Federal Reserve Bank *of* Atlanta
Research Data Report

2023 Survey and Diary of Consumer Payment Choice: Summary Results

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Kevin Foster, Claire Greene, and Joanna Stavins

Abstract

For 2023, the Survey and Diary of Consumer Payment choice found the following:

- US consumers made more payments in 2023.
    - Compared to October 2022, there were statistically significant increases in the number of all payments (to 45.6 on average per month), in the number of all types of card payments (29.5), and in payments via mobile app (13).
    - The share of purchases made remotely increased to 22 percent, up 4 percentage points from 2022 and more than double the share of remote purchases before the COVID-19 pandemic.
- Mobile has won over three-quarters of US consumers.
    - 72 percent of consumers adopted online or mobile payment accounts like PayPal, Zelle, Venmo, and Cash App in 2023, a statistically significant increase from 2022.
    - 70 percent of consumers made a mobile phone or tablet payment at least once in the 12 months ending in October 2023 (also a statistically significant increase).
    - 73 percent of consumers used mobile banking (another statistically significant increase).
- Nevertheless, almost all consumers used cash.
    - In the prior 30 days, almost 90 percent of consumers used cash.
    - One-quarter of in-person purchases were made with cash.
- More credit cardholders reported paying fees; revolving behavior was stable.
    - One-third of consumers with credit cards paid fees, a statistically significant increase from 2022.
    - Compared to 2020, 2021, and 2022, shares of cardholders with unpaid balances (revolvers) were statistically unchanged at just under half.
    - Revolvers were less likely to report that their balance was lower compared to 2022 (a statistically significant change). Among revolvers, the median unpaid balance was about the same as in 2022 ($2,500 in 2023 and $2,700 in 2022).

- By number, most payments were card payments. By value, most payments were made electronically from a bank account.
    - By number, two-thirds of payments were by card, including 32 percent by credit card and 30 percent by debit card.
    - By value, 42 percent of payments value was made electronically from a bank account using one of two ACH-authorizing methods. The total value of payments per consumer was $5,382 in October 2023.

A questionnaire change introduced in 2022 to help respondents remember to report all their payments was refined in 2023. In addition, some 2023 respondents agreed to receive text message alerts reminding them to report payments during their diary days. This report includes a description of these changes and their effect. Interactive charts showing payment use by transaction type and dollar value, card and nonbank account adoption by income, and recent use of a payment instrument by income are on the Atlanta Fed website, along with data for download, questionnaires, codebooks, and other resources for data users.

Keywords: cash, checks, checking accounts, debit cards, credit cards, prepaid cards, electronic payments, payment preferences, unbanked, Survey of Consumer Payment Choice, Diary of Consumer Payment Choice

JEL Classifications: D12, D14, E42

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This report, which may be revised, is available on the Atlanta Fed website.

Acknowledgments appear on the following page. The authors are responsible for any errors. The views expressed in this paper are those of the authors. They do not necessarily reflect the views of the Federal Reserve Banks of Atlanta or Boston, other Federal Reserve Banks, or the Board of Governors of the Federal Reserve System.

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Introduction

This paper reports the results of the 2023 Survey and Diary of Consumer Payment Choice (SDCPC), a survey of US consumers conducted annually in October by the Federal Reserve Banks of Atlanta and Boston and Federal Reserve Financial Services. It reports the number, dollar value, and shares of payments by transaction type and by payment instrument based on data on individual payments from daily records kept by consumers. It also reports consumers' adoption of bank and nonbank payment accounts, use of payment instruments, rankings of instruments for security and other characteristics, and preference for using payment instruments for specific types of transactions (bills, online purchases, and in-person purchases).

In October 2023, US consumers reported making 45.6 payments per month on average, an increase over 2022. As a share of all payments by number, most payments were by credit card (32 percent) or debit card (30 percent). By value, 42 percent of payments value was made electronically from a bank account using one of two ACH methods and 37 percent were made using a card (debit, credit, or prepaid).

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- Mobile has won over three-quarters of US consumers.
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- By number, most payments were card payments. By value, most payments were made electronically from a bank account.
    - By number, two-thirds of payments were by card, including 32 percent by credit card and 30 percent by debit card.

- By value, 42 percent of payments value was made electronically from a bank account using one of two ACH-authorizing methods. The total value of payments per consumer was $5,382 in October 2023.

The Survey and Diary of Consumer Payment Choice aims to provide a comprehensive understanding of the payment behavior of US consumers. It is comprised of the Survey of Consumer Payment Choice (SCPC), the 16th in a series of surveys that ask consumers to assess characteristics of payment instruments and to report their adoption of payment instruments, and the Diary of Consumer Payment Choice (DCPC), conducted in 2012 and annually since 2015, in which consumers record details of specific transactions (including dollar values) and their payment choices.[1]

For purposes of this research, payment instruments are paper (cash, check, money order), cards (debit, credit, prepaid), and electronic via the ACH system, which includes bank account number payment (BANP, defined in the survey questionnaire as "You pay by giving your bank's number [sometimes called a "routing number"] and your account number") and online banking bill payment (OBBP, defined in the survey questionnaire as "a payment made from your bank's online banking website or mobile app"). Transaction types are bills, purchases, and person-to-person (P2P) payments, made in person or remotely. This report for 2023 focuses on the number and shares of payments by transaction type and payment instrument as well as on changes from 2022. A total of 4,579 respondents completed the 2023 survey and diary.

Summary of tables

The remainder of this paper comprises two parts: a summary of the key results and tables showing detailed findings related to consumers' payment choices. The report also summarizes consumer activity related to banking, consumer assessments of payment characteristics, and a rich set of consumer and household demographic characteristics.

- Adoption of accounts and payment instruments: Tables 1–4
- Use of payment instruments in past 30 days: Table 5
- Number and dollar value of payments by type of payment instrument, transaction type, location, and merchant payee: Tables 6–13
- Cash holdings: Tables 14–15
- Loss, assessments of payment instrument characteristics, and preferences: Tables 16–18
- Household characteristics: Tables 19–20

[1] For reports on earlier versions of the SCPC, see Foster et al. (2009, 2011); Foster, Schuh, and Zhang (2013); Schuh and Stavins (2014, 2015); Greene, Schuh, and Stavins (2016, 2017); Greene and Stavins (2018b); and Foster, Greene, and Stavins (2019, 2020, 2021). For the DCPC, see Briglevics and Shy (2012); Shy (2013); Shy and Stavins (2014); Schuh (2017); Greene and Schuh (2017); Greene, O'Brien, and Schuh (2017); Greene and Stavins (2018a, 2019, 2020a, 2021). For the 2021 combined report, see Foster, Greene, and Stavins (2022, 2023).

Interactive charts online

Building on the work in Connolly and Stavins (2015), charts posted online with this paper enable users to examine payment instrument use in the past 30 days and adoption of cards and nonbank payment accounts by four household income categories (less than $35,000, $35,000 to $75,000, $75,000 to $125,000, and $125,000 or more) and by six age groupings beginning at 18. Other interactive charts depict payment instrument use by transaction type and dollar value ranges. Other research using the SDCPC data investigates payments behavior and demographic characteristics, for example, Greene and Shy (2022).

Online data and user guides

All SDCPC data are available free to the public at the Atlanta Fed website.[2] Survey data are available for all years, 2008 through 2020, and consolidated with diary data from 2021 through 2023. Diary data are for 2012 and 2015 through 2020 (consolidated with survey data for 2021 through 2023). Public-use microdata sets containing responses to all questions are available in CSV, R, and Stata formats and include the following:

- Individual-level data sets: Survey-style questions (questions that do not ask for specific point-in-time information). Includes bank account adoption, assessments, preferences, income, and demographics.
- Day-level data sets: Questions asked on diary days one, two, and three. Includes cash holdings in wallet and storage and the payment instruments the respondent carried or had access to that day.
- Transaction-level data sets: Date, time, dollar value, payment instrument, location, device used, merchant for all transactions reported.

See the 2023 SDCPC Data Codebook for more information about each data set, including detailed descriptions of every variable in all three data sets.

Additional resources posted for data users include the following:

- Tables in pdf and Excel format (including tables of confidence intervals)
- Online questionnaires
- Definitions of important survey concepts
- Data codebook explaining structure of the data set and including definitions of all variables
- Research data reports
- Other economic research and publications using SDCPC data
- Interactive charts

[2] https://www.atlantafed.org/banking-and-payments/consumer-payments.aspx

Account adoption

Payment behavior is measured as a two-step process. The consumer must first adopt—that is, own or have set up for use—the payment instrument to be able to use it. Adopting a bank account is a prerequisite to adopting several payment instruments—for example, a debit card or online banking bill pay. Bank account adoption has been high—always greater than 90 percent of US consumers—in each of the 16 years of the SCPC. In 2023, 96 percent of US consumers had a bank account and 95 percent had a checking account, both statistically unchanged from 2022. Adoption of a savings account increased to 79 percent, a statistically significant change from 2022 (table 1).

Of consumers with a bank account, three-quarters reported not paying any bank account fees. Seven percent of bank account adopters paid two or more types of fees (table 1). The most common fees paid were ATM fees, paid by one in five bank account adopters, and overdraft fees, paid by one in 10.

Among the 4 percent of US consumers without a bank account, 30 percent said they did not like dealing with banks and about one-quarter said they didn't write enough checks to make it worthwhile (table 2). Almost 20 percent cited reasons related to cost (minimum balance required, fees, or service charges).

In contrast to the stability of checking account adoption, the increase in the adoption of nonbank payment accounts was statistically significant from 2022 to 2023, increasing from 66 percent of consumers to 72 percent. Shares of consumers adopting Zelle and Venmo increased statistically significantly. Continuing its steady increase from 2016 to 2023, mobile banking adoption—44 percent of consumers in 2016—increased to 73 percent of consumers in 2023, a statistically significant increase from 68 percent in 2022. Online banking adoption was statistically unchanged at 80 percent of consumers.

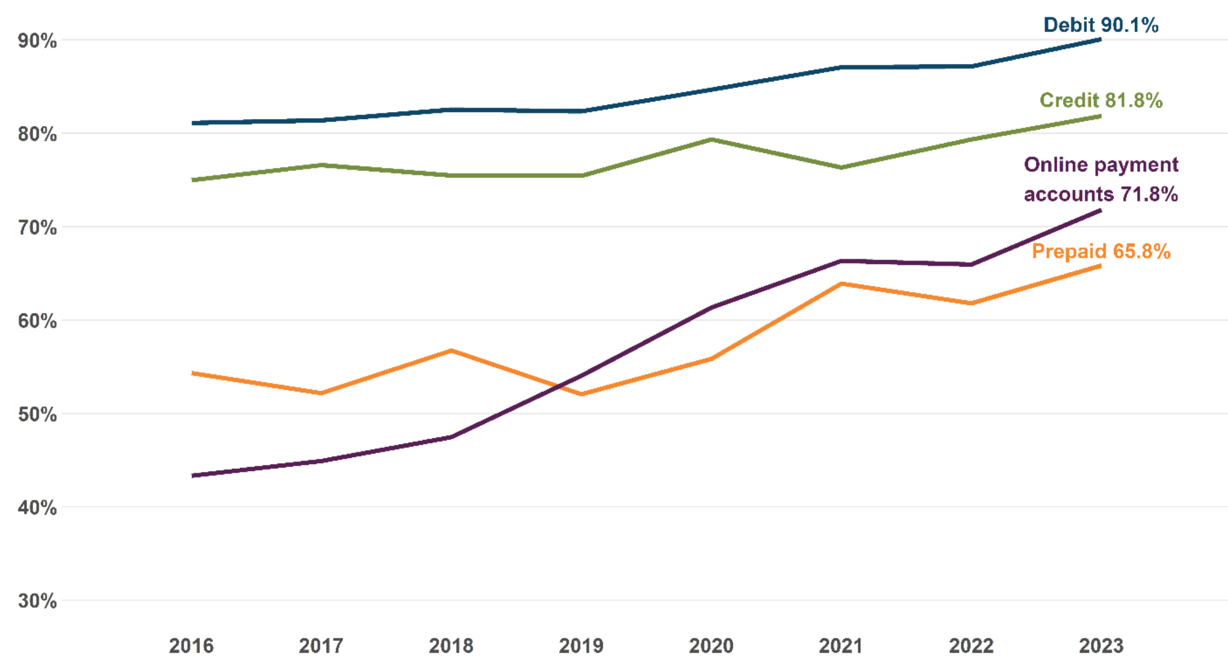
Payment instrument adoption

Adoption of payment cards was the highest recorded since 2015, with 99 percent of consumers owning a debit, credit, or prepaid card—more than the share of consumers reporting that they had a bank account (table 3). Among card types, only the change in the shares adopting prepaid cards was statistically significant, increasing to 66 percent in 2023 from 62 percent in 2022. Shares of consumers adopting debit cards and credit cards were stable at 90 percent and 82 percent, respectively. Figure 1 shows the percentage shares of consumers adopting cards and online payment accounts.

Half of consumers with a credit card had one or two credit cards, and almost one-quarter had five or more. Sixty-eight percent of credit card adopters reported that they did not pay any credit card fees in 2023 (table 4), down from 73 percent in 2022, a statistically significant change. For the 32 percent of adopters who paid fees, the most common fee paid was an annual fee, reported by 20.1 percent of credit card adopters.

Compared to 2020, 2021, and 2022, shares of credit card adopters carrying an unpaid balance (revolvers) were statistically unchanged at just under half (table 4). Since 2020, the shares of credit card revolvers reporting "lower/much lower" balances has declined steadily from half to approximately one-third. In 2023 equal shares of credit card adopters reported their unpaid balance was "lower/much lower" (35 percent) and "higher/much higher" (34 percent) compared to October 2022. Among revolvers, the median unpaid balance was about the same as in 2022 ($2,500 in 2023 and $2,700 in 2022).

Figure 1: Shares of US consumers who adopted payment cards and online payment accounts



Source: 2016–23 SDCPC

From 2022 to 2023, a statistically significant increase in adoption of electronic payments was powered by the increase in consumers adopting BANP (made by providing a bank routing number and account number and sometimes called pay-by-bank or an account-to-account payment) from 40 percent in 2022 to 44 percent in 2023. A factor in the increased adoption of payment cards and BANP could be the high adoption of mobile phone or tablet payments, which settle via cards and electronic methods. Seventy percent of consumers made a mobile phone or tablet payment at least once in the 12 months ending in October 2023, a statistically significant increase from the prior year.

Even in our digital age, most consumers have paper checks (71 percent in 2023) and 95 percent of consumers reported they had used cash to pay at least once in the past 30 days and/or held some cash on their person or stored elsewhere (table 3).

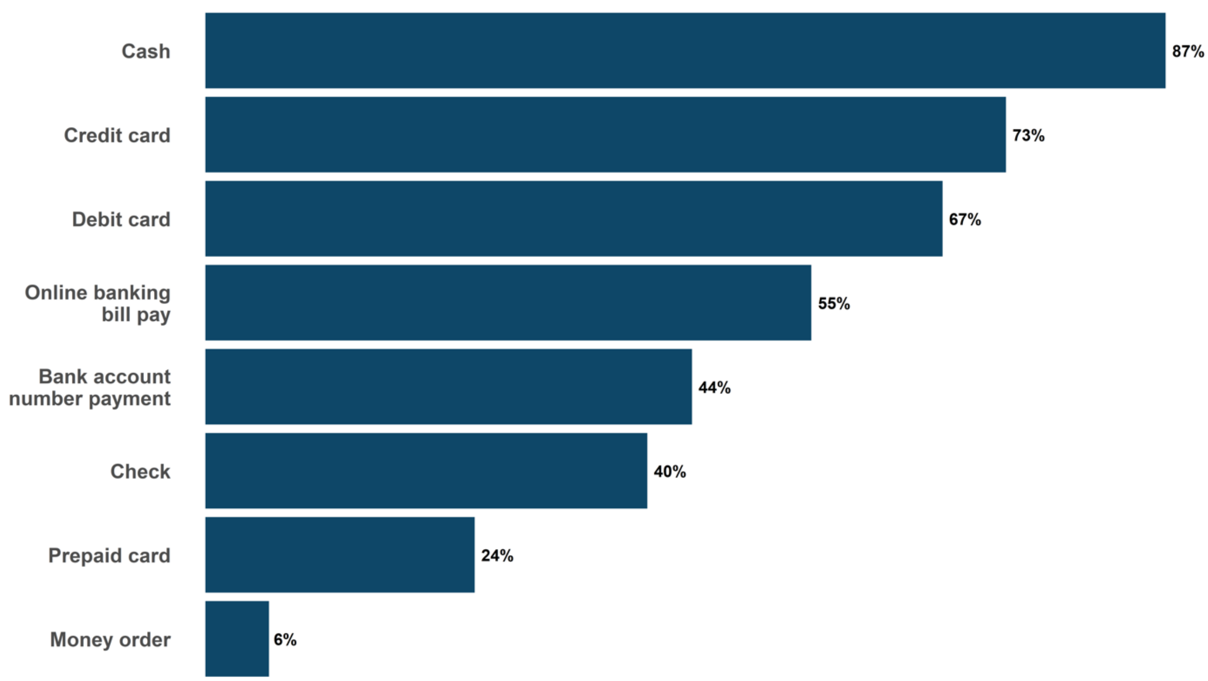
Use of payment instruments

Most consumers have a wide range of payment instruments at their disposal and use them regularly. In October 2023, consumers took advantage of their ability to pay in various ways. From October 2022, there were statistically significant increases in the shares of consumers using cash, credit cards, prepaid cards, and BANP at least once in the past 30 days. In contrast, the share of consumers using checks declined, also statistically significant (figure 2 and table 5).

Cash is used more extensively than any other payment instrument. In 2023, 87 percent of consumers reported that they had used cash to pay at least once in the past 30 days, up from 83 percent in 2022 (table 5).

Ninety-five percent of consumers used a card (credit, debit, or prepaid) in the past 30 days. Seventy-three percent used a credit card and 24 percent used a prepaid card, both shares significantly more than in 2022. More consumers used OBBP and BANP than used a paper check.

Figure 2: Shares of US consumers using a payment instrument in the past 30 days



Source: 2023 SDCPC

Number and value of payments

In 2023, US consumers made on average 45.6 payments for the month,[3] or about one-and-one-half payments per day (table A and table 6). This is a substantial and statistically significant increase from 2022, when consumers made 38.8 payments a month on average. On any given day, an average of 37 percent of consumers reported making zero payments (compared to 40 percent in 2022). US consumers made on average $5,382 worth of payments

[3] All the data reported in this paper refer to October 2023, unless specified otherwise.

for the month.[4] Dividing the value of payments by the number of payments yields an average value per payment of $118 (table 7).

Table A: Average number of payments in October

	2016	2017	2018	2019	2020	2021	2022	2023
Average number of payments	45.9	41.0	43.3	38.7	34.8	35.8	38.8	45.6
95% confidence interval	[44.2, 47.6]	[39.1, 42.9]	[41.2, 45.4]	[36.8, 40.6]	[32.6, 36.9]	[34.7, 36.9]	[37.7, 39.9]	[44.3, 46.9]

Source: 2023 SDCPC, table 6 and table 6 confidence intervals

The number of payments increased about 18 percent (that is, by about seven payments) compared with October 2022. The total value of payments increased by $353 (7 percent, not statistically significant) to $5,382. The average transaction dollar value dropped slightly to $118 (not statistically significant) (table 7).

Number and value of payments by instrument

US consumers made 30 payments (65 percent) with payment cards (debit, credit, and prepaid) in October 2023. They used paper instruments (cash, checks, and money orders) for 19 percent of payments (nine payments) and electronic methods for 13 percent (six payments) (table 1). The seven additional payments in 2023 can be roughly allocated among card (six payments: four credit card and two debit card) and electronic payments (one BANP).

Debit cards, credit cards, and cash were used for almost 80 percent of payments, with credit cards exceeding debit cards for most payments per month, 15 compared to 14, respectively (table 6). In 2023, 32 percent of payments were with credit cards, 30 percent with debit cards, and 16 percent with cash. The number of cash payments increased by about half a payment from 2022 to 2023; the share of payments in cash dropped one percentage point in the context of the increased number of payments mentioned above. The increases in the numbers of card payments, including prepaid cards, were all statistically significant. The change in the number of cash payments was not.

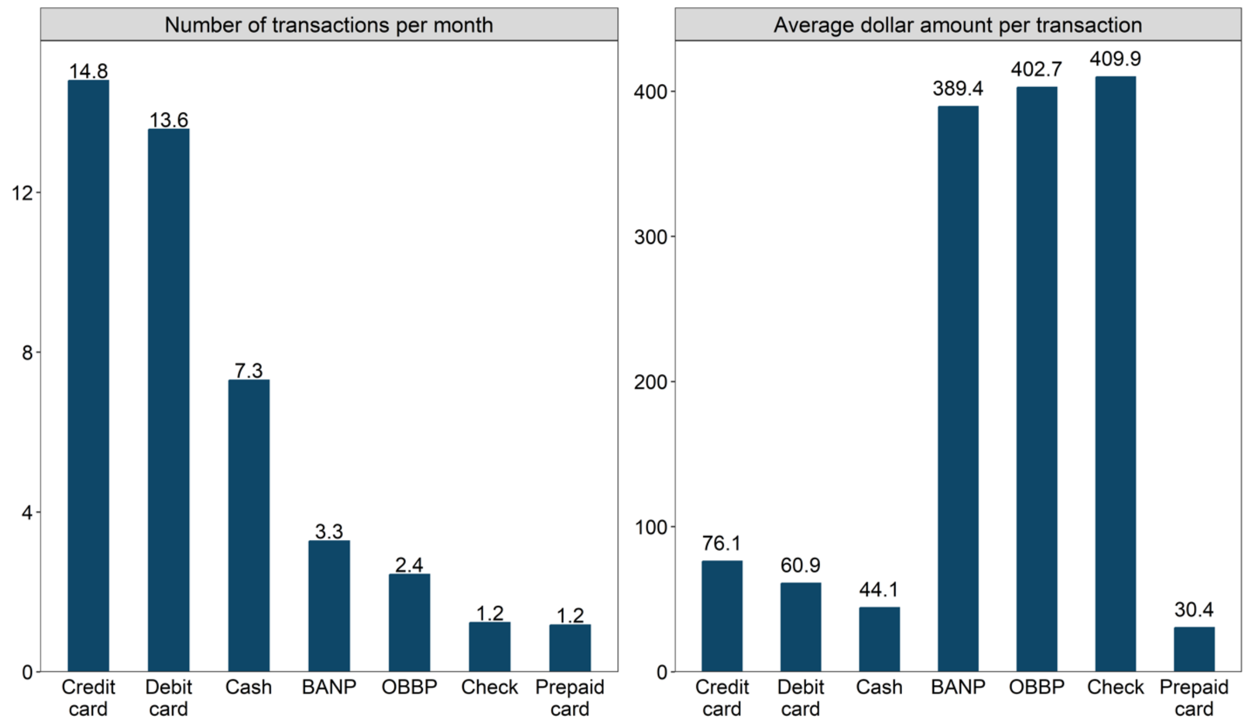
In contrast to the small share of payments made electronically (13 percent), most payments value is made electronically, $2,257 (42 percent). Card payments, about two-thirds of payments by number, totaled $1,989 (37 percent by value). Paper payments were $842 (16 percent) (table 6).

The difference between the distributions by volume and by value reflects consumers' tendency to use cash and payment cards more often, but for relatively low-value payments, and their tendency to use electronic payments less often, but for relatively high-value payments (figures

[4] Consumer payments are not the same as consumer (or household) expenditures, so the estimated value of consumer payments (and its growth rate) should not be compared with data on expenditures. Consumer payments include transfers between accounts—for example, savings or investment—as well as tax payments, which are excluded from consumer expenditures. Consumer payments omit any payments made by others on behalf of consumers—for example, health costs paid by insurance.

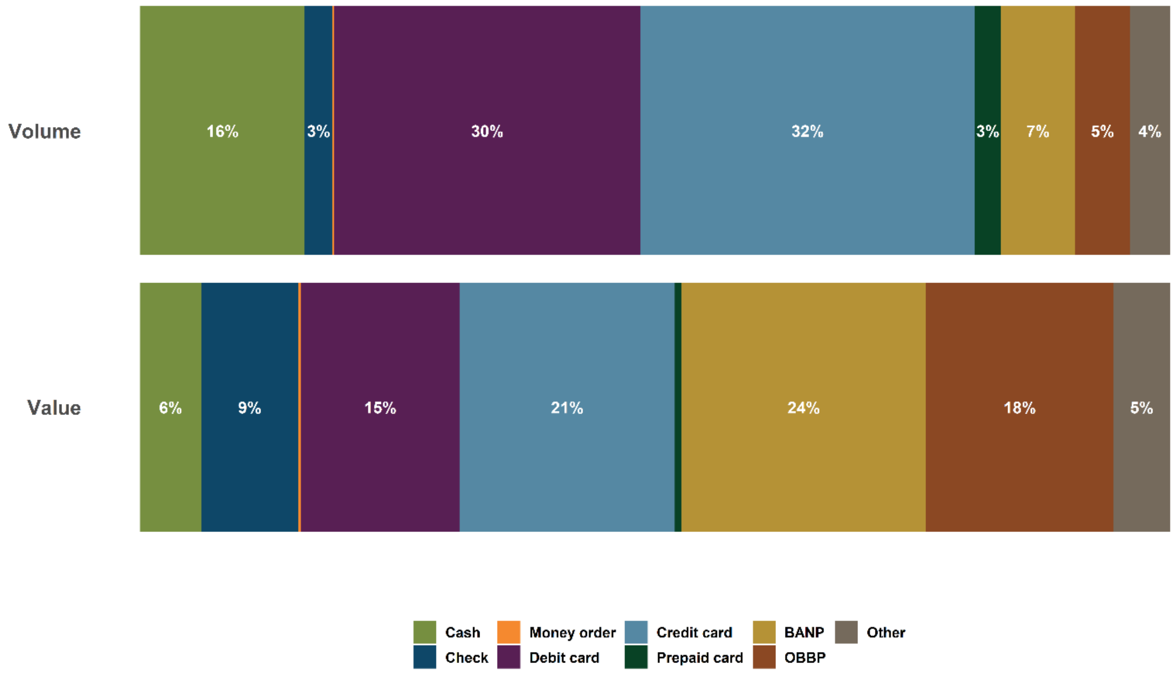
3 and 4). For example, US consumers on average made fewer electronic-instrument payments than cash payments (six compared with seven), but they used electronic payments for transactions that were higher in average value than cash transactions ($395 compared with $44). The average value when using payment cards is between the two, at $67 (tables 6 and 7).

Figure 3: Number and average value of payments by instrument, October 2023



Note: There are typically very few money order payments recorded in the diary. Estimates for money order transactions are available in tables 6 and 7.
Source: 2023 SDCPC, tables 6 and 7

Figure 4: Percentage shares of payments by number and value, October 2023



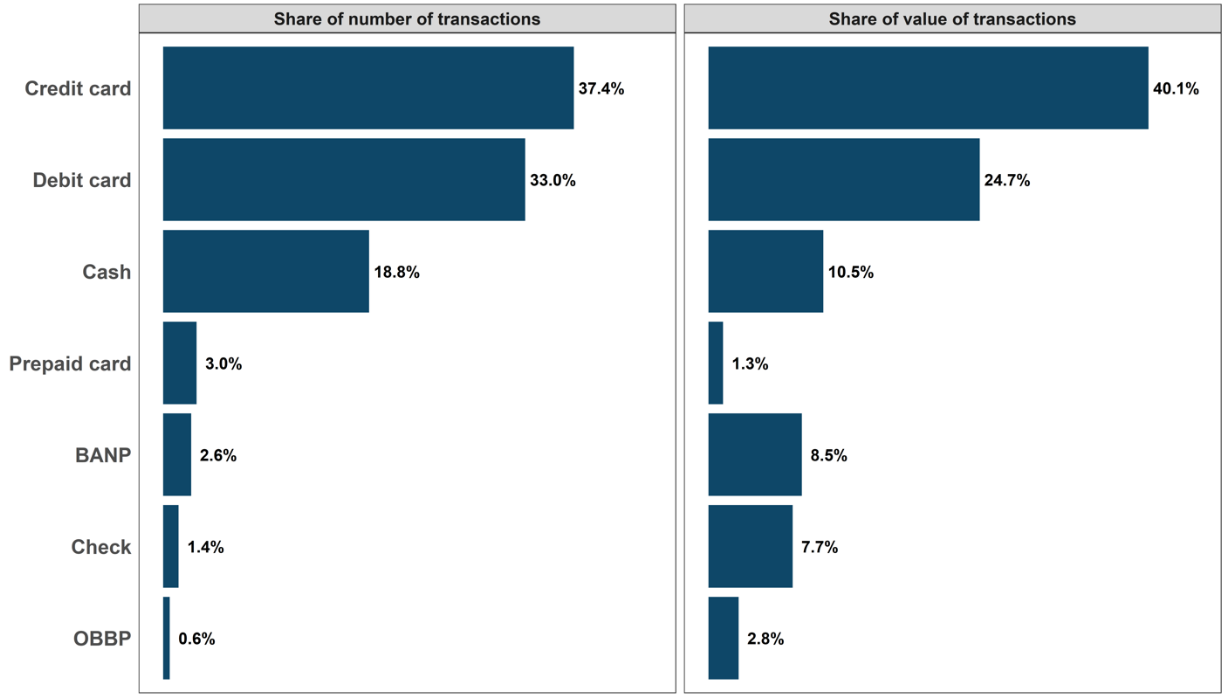
Source: 2023 SDCPC, table 5

Payments by transaction type: Purchases and bills

US consumers on average made 37 purchases and nine bill payments per month (tables 9 and 11). Purchases (both online and in-person and including P2P) accounted for 80 percent of all payments by number in 2023. The increase in the total number of payments from 2022 to 2023 is mostly due to the increase in the number of purchases, which increased by about six purchases (table 9). Tables 9a and 9b include goods and services bought in person and online as well as payments to another person—for example, as a gift or allowance. Purchases were 41 percent of payments by value. The average dollar value of a purchase was $65.

Credit card was the most frequently used payment method for purchases, accounting for 37 percent of purchases by number, followed by debit cards (33 percent) (figure 5). Cash was used for 19 percent of purchases. In terms of dollar value, 66 percent of all purchases were with cards, 40 percent with credit cards and 25 percent with debit cards. The dollar-value relationship to payment instrument choice described above pertains here: average dollar values for cash, debit card, and credit card purchases were, respectively and in ascending order, $34, $45, and $65 (table 9).

Figure 5: Shares of payment instrument use for purchases, by number and value

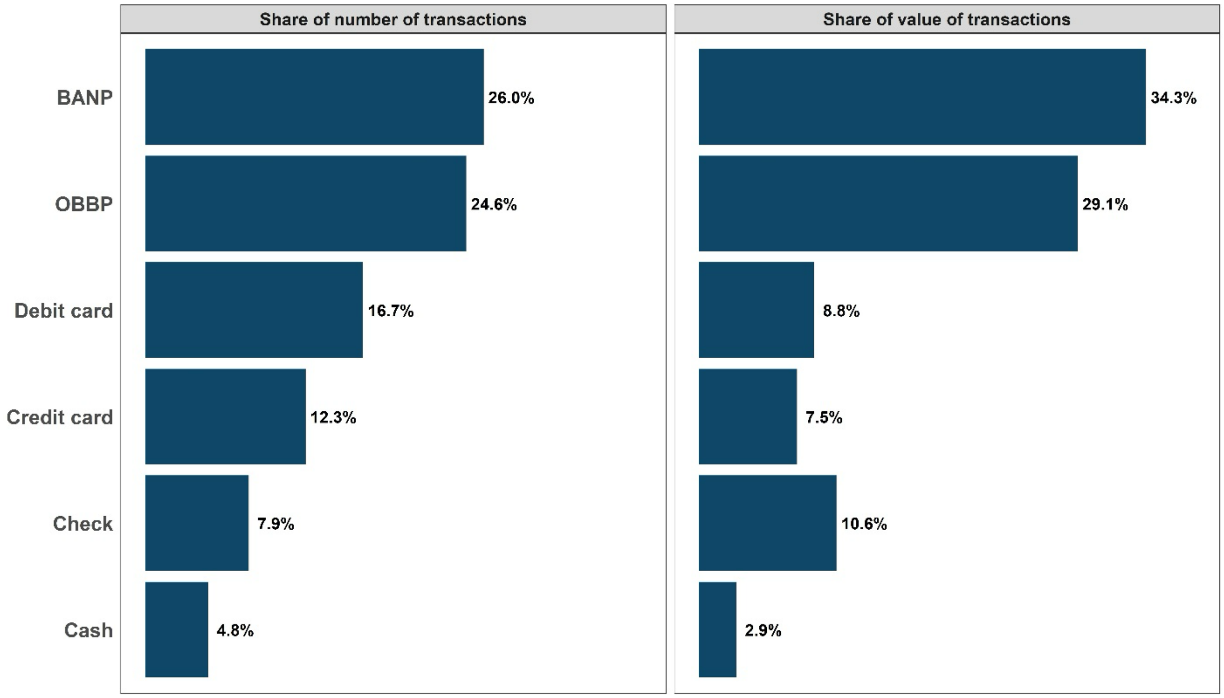


Note: Shares do not sum to 100 because less-common payment instruments are omitted.
Source: 2023 SDCPC

About 22 percent of purchases were made remotely (table 10), up about three percentage points from the shares in 2020, 2021, and 2022. Of remote purchases, three-quarters by number and half by value were made with cards.

In 2023, bill payments accounted for 20 percent of all payments by number and 60 percent by value. Electronic payment methods and debit cards are used most for bill pay: 26 percent of bills by number were paid by BANP, 25 percent by OBBP, and 17 percent by debit cards, totaling almost 70 percent of all bill payments for the three methods (table 11 and figure 6). Thirty percent of bills were paid with cards (credit, debit, or prepaid). Checks were 8 percent of bill payments. In 2020, 50 percent of consumers reported they had used a check at least once in the past 30 days. That share was 42 percent in 2023. When asked how they prefer to pay bills, 30 percent of consumers choose OBBP, 24 percent chose debit card, 18 percent chose a credit card, and 8 percent chose checks (table 18).

Figure 6: Shares of payment instrument use for bills, by number and value



Note: Shares do not sum to 100 because less common payment instruments are omitted.
Source: 2023 SDCPC

In contrast to purchases, almost 90 percent of bill payments by both number and value were made remotely, either online or by mail (table 12). One-quarter of remote bill payments were made with cards, representing 16 percent of remote bill pay value. Almost 60 percent of remote bill payments were made electronically, by BANP or OBBP, representing 70 percent of remote bill pay value.

Payments by payees

Of the average 46 payments per month that US consumers reported, 16 were for everyday purchases (groceries, pharmacies, other stores, and online shopping) and nine were for food consumed away from home (including restaurants, bars, and fast food). Consumers made on average four payments at gas stations and four to financial services companies, including insurance, IRA and mutual funds, and credit card, mortgage, and other loan payments (table 13).

The remaining payments were for services related to housing (rent, utilities, and communications), for medical and education expenses, for other services and recreation, and for charitable donations. Consumers made two payments per month to another person, defined in the questionnaire as “friends, family, coworkers, or a person you pay for goods or services.”

Shopping (including grocery stores, convenience stores, pharmacies, other physical stores, and online) represented 35 percent of all payments by number and 19 percent by value (table 13). As for shopping, the purchase of food consumed away from home was 20 percent of payments by number and just 5 percent by value, reflecting the relatively low average dollar value of such payments. In contrast, payments to financial services companies, which include loan repayments, transfers to another account, and purchases of financial assets, were 8 percent of all payments by number and 38 percent by value, the greatest share of any payee type. Most payments to financial institutions were credit card bill payments (table B), and loan payments including credit card bills were 80 percent of payments to financial institutions by value.

Table B: By number and value, most payments to financial institutions were for credit card bills

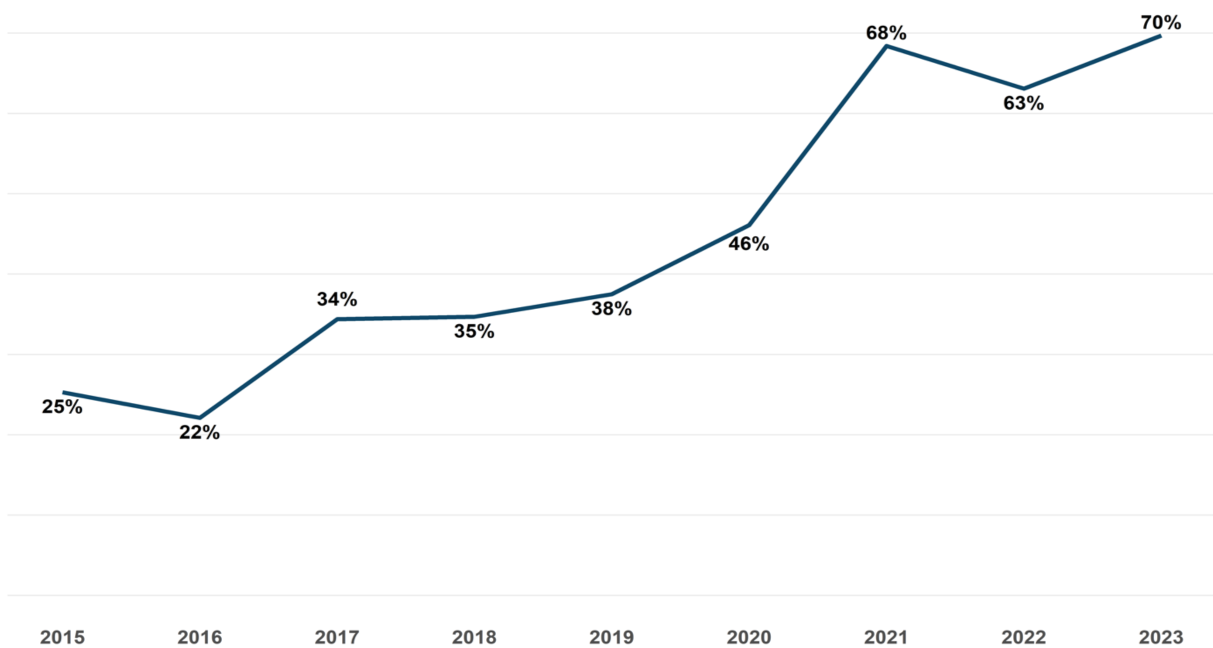
	Share, #	Share, $
Credit card bill	51.5%	49.8%
Loan payment	20.3%	30.2%
Mortgage	9.5%	22.4%
Other loan	10.8%	7.8%
Other (remittance, fees, transfer, investment, etc.)	28.2%	20.0%

Source: 2023 SDCPC

Mobile payments

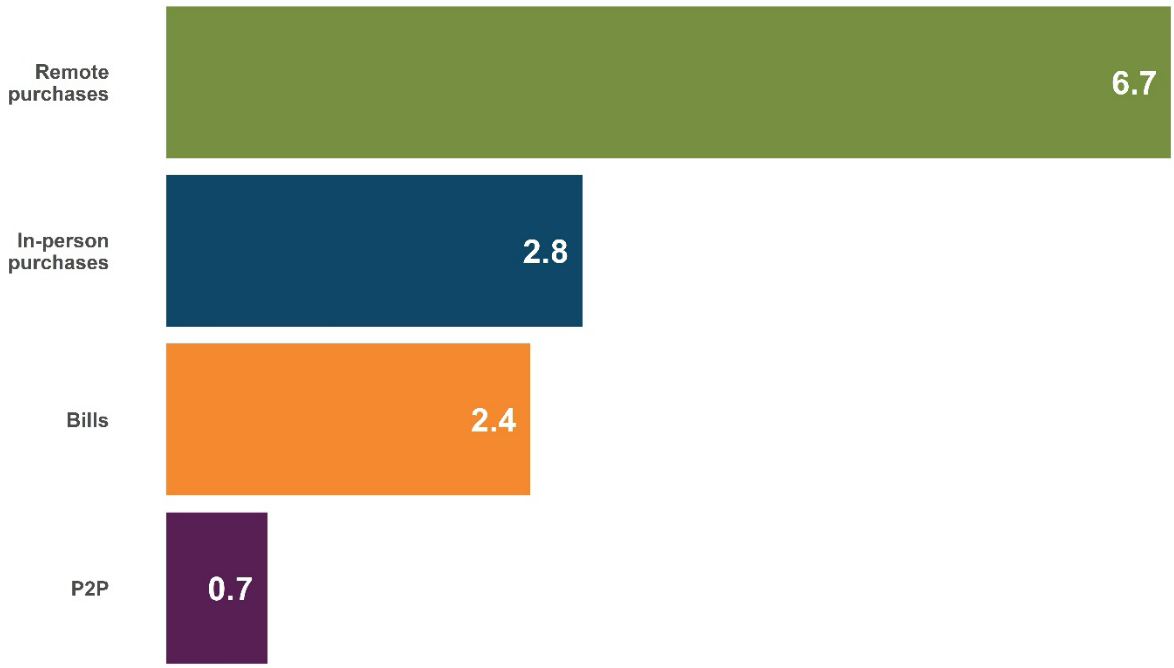
Seven in 10 consumers made at least one payment using a phone or tablet in the 12 months ending in October 2023, in line with shares since 2021 (figure 7). Most mobile payments were for purchases. On average, 13 mobile payments per consumer were reported, up from 10 in 2022, and 29 percent of all payments. Of those, 10 were for purchases, two for bills, and one to pay another person (figure 8). More than half of mobile payments were for remote purchases. More than half of P2P payments (70 percent or 1.6 payments) were facilitated via a mobile device.

Figure 7: Shares of consumers making at least one mobile or tablet payment, 12 months ending in October



Source: 2023 SDCPC

Figure 8: Number of mobile payments, October 2023



Source: 2023 SDCPC

Cash holdings

The DCPC obtains data on consumers' holdings of cash on their person (pocket, purse, or wallet) and stored elsewhere (home, car, office, and such). The data on cash holdings were collected every night during the diary recording period; the data on stored cash were collected on the first and last nights. For both measures, respondents were asked to count the exact number of bills held by denomination, and the online questionnaire automatically summed the dollar values of cash holdings by denomination and in total. Respondents did not report holdings of coins.

In 2020, cash on person increased notably, from an average of $60 in October 2019 to $76 in 2020. Cash on person has remained elevated since then, reaching an average of $81 in 2023. By value, 40 percent of the cash on person was in the form of $20 bills and 30 percent was in $100 bills (table 14). About 78 percent of consumers carried at least $1 at the beginning of at least one of their diary days.

Fewer consumers store cash elsewhere; 47 percent of consumers had at least $1 stored elsewhere. For all consumers, the average value of cash stored elsewhere was $510, up from $418 (table 15). Among those with at least $1, the average value was $1,393. Cubides and O'Brien (2024) further describe cash holdings.

Fraud, assessments, and preferences

Shares of consumers reporting identify theft or fraudulent use of payment instruments, which increased markedly from 2020 to 2021, increased again from 2022 to 2023. In 2023, 9 percent of consumers said they had been a victim of identity theft, compared to 5 percent in the pre-COVID year 2019. The share of adopters reporting credit card or debit card theft or fraud also increased in 2023, following on large increases from 2020 to 2021 (table 16). Twelve percent of adopters experienced credit card theft or fraud and 10 percent experienced debit card theft or fraud. Despite widespread reports of check theft and check washing, consumers rarely reported check fraud, and the rate of check fraud was unchanged.

Despite the increase in reported credit card fraud, consumers rank credit cards as superior to all other payment instruments for security, defined in the survey questionnaire as "security against permanent financial loss or unwanted disclosure of personal information" (table 17). They have ranked credit cards best for security in every year since 2017. The high rating might be related to the liability protection shielding most credit card holders from any financial losses. Online banking bill pay is ranked next, followed by debit cards. Cash, checks, and prepaid cards all rank relatively poorly.

For security and other characteristics, credit cards generally are viewed more positively than other payment instruments. In addition to security, credit cards have ranked first for acceptance, payment records, and convenience in all years since 2017. Cash is considered best (and has been in every year since 2015) for cost and ease of getting and setting up. Prior research has found that such assessments are relevant for consumer payment choice (Stavins 2017). As you can see in table 17, these ratings are quite stable over the years.

To derive the rankings reported in table 17, the mean rating for each payment instrument is calculated. For example, the 2023 security rating for a credit card is 3.6. Security ratings for the other payment instruments range from 2.9 to 3.4, with cash rated the worst at 2.9. Then, that mean rating is used to rank the payment instruments from one to eight for each characteristic. For year-to-year comparability, the set of payment instruments ranked is consistent from year to year. In addition, beginning in 2021, consumers were asked to assess the characteristics of making a mobile payment. When compared to the ratings of payment instruments, the mobile method of paying (regardless of payment instrument used to make the mobile payment) generally ranked in the lower middle of the pack. For acceptance, it was rated poorly (table 17b).

Since 2015, respondents have been asked to report the payment method they prefer to use for paying bills and making in-person and online purchases. A preference for cards is strong for all these transaction types. Over time, you can see a decline in the shares of consumers who prefer to use checks to pay bills from 17 percent in 2016 to 8 percent in 2021 and after (table 18). Cards and electronic ways were equally popular for bill pay; 43 percent of consumers reported that they prefer to pay bills with some type of card (credit, debit, or prepaid) and 42 percent preferred one of the electronic methods (BANP or OBBP). From 2022 to 2023, the only statistically significant change in preferences reported was the share of consumers reporting they prefer OBBP for bill pay, increasing to 30 percent in 2023 from 24 percent in 2022.

For in-person purchases, three-quarters of consumers prefer to use a card; one in five prefer cash, unchanged from 2022. (For more on cash preferences, see Cubides and O'Brien 2024.) Fifty-seven percent of consumers prefer a credit card for online payments, compared to 36 percent who prefer a debit card. There were no statistically significant changes in the shares preferring the various payment instruments for either in-person payments or online payments.

Special topics

Surcharges and discounts

Some payees use discounts to encourage consumers to use certain payment instruments. For cash and card payments, discounting was uncommon., although it increased slightly from 2022.

Discounting is most likely for credit card payments, for example, those made at gas stations, presumably with store branded cards that encourage loyalty to a specific merchant chain. In 2023, 4.5 percent of credit card payments received a discount. At gas stations, 8.4 percent of credit card payments received a discount.

Cash payments were less likely to receive discounts. In 2023, 3.6 percent of cash payments received a discount, up 0.7 percentage points from 2.9 percent in 2022. The rate of discounting for cash has increased since 2020, when 2.4 percent of cash payments received a discount. At gas stations, 6.7 percent of cash payments received a discount. While cash discounts remain rare, Stavins (2018) finds that consumers are somewhat likely to switch to cash when offered a discount.

Debit cards payments were least likely to receive a discount (2.3 percent of all debit card payments).

On the flip side, credit card surcharges also are uncommon; about 2.9 percent of credit card payments included a surcharge.[5] For bills, however, credit card surcharges are more likely. When paid with a credit card, 29.8 percent of government taxes or fees, 19.4 percent of rent payments, and 10.8 percent of utility bill payments included a surcharge.

Buy now, pay later

Special questions in 2021, 2022, and 2023 inquired into consumers' familiarity with and use of buy now, pay later (BNPL), sometimes called pay-in-four or checkout loans. The survey defined this form of immediate borrowing as follows:

> "Buy now, pay later allows people to make a purchase and spread payments over a period of time. This type of payment is sometimes offered by online stores when checking out through finance companies called Affirm, Afterpay, Klarna, QuadPay, Sezzle, etc. This type of payment is like a loan, but for smaller purposes and sometimes without any interest to pay."

More than half of consumers had been offered a BNPL purchase in the prior 30 days and under one-fifth of those offered had made a purchase in this way (9 percent of all consumers).

[5] The 2023 SDCPC did not ask respondents to report surcharges for debit card purchases.

Eighteen percent of those using BNPL had used it three or more times in the past 30 days, 25 percent used it twice, and 58 percent used it once (table C).

About 35 percent of consumers (44 percent of credit card adopters, as noted above) revolved a balance on a credit card in the month ending in October 2023. This is four times the share of consumers using BNPL in the past 30 days.

Table C: Buy now, pay later
Percentage of US consumers, October

	2021	2022	2023
Heard of BNPL	53.6	73.0	76.6
Offered BNPL in last 30 days	33.4	46.5	52.8
Used BNPL in last 30 days	6.9	8.1	9.1

Source: 2023 SDCPC

Consumers' allegiance to cash

More than 90 percent of US consumers say they have no plans to stop using cash now or into the future. About half of consumers say it would be problematic for them if US consumers stopped paying with cash or accepting cash, citing its utility during power outages or other emergencies, its universal acceptance (for example, by community groups, charities, and at farmers markets), and its function as a budgeting tool. One-quarter of consumers said it would be no problem, and one-quarter were unsure.

Table D: Half of consumers would find it difficult to cope in a cashless society
Share of consumers citing each reason why they would find it difficult

	2022	2023
I use cash in case of power outages or other events that make other payment methods unusable	57.9	59.0
I need cash for when other payment methods are not accepted, for example to pay workers, community groups, or charities	52.2	54.6
I use cash to monitor my spending or as a budgeting tool	36.4	33.7
I get paid in cash	5.6	7.2
I don't have access to a debit card or credit card, so cash is the only payment method that is accessible to me	4.0	3.4
Other	16.0	17.2

Source: 2023 SDCPC

Consumers who said they themselves could cope in a so-called cashless society cited problems that others might incur, including those listed in table D. Notably, three-quarters of these consumers responded that the cashless society would present a hardship to people without debit cards or credit cards. Of people who said they themselves would not be able to cope, only 3 percent gave this answer.

Crypto assets

After doubling from 2019 to 2020 and again from 2020 to 2021, shares of consumers owning crypto were flat from 2021, with 9 percent of consumers saying they owned some crypto asset. Shares of owners who said they owned crypto as an investment continued to drift down from 82 percent in 2021 to 64 percent in 2023 (table E). Twenty-two percent said they were interested in new technologies, continuing the increase from 2022.

Table E: Among crypto asset adopters, reasons for holding
Percentage of adopters

	2021	2022	2023
It is an investment	82.2	68.4	63.8
I am interested in new technologies	12.9	20.3	22.4
It allows me to make payments anonymously	0.3	1.6	2.3

Note: Responses selected by less than 2 percent of owners excluded.
Source: 2023 SDCPC

Survey methods

Questionnaire changes

Changes to the questionnaire for 2022 were expanded in 2023 with the addition of a day-after payments reminder for day 3 using a new day 4 diary module. Reminders for days 1 and 2 were added in 2022. (Foster et al. 2023 describes the reminders.)

The "day-after" nudges are presented to respondents as follows:

> Before we begin with today's diary, we want to make sure we have a complete list of all the payments you made yesterday. According to our records you made the following payments yesterday.

A list of payments followed, with the question "Did you make any other payments yesterday?" Consumers who answered yes were returned to the payment entry screen for the previous day to add payments.

The day 4 nudge did not make an appreciable difference in the number of payments reported in 2023. Researchers using this data may choose whether or not to include the "nudge" payments; for detail, see the codebook. Other small changes from 2022 included permitting respondents to log in to the survey website earlier in the day, offering respondents text reminders to track their payments, and reminding respondents to turn on text or email alerts from their financial institutions.

Assessments

Respondents' assessments of payment instruments on characteristics like security, cost, and convenience have proved important to research since the survey was first implemented in 2008. For multiyear respondents, these assessments have proved stable from one year to the next, so they are asked to rate payment instruments once every three years to shorten response time and reduce survey burden. In 2021 and 2022, only new respondents were asked to assess the eight payment instruments. All panelists rated the payment instruments in 2023. The 2023 rankings are based on the responses of 4,577 respondents, that is, all but two 2023 respondents.

Sample

The 2023 SDCPC was implemented with representative samples from the Understanding America Study (UAS), managed by the University of Southern California (USC) Dornsife Center for Economic and Social Research (CESR) (table F).

Table F: Overview of samples, 2015–23

Year	Understanding America Study available panel	Number of unique respondents	Respondents completing all DCPC days	Number of longitudinal panelists
2015	2140	1087	1016	—
2016	4776	3047	2848	799
2017	4759	2871	2793	2226
2018	4718	2992	2873	2276
2019	5228	3154	3016	2388
2020	5267	3485	3235	2486
2021	9283	4896	4453	3008
2022	9356	5170	4761	3919
2023	12465	4858	4579	3633

Note: In 2020, the sample was split, with half of respondents completing the standard questionnaires and half the experimental version.
Source: Federal Reserve Bank of Atlanta

Conclusion

In 2023, consumers continued their move toward card and electronic payments, driven perhaps by their use of mobile devices to make payments and their increase in remote purchasing. Consumers made 62 percent of payments by number with a debit card or credit card. They accomplished 29 percent of payments using a mobile phone. They made 22 percent of purchases remotely.

Nevertheless, consumers continued to rely on paper payment instruments. In October 2023, more consumers had used cash in the past 30 days—87 percent—than used any other payment instrument. Seven in 10 consumers had checks on hand.

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