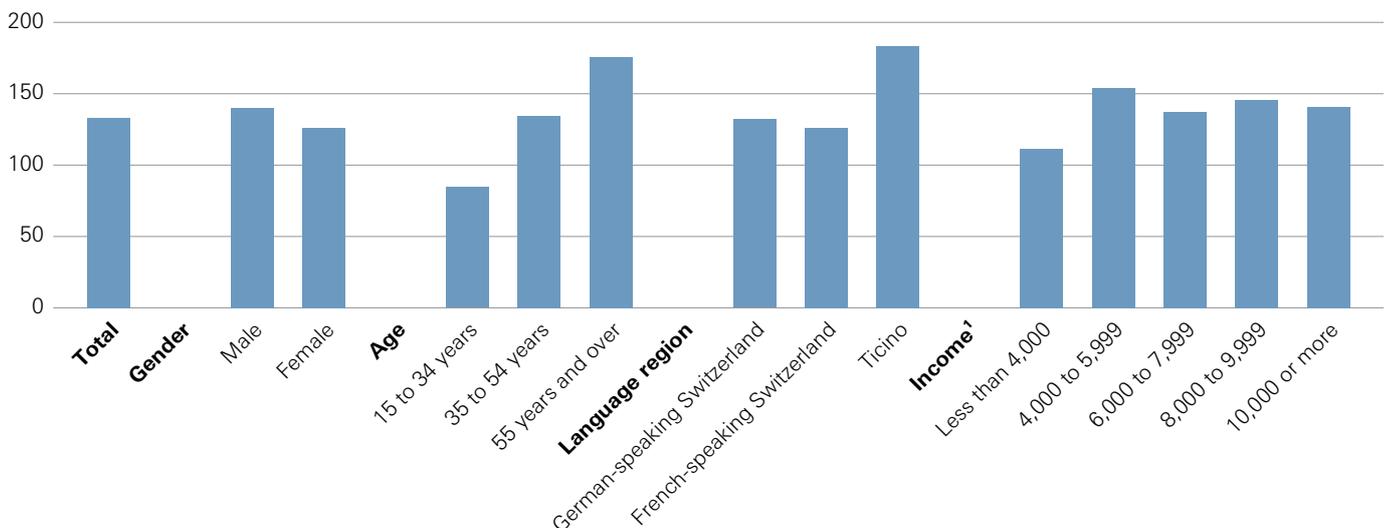


¹ The awareness of the payment method category 'Other payment cards' cannot be established, as respondents did not specify this category when unprompted. Questions: "In addition to cash, there are a large number of other (cashless) payment methods. What payment methods other than cash are you aware of?" and "Which of the following cashless payment methods do you personally possess?"
Basis: all respondents (1,968 people)
Source: SNB

Chart 3.2

AMOUNT OF CASH HELD IN WALLET

Value of Swiss franc cash (notes and coins) held in wallet, in CHF; as per diary entries



¹ The income indicated is the monthly gross household income of respondents in Swiss francs. Question: "How much cash (which Swiss franc coins and banknotes) do you keep in your wallet or about your person generally?"
Basis: 1,967 people (total) and respondents broken down by socio-demographic group (cf. Appendix 2)
Time point of data collection: start of diary-keeping period
Source: SNB

3.3 EVALUATION OF THE FEATURES OF PAYMENT METHODS

When it comes to the decision as to which payment method to use in a specific payment situation, the focus is on the following features: security, acceptance, user-friendliness, speed of deployment and the costs associated with payment. Accordingly, respondents were asked to evaluate these features for the most widely used payment methods, namely cash, debit and credit cards, and payment apps.

As is clear from chart 3.4, cash fares best in four of the five feature categories, particularly where acceptance and costs are concerned. The debit card is likewise perceived as good to very good from an overall perspective. It performs unfavourably against cash only in the area of cost, but comes out slightly better when the aspect of security is rated. This may be attributable to the fact that cash can be irrevocably lost or stolen, whereas the equivalent loss for the holder of a debit card is limited if the card is blocked in good time. In third place comes the credit card, which is rated significantly less favourably from a cost perspective than the other methods of payment. Payment apps come out worst in four of the five features surveyed. However, it should be noted that in most cases more than 50% of respondents – and up to two-thirds of respondents in the case of certain features – did not undertake any evaluation of payment apps. This is presumably explained by the fact that many respondents still do not have much experience with this relatively new payment procedure.

In order to highlight the usefulness of selected payment methods in specific payment situations in greater detail, the respondents were asked two further evaluation questions. This was with a view to establishing whether certain payment methods are rated differently in specific situations, or whether they have an additional potential benefit that goes beyond the actual processing of the payment in question.

Specifically, respondents were first asked which payment methods they prefer to use for shopping when they are in a particular hurry. As chart 3.5 shows, a majority of respondents opt for cash when they are in a hurry, whereas around one-third resort to the debit card in such cases. Only a small proportion cite credit cards or payment apps as the preferred payment method in such a scenario. This corresponds with the evaluation of payment methods from a speed perspective.

In addition, a clear majority (almost two-thirds) of respondents stated that cash is best suited to helping them retain an overview of their personal expenditure, a far higher proportion than that cited for the debit card (cf. chart 3.6).⁸ Cash therefore appears to offer a certain benefit in this respect that goes beyond its pure payment function.

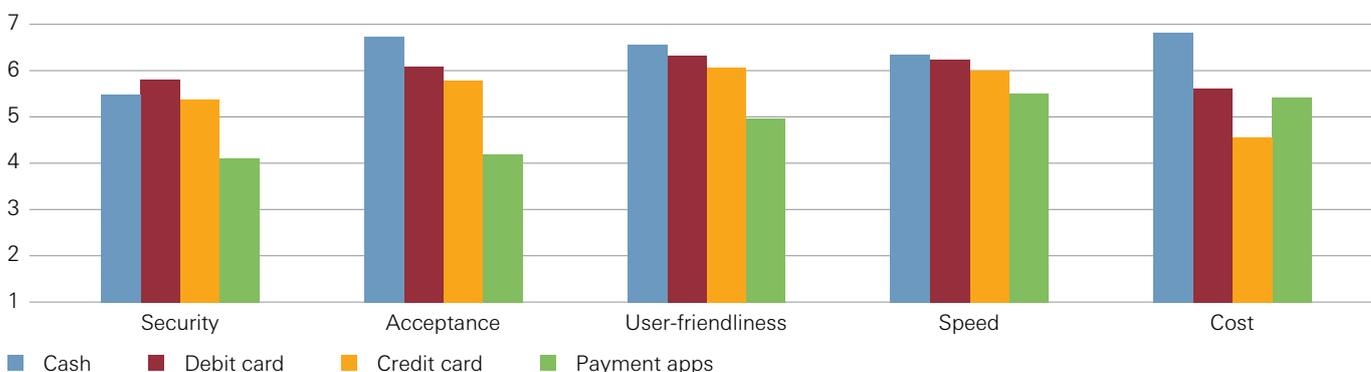
Depending on the payment type, notable differences emerge in the evaluation of features generally, and in particular in the case of the preferred payment method when in a hurry or for purposes of controlling expenditure. In line with their general preferences, around 90% of cash payers resort to cash when in a hurry and for the purposes of controlling their expenditure, whereas some 80% of non-cash payers prefer non-cash methods of payment in such cases.

⁸ This is in line with earlier results for other countries. However, there are also other possibilities: Account statements and payment apps likewise facilitate straightforward monitoring of expenditure incurred with non-cash payment methods. Cf. for example Deutsche Bundesbank (2015), *Zahlungsverhalten in Deutschland 2014 [Payment behaviour in Germany 2014]*, and Ulf von Kalckreuth, Tobias Schmidt and Helmut Stix (2014), Using cash to monitor liquidity – implications for payments, currency demand and withdrawal behavior, *Journal of Money, Credit and Banking*, 46(8), pp. 1753–1785.

Chart 3.4

EVALUATION OF THE FEATURES OF THE VARIOUS PAYMENT METHODS

Evaluation on a scale of 1 (very poor) to 7 (very good); self-assessment



Question: "How do you rate the various payment methods with regard to the following aspects? Here it is irrelevant whether you personally possess this payment method or not."

Basis: all respondents (1,968 people)

Source: SNB

Overall, it may be concluded that respondents' ratings of the different methods of payment are on average consistent with their general payment preferences. This suggests that the subjective perception of the user is what matters when selecting a payment method at point of sale. The extent to which these preferences and evaluations are also reflected in payment behaviour is addressed in chapter 4.

Quality and security of banknotes

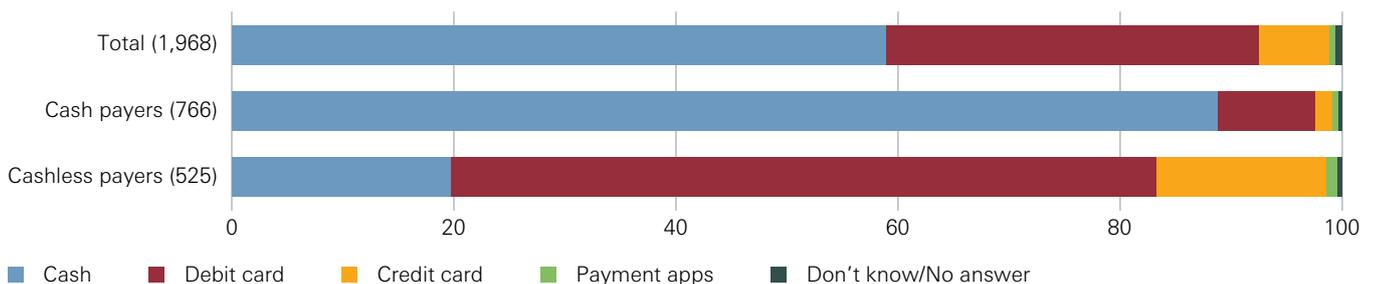
As part of the interview, participants were also asked to evaluate the quality and security of Swiss banknotes (8th and 9th banknote series). The quality of Swiss banknotes is rated as good to excellent by 87% of respondents.

Moreover, Swiss banknotes are considered to be forgery-proof by 90% of respondents. This explains why 86% rarely or never make a conscious effort to scrutinise the genuineness of the banknotes they receive. When they do review the genuineness of Swiss banknotes, respondents for the most part do this by holding the note up to the light or checking if the banknote has the right 'feel'. Just under a half of respondents believe that checking the genuineness of the banknote is very or fairly easy, with the other half finding it not that easy or indeed not easy at all.

Chart 3.5

PAYING IN A HURRY: PREFERRED PAYMENT METHOD PER PAYER TYPE

Proportions in % of relevant basis; self-assessment



Question: "Which of these payment methods do you prefer to use when you are out shopping and in a particular hurry?"

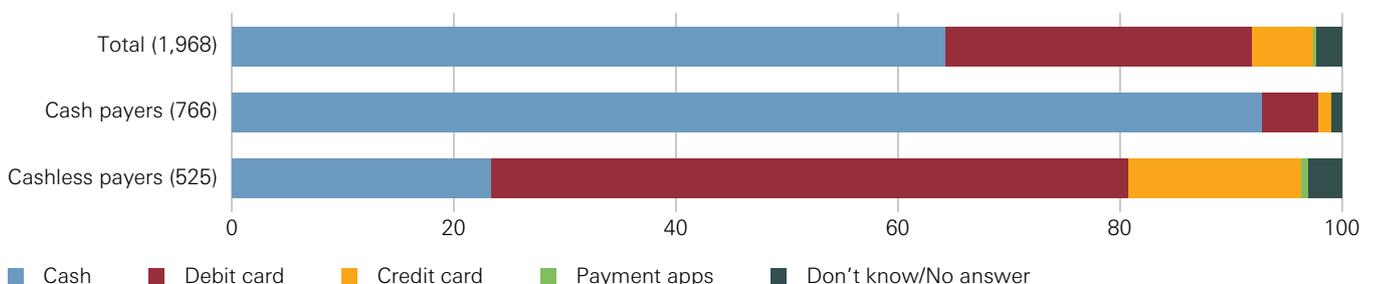
Basis: respondents assigned to the relevant payer type (cf. bar descriptions)

Source: SNB

Chart 3.6

CONTROLLING EXPENDITURE: PREFERRED PAYMENT METHOD PER PAYER TYPE

Proportions in % of relevant basis; self-assessment



Question: "Which of the following payment methods do you find most helpful for retaining an overview/keeping control of your personal expenditure?"

Basis: respondents assigned to the relevant payer type (cf. bar descriptions)

Source: SNB

Key points in brief

- Recorded payments amount to CHF 41 on average, with a majority of payments involving an amount of less than CHF 20.
- Cash is the payment method most used by the resident population in Switzerland (70% of recorded payments), followed by the debit card (22%) and the credit card (5%).
- More innovative types of payment procedure (payment apps, card payment with contactless function) are not at all widely used.
- When measured in terms of the overall value of the payments recorded, cashless payment predominates (55%).
- The different payment methods appear to complement each other – cash is of exceptional importance for small amounts, while debit cards are widely used for medium-sized amounts and credit cards for larger amounts.
- The place of payment influences the choice of payment method, whereby the subjective evaluation of how simple a particular method of payment is emerges as the key criterion.
- Thanks to the ready availability of cash in Switzerland and the high acceptance of non-cash payment instruments, residents have freedom of choice at most places of payment.
- Overall, households appear to be very satisfied with the existing wide range of payment options.
- Established differences in payment behaviour according to age and income groups are also evident in Switzerland.

Chapter 3 provided an illustration of which payment methods are used by residents in Switzerland, and how they evaluate these. Building on these findings, this chapter describes payment behaviour and the significance of the individual payment methods, as well as addressing the determining factors and motives for selecting a particular method of payment.

The focus is on the following questions: How do Swiss households make payments, and what influence do the amount and place have on their payment behaviour (cf. section 4.1)? To what extent can differences in payment behaviour be explained by socio-demographic characteristics (cf. section 4.2)? What are the primary reasons for choosing a particular payment method (cf. section 4.3)? Finally, respondents' assessment of their expected future payment behaviour will be explored briefly (cf. section 4.4).

The evaluation is based mainly on the diary entries in respect of payments executed by households.¹ This comes from a total of 1,968 diaries, in which 22,689 transactions with a total value of CHF 919,305.60 were recorded, whereby recurring payments were not to be entered.² The evaluation of the diary entries is occasionally expanded with findings gained from respondents' assessment of their own behaviour as determined in interviews. In these cases, a clear distinction cannot be made between recurring and non-recurring payments.

4.1 OVERVIEW OF PAYMENT BEHAVIOUR

The diary entries reveal that an average of 1.65 payments were made per person per day, with an average transaction amount of around CHF 41 (cf. table 4.1). For the majority of transactions recorded (almost 60%), the payment amounts are quite small (less than CHF 20), whereas just 2% of payments involve sums of more than CHF 200 (cf. chart 4.2).

¹ The data to be entered in each case comprised method of payment, payment amount and place of payment. In isolated cases, information on payment method, the payment amount or the place of payment is lacking. The following evaluations therefore do not always have the same underlying basis, depending on the question. The basis in each case is explicitly set out in the tables and charts.

² Recurring payments of households (rental expenses, insurance premiums and similar) were only to be recorded in the diary in aggregate form as one-off monthly amounts. The resulting overall amount for all respondents is in a similar order of magnitude as an extrapolation of the recorded non-recurring monthly payments (around CHF 14 billion in each case).

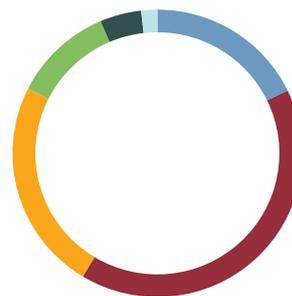
Measured in terms of the number of non-recurring transactions recorded, cash is the most frequently used payment instrument of households in Switzerland, accounting for a share of 70% (cf. chart 4.1). When the analysis is based on the value of transactions, it is non-cash payments that predominate with a total share of 55%. Here the debit card emerges as the most commonly used non-cash payment method. This is true of both its share of the total number of transactions (22%) and its share of the value of these transactions (29%). Credit cards follow in third place, with 5% of transactions and 10% of the amounts paid. All other payment instruments and procedures account for smaller shares. Notable proportions are achieved by e-banking transfers at around 8% of the transaction value, internet payment procedures such as PayPal with 3% and payments made at post office counters (either in cash or by card) at 2%. By contrast, payment apps are very rarely used, in terms of both the number of transactions and the transaction amounts. This is likely to be attributable to the relatively low take-up of this payment procedure to date (cf. chapter 3).³

The fairly marginal transaction and value proportions of e-banking transfers and payments at post office counters may be attributable to the fact that these payment procedures are likely to be most significant for recurring payments, which were explicitly not recorded in respondents' diaries. If all payments made by households were to be captured, e-banking transfers and post office

Chart 4.2

PAYMENTS BY AMOUNT RANGE

Proportions in % of basis; as per diary entries



- Up to CHF 5, 18%
- CHF 5 to 20, 41%
- CHF 20 to 50, 24%
- CHF 50 to 100, 11%
- CHF 100 to 200, 5%
- CHF 200 or more, 2%

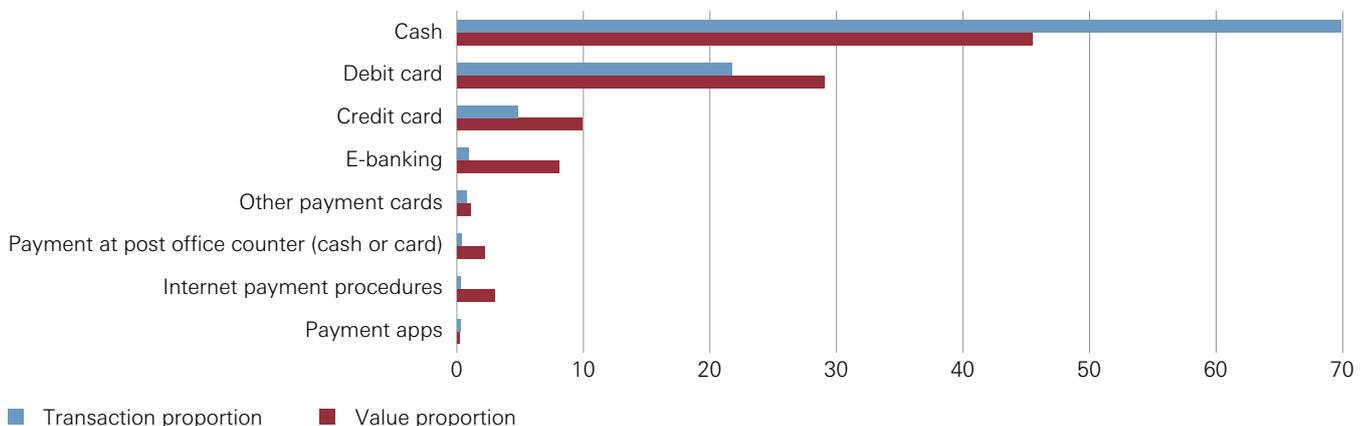
Basis: 22,689 transactions with a total value of CHF 919,306
Source: SNB

³ An extrapolation on the basis of proportions by value indicates that the resident population aged 15 years and over spends an annual total of CHF 175 billion on non-recurring payments, of which CHF 80 billion is paid in the form of cash, and some CHF 50 billion by debit card. This is broadly in line with previous estimates in connection with the usage of payment methods in Switzerland. Cf. for example BAKBASEL (2016), *Analyse des Schweizer Zahlungsverkehrs zuhanden des Bundesamts für Kommunikation (BAKOM)* [Analysis of Swiss payment transactions on behalf of the Federal Office of Communications (OFCOM)], available in German, French and Italian only at www.bakom.admin.ch, *Post und Presseförderung, Evaluation, BAKBASEL Analyse des Schweizer Zahlungsverkehrs* and Tobias Trütsch (2017), *Bankkarten verdrängen Bargeld* [Bank cards displacing cash], *Die Volkswirtschaft*, 8–9/2017, pp. 10–13.

Chart 4.1

TRANSACTION AND VALUE PROPORTION PER PAYMENT METHOD

Proportions in % of basis; as per diary entries

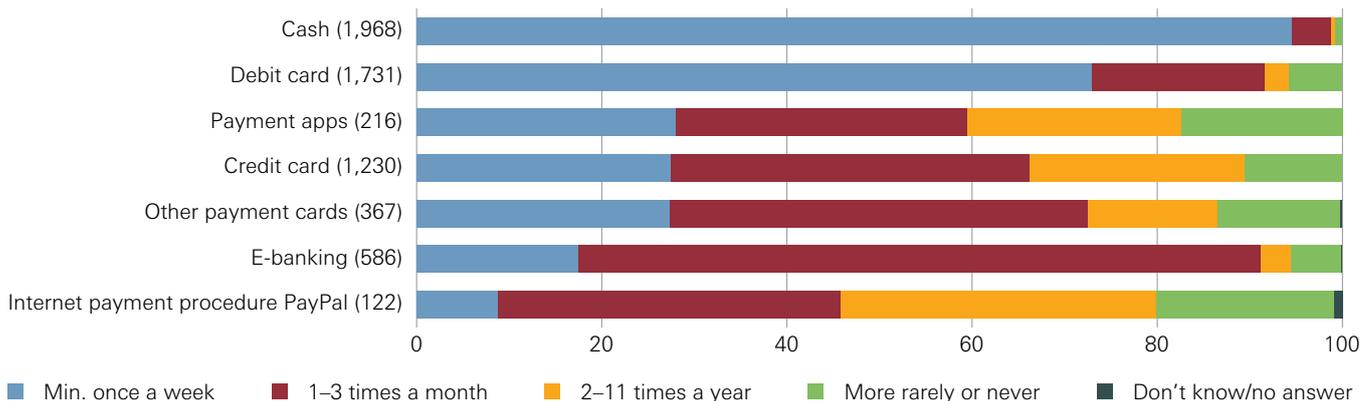


Basis: 22,517 transactions (transaction proportion) with a total value of CHF 916,617 (value proportion)
Source: SNB

Chart 4.3

USAGE FREQUENCY: CASH AND NON-CASH PAYMENT METHODS

Proportions in % of relevant basis; self-assessment

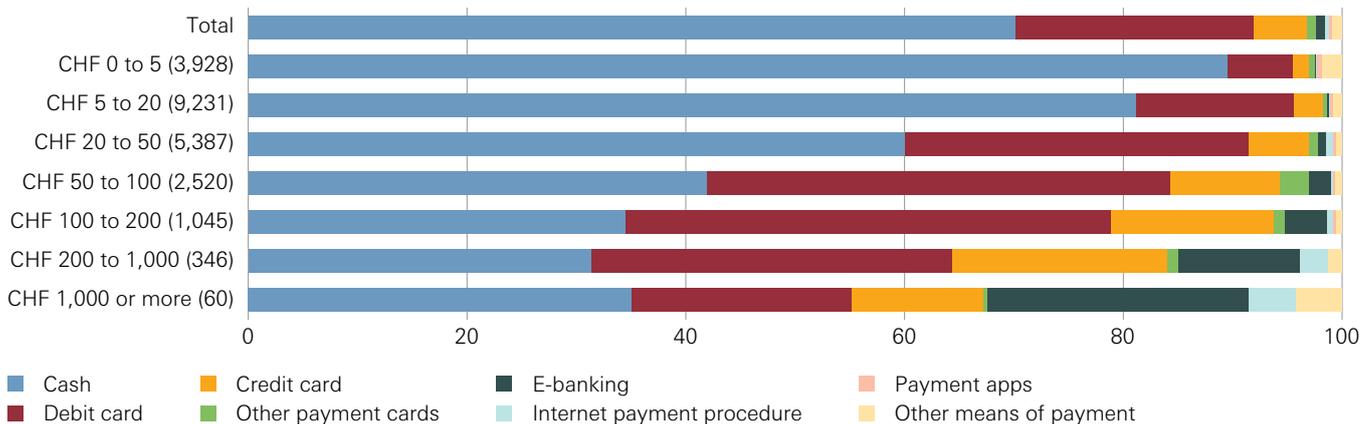


Question: "How often do you typically use the following payment methods for payment purposes?"
 Basis: respondents who possess the payment method in question (cf. bar descriptions)
 Source: SNB

Chart 4.4

TRANSACTION PROPORTIONS OF PAYMENT METHODS PER AMOUNT RANGE

Proportions in the relevant amount ranges in %; as per diary entries

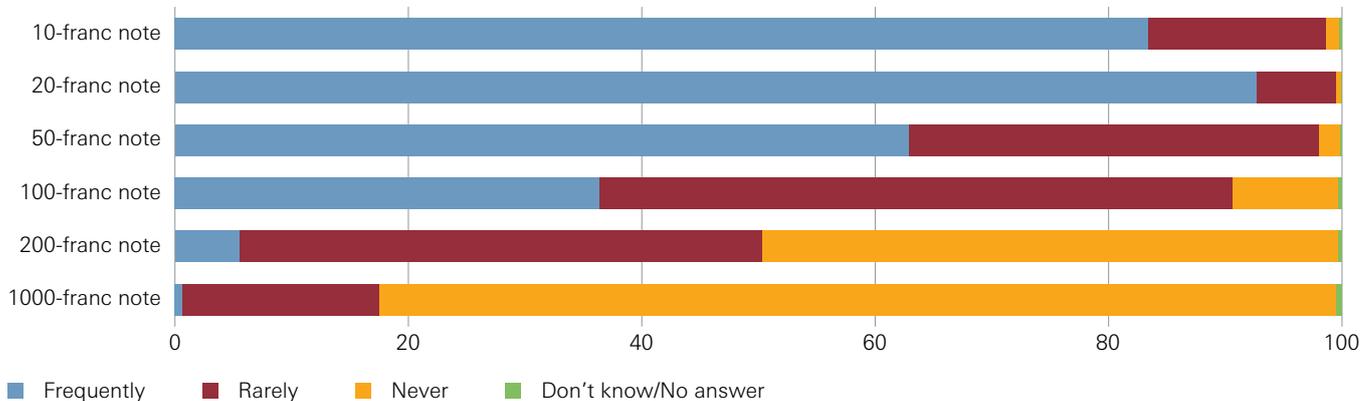


Basis: 22,517 transactions with a total value of CHF 916,617 (total) and transactions per amount range (cf. bar descriptions)
 Source: SNB

Chart 4.5

USAGE FREQUENCY PER BANKNOTE DENOMINATION

Proportions in % of basis; self-assessment



Question: "When you pay with cash in everyday life, how often do you use the following banknotes?"
 Basis: respondents using cash for payment purposes (1,963 people)
 Source: SNB

counter payments would probably account for a higher share. This is also suggested by the fact that the median aggregate monthly expenditure on recurring payments recorded by respondents amounted to between CHF 1,500 and CHF 2,000.⁴

Not only do cash and debit cards account for a large proportion of the transactions executed, they also exhibit high usage frequencies (cf. chart 4.3). According to their own estimates, respondents on average use these two payment methods several times a week. While cash is used as a payment method by almost all respondents at least once a week, and the debit card by three out of four respondents over the same timeframe, the corresponding proportions for the credit card and other, less prevalent non-cash payment instruments are significantly lower. Cash is used for payment purposes with high frequency across all socio-demographic groups. In the case of debit and credit cards, by contrast, there are significant deviations from the average usage frequency, depending on the group in question (cf. section 4.2).

4.1.1 PAYMENT AMOUNT AS DETERMINING FACTOR

The differences between the transaction proportions and the value proportions of the different payment methods suggest that the payment amount is a relevant factor when it comes to selecting a particular payment method.

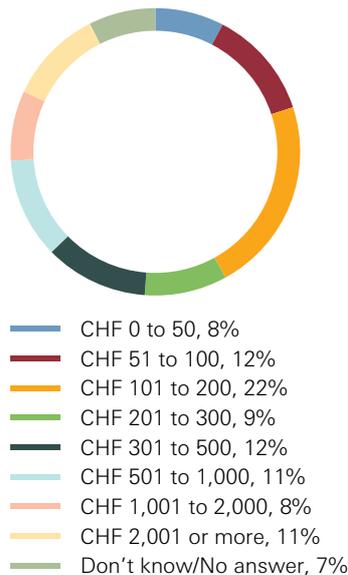
The diary information on the transaction proportions of the individual payment methods for the different amount bandwidths illustrates this further (cf. chart 4.4). For example, while cash is a very commonly used payment method overall, the proportion of cash payments is disproportionately high for amounts of less than CHF 20 in particular. In the CHF 50–200 range, a significant proportion of transactions is executed by debit card. For higher amounts, the proportion accounted for by credit card and e-banking transfers increases. However, it is notable that the proportion of payments made by cash remains virtually stable in the amount ranges above CHF 100, and cash is still used to make 35% of all non-recurring payments over CHF 1,000. One contributory factor here is that cash payments at post office counters play a significant role for the higher amount ranges. If these transactions are excluded, the proportion of cash payments involving sums of more than CHF 1,000 amounts to 27%.

Overall, the widespread use of cash for the payment of small amounts is in line with the self-assessment of a significant majority of respondents to the effect that they frequently use the three lowest denominations (10-franc, 20-franc and 50-franc notes) to make payments (cf. chart 4.5). In particular, the two lowest-denomination banknotes are frequently used by all population groups. The two largest denominations (200-franc and 1000-franc notes) are used much less often, with the usage profiles differing significantly

Chart 4.6

HIGHEST AMOUNT SETTLED WITH CASH

Proportions per amount range in % of basis; self-assessment



Question: "What is the highest amount that you have settled in cash over the last twelve months?"

Basis: respondents using cash for payment purposes (1,963 people)

Source: SNB

in some cases, depending on the socio-demographic group in question (cf. chapter 5). The 100-franc note plays something of an intermediate role, as around 36% of residents state that they use it frequently.

It is also apparent from the median payment amounts that the size of a payment influences the choice of method.⁵ Half of the payments recorded as being executed with payment apps involve an amount of less than CHF 10. The second-lowest median value (CHF 12) is found with cash payments. The corresponding values for all other payment methods are higher, in some cases significantly so. Specifically, they are some three times higher for the debit card without contactless function (CHF 34) and for internet payment procedures (CHF 38) than the equivalent figure for cash, and five times higher in the case of the credit card (without contactless function), namely CHF 60. In the case of payments at post office counters (cash or card) and e-banking transfers, a half of all settled amounts lie between CHF 77 and CHF 93.

Another striking aspect in this regard is the spectrum of amounts for which the respondents state they use cash as payment. For example, half the respondents state that the highest payment made in cash over the last twelve months is below CHF 300 (cf. chart 4.6). One in every five respondents reports that he/she has executed no cash payment of more than CHF 100. At the same time, 4% of

4 Due to the nature of the question, no statement on the arithmetic mean is possible.

5 Here the median value is used in order to avoid distortions due to outliers in the case of payment methods that are used less frequently.

Table 4.1

PAYMENTS DIARY: OVERVIEW OF RECORDED TRANSACTIONS

As per diary entries

	Number of transactions	Average number of transactions per day/per person	Average amount per transaction
Total			
Total	22 689	1.65	40.50
Gender			
Male	11 383	1.69	40.45
Female	11 306	1.61	40.55
Age			
15 to 34 years	6 259	1.51	32.30
35 to 54 years	8 600	1.73	40.15
55 years and over	7 830	1.68	47.50
Language region			
German-speaking Switzerland	16 020	1.63	40.25
French-speaking Switzerland	5 567	1.70	41.95
Ticino	1 102	1.62	37.20
Residential environment			
City/town	14 824	1.70	37.75
Urban agglomeration	4 672	1.61	50.25
Rural	3 193	1.48	39.05
Level of education			
Tertiary level	5 600	1.83	45.45
Upper secondary level	13 998	1.62	39.15
Compulsory education	2 819	1.50	37.25
Monthly household income			
Less than CHF 4,000	4 986	1.59	32.65
CHF 4,000 to 5,999	4 816	1.71	41.35
CHF 6,000 to 7,999	4 028	1.70	40.05
CHF 8,000 to 9,999	2 691	1.72	38.20
CHF 10,000 or more	2 617	1.75	49.55
Employment status			
Employed	14 041	1.73	39.90
Unemployed	1 311	1.53	39.75
In training/education	1 617	1.32	18.55
Retired	4 256	1.62	52.10

Source: SNB

respondents state that they have executed a payment of more than CHF 5,000 in cash.

4.1.2 PLACE OF PAYMENT AS DETERMINING FACTOR

Payment behaviour is also influenced by the place of payment. Chart 4.7 and chart 4.8 provide a good illustration of this by looking at selected places of payment on the basis of the diary data.

Chart 4.7 first shows that payments are most frequently made in shops for everyday needs. In value terms, these payments account for 35% of the total transaction volume recorded in the diaries. Around a quarter of transactions relate to the position ‘eating and drinking out’, with these payments accounting for 13% of the total amount paid. All other places of payment exhibit lower usage frequencies: Payments at vending machines (e.g. for snacks or drinks) and petrol stations amount to 6% of transactions in each

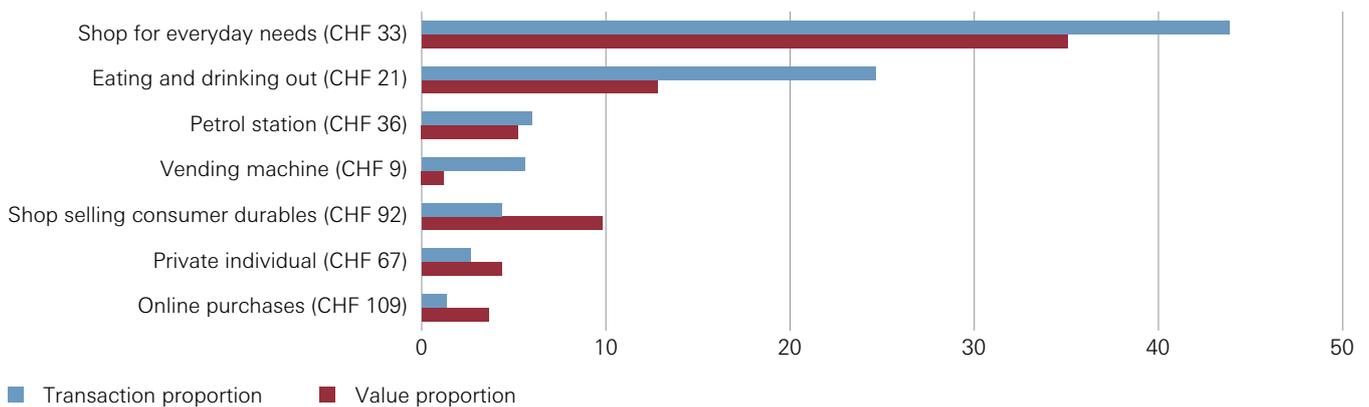
case, although in terms of their proportions of total value, petrol station payments (5%) account for a significantly higher share than vending machine payments (1%). This is only to be expected, given that products purchased from vending machines are typically low-cost items. By contrast, the proportion of total value accounted for by payments at certain points of sale – such as online purchases or purchases in shops selling consumer durables – is considerably higher than the proportion of total transactions. This is explained by the typically higher amounts of the payments made at these points of sale.

Chart 4.8 in turn reveals significant differences in the usage proportions of the individual payment methods depending on the place of payment. First of all, payment method usage in shops for everyday needs is virtually in line with the average proportion of transactions at all places of payment. However, a different picture emerges in particular in the case of ‘eating and drinking out’ as

Chart 4.7

TRANSACTION AND VALUE PROPORTIONS AT SELECTED PLACES OF PAYMENT

Proportions in % of relevant basis; as per diary entries

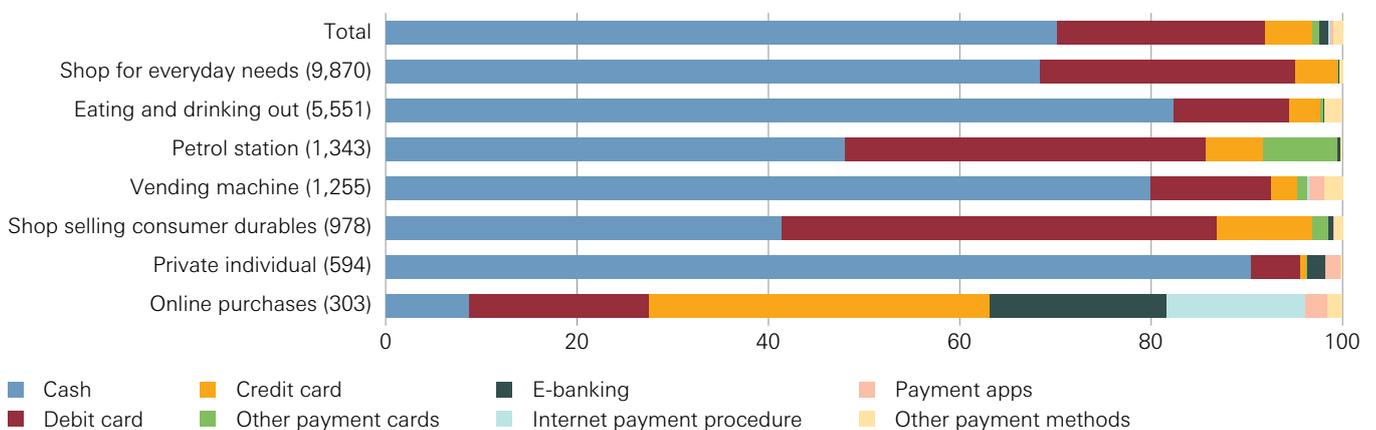


Basis: 22,495 transactions (transaction proportion) with a total value of CHF 915,948 (value proportion)
 In brackets: average payment amount per place of payment
 Source: SNB

Chart 4.8

TRANSACTION PROPORTION BY PAYMENT METHOD AT SELECTED PLACES OF PAYMENT

Proportions in % of relevant basis; as per diary entries



Basis: 22,509 transactions (total) and transactions per place of payment (cf. bar descriptions)
 Source: SNB

well as for payments at vending machines and payments to private individuals. In these cases, the proportion of cash payments is markedly higher than the average value of 70%. For their part, petrol stations and shops selling consumer durables exhibit higher proportions of debit card payments than other places of payment. Moreover, credit card usage is significantly more common for payments in shops selling consumer durables than it is on average across all places of payment, while place-specific fuel card payments also play a role at petrol stations. Payment apps are used to some extent for online purchases, at vending machines and for payments to private individuals, but the overall usage figures for this innovative form of payment procedure are still at a very low level.

It is in the area of online purchases that the usage proportions of the individual payment methods deviate most significantly from the general averages. In this regard, the credit card is by far the most frequently used payment method, accounting for more than one-third of transactions, followed by the debit card and then e-banking transfers. Unsurprisingly, other internet payment procedures are also of importance. The much smaller usage proportions of cash and debit cards for online purchases compared to other places of payment are only logical, as these payment methods are accepted for payment at this point of sale to only a limited degree. That said, cash is nonetheless used to execute 9% of online purchases – such as online purchases on account, which are then settled with cash at post office counters, or in cases where the order is placed online but the product is actually collected from a branch against cash payment.

4.1.3 SUMMARY: DETERMINING FACTORS

Overall, the results presented here suggest that the size of a payment plays a role in the choice of payment method. The amount in question is likely to influence the outcome of the weighing-up of security aspects and convenience. While security considerations may become paramount where larger amounts are concerned, the simplicity and speed of the payment procedure are likely to be the focus for small amounts. This assumption tallies with respondents' assessments of the features of cash and non-cash payment methods (cf. chapter 3).

In addition, it is clear that the choice of payment method is influenced by the place of payment. A large number of non-recurring payments are made at places of payment where the resident population often resorts to cash. At the same time, these places of payment are also places where the average sum spent is fairly low. These results explain the high overall importance of cash as a payment method for non-recurring transactions.

Payment behaviour abroad

The focus of this survey is on everyday payment behaviour. It is therefore predominantly geared around domestic payments (including online payments made from Switzerland). In addition, the survey asked respondents about their payment behaviour when travelling abroad.

According to respondents' self-assessments, 52% of payments abroad are made with cash. This value is therefore lower than the proportion of cash recorded in the diaries for all non-recurring payments (70%). This could be attributable to the fact that respondents tend to carry less cash around with them abroad than they do in Switzerland, for example due to security considerations or to avoid being left holding foreign currency they cannot use in Switzerland. Definitive clarification of this question is not possible on the basis of the survey results, however.

Respondents state that they resort to their credit cards considerably more when abroad (25%) than they do in Switzerland, whereas debit card use abroad (13%) is significantly less prevalent than in Switzerland. One possible explanation for the order of preference for card payments is that the credit cards of major credit card companies are more widely accepted around the world than the debit cards of Swiss issuers.

4.2 SOCIO-DEMOGRAPHIC DIFFERENCES IN PAYMENT BEHAVIOUR

Both the information contained in the diaries and respondents' self-assessments reveal what are at times considerable differences in payment behaviour between different socio-demographic groups.⁶ The overall picture that emerges is largely in line with patterns that are already familiar from international studies. An aspect particular to Switzerland is that of regional differentiation.

For example, the age of respondents has a significant bearing on payment behaviour. Respondents aged 55 and over process a higher proportion of their recorded payments with cash compared to the survey average, whereas respondents in the youngest age group process a comparatively high proportion of their recorded payments using a debit card (cf. chart 4.9). Viewed overall, however, a significant proportion of transactions are settled with cash across all age groups. Indeed, even in the group of respondents aged 15–34, two out of three payments are made with cash. Moreover, the youngest age group as a whole processes much smaller payment amounts than the other age groups, which is likely to be primarily explained by their lower incomes. In the case of respondents aged 55 and over, by contrast, the average settled payment amount is well above the equivalent figure of the other age groups (cf. table 4.1).

⁶ Appendix 2 describes in detail the socio-demographic characteristics and the breakdown by group.

In addition, the level of household income clearly has a significant impact on payment behaviour. As household incomes rise, there tends to be an increase not only in the number of transactions and the average amount of payments, but also in the usage proportions and the usage frequencies of debit and credit cards (cf. charts 4.9 to 4.11 and table 4.1). The differences are very apparent when a comparison is made between persons from households with a monthly income of CHF 10,000 or more and those from households with a monthly income of less than CHF 4,000. For example, only 15% of respondents from the group with the lowest household income who possess a credit card state that they use this at least once a week, whereas the equivalent figure for persons from the highest income group is 40%.

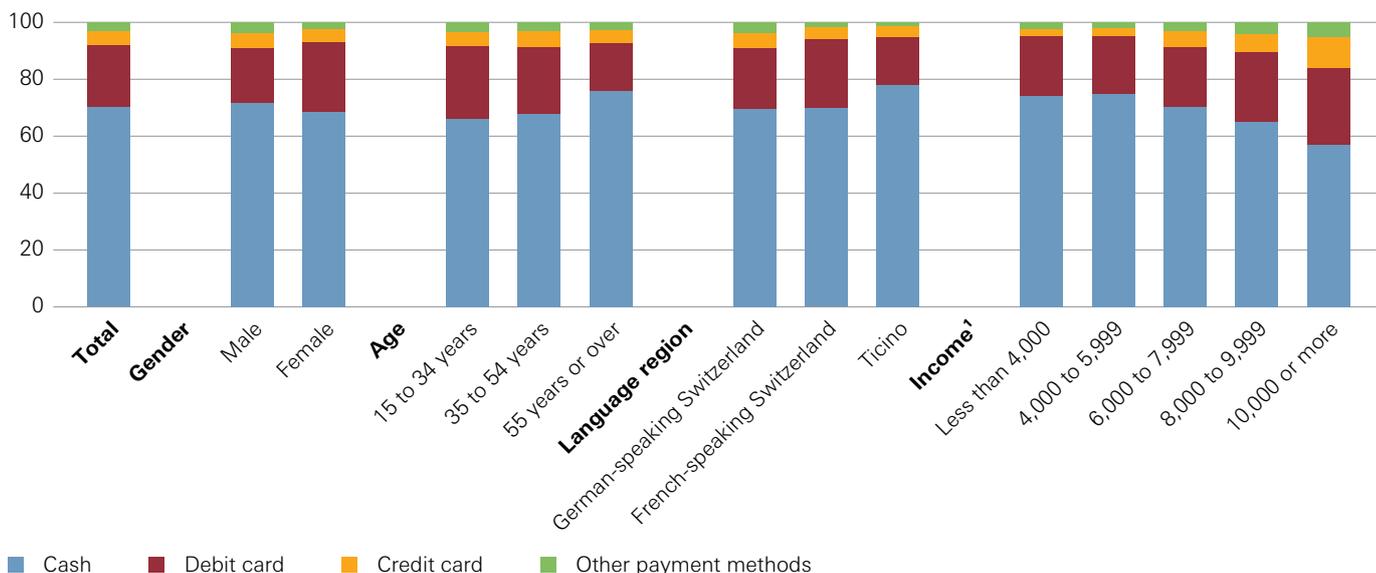
In certain aspects at least, there are also differences in the payment behaviour of respondents when broken down according to gender, employment status and residential environment.

Whereas the transaction proportions of the different payment methods and the average payment amounts are more or less the same for both genders, differences are evident in the frequency with which the different payment methods are used. Women make less frequent payments than men. And when they do make a payment, women are more likely than men to use a debit card. By contrast, men are more likely to use a credit card (cf. chart 4.10 and chart 4.11). Moreover, the average sum settled with cash by women is higher than the average cash payment made by men.

Chart 4.9

TRANSACTION PROPORTION PER PAYMENT METHOD BY SOCIO-DEMOGRAPHIC CHARACTERISTICS

Proportions in % of relevant basis; as per diary entries



¹ The income indicated is the monthly gross household income of respondents in Swiss francs.

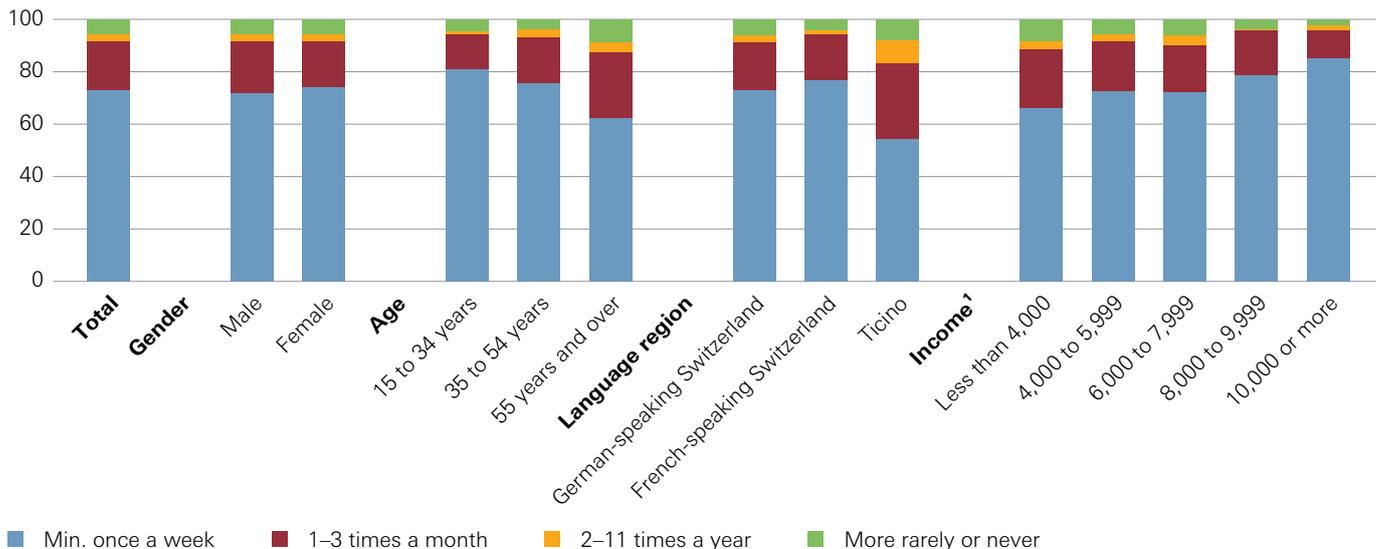
Basis: 22,532 transactions and number of transactions broken down by socio-demographic group (cf. Appendix 2)

Source: SNB

Chart 4.10

USAGE FREQUENCY BY SOCIO-DEMOGRAPHIC CHARACTERISTICS: DEBIT CARD

Proportions in % of relevant basis; self-assessment



¹ The income indicated is the monthly gross household income of respondents in Swiss francs.

Question: "How often do you use a debit card?"

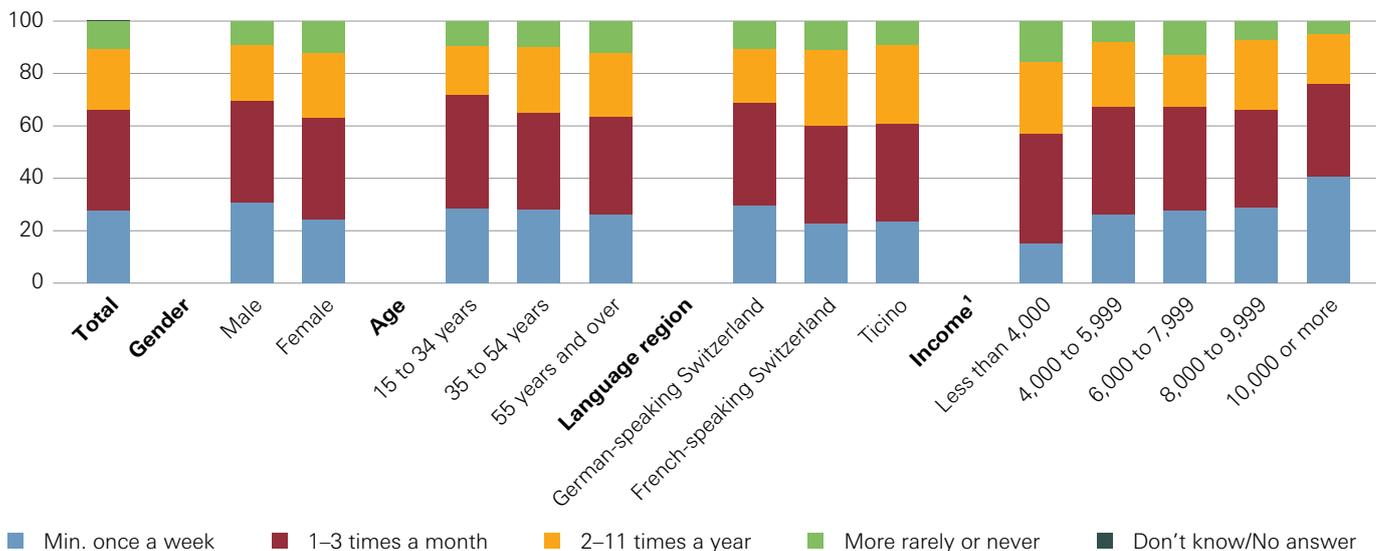
Basis: respondents who possess a debit card (total: 1,731 people) and broken down by socio-demographic group (cf. Appendix 2)

Source: SNB

Chart 4.11

USAGE FREQUENCY BY SOCIO-DEMOGRAPHIC CHARACTERISTICS: CREDIT CARD

Proportions in % of relevant basis; self-assessment



¹ The income indicated is the monthly gross household income of respondents in Swiss francs.

Question: "How often do you use a credit card?"

Basis: respondents who possess a credit card (total: 1,230 people) and broken down by socio-demographic group (cf. Appendix 2)

Source: SNB

Where employment status is concerned, people in education/training and retirees stand out from the average (cf. table 4.1). The former make significantly fewer payments and for significantly lower amounts – on average less than CHF 19 per transaction – which is not least likely to be attributable to their income and wealth situation. By contrast, retirees make considerably higher payments than the average, and are more likely to use cash to do so. The latter aspect reflects the relatively large proportion of ‘cash payers’ in this group.

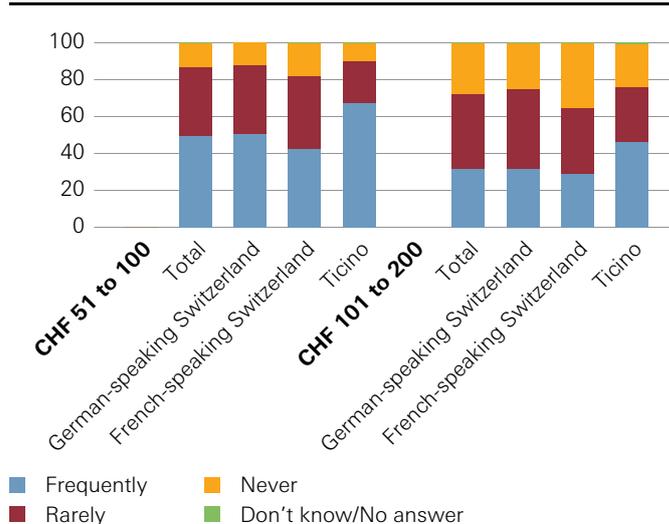
Residential environment in turn has an impact on both the average payment amount and the frequency of payments made (cf. table 4.1). Whereas town/city dwellers – who make up the majority of respondents – make rather more payments than the Swiss average, rural dwellers exhibit a significantly lower payment frequency. A striking feature is the higher average payment amount in urban agglomerations, which is likely to be attributable to the higher household incomes in this environment. With regard to the usage proportion of cash or non-cash payment methods, the differences between residential environments are minimal. This may be viewed as an indicator that Switzerland has a secure and well-functioning payment transactions infrastructure which is well embedded across all residential environments.

An additional aspect peculiar to Switzerland is the striking regional differences in payment behaviour. In particular, the residential population of Ticino has a much stronger attachment to cash. On the one hand, this is evidenced by the fact that a very high proportion of transactions in Ticino (around 80%) are executed on a cash basis (cf. chart 4.9). On the other hand, the local affinity for cash payment is also apparent from the fact that people resident in Ticino report that they use cash relatively often to settle significant payment amounts (cf. chart 4.12). Two-thirds of the residents of this canton settle amounts of between CHF 51 and CHF 100 in cash either all of the time or most of the time. When it comes to sums of between CHF 101 and 200 too, the proportion of respondents from Ticino who mostly or always pay with cash is still almost half, whereas the Swiss average for these sums is only around one-third of the population. In French-speaking and German-speaking Switzerland, by contrast, there are no significant deviations from the average national payment behaviour. An initial analysis suggests that differences in age structure or distribution by income cannot sufficiently explain this difference between Ticino and Switzerland’s other language regions. It is therefore likely that cultural factors play a role, too. A definitive clarification of this aspect goes beyond the parameters of this report, however.

Chart 4.12

CASH USAGE FREQUENCY IN SELECTED AMOUNT RANGES

Proportions in % of relevant basis; self-assessment



Question: “How often do you pay in cash for amounts of between CHF 51 and 100 and for amounts of between CHF 101 and 200?”

Basis: respondents using cash for payment purposes (total: 1,963 people) and respondents broken down by socio-demographic group (cf. Appendix 2)

Source: SNB

4.3 REASONS FOR THE CHOICE OF PAYMENT METHOD

What reasons lie behind the choice of a particular payment method, and why are there significant differences in some cases in the choice of payment method depending on the payment amount and place of payment?

The survey results point to two key factors. First, it becomes clear that the place of payment has a major influence on the choice of payment method. The individual's appraisal of the simplicity of the payment procedure at any given place of payment emerges as a key criterion. Second, individual preferences and payment habits shape payment behaviour.

However, both these factors – assessment of payment simplicity depending on place of payment, and the individual's preferences and habits – can only be of significant importance if cashless payment methods are accepted and the direct availability of cash poses no obstacle. These two aspects in conjunction are required for there to be true freedom of choice at any particular point of sale, or in any specific payment situation. Therefore, the report first looks at the extent to which these prerequisites are fulfilled.

4.3.1 ACCEPTANCE AND AVAILABILITY AS PREREQUISITES FOR FREE CHOICE OF PAYMENT METHOD

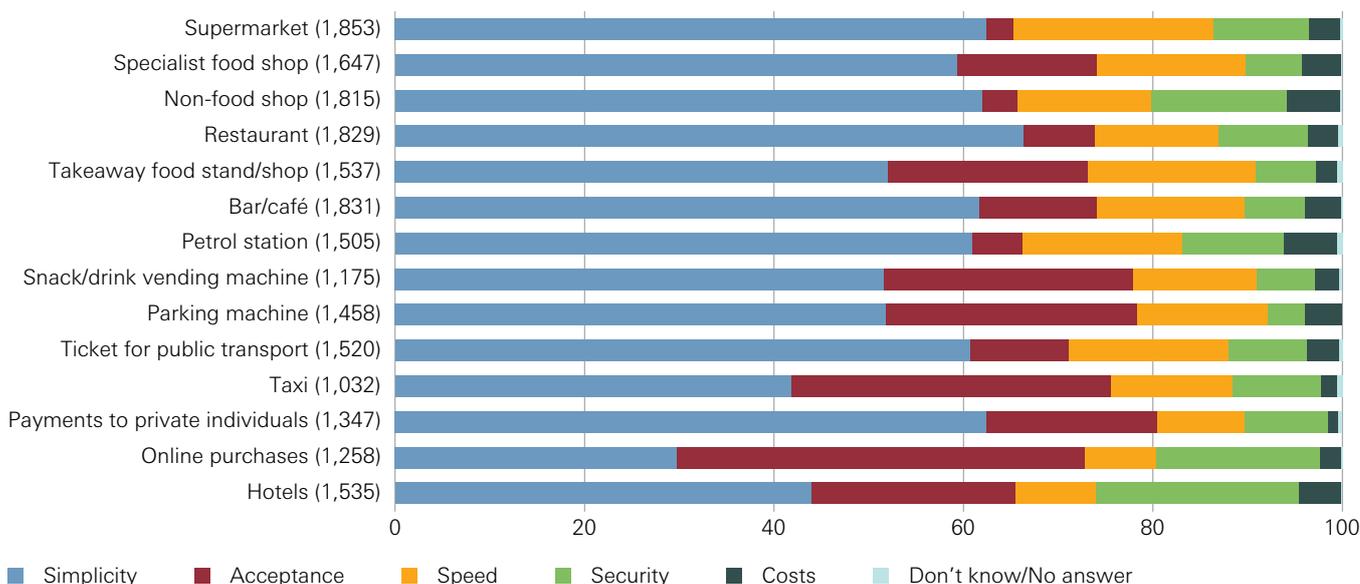
The diary data reveal that in Switzerland, the criteria of acceptance of non-cash payment methods and the availability of cash are only significant to a limited extent.⁷ In the case of just under two-thirds of the recorded payments executed with cash, non-cash payment would have been a possible alternative. When viewed together with the payments actually executed with a cashless payment method, it emerges that the acceptance of cashless payment methods is not the crucial factor for the choice of payment method in more than 80% of cases. Unsurprisingly, however, there are a number of differences – in some cases significant – depending on the place of payment. For example, non-cash payment execution is mostly possible in particular in shops for everyday needs and at petrol stations, whereas in the case of payments to private individuals or for services in the home that has thus far only been possible to a limited extent. A similar situation applies in the case of online purchases, for which the resident population predominantly use credit cards (as described in section 4.1.2). Respondents cite the criterion of acceptance as a reason for this choice of payment method more often than they do for other places of payment (cf. chart 4.13).

⁷ In order to investigate this, respondents were asked to note down the possible payment alternatives whenever making any diary payment entry. In the case of cash payments, they were to record whether the use of alternative non-cash payment methods would have been possible or not. In the case of non-cash payments, respondents were to record whether they did actually have sufficient cash on them at that time to have executed the transaction in question with cash.

Chart 4.13

SELECTION OF PAYMENT METHOD BY PLACE OF PAYMENT: PREDOMINANT REASON

Proportions in % of relevant basis; self-assessment



Question: "Why precisely do you use the specified payment method at the corresponding point of sale most frequently?"

Basis: respondents who pay at the corresponding place of payment (cf. bar descriptions)

Source: SNB

At the same time, the diary data indicate that non-cash payment methods are not simply used whenever an individual does not have enough cash for the transaction in question, and are instead used above all in situations where the individual regards them as being expedient despite having sufficient cash available. This is proven by the fact that, on average, respondents had a sufficient amount of cash on them to execute some 60% of the transactions processed with non-cash payment methods.

4.3.2 ASSESSMENT OF SIMPLICITY OF PAYMENT PROCEDURE

Overall, therefore, the acceptance of non-cash payment methods and the availability of cash are barely perceived as obstacles in Switzerland. Accordingly, when choosing a payment method at a particular place of payment, respondents can attach greater weight to other factors. The criterion of how easily respondents think they can use individual payment methods at the various places of payment emerges as particularly significant here.

Indeed, ease of use is by far the most-cited reason for the payment method typically selected at any particular place of payment (cf. chart 4.13). Irrespective of the most popular payment method in each case, the aspect of simplicity is emphasised for almost all places of payment. At the same time, it is apparent that respondents prefer to use different payment methods depending on the place of payment (cf. section 4.1.2). This implies that the perceived simplicity of the relevant payment procedure is particularly important for the choice of method at any given place of payment.

In addition, the simplicity factor also appears to be more important in Switzerland than security considerations when it comes to the use of cash. Although security is likely to become more significant when higher payment amounts are concerned (as illustrated in section 4.1.3), the diary entries nonetheless suggest that the population also executes significant payments with cash at places of payment where disproportionately high payment amounts are involved. In other words, respondents do not generally stick to a fixed threshold amount across all places of payment and refrain from using cash for payments above this threshold. If security considerations actually did play a significant role, it would only be reasonable to expect such a threshold to apply. Instead, this result suggests that respondents actually increase the amount of the cash they hold if they are expecting to spend more at a place of payment where they perceive cash settlement to be particularly simple. According to this initial analysis, therefore, the choice of payment method is in many cases more likely to depend on the place of payment than the amount. A conclusive evaluation of the relative importance of amount and place for the choice of method goes beyond the remit of this report, however.

4.3.3 INDIVIDUAL PREFERENCES AND HABITS

In addition to the place of payment, individual preferences and habits can also have a significant impact on the choice of payment method. This emerges from a group-specific evaluation of the interviews, namely by dividing respondents into the three payer types (cash payers, cashless payers and situational payers, cf. section 3.1). Here, too, different preferences only acquire significance when the criteria of acceptance and availability are met – as is the case generally in Switzerland – as only then does the individual have true freedom of choice.

Individual preferences and habits are first apparent from the reasons cited for the preferred payment behaviour in question (cash preference, non-cash preference or situation-based preference). As chart 4.15 shows, cash payers like cash above all as it helps them to keep their expenditure under control. For cashless payers, by contrast, the simplicity of the payment method takes clear priority. Where situational payers are concerned, what matters is whether they have a sufficient amount of cash on them when making the payment in question. In addition, and by extension, many respondents in this group cite the payment amount as a determining factor.

Individual preferences and habits are also reflected in the different assessments of the payment method features, namely security, speed, user-friendliness, acceptance and costs. Unsurprisingly, cash payers perceive cash to be superior in all the above-mentioned categories, whereas cashless payers consider debit cards and credit cards superior to cash in respect of security, speed and user-friendliness (cf. also section 3.3).

Individual preferences and habits are also reflected in the specific payment behaviour picture painted by the diary entries, particularly in the usage proportions of the various payment methods and the selection of payment method depending on the payment amount in question.⁸ It is clear that the share of transactions settled in cash by cash payers is disproportionately high, while the share of cash transactions settled in cash by cashless payers is disproportionately low (cf. chart 4.14). Nonetheless, the latter group actually executes just under a half of all transactions with cash. This is explained by the fact that cash payments of the cashless payer type predominantly involve small sums. This finding is also reflected in the fact that respondents of this type above all use 10-franc and 20-franc notes when making cash payments.

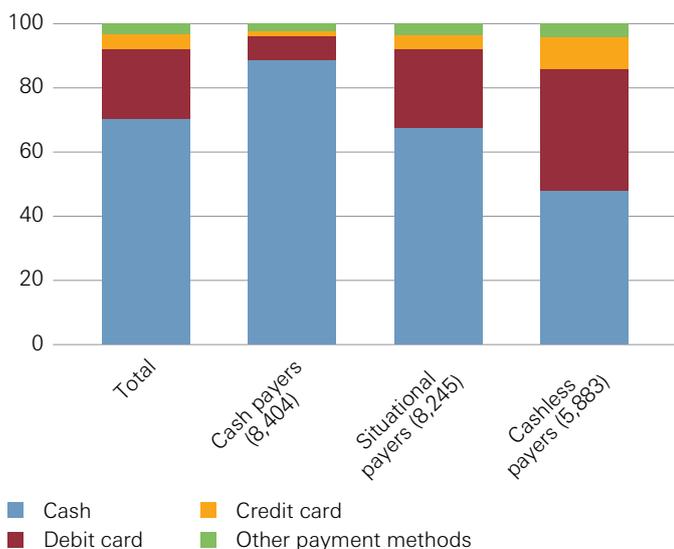
By contrast, cash payers exhibit a higher degree of cash usage for higher payment amounts, too. Every second respondent of this type states that he or she typically uses cash for amounts of between CHF 100 and CHF 200, and one in five still uses cash for amounts in excess of

⁸ In terms of usage proportions, the situational payer type generally replicates the average payment behaviour of the resident population, as described in sections 4.1 and 4.2. Accordingly, no further explanation of this aspect is required here.

Chart 4.14

TRANSACTION PROPORTION BY PAYMENT METHOD PER PAYER TYPE

Proportions in % of relevant basis; as per diary entries



Basis: 22,532 transactions (total) and transactions per payer type (cf. bar descriptions)
Source: SNB

CHF 1,000. The corresponding proportion in this amount range is therefore twice as high as the average. By contrast, just under 40% of cashless payers state that they only rarely or never use cash even for amounts of less than CHF 20.

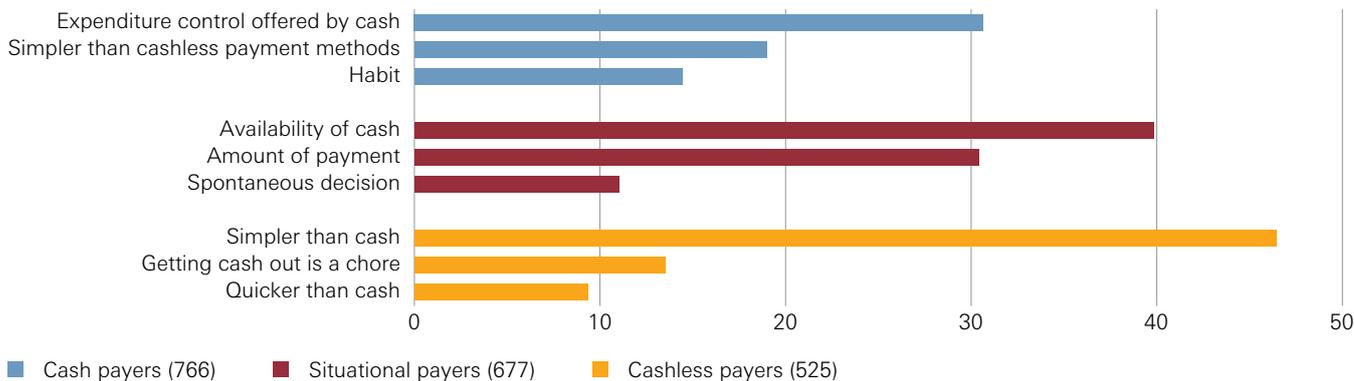
4.3.4 SUMMARY: REASONS FOR THE CHOICE OF PAYMENT METHOD

Overall, this evaluation of the motives of payment behaviour reveals that acceptance and availability aspects are generally not the key considerations in Switzerland. Due to the prevalence of places of payment with a rapid and secure payment infrastructure combined with a high density of ATMs, residents in Switzerland frequently do have true freedom of choice at places of payment. Given this background, the place of payment can have a significant influence on the choice of payment method of households, whereby the perception of the simplicity of executing a payment emerges as a key motive for selecting a payment method at any particular place of payment. At the same time, the survey indicates that individual preferences and habits play a key role in the evaluation of payment methods and therefore also for payment method choices. When all these aspects are taken into consideration, it appears that individual payment behaviour is likely to prove quite consistent, even when an existing payment method or a new payment procedure should – from an objective standpoint – be considered superior in terms of speed or security.

Chart 4.15

PAYMENT METHOD PREFERENCE: MAIN REASON PER PAYER TYPE

Proportions in % of relevant basis; self-assessment



Questions: "What in your view is the main reason for paying with cash (cashless payment methods) instead of cashless payment methods (cash)?" or in the case of situational payers: "What in your view is the most important reason for your decision whether to make a purchase with cash or a cashless payment method?"
Basis: respondents assigned to the relevant payer type (cf. legend)
Source: SNB

4.4 ASSESSMENT OF FUTURE PAYMENT BEHAVIOUR

The significance of preferences and habits is also apparent in the payment behaviour respondents expect to have in five years' time.⁹

Almost half of the respondents anticipate paying with cash just as frequently as they do now in the medium-term future (cf. chart 4.16). Similarly, almost half of respondents state that they will use cash less for payment purposes, while a small group actually anticipates using cash more frequently in the future.¹⁰

There are significant differences between respondents with a preference for paying with cash and those who generally prefer cashless payment. Cash payers for the most part expect their use of cash to remain the same, whereas respondents with a preference for cashless payment methods for the most part expect to reduce their use of cash in future. Moreover, it is apparent that younger people tend to expect their use of cash to decline in the future, and higher-income respondents also expect to use non-cash forms of payment more frequently in the future.

⁹ Answers to questions that involve self-assessment of behaviour far in the future should obviously be interpreted cautiously.

¹⁰ The small group of respondents that expect to use cash more often in the future is not considered in more detail here. The reasons cited by these individuals for their expected behavioural adjustments are similar to those of the group that expects to use cash to a similar extent as it does today. This group also most frequently (55%) gave the answer 'habit/things are fine as they are'. However, this can hardly be said to be a plausible reason for a behavioural change. It would be speculative to try and fathom what respondents actually meant by this answer. This, together with the fact that these respondents constitute a relatively small group, means that this group is not considered further.

Of the respondents who expect to use cash payments with the same frequency in the future, habit/satisfaction with the status quo is by far the most common reason cited (76%). There is then quite a gap to retaining an overview of expenditure (24%) and ease of processing payments with cash (21%).

This tallies with the fact that 42% of these people when asked about the most important catalyst for making more cashless payments in future said they essentially saw no reason to do so. Meanwhile, the most common reason cited for a possible change in behaviour toward greater usage of cashless payments was a change in the relative costs of cash and non-cash payment methods,¹¹ followed by the improved relative acceptance of non-cash payment methods (cf. chart 4.17).¹² Other reasons such as greater security, greater anonymity, greater speed or greater simplicity are in each case only cited by a low number of respondents as the key motivation. In particular, the low importance attached to transaction speed (2%) would suggest that cash payments are not perceived to be slow, and that the usage potential for contactless payments – which generally fare well in respect of the speed criterion – could be restricted within this circle of respondents. This in turn makes it reasonable to conclude that contactless payment methods are more likely to replace other non-cash payment methods rather than cash payments (cf. text box 1 in chapter 3).

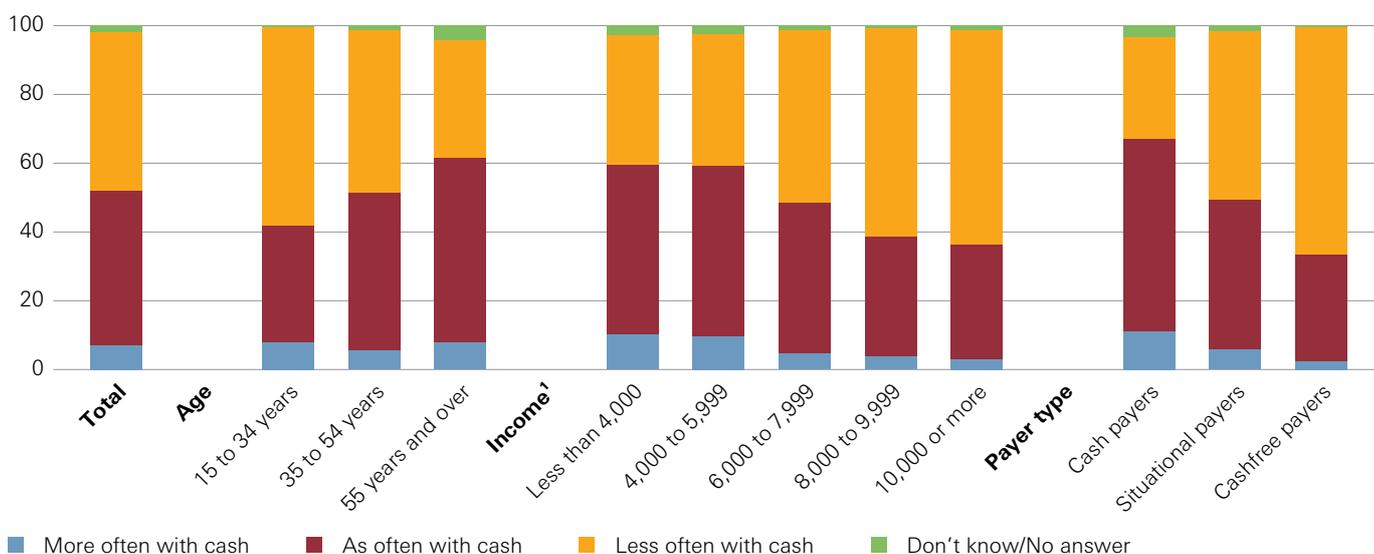
¹¹ Specifically, the following reasons are cited: 'no additional fees with cashless payment', 'lower costs than today for cashless payment', 'prices for cash payments would have to rise'.

¹² Here specifically: 'cash would have to be less widely accepted', 'non-cash payment methods more widely accepted in shops'.

Chart 4.16

FUTURE EXPECTED PAYMENT BEHAVIOUR

Proportions in % of relevant basis; self-assessment



¹ The income indicated is the monthly gross household income of respondents in Swiss francs.

Question: "Compared with today, do you think that you personally will pay with cash more often, as often or less often in the future than you do today?"

Basis: all respondents (1,968 people) and respondents broken down by socio-demographic group (cf. Appendix 2)

Source: SNB

Chart 4.17

KEY POTENTIAL CATALYST FOR INCREASED CASHLESS PAYMENT

Proportions in % of basis; self-assessment



- No reason to change behaviour, 42%
- Costs, 19%
- Acceptance, 18%
- Security, 8%
- Other or no information, 14%

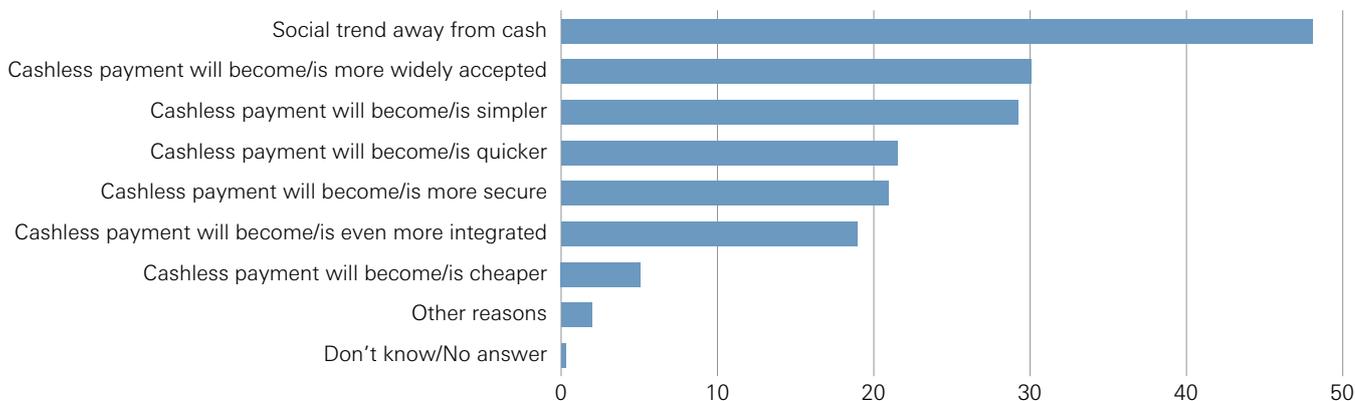
Question: "Which of the aspects cited would be the key catalyst for you to increasingly pay with cashless methods in the future?"
 Basis: respondents who do not anticipate changing cash usage in future (884 people)
 Source: SNB

Respondents who expect to use cash less often in future most frequently cite a social trend away from cash as the reason (cf. chart 4.18). This is followed by the assessment that the acceptance and simplicity of non-cash payment methods and procedures will increase. The fact that an exogenous factor is stressed is another indication that existing preferences for a particular payment method are very important. At the same time, this points to a relatively high degree of satisfaction with the status quo, which is not least likely to be attributable to the fact that freedom of choice is ensured by an efficient supply of cash and a secure infrastructure for cashless payments that is only rarely subject to disruption (cf. section 4.3).

Chart 4.18

REASONS FOR INCREASED USAGE OF NON-CASH PAYMENT METHODS IN FUTURE

Proportions in % of basis (multiple answers possible); self-assessment



Question: "Why do you think that you will pay less often with cash in future and more often with cashless payment methods instead?"
 Basis: respondents who expect to use non-cash payment methods more often in the future (906 people)
 Source: SNB

Key points in brief

- Cash is predominantly withdrawn at ATMs and at bank or post office counters.
- Both the 200-franc and 1000-franc notes are widely used by the population, and are first and foremost used for expensive purchases that do not occur frequently.
- Cash is used by households not only as a method of payment, but also as a store of value (37% of respondents).
- The predominant motive for the use of cash as a store of value is the immediate availability of funds if needed – by contrast, the low interest rate environment is of minor importance for households.

In addition to the collection of more detailed information on general payment behaviour of households and the underlying motives of this behaviour, the survey also facilitates a better understanding of the use of cash by the resident population. This is of particular interest now against the backdrop of international developments in the area of cash usage. A good example of this is the declining significance of cash as a method of payment in Nordic countries.

This chapter answers the following specific questions regarding the use of cash: Through what channels do households acquire cash (cf. section 5.1)? How widespread are the two largest denominations (200-franc and 1000-franc notes) among the resident population, and for what purposes are they predominantly used (cf. section 5.2)? What role does cash play for households as a store of value, and what motives lie behind its retention for this purpose (cf. section 5.3)? The evaluation undertaken is based on respondents' self-assessments in the interviews.

5.1 CASH WITHDRAWALS AND DEPOSITS

According to the information provided by respondents, 89% of Swiss households have at least one bank account or postal account. This is considered a key prerequisite for being able to withdraw and make deposits in cash. Although households can essentially obtain cash through other channels, such as payment of wages or cash gifts, these are likely to account for only a small proportion of cash sums obtained by the resident population. For that reason, the following observations are restricted to cash flows linked to a bank or postal account.¹

Of the respondents who possess an account, 94% state that they make cash withdrawals. A subsequent distinction can be made between different forms of withdrawal behaviour: Just over one-third of respondents state that they take out cash as often as they need it, and in the amounts required at that time. The second most-cited form of behaviour is the regular withdrawal of the same amount in each case. Other, less prevalent patterns of behaviour include the regular withdrawal of different amounts and the irregular withdrawal of similar amounts.

ATMs are the most frequently used sources of cash. Just under half of respondents withdraw cash from this source at least once a week. Cash withdrawals are much less frequent at bank and post office counters, and at shop cash tills.

By far the most-cited reason for withdrawing cash is the purchase of goods and services (cf. chart 5.1). Other frequently cited reasons include the payment of bills at post office counters and topping up cash holdings to the desired level. These two reasons are cited disproportionately often by respondents aged 55 and over. Those with a very low household income also cite payments at post office counters as a cash withdrawal motive disproportionately often.

¹ This does not necessarily mean that withdrawals have to be made at bank/post office counters or at ATMs. Other sources of cash exist – such as shop cash tills, for example.

Respondents most frequently withdraw 100-franc notes, followed by 50-franc and 20-franc notes (cf. chart 5.2). The dominance of the 100-franc note for withdrawals is surprising at first glance, as only around one-third of households state that they make payments with this denomination frequently, whereas a majority make payments frequently using smaller denominations (cf. section 4.1). One possible explanation is the fact that the 100-franc note is the most common denomination found in ATMs. Because a majority of cash payments involve amounts of less than CHF 20, change in smaller denominations is typically received when using a 100-franc note. These denominations are then inevitably used more frequently than the 100-franc note for payments, without needing to be withdrawn from an ATM separately.

The withdrawal of smaller denominations declines as the age of respondents rises. Older people have a greater tendency to withdraw 100-franc, 200-franc and 1000-franc notes. One explanation for this tendency is the payment of bills at post office counters, which is particularly common among people aged 55 and over. Paying bills via this channel mainly involves large denomination banknotes (cf. sections 4.1 and 5.2).

Although the great majority of Switzerland’s resident population withdraws cash, just 23% of respondents state that they pay cash into their own bank account or postal account. This is likely to be attributable to the fact that private individuals receive the large part of their income – i.e. salary or pension payments – in non-cash form, typically via transfer to a bank account or postal account, whereas purchases are frequently made with cash. Accordingly, it can be assumed that significant cash surpluses – of a magnitude that would make a payment into an account a logical step – are fairly rare.

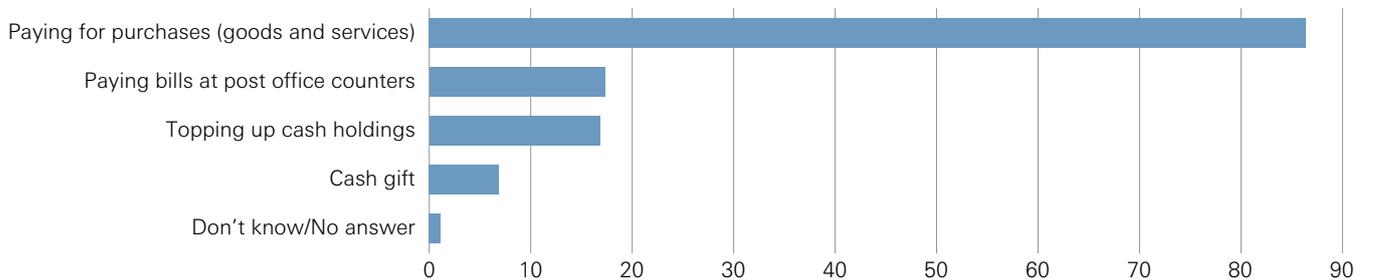
When cash deposits are made, respondents use ATMs with the corresponding deposit function (47%) and bank counters (43%). In addition, 29% of respondents state that they make payments into their own account at post office counters.²

² Multiple answers to this question were possible.

Chart 5.1

CASH WITHDRAWAL: REASONS

Proportions in % of basis (multiple answers possible); self-assessment

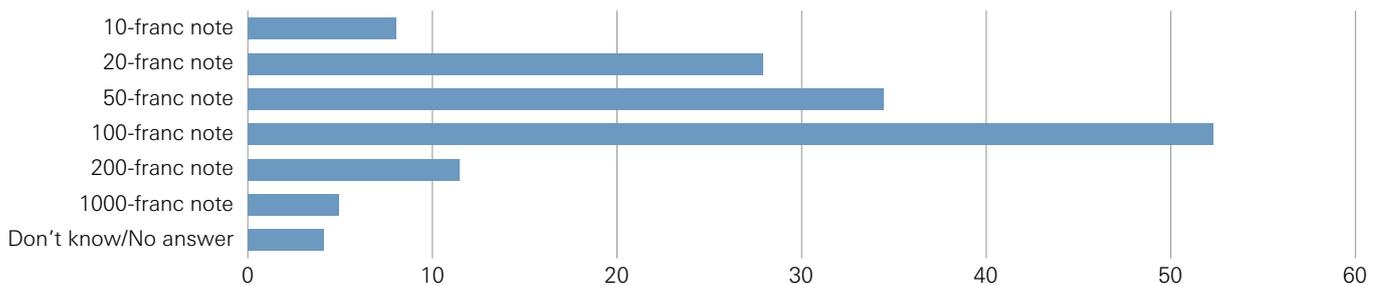


Question: “For what reasons do you typically withdraw cash?”
 Basis: respondents who have a postal or bank account (1,756 people)
 Source: SNB

Chart 5.2

CASH WITHDRAWAL: DENOMINATION

Proportions in % of basis (multiple answers possible); self-assessment



Question: “What denomination banknotes do you typically choose when you withdraw the corresponding amount from the various sources of cash?”
 Basis: all answers of respondents holding an account who withdraw cash from the various sources of cash (3,069 answers from 1,733 respondents)
 Source: SNB

5.2 USE OF LARGE DENOMINATION BANKNOTES

At the end of 2017, the 200-franc and 1000-franc notes accounted for a combined 23% of the total number of Swiss banknotes in circulation, with 61 million and 50 million units respectively. These banknotes had a combined value of CHF 62 billion, or 76% of the value of all banknotes in circulation.³ In other words, the two largest denominations account for a significant proportion of all notes in circulation, in terms of both numbers and (in particular) value. Given this background, the extent to which the two largest denomination banknotes are held by households in Switzerland and the purposes for which they are used are logical questions to ask.

Forty percent of respondents state that they have possessed at least one 1000-franc note within the last two years, a figure that rises to 66% with respect to the 200-franc note (cf. chart 5.3). For both denominations, the possession proportions in Ticino are significantly higher than the average, something that is true in French-speaking Switzerland only for the 200-franc note. Similarly, the figures are higher for men than they are for women. In addition, the 1000-franc note is more common among people aged 35–54 and, in particular, among people aged 55 and over than it is among people aged 15–34.

The 1000-franc note is above all withdrawn at bank or post office counters (cf. chart 5.4), while the most popular source of the 200-franc note is the ATM. This can be explained by the fact that ATMs in Switzerland are widely stocked with the 200-franc note, whereas only selected locations stock the 1000-franc note. Other sources much less frequently cited as main sources are gifts, wage payments in cash, and the sale of goods and services.

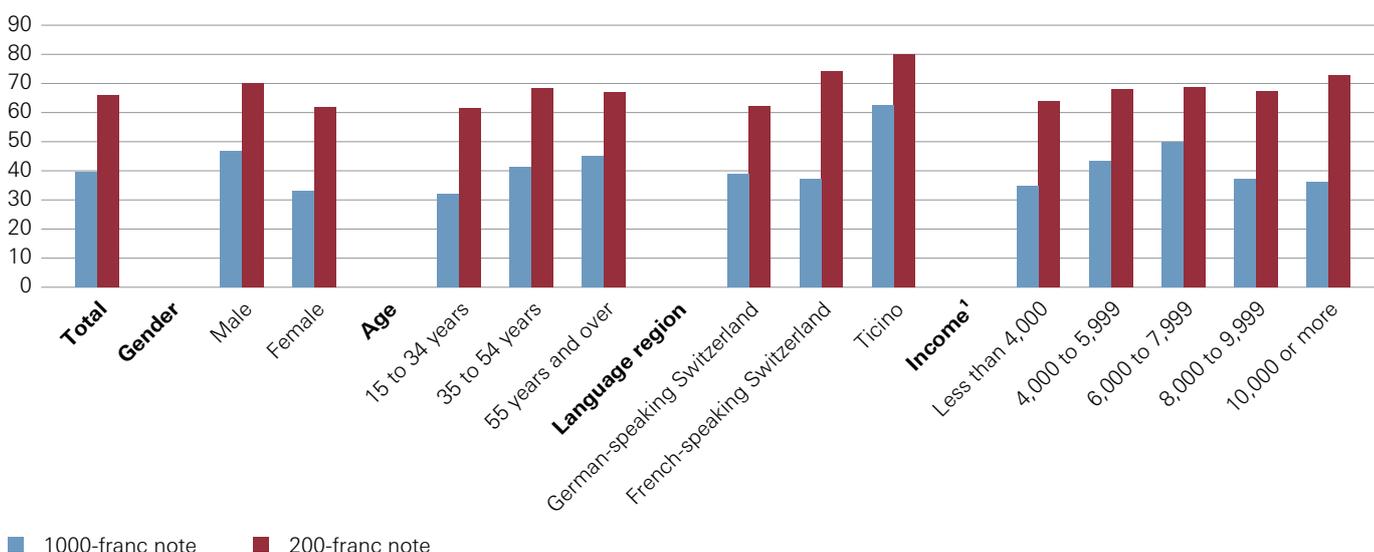
Chart 5.5 shows that the typical intended uses for the 200-franc and 1,000-franc banknotes are similar. While respondents who possessed the corresponding denomination cite above all the payment of bills at post office counters and purchases as the reasons for using the 1000-franc note, the latter purpose in particular is cited as the reason for holding the 200-franc note. Other much less-cited reasons for holding both denominations include making payments into one's own bank or postal account, expenditure on holidays, holding the banknotes as a store of value or passing them on as gifts.

³ Source: SNB data portal: data.snb.ch, Table selection, Swiss National Bank, Key figures for the SNB, Banknotes and coins in circulation.

Chart 5.3

POSSESSION OF LARGE DENOMINATION BANKNOTES

Proportions in % of relevant basis; self-assessment



¹ The income indicated is the monthly gross household income of respondents in Swiss francs.

Question: "Have you possessed one (or several) 1000-franc or 200-franc notes in the last one to two years?"

Basis: all respondents (1,968 people) and respondents broken down by socio-demographic group (cf. Appendix 2)

Source: SNB

When Swiss households use the 1000-franc note for buying goods, the object in question is primarily a car (31% of respondents holding the 1000-franc note with a view to making purchases), an electrical device (23%), or furnishings/furniture (17%). By contrast, livestock trading was cited only very rarely as an intended use (2%).⁴ This is likely to be above all attributable to the fact that the proportion of households in Switzerland engaging in livestock trading is low. However, it does not imply that the largest denomination banknote is of low significance as a means of payment in livestock trading.

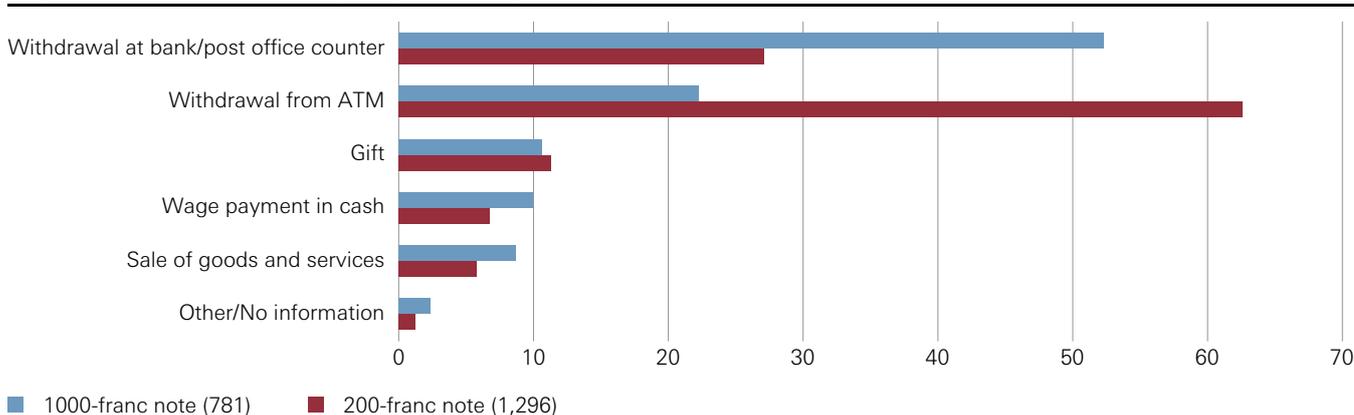
4 Multiple answers to this question were possible.

Where socio-demographic characteristics are concerned, it is striking that the respondents from groups that account for a high proportion of holdings of both large denominations state disproportionately often that they use these banknotes for paying bills at office counters. Specifically, this applies to people aged 55 or over and to people living in Ticino. By contrast, people aged 15–34 for the most part state that they do not use 200-franc or 1000-franc notes at all. To the extent that they use these large denominations, the intended use for this age group is largely for making purchases. The low usage rate for this group is likely to be attributable (among other things) to the generally lower average expenditure of this age group, as well as the lower maximum expenditure on individual items (cf. also section 4.2).

Chart 5.4

SOURCE OF LARGE DENOMINATION BANKNOTES

Proportions in % of relevant basis (multiple answers possible); self-assessment

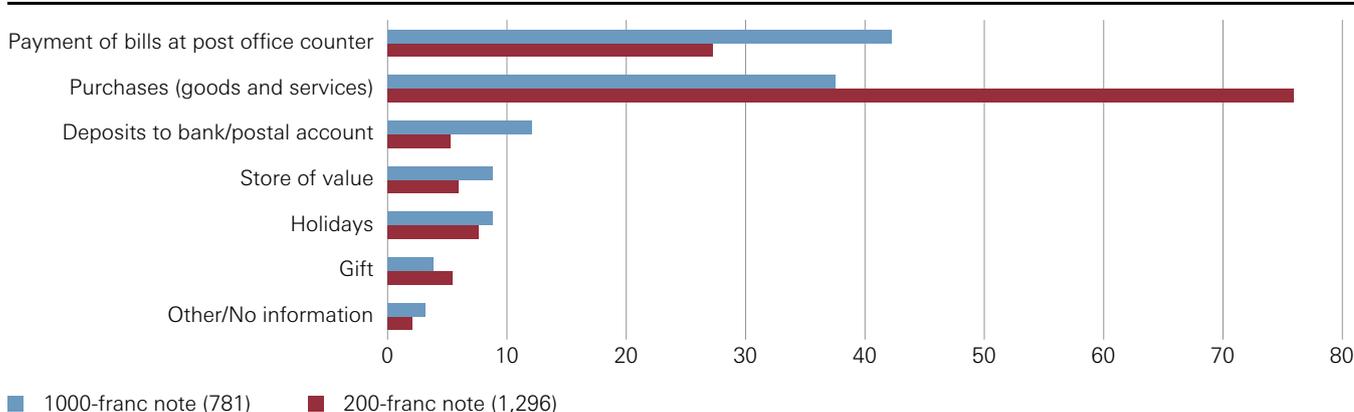


Question: "How did you come into possession of this/these 1000-franc note(s) and/or 200-franc note(s)?"
 Basis: respondents holding 1000 and/or 200-franc notes (cf. legend)
 Source: SNB

Chart 5.5

USE OF LARGE DENOMINATION BANKNOTES

Proportions in % of relevant basis (multiple answers possible); self-assessment



Question: "What did you use the 1000-franc or 200-franc note for/what do you use 1000-franc notes or 200-franc notes for generally?"
 Basis: respondents holding 1000 and/or 200-franc notes (cf. legend)
 Source: SNB

5.3 USE OF CASH AS A STORE OF VALUE

Section 5.2 shows that households use 200-franc and 1000-franc notes as a store of value to only a modest extent. The aim of this chapter is to establish in more detail whether, and in what amounts, Swiss households hold cash as a store of value, and what banknote denominations they primarily use for this purpose.

Thirty-seven percent of respondents say they keep cash at home or in a safe, in addition to the cash they carry around in their wallets. The proportion of respondents from German-speaking Switzerland who keep such holdings (40%) is higher than in the other two language regions. Almost three-quarters of respondents who hold cash as a store of value say they hold less than CHF 1,000 for this purpose (cf. chart 5.6).

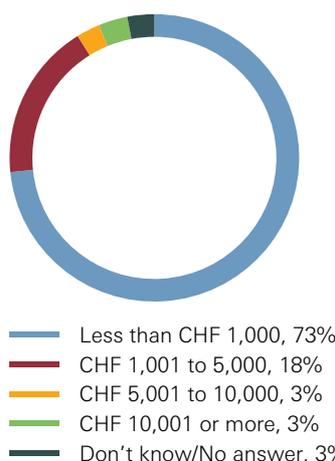
With regard to changes in the amount of cash held as a store of value over time, 41% of respondents who hold cash for this purpose state that the amount they now hold is slightly or considerably higher than ten years ago. The main reason given for the increased holdings is the greater amount of cash available to the respondent compared to the previous reference date, due to either higher income or higher wealth. A rather smaller proportion of respondents currently hold around the same amount of cash as a store of value as ten years ago. In addition, 18% of respondents had slightly or significantly lower holdings of cash. These data suggest that Swiss households keep a larger amount of cash as a store of value today than they did ten years ago. However, as the specific change in the cash amount held was not explored in the interviews, it is not possible to arrive at a definitive statement in this respect.

Two out of every five respondents who hold cash as a store of value say they primarily use 100-franc notes for this purpose (cf. chart 5.7). All other denominations are much less frequently mentioned in this respect. For example, just 11% of respondents primarily keep their cash holdings in 200-franc notes, and only 5% primarily in 1000-franc notes.

Chart 5.6

RETENTION OF CASH AS STORE OF VALUE: AMOUNT

Proportions in % of basis; self-assessment

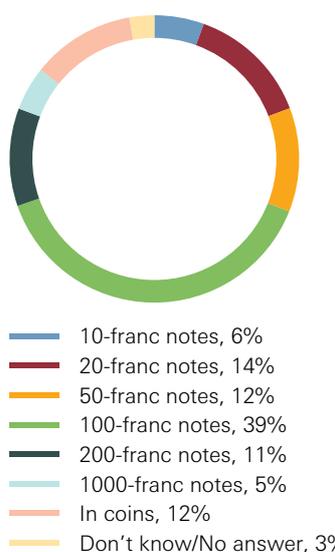


Question: "How much cash do you hold as a store of value overall?"
Basis: respondents who hold cash as a store of value (726 people)
Source: SNB

Chart 5.7

RETENTION OF CASH AS A STORE OF VALUE: DENOMINATION

Proportions in % of basis; self-assessment

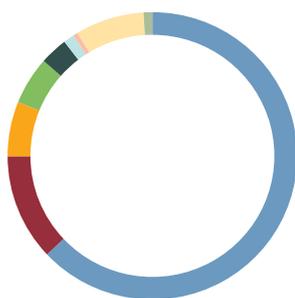


Question: "In what denominations, i.e. in what banknotes is this cash primarily held?"
Basis: respondents who hold cash as a store of value (726 people)
Source: SNB

Chart 5.8

**RETENTION OF CASH AS A STORE OF VALUE:
MAIN REASON**

Proportions in % of basis; self-assessment



- Immediate availability in case of need, 63%
- Reserve/not always having to go to bank, 12%
- Saving, 6%
- Security cushion in event of crisis, 5%
- Mistrust of banks, 3%
- Mistrust of state, 1%
- Fear of negative interest rates, 1%
- Other reasons, 8%
- Don't know/No answer, 1%

Question: "Why do you hold cash at home/in a safe/in another place?"
Basis: respondents who hold cash as a store of value (726 people)
Source: SNB

A possible explanation of this distribution is the primary motive behind holding cash as a store of value: 63% of respondents who hold cash as a store of value cite its immediate availability in case of need as their primary reason (cf. chart 5.8). The second most frequently cited reason is the holding of cash as a general reserve. This suggests that the use of cash as a store of value is primarily driven by the desire to be prepared for an unforeseen need for cash. This is also implied by the fact that the cash amounts held by Swiss households as a store of value for the most part involve sums of less than CHF 1,000.

Other reasons for holding cash as a store of value – albeit cited by a significantly smaller proportion of respondents – include saving, holding a security ‘cushion’ for crisis situations and a lack of trust in banks. The low importance attached to the latter two reasons could also be attributable to the fact that these issues were not topical at the time the survey was conducted, with no acute crisis situation existing and the financial crisis not being so fresh in respondents’ memories.⁵ The current low interest rate environment likewise appears to be insignificant as a factor motivating households to keep cash in their homes or in safes, as only a small minority of respondents report that they have increased their cash holdings for fear of negative interest being charged on account balances. A plausible explanation is that the great majority of private individuals do not suffer the problem of having negative interest rates passed directly onto them by the commercial banks.

When interpreting the results on the usage of cash as a store of value, it should be borne in mind that respondents’ answers on this sensitive topic are likely to be not wholly reliable due to both security and discretion considerations. Likewise, the survey should not be considered representative beyond doubt on this issue – in particular due to the typically limited coverage of very affluent households. The results should therefore be treated with a certain amount of caution, and should be interpreted as being in the lower level of the bandwidth of cash holdings by households in Switzerland.

⁵ During the financial crisis, the amount of cash in circulation rose by CHF 5 billion within a relatively short period in the autumn of 2008. Due to the great uncertainty over the stability of banks around the world at that time, this increased demand for cash is likely to have come from both households and companies/institutional investors.

6

International comparison

Key points in brief

- Overall, Switzerland’s population exhibits similar payment behaviour to the euro area population on average.
- With respect to both payment preferences and usage proportions, Switzerland comes somewhere in the middle between the cash-oriented countries of German-speaking and southern Europe on the one hand, and the cashless-oriented French-speaking and northern euro area countries on the other.
- Large denomination banknotes are significantly more common in households in Switzerland than they are in the euro area.
- Cash is more commonly held as a store of value in Switzerland than it is in the euro area.

When looking at aggregate indicators such as cash in circulation relative to the number of residents or GDP in international comparisons, Switzerland emerges as a fairly cash-oriented country. The results of this survey on payment methods allow a further-reaching comparison of the payment behaviour of households in Switzerland with that of households in other countries in which similar payment method surveys have been conducted. In particular, this chapter compares general payment behaviour, the use of large denomination banknotes and the use of cash as a store of value in Switzerland with the corresponding results for both the euro area overall and for Germany, Austria and the Netherlands in particular.¹ It would be interesting to undertake a comparison with Sweden, which is generally known as a fairly cash-averse country. No comparable survey has been undertaken there, however.

When interpreting the following information, it should be borne in mind that the studies being compared exhibit a number of differences in both design and focus. For

1 Sources: Nicole Jonker, Lola Hernández, Renate de Vree and Patricia Zwaan (2018), From cash to cards – how debit card payments overtook cash in the Netherlands, *DNB Occasional Studies*, 16–1; Deutsche Bundesbank (2018), *Zahlungsverhalten in Deutschland 2017 [Payment behaviour in Germany 2017]*; Henk Esselink and Lola Hernández (2017), The use of cash by households in the euro area, *ECB Occasional Paper Series*, 201/November 2017; Codruta Rusu and Helmut Stix (2017), Von Bar- und Kartenzahlern – Aktuelle Ergebnisse zur Zahlungsmittelnutzung in Österreich [On cash and card payers – current results on the use of payment methods in Austria], *Monetary Policy & The Economy Q1/17*.

example, online purchases/payments are not considered in the surveys commissioned by the European Central Bank and the Netherlands Bank (DNB). These surveys also disregard payments to private individuals. By contrast, the studies commissioned by the Deutsche Bundesbank and the Austrian National Bank (OeNB) are very similar to the SNB survey in terms of the payments recorded.

These restrictions aside, a comparison of the results of Switzerland’s payment methods survey with those of the euro area does not highlight any particularly striking behavioural features on the part of households in Switzerland. Overall, indeed, the behaviour of Swiss households is similar to the patterns of use established for the euro area on average. That said, it should be noted that there are a number of – in some cases considerable – differences between the individual member states of the euro area. For example, German-speaking and southern European countries use cash significantly more than French-speaking and northern euro area countries.

6.1 PAYMENT BEHAVIOUR

Analysis of the different payer types (cf. chapter 3) reveals that at 34%, Switzerland has a higher proportion of people with no fixed payment method preference (‘situational payer’ type) than the euro area. Of the countries compared here, the corresponding proportion is higher only in Germany (cf. chart 6.1). Among persons with a fixed payment method preference, the proportion of people who typically pay with cash in Switzerland is somewhat higher than the euro area average, whereas the number of cashless payers is significantly lower in Switzerland.

The average amounts of cash (following adjustment for purchasing power) held in the wallets of respondents is somewhat higher in Switzerland (EUR 76) than for the euro area on average (EUR 65), as well as being much higher than in the Netherlands (EUR 37), whereas the average amount of cash held in the average person’s wallet in Germany is substantially higher (EUR 104) and in Austria is slightly higher (EUR 86).² At the same time, of the countries in this comparison, only Austria exhibits a rather lower level of credit and debit card possession. As in Switzerland, the proportion of people who possess at

2 Purchasing power adjustment is based on the corresponding OECD data for private consumer spending in 2016: www.oecd.org, *Data, Database access, Data by theme, Find in Themes: National Accounts, Annual National Accounts, Main Aggregates, PPPs and exchange rates, Purchasing power parities for private consumption*.

least one debit or credit card is over 90% in Germany, the Netherlands and the euro area overall.³

With respect to the usage proportions for the individual payment methods, it emerges that the proportion of cash payments relative to all recorded transactions in Switzerland is below the corresponding average of 79% for the euro area (cf. chart 6.2). Similarly, the proportion of cash relative to the overall value of transactions in Switzerland is lower than the euro area average. Within the euro area, however, a number of – in some cases significant – differences are evident. In German-speaking and southern European countries, the proportion of cash transactions is considerably higher than in French-speaking and northern euro area countries. Overall, Switzerland occupies a middle position in this respect.

The lower proportion of cash transactions in Switzerland compared to the euro area average may be considered slightly surprising at first glance. On the one hand, this can be attributed to the above-mentioned differences in study design: The surveys of the euro area and the Netherlands disregard online purchases/payments, as well as payments to private individuals. As online purchases are predominantly executed with cashless forms of payment, the proportion of transactions executed in cash in the euro area is likely to be somewhat overestimated. On the other hand, the lower proportion of cash transactions in Switzerland can also be attributed to differences in commonly used payment methods at the most-frequented places of payment. For example, the proportion of cash

(relative to overall transaction value) used in shops to meet everyday needs is considerably lower in Switzerland than in the other countries included in the comparison.

6.2 CASH USAGE

Where banknote denominations are concerned, it emerges that the two largest denomination banknotes in Switzerland are much more widely used than the two largest notes in the euro area. Whereas on average 19% of respondents possessed a 200-euro or 500-euro note, the corresponding figures for Swiss households are much higher, at 66% (200-franc note) and 40% (1000-franc note). However, the difference compared to Austria (38%) and Germany (64%) is much less striking than it is for other countries included in the comparison (cf. chart 6.3).⁴ As in Switzerland, the primary sources cited for obtaining large denomination banknotes in the euro area are ATMs and bank/post office counters. Similarly, the corresponding denominations in the euro area are primarily used to pay for goods and services. The widespread use of 1000-franc and 200-franc notes in Switzerland for paying bills at post office counters cannot be compared with European usage in this respect, as this aspect of cash usage is peculiar to Switzerland and was not explored in the foreign surveys. However, 28% of households in the euro area holding 200-euro and 500-euro notes use these for paying money

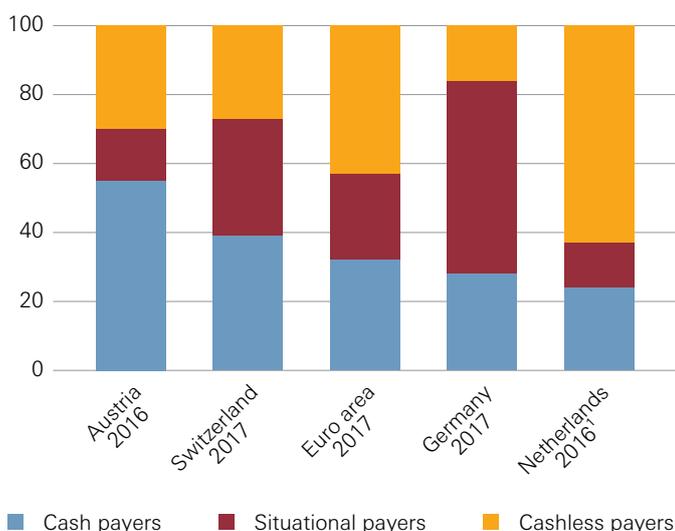
4 The differences should be treated with a certain degree of caution. Whereas the Swiss survey involved a time horizon of one to two years and respondents were asked about their ownership of each of the two largest denomination banknotes, the Austrian survey focused on ownership of the 200-euro and the 500-euro note over the previous twelve months. In Germany, the corresponding question related only to ownership of the 500-euro note, but without any restriction of the period in question.

3 The corresponding figure for Austria is 84%.

Chart 6.1

PAYER TYPES IN AN INTERNATIONAL COMPARISON

Proportions in %; self-assessment



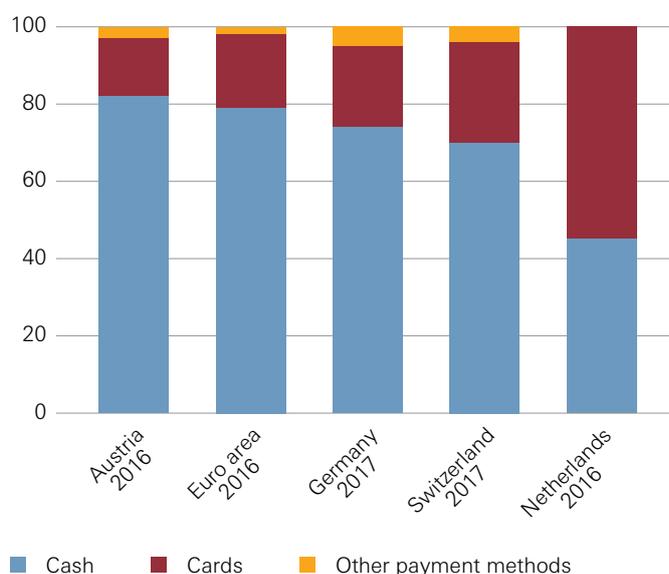
¹ The data for the Netherlands come from the ECB study (2016), as the payer types used in the Dutch survey of payment methods are not recorded in a way that is comparable.

Basis for Switzerland 2017: all respondents (1,968 people)
Sources: Deutsche Bundesbank, ECB, OeNB, SNB

Chart 6.2

TRANSACTION PROPORTION BY PAYMENT METHOD IN AN INTERNATIONAL COMPARISON

Proportions in % of transactions; as per diary entries



Basis for Switzerland 2017: 22,517 transactions
Sources: Deutsche Bundesbank, DNB, ECB, OeNB, SNB

into bank accounts or exchanging currency (whereas only 8% of respondents in Switzerland cite this as a designated use).

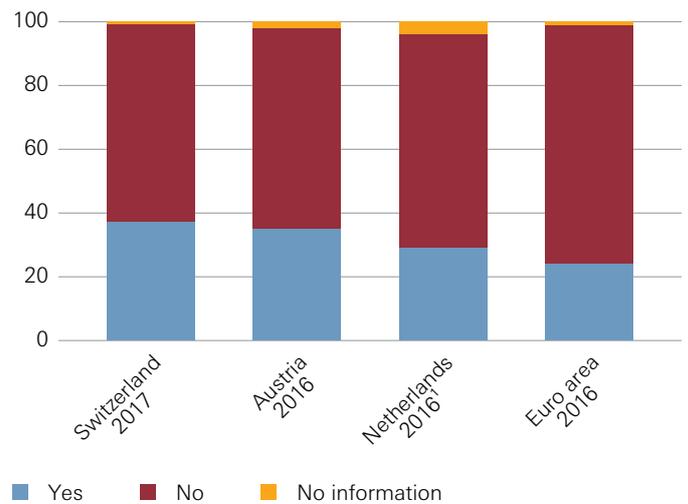
When it comes to the use of cash as a store of value, the international comparison reveals that this intended use is more prevalent among households in Switzerland than it is in the euro area. According to the information provided by respondents, 37% of Swiss households hold cash as a store of value, significantly higher than the euro area average of 24% and the Dutch proportion of 29%. By contrast, Austria (35%) returns a very similar figure (cf. chart 6.4).⁵

The average amount of cash held as a store of value in Switzerland is broadly similar to that of the euro area. Where households hold cash for this purpose, a significant majority of both euro area and Swiss households keep less than EUR 1,000/less than CHF 1,000.⁶ From this it may be concluded that the holding of cash as a store of value by households in both the euro area and Switzerland is primarily motivated by the desire for the immediate availability of funds if needed.

Chart 6.4

RETENTION OF CASH AS A STORE OF VALUE IN AN INTERNATIONAL COMPARISON

Proportions in % of relevant basis; self-assessment



¹ The data for the Netherlands come from the ECB study (2016), as no information on the retention of cash as a store of value is gathered in the Dutch survey on payment methods.
Basis for Switzerland 2017: all respondents (1,968 people)
Sources: ECB, OeNB, SNB

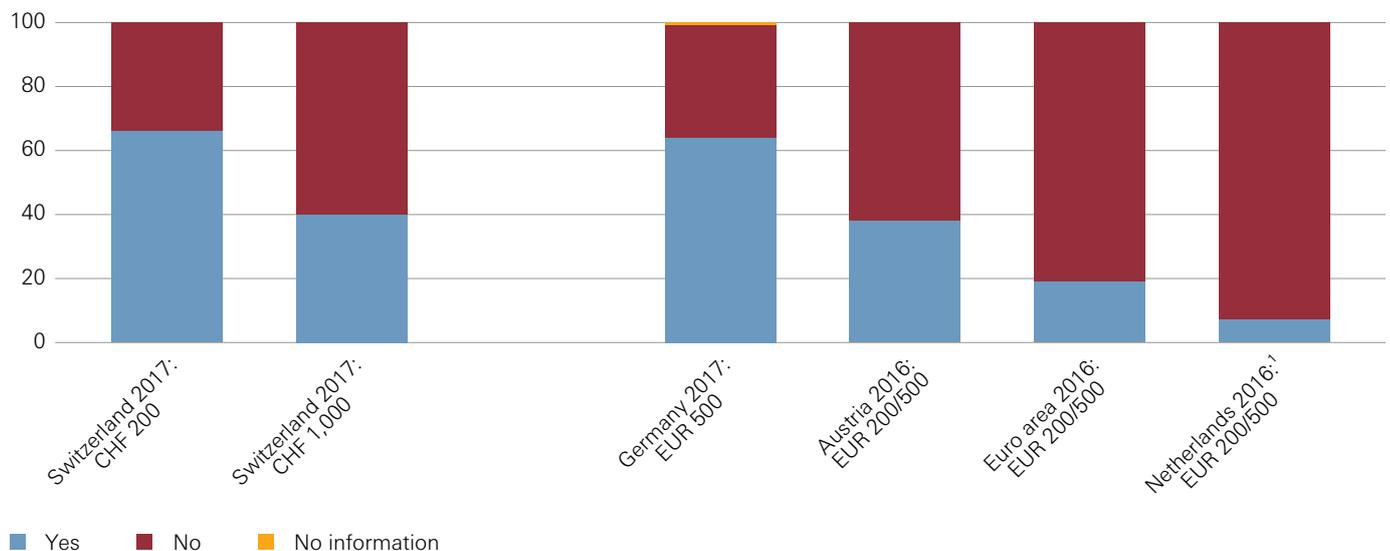
⁵ No information exists in this respect for Germany.

⁶ Since questions on this topic – which for previously mentioned reasons is rather sensitive – involved only bandwidths and it cannot therefore be precisely established where the average cash holding as a store of value lies within the bandwidth, an adjustment for purchasing power is likewise not that meaningful. If only the upper threshold of the lowest bandwidth of CHF 1,000 is used for Switzerland, the equivalent figure when adjusted for purchasing power amounts to around EUR 570, significantly below the euro area figure of EUR 1,000.

Chart 6.3

POSSESSION OF LARGE DENOMINATION BANKNOTES IN AN INTERNATIONAL COMPARISON

Proportions in % of relevant basis; self-assessment



¹ The data for the Netherlands come from the ECB study (2016), as no information on the possession of large denomination banknotes is gathered in the Dutch survey of payment methods.
Basis for Switzerland 2017: all respondents (1,968 people)
Sources: Deutsche Bundesbank, ECB, OeNB, SNB

Methodological notes

The SNB commissioned the market research institute DemoSCOPE to conduct this survey. DemoSCOPE selected some 2,000 language-assimilated individuals aged 15 and over and resident in Switzerland on the basis of a random quota procedure and surveyed them between mid-August and mid-November 2017. The random quota procedure ensures the representative nature of the survey results, and involves a two-stage selection process. First of all, 200 survey points ('sample points') were defined randomly. A sample point corresponds to a given municipality or postcode. The random selection was carried out at postcode level. These could in principle be selected multiple times, whereby the probability of a sample point being selected was weighted by size of the local population. In order to take account of Switzerland's multi-lingual population, the distribution of sample points across the three language regions was disproportionately defined: 120 sample points were defined in German-speaking Switzerland, 50 in French-speaking Switzerland and 30 in Italian-speaking Switzerland.

In a second step, a total of six streets were randomly selected for each sample point. A weighting factor was introduced here too. On the basis of data obtained from Swiss Post, each street was assigned a weighting (number of buildings) before the random selection was then made. The interviewers had to recruit survey participants at each sample point according to the prescribed quotas. These involved selecting participants according to age group and gender.

The survey itself comprised two parts. The first part involved a personal interview in which participants responded to some 200 questions on their payment habits, as well as on the motives behind their choice of payment method. The interviews were conducted face-to-face at respondents' own homes in the form of computer-assisted personal interviews (CAPI). The second part of the survey involved the keeping of a payments diary. Here respondents independently recorded information on all payments made by them over a period of seven consecutive days, specifically the payment amount, the place of payment and the selected payment method. Recurring payments (e.g. rent, health insurance premiums) were explicitly excluded from this diary recording process – these payments were to be entered in summary form at the end of the diary as a one-off monthly total amount.

By way of compensation for their time, participants received two giveaways (an SNB pen and a package of shredded Swiss banknotes withdrawn from circulation). In addition, a personalised postal cheque to the value of CHF 100 was sent to respondents after conclusion of the survey. Compensation of this size is appropriate and in line with market norms for surveys that take up a relatively large amount of participants' time.

A total of 2,158 people were interviewed during the field phase, of which 2,007 returned a completed payments diary. This comparatively high proportion of 93% can be attributed to different factors: First, participants were reminded by telephone or e-mail about the need to keep a diary and, second, a significant element of the incentive to participate (Swiss Post cheque) was only released once a completed payments diary had been received.

Once all the underlying data had been gathered, DemoSCOPE undertook a data adjustment. This process involved reviewing whether interviews had been correctly conducted. In the case of 34 interviews, it was deemed that this was not the case, and these interviews were accordingly removed from the database. In addition, all interviews that had a refusal rate of greater than 15% – measured as the ratio between 'refused' responses and the total number of possible responses – were likewise eliminated. Similarly, only the interviews that were paired with a completed diary were used. In total, 190 responses were eliminated, giving a final total of 1,968 correct datasets (interview and diary) for the final evaluation.

The adjusted database was weighted on the basis of the structural characteristics of the overall database, in order to arrive at representative statements on the resident population of Switzerland from the age of 15 onwards. For this weighting, the so-called 'redressment procedure' was used. The basis for this procedure was the same data that had already formed the basis for the random sample selection and in particular for the quota requirements per sample point. Specifically, all interviews and diaries were weighted according to language region, residential environment, age and gender, in line with the actual proportions found in the population as a whole.

Distribution of the sample according to socio-demographic characteristics

SOCIO-DEMOGRAPHIC CHARACTERISTICS

	Number in sample	Description
Total		
All respondents	1,968	Size of adjusted random sample with all respondents
Gender		
Male	964	Male participants in payment methods survey
Female	1,004	Female participants in payment methods survey
Age		
15 to 34 years	593	Respondents aged between 15 and 34 years
35 to 54 years	710	Respondents aged between 35 and 54 years
55 years and over	664	Respondents aged at least 55 years
Language region¹		
German-speaking Switzerland	1,404	Respondents resident in German-speaking Switzerland
French-speaking Switzerland	467	Respondents resident in French-speaking Switzerland
Ticino	97	Respondents resident in Italian-speaking Switzerland
Residential environment²		
Town/city	1,246	Respondents resident in the category 'urban centre'
Conurbation	414	Respondents resident in the category 'area under influence of urban centres'
Rural	308	Respondents resident in the category 'areas not under influence of urban centres'
Level of education		
Tertiary level	437	Respondents with final education qualification from a university of applied sciences ('Fachhochschule'), higher technical school ('Höhere Technische Lehranstalt'), business school, college of education, university or the Swiss Federal Institute of Technology
Upper secondary level	1,238	Respondents with a final school-leaving certificate from a high school ('Mittelschule'), vocational high school ('Berufsmittelschule') or grammar school ('Gymnasium')
Compulsory education	268	Respondents having completed primary school, lower secondary level, or no education
Income		
Less than CHF 4,000	448	Respondents with monthly gross household income of below CHF 4,000
CHF 4,000 to 5,999	403	Respondents with monthly gross household income of between CHF 4,000 and CHF 5,999
CHF 6,000 to 7,999	338	Respondents with monthly gross household income of between CHF 6,000 and CHF 7,999
CHF 8,000 to 9,999	224	Respondents with monthly gross household income of between CHF 8,000 and CHF 9,999
CHF 10,000 or more	213	Respondents with monthly gross household income of at least CHF 10,000
Employment status		
Employed	1,161	Respondents in employment (full-time, part-time, self-employed)
Unemployed	122	Respondents (temporarily) without employment
In training/education	175	Respondents in training/education, including apprentices
Retired	374	Respondents in retirement

¹ The assignment of respondents' place of residence (municipality) to language regions is based on the most commonly spoken local language according to the SFSO structural survey (website available in German and French only): www.bfs.admin.ch, *Statistiken finden, Regionalstatistik, Atlanten, Statistischer Atlas der Schweiz, Atlaskapitel Schweiz, Statatlas Schweiz 01 – Bevölkerung, Räumliche Gliederungen der Schweiz, Analyseregionen, Sprachgebiete, 2016 – Karte nach Gemeinden*. For presentation purposes, Italian-speaking municipalities outside the Canton of Ticino are included under Ticino.

² The breakdown by residential environment is based on the system applied by the SFSO (website available in German and French only): www.bfs.admin.ch, *Statistiken finden, Querschnittsthemen, Räumliche Analysen, Räumliche Gliederung, Räumliche Typologie*.
Source: SNB

GLOSSARY

Term	Description
Contactless function	Facilitates the transfer of payment information between a physical device (e.g. smartphone, payment card) and a terminal at a point of sale without any physical contact between the device and the terminal being required. Contactless payments are typically transferred using near field communication (NFC) or Bluetooth low energy (BLE) technology, or through the reading of a Quick Response code (QR code).
Credit card	Payment card that enables the holder to make payments or cash withdrawals on credit up to an agreed threshold. No interest is usually accrued until the invoice date (typically the following month). Thereafter, the cardholder has the option of paying back the balance in instalments, with interest being payable on the outstanding balance.
Debit card	Payment card tied to a bank or postal account that enables the cardholder to charge payments and cash withdrawals directly to his/her account (Maestro/EC card, PostFinance card).
Direct debit	Charging of the account of the payer by the payment recipient with the former's approval.
E-banking	Execution of banking transactions via the internet, irrespective of location or opening times. Banks offer their customers the corresponding websites or portals, as well as specific apps, through which customers can conduct their banking business online.
Internet payment procedures	Payment procedures based on e-banking transfers of the payer and other payment procedures via the internet that facilitate the processing of payments within a proprietary network and are linked to a bank/postal account or a payment card. This term is used throughout this report to encompass all payments made via the internet that are not executed through a specific e-banking application or a specific payment app.
Other payment cards	Retailer cards with a payment function, e.g. those of petrol stations or retailers as well as prepaid cards that can only be used with certain retailers (e.g. voucher cards) or in a restricted way (university, canteen, washing machine, etc.).
Payment apps	These include apps for paying by smartphone (or other electronic device) for the acquisition of goods and services (at point of sale or remotely), as well as the use of an app for the transfer of money between private individuals. A transaction via a payment app typically involves an underlying transfer, card payment, or the use of e-money. Payment at the point of sale functions via the reading of a QR code, via BLE or via NFC (cf. 'Contactless function' above).
Payment instruments	These include cash, payment cards (debit, credit and other payment cards), (e-banking) transfers, direct debit procedures and e-money. In addition, payment apps and internet payment procedures are also covered by this term for the purposes of this report.
Payment methods	Cf. payment instruments.
Place of payment	Describes the point of sale (POS) at which goods or services are acquired and paid for. For the purposes of this report, the term 'place of payment' covers specific points of sale (e.g. supermarkets, restaurants and online platforms) as well as counterparties (e.g. private individuals) and payment purposes (e.g. 'eating and drinking out').
Transfer	Payment instruction triggered by the payer to transfer a set amount to the recipient.

Published by

Swiss National Bank
P.O. Box, CH-8022 Zurich
Telephone +41 58 631 00 00

Further information

communications@snb.ch

Languages

German, French, English
and Italian

Design

Interbrand Ltd, Zurich

Typeset and printed by

Neidhart + Schön Group AG, Zurich

Publication date

May 2018

ISSN 2624-5329 (print version)

ISSN 2624-5337 (online version)

Availability

Swiss National Bank publications are
available online at www.snb.ch,
Publications.

The publication time schedule can be found
at www.snb.ch, *Media, Time schedule*.

Many SNB publications are available
in printed form, either as single copies
or on subscription, from:

Swiss National Bank, Library
P.O. Box, CH-8022 Zurich
Telephone +41 58 631 11 50
Fax +41 58 631 50 48
E-mail: library@snb.ch

**Copyright ©**

The Swiss National Bank (SNB) respects all third-party rights, in particular rights relating to works protected by copyright (information or data, wordings and depictions, to the extent that these are of an individual character).

SNB publications containing a reference to a copyright (© Swiss National Bank/SNB, Zurich/year, or similar) may, under copyright law, only be used (reproduced, used via the internet, etc.) for non-commercial purposes and provided that the source is mentioned. Their use for commercial purposes is only permitted with the prior express consent of the SNB.

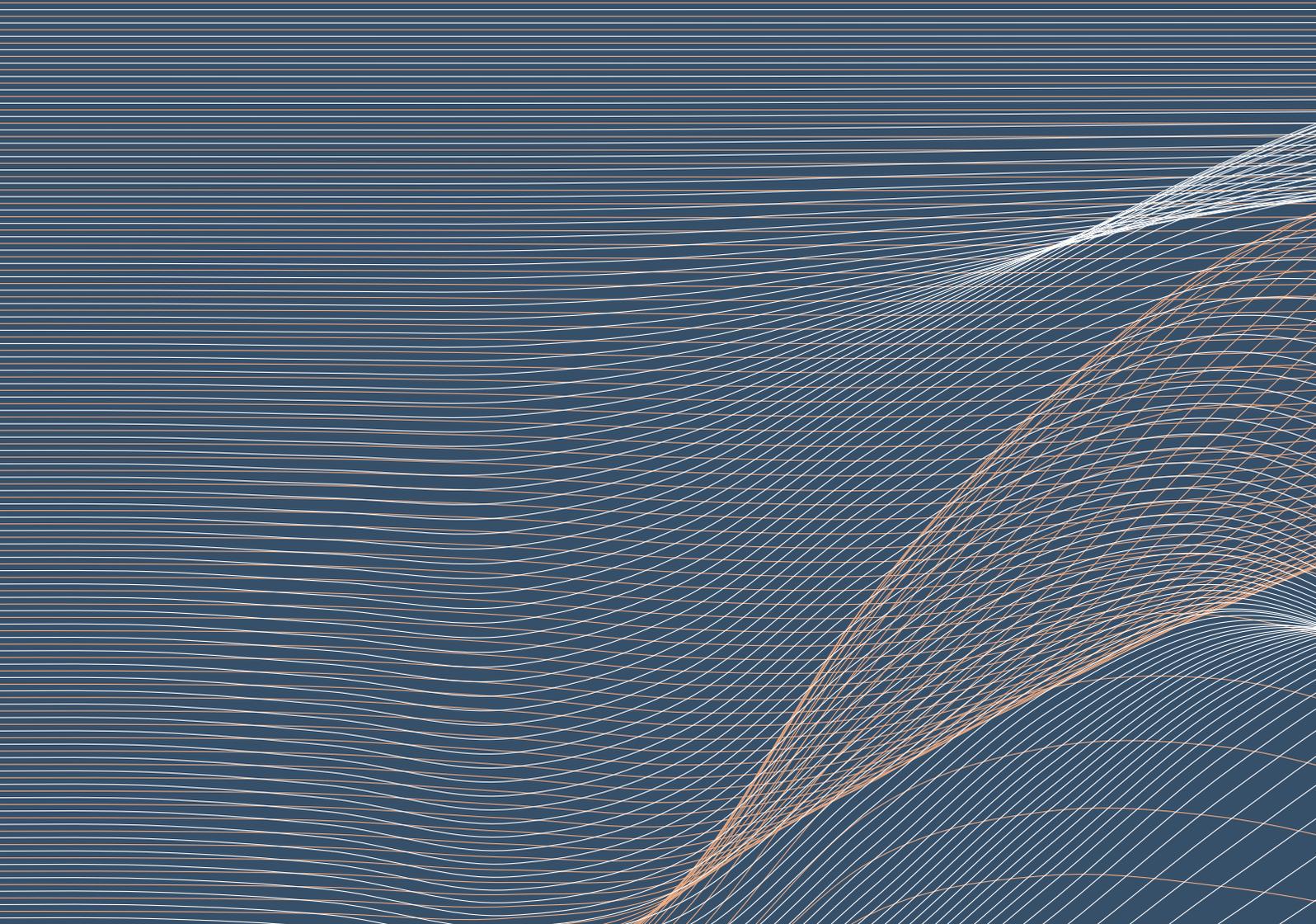
General information and data published without reference to a copyright may be used without mentioning the source.

To the extent that the information and data clearly derive from outside sources, the users of such information and data are obliged to respect any existing copyrights and to obtain the right of use from the relevant outside source themselves.

Limitation of liability

The SNB accepts no responsibility for any information it provides. Under no circumstances will it accept any liability for losses or damage which may result from the use of such information. This limitation of liability applies, in particular, to the topicality, accuracy, validity and availability of the information.

© Swiss National Bank, Zurich/Berne 2018



SCHWEIZERISCHE NATIONALBANK
BANQUE NATIONALE SUISSE
BANCA NAZIONALE SVIZZERA
BANCA NAZIUNALA SVIZRA
SWISS NATIONAL BANK

