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The 2020 Survey of Consumer Payment Choice: Summary Results

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Abstract

In 2020, U.S. consumers made 68 payments per month on average, unchanged from 2019. Debit cards were used most often, for 23 payments, followed by credit cards (18 payments) and cash (14 payments).

Consumers reported changes in their behavior during the pandemic year of 2020. The share of consumers making at least one online purchase in a typical month increased from 59 percent in 2019 to 66 percent in 2020. The share making at least one mobile phone payment in the prior 12 months increased from 38 percent in 2019 to 46 percent in 2020. Also, more consumers reported making at least one payment to another person in a typical month, 52 percent, up from 48 percent.

Other findings include:

- Seventy-four percent of consumers reported that they used cash at least once in a typical month, down from 82 percent in 2019.
- As a share of all payments, credit card payments increased by 3 percentage points, from 24 percent to 27 percent.
- More than half of consumers with a credit card reported that their unpaid balance was "lower" or "much lower" in October 2020 compared to October 2019.
- Online purchases increased from 12 percent of all purchases in 2019 to 15 percent in 2020.
- Sixty-two percent of consumers adopted at least one payment app, such as PayPal, Venmo, or Zelle, up from 54 percent in 2019.
- Forty-six percent of consumers made at least one mobile payment in the 12 months ending in October, up from 38 percent in October 2019.

Interactive charts, showing payment use by transaction type, income, and age, are at the Atlanta Fed website.

Keywords: cash, checks, checking accounts, debit cards, credit cards, prepaid cards, electronic payments, payment preferences, unbanked, Survey 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 2020 Survey of Consumer Payment Choice, a survey conducted annually in October by the Federal Reserve Banks of Atlanta, Boston, and San Francisco since 2008. It reports the number and shares of payments by transaction type and by payment instrument, as well as changes in these shares from 2019 to 2020, the COVID-19 pandemic year.

In 2020, consumers made most of their payments with debit cards, followed by credit cards and cash. The average number of credit card payments increased to 18 from 16 in 2019, a statistically significant change.[1] Changes in the number of cash payments and debit card payments were not statistically significant.

U.S. consumers adjusted their purchasing behavior somewhat in the pandemic year. The share of consumers making at least one online purchase increased from 59 percent in 2019 to 66 percent in 2020. Online purchases increased from 12 percent of all purchases in 2019 to 15 percent in 2020. During the 12 months ending in October 2020, 46 percent of consumers made at least one mobile payment, up from 38 percent in the 12 months ending in October 2019. The share of consumers who reported making at least one in-person purchase in a typical month was flat: 93 percent in October 2020, compared to 95 percent in 2019. Consistent with prior years, consumers continued to rate credit cards and debit cards positively for convenience and recordkeeping, and cash positively for its low cost and ease of acquisition. Also consistent with prior years, 7 in 10 consumers 18 and older adopted between five and seven payment instruments, giving them a choice of options at time to pay.

The 2020 Survey of Consumer Payment Choice (SCPC) is the 13th in a series of annual studies that aim to gain a comprehensive understanding of the payment behavior of U.S. consumers.[2] The SCPC data complement data from the Diary of Consumer Payment Choice (DCPC), for which consumers record details of specific transactions (including dollar values) and their payment choices.[3] Respondents participate in these two surveys in September (SCPC) and October (DCPC).

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[1] Throughout this report, we take statistical significance to indicate a calculated p-value < 0.05 against a null hypothesis that the true measure of interest, usually a difference in years, is zero.

[2] For detailed 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).

[3] 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, 2020).

For this report of the 2020 results, we focus on the number and shares of payments by transaction type and payment instrument and changes from 2019. Due to changes in the sample recruitment methodology and questionnaire over the 13 years of the survey (Foster, Greene, and Stavins 2019), some differences may be attributable to survey design effects and question design effects. For more details about definitions and motivations, please consult earlier papers describing the SCPC surveys, particularly Schuh and Stavins (2014). Many news reports have noted the wide disparities in the effects of COVID-19 on Americans in different socioeconomic groups[4]; this report provides aggregate data. Building on the work in Connolly and Stavins (2015), charts posted online with this paper enable the user to examine payment instrument use by three income categories (less than $40,000, $40,000–$75,000, and $75,000 or more) and by six age groupings beginning at 18. Another interactive chart depicts payment instrument use by Census Bureau community classification (urban/rural/mixed). Future research will investigate payments behavior and demographic characteristics.

This report includes 16 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. The online version of this report, available on the Atlanta Fed website, includes figures that show consumers' payment use by age, income, and transaction type.

A total of 1,909 respondents completed the 2020 SCPC, a decrease from prior years because the full consumer survey sample (3,708 respondents) was divided into two parts. In addition to these long-running versions of the SCPC and DCPC, an experimental survey integrating the SCPC and DCPC was implemented in October 2020 (hereafter, the "experimental consumer payments diary"). This experimental consumer payment diary was designed to explore various ways to streamline the combined Survey and Diary of Consumer Payments Choice to reduce respondent burden and improve

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[4] "Covid-19 Deals Different Hands for Family Finances," *Wall Street Journal* (December 29, 2020), https://www.wsj.com/articles/covid-19-deals-different-hands-for-family-finances-11609237812; "Consumption Heterogeneity by Occupation: Understanding the Impact of Occupation on Personal Consumption during the COVID-19 Pandemic," https://www.bostonfed.org/publications/research-department-working-paper/2020/consumption-heterogeneity-by-occupation.aspx; "Which Workers Bear the Burden of Social Distancing?" https://www.nber.org/papers/w27085; "As Coronavirus Deepens Inequality, Inequality Worsens Its Spread," https://www.nytimes.com/2020/03/15/world/europe/coronavirus-inequality.html; "The Year Inequality Became Less Visible, and More Visible Than Ever," https://www.nytimes.com/2020/12/28/upshot/income-inequality-visible.html

data quality. Half of the 2020 sample received the experimental consumer payment diary. A report on this survey experiment is forthcoming.

The remainder of this paper comprises three parts: 1) a summary of the key SCPC results, 2) tables containing definitions of important survey concepts (Definition Tables), and 3) tables containing SCPC results (SCPC Tables).

Summary of SCPC tables

The SCPC aims to measure U.S. consumer ownership (adoption) of payment instruments and the use of these instruments (number of payments) in a typical month. The 2015 through 2020 results appear in SCPC Tables 1–16, organized into seven sections[5]:

1. *Adoption of accounts and payment instruments:* consumer adoption of bank accounts, nonbank payment accounts, and payment instruments **[SCPC Tables 1 and 2]**
2. *Incidence of use of accounts and payments instruments:* share of consumers using each payment instrument and share making a transaction, by type of transaction **[SCPC Tables 3 and 4]**
3. *Frequency of use of payment instruments and transactions:* number and share of payments by payment instrument and type of transaction as well as distributions of the number by payment instrument and type of transaction **[SCPC Tables 5 through 11]**
4. *Prevalence and amount of credit card debt* **[SCPC Table 12]**
5. *Loss, theft, or fraud:* percentage of consumers experiencing loss, theft, or fraud by payment instrument **[SCPC Table 13]**
6. *Assessments:* consumer assessments of key characteristics of payment instruments and payment practices **[SCPC Table 14]**
7. *Household characteristics:* information about consumer demographic characteristics and financial status **[SCPC Tables 15 and 16]**

All SCPC data are available free to the public at atlantafed.org/banking-and-payments/consumer-payments/survey-of-consumer-payment-choice.aspx. The following list summarizes online resources for all years, 2008 through 2020:

[5] The numbering of the SCPC tables is constant from year to year, so the text discussion of the findings is not necessarily presented in the order of the tables.

- SCPC public-use microdata sets containing consumer-level SCPC responses to all survey questions as well as the important created variables used to populate the official tables. These data files are available in CSV, R, Stata, and SAS formats.
- Tables containing estimates of the standard errors for the SCPC results
- "Data Guide to the Survey of Consumer Payment Choice," defining each variable and providing a frequency table of the categorical responses and summary statistics for continuous variables (2018, 2019, and 2020 only)
- Survey questionnaire, including a complete list of variables
- Data and reports
- Interactive charts showing payment use by three income categories, six age groupings, and four transaction types for 2015–20.[6] A new chart in 2020 shows differences by Census Bureau categories of communities: urban, rural, or mixed.

All SCPC data users are encouraged to read the technical appendix (Angrisani, Foster, and Hitczenko 2017). The SCPC estimates reported here may be revised in the future because of additional process improvement or insights from new data. Small discrepancies in the estimates may exist throughout the paper, due to rounding.

Account and payment instrument adoption

Payments behavior is measured as a two-step process: The consumer must "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 U.S. consumers—in each of the 13 years of the SCPC. In 2019, 93 percent of U.S. consumers had a bank account, the highest share since 2008. Ninety-three percent of consumers had a checking account; 75 percent had a savings account. Six in 10 had a nonbank account, such as PayPal or Venmo (SCPC Table 1). The increase in the adoption of online payment accounts from 54 percent 2019 to 62 percent 2020 is statistically significant. Increases in the percentages of consumers adopting two nonbank payment accounts—PayPal (from 38 percent to 42 percent) and Venmo (15 percent to 24 percent)—as well as in the bank-account-linked Zelle (11 percent to 17 percent) were all statistically significant.

[6] For information on the methodology used to create these charts, see Connolly and Stavins (2015).

In the year of COVID-19 and the resulting lockdowns, one might expect to see increases in the adoption of online and mobile banking as well as ways to pay electronically directly from a bank account (SCPC Table 2). Before 2020, adoption of online banking was already widespread, at three-quarters of consumers; it increased to 79 percent in 2020, which is statistically significant. Nearly two-thirds of U.S. consumers adopted mobile banking in 2020, with the increase from 59 percent in 2019 also statistically significant. The 9 percent year-over-year increase in the share adopting mobile banking compares to a 6 percent increase from 2018 to 2019. Adoption of ways to pay directly from a bank account increased for one method and was stable for a second. Adoption of BANP (bank account number payment, defined in the survey questionnaire as “You pay by giving your bank’s number [sometimes called a “routing number”] and your account number”) increased to almost three-quarters of consumers, a statistically significant increase from 67 percent in 2019. Adoption of online banking bill pay (OBBP, defined in the survey questionnaire as “a payment made from your bank’s online banking website or mobile app”) was unchanged, at 47 percent of U.S. consumers. Adoption of mobile phone payments (defined as making a payment via any of the following methods: using tap and pay at the point of sale, scanning a QR code or showing a phone to a clerk, using a mobile app to pay) increased to 46 percent of consumers from 38 percent in 2019.

Cash adoption is defined as having used cash to make a payment in the prior 12 months or having some cash on hand. Debit card adoption is defined as owning a debit card, and so on (see Definitions Table 3). In 2020, most consumers—99 percent—had adopted cash. Ninety-seven percent of consumers had some sort of payment card (debit, credit, or prepaid), with 85 percent owning a debit card. Seventy-seven percent of consumers reported having a blank paper check on hand, a share that has been stable since 2016. Four percent of U.S. consumers reported that they own virtual currency like Bitcoin, Litecoin, or Ethereum, doubled from 2 percent in 2019 (statistically significant).

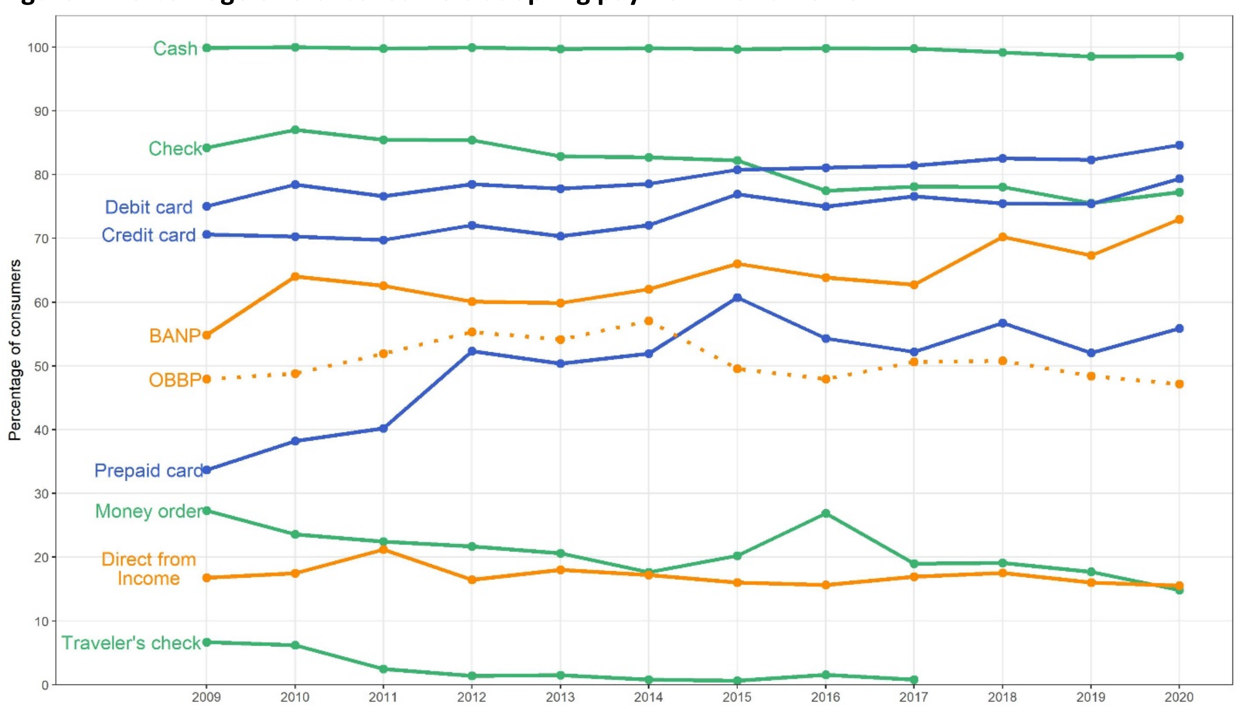
In October 2020, eight months after the end of an economic expansion that began in 2009,[7] 79 percent of consumers reported that they had a credit or charge card, the highest percentage of consumers in all years since the SCPC began in 2008. The median number of credit cards owned by credit card adopters was three. The number of cards held varied widely across consumers, with two being the most common number of cards. Most credit cardholders—84 percent—reported that at least one of their cards offered rewards.

[7]https://www.nber.org/news/business-cycle-dating-committee-announcement-june-8-2020

In 2020, 41 percent of credit card adopters reported that they had carried an unpaid balance at some time during the past month (SCPC Table 12), a statistically significant decline from 2019 and the lowest share reporting an unpaid balance in the preceding month since 2014. In addition, more than half of credit card adopters reported that their unpaid balance was "lower" or "much lower" compared to October 2019. This is in line with a Federal Reserve Bank of New York survey, which found that as of June 2020, 35 percent of the first round of stimulus payments under the Coronavirus Aid, Relief, and Economic Security Act was used to pay down debt.[8] Of credit card adopters with an unpaid balance ("revolvers"), the median unpaid balance was about $1,000 (the mean was $5,881). Adopters estimated their total credit limit on all cards to be about $24,000, unchanged from 2019.

Figure 1 shows adoption rates over the past 13 years, with the caveat that some year-over-year differences could be attributable to small changes in sampling methodology and questionnaire design, particularly before 2015, when a different survey vendor was used (Foster, Greene, and Stavins 2019).

Figure 1: Percentage of U.S. consumers adopting payment instruments



Notes: Results from 2009 through 2014 are based on the American Life Panel; 2015 through 2020 results are based on the Understanding America Study panel. OBBP stands for online banking bill payment; BANP stands for bank account number payment. Travelers' checks were omitted from the questionnaire beginning in 2018.

Source: 2009–20 Surveys of Consumer Payment Choice

[8] https://libertystreeteconomics.newyorkfed.org/2020/10/how-have-households-used-their-stimulus-payments-and-how-would-they-spend-the-next.html

Seven in 10 consumers owned between five and seven payment instruments. One in eight consumers owned the most popular combination: cash; checks; debit, credit, and prepaid cards; online banking bill payment (OBBP); and BANP. Generally, the portfolios owned were quite varied. Respondents reported owning 172 combinations of payment instruments, from cash only (2 percent of consumers) to seven or more payment instruments (18 percent of consumers). Seven percent of consumers did not own any of the payment instruments linked to a bank account, including paper check, debit card, OBBP, or BANP. These so-called unbanked bundles contained various combinations of cash, money order, and prepaid card. As noted above, 93 percent of U.S. consumers reported having a bank account.

Consumers making payments in a typical month

In the SCPC, consumers report payment instrument use in the context of transaction type. They report three types of bill payment (automatic, online, and by mail, in person, or by phone), three types of purchases (in-person retail goods, in-person services, and online), and person-to-person (P2P) payments. In 2020, 98 percent of respondents reported making at least one payment in a typical month.

Consumers make different payment choices depending on the payment scenario—for example, making a purchase online versus making a purchase in person; or for different values, such as a payment of $100 versus a payment of $10.[9] Therefore, consumers' mix of transactions provides a meaningful foundation for examining payment instrument choice, particularly during the coronavirus pandemic when lockdowns and advice from the Centers for Disease Control could have affected an individual's propensity to visit a store and pay in person.[10] In October 2020 compared to October 2019, fewer consumers reported making purchases in person and more reported making online purchases, in both instances, statistically significant changes (SCPC Table 4), although the change in the share making in-person purchases was small. As reported previously, the share of consumers who said they had made an in-person payment in the prior 30 to 60 days was 34 percent in April 2020; 60 percent reported that they had made an in-person payment in the prior 30 days in August 2020.[11]

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[9] See, for example, Shy (2019) and Greene and Stavins (2020).

[10] https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/essential-goods-services.html

[11] The questions on the April 2020 and August 2020 surveys differ from the 2019 and 2020 SCPC, which defines the period as a "typical month." For the April finding, consumers responding between April 15 and May 12, 2020, were asked, "Have you made any in-person payments since March 10, 2020?" Between August 5 and September 2, consumers answered a simpler question:

Two-thirds of consumers reported that they make at least one online purchase in a typical month, a statistically significant increase from 59 percent in 2019. Compared to 2019, fewer consumers reported in October 2020 either that they make at least one in-person purchase of retail goods or that they make at least one in-person purchase of retail services in a typical month; these changes were statistically significant yet small. Ninety-one percent of consumers reported making at least one in-person purchase of goods in a typical month (down from 93 percent in 2019), and 85 percent of consumers said they made at least one in-person purchase of services in the same time period (down from 87 percent in 2019). In 2020, more consumers reported making at least one payment to another person in a typical month, 52 percent, up from 48 percent in 2019, statistically significant. Payments to another person are defined in the questionnaire as "payments to friends and family, gifts, and casual payments like payments to babysitters and lawn mowers."

Ninety-four percent reported making a bill payment of some type, unchanged from 2019. Note that more consumers paid bills online than made purchases online: 75 percent paid at least one bill online in a typical month, compared to 66 percent making an online purchase. Eighty-six percent of consumers paid online in a typical month, defined as making an online purchase or an online bill payment at least once.[12]

Cash was used at least once by more consumers than any other payment instrument: 74 percent reported using cash at least once during a typical month (SCPC Table 3). Note that this share declined significantly from 82 percent in 2019, perhaps in part related to consumers' reluctance to make proximity payments during the coronavirus pandemic or retailers' reluctance to accept them.[13] Sixty-eight percent of consumers used debit cards in a typical month, and an equivalent share used BANP. The share of consumers using credit cards was stable from 2019, 63 percent. Less than half of consumers reported that they used the other payment instruments in a typical month: 44 percent used a paper check; 31 percent, online banking bill payment; 19 percent, a prepaid card; and 7 percent, a money order (SCPC Table 3). The 2019–20 decline in the percentages of consumers reporting that they used a

"Have you made any in-person payments in the past 30 days?" For more on the April and August 2020 surveys, see Kim et al. 2020a, Cole et al. 2021, and Foster and Greene 2021.

[12] Automatic payments that initially may have been set up online are excluded from this calculation. This is the share of consumers who actively made a payment online at least once in a typical month.

[13] In April 2020, the Bank for International Settlements (BIS) reported that Internet searches pertaining to "cash" and "virus" were at record highs (Auer et al. 2020).

check at least once in a typical month was statistically significant; the share of consumers using checks at least once in a typical month has declined in every year since 2010.

In the pandemic year, almost half of consumers reported that they are mobile payment adopters. Forty-six percent of consumers made at least one mobile payment in the preceding 12 months, up from 38 percent in 2019 and statistically significant. Respondents answered a yes/no question about making a mobile payment in the prior 12 months by any of the following methods: (1) tap-and-pay at the point of sale; (2) scanned a QR code or showed phone at the point of sale; (3) used a mobile app.

Number of payments in a typical month

In 2020, the average number of total payments reported by consumers for a typical month was 68 payments on average, unchanged from 2019. The number of payments was generally flat from 2015 to 2020 (Table A).

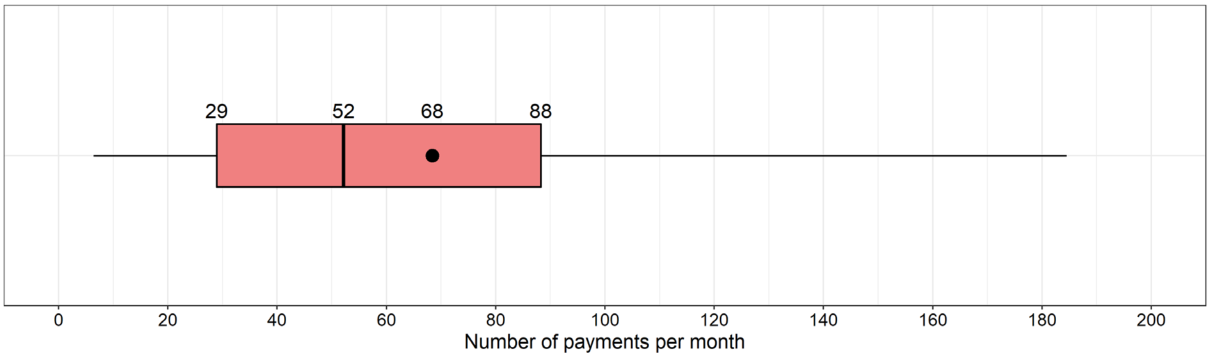
Table A: Average number of payments per consumer per month

	2015	**2016**	**2017**	**2018**	**2019**	**2020**
Average number of payments	68.9	67.8	69.6	72.1	68.4	68.4
95% confidence interval	65.4, 72.4	65.4, 70.2	66.7, 72.5	69.0, 75.2	65.0, 71.9	64.9, 71.9

Source: 2015–20 Surveys of Consumer Payment Choice

Payments comprise bill payments, purchases, and P2P payments. This mean number of payments encompasses quite a bit of variability among individuals, particularly for consumers making larger numbers of payments. The survey data reveal this variability in monthly payments across individuals, especially in the right tail, with some reporting more than twice the mean. As the distributions in SCPC Table 6 show, the median number of payments was 52, and the middle 50 percent of consumers made between 29 and 88 payments per month (Figure 2: dot shows the average number of payments per consumer in a typical month, vertical rule inside the box shows the median). We find this sort of dispersion in much consumer payments behavior, including, for example, the very large number of bundles of different payments instruments that consumers own.

Figure 2: Number of payments by usage percentile, 2020



Note: The vertical rule inside the box displays the median value, and the box spans the 25% to 75% percentiles. The horizontal rules display the 5% and 95% percentiles. The dot inside the distribution is the mean.

Source: 2020 Survey of Consumer Payment Choice

Payments by transaction type

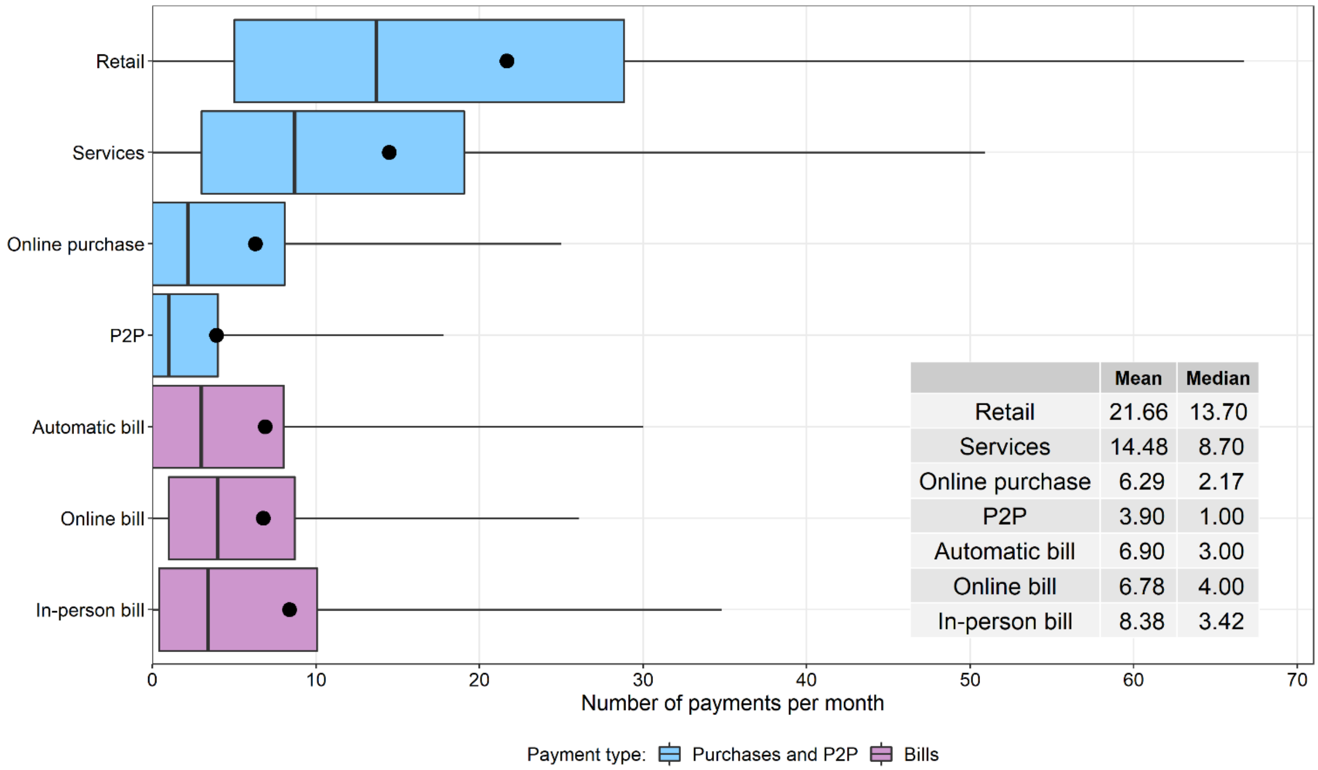
Purchases make up about 62 percent of all consumer payments in a typical month in 2020 (Table 7). These include in-person purchases of goods, in-person purchases of services, and online purchases of goods and services. On average, consumers made 36 in-person purchases in a typical month and 6 online purchases—that is, 85 percent of purchases were in person. Half of purchases, 22 in 2020, were in-person purchases of goods. The recall-style SCPC asks consumers to report their behavior in a "typical" month; it is possible that some respondents did not define their pandemic-time behavior as typical. For data about consumers' actions at the start of the pandemic in March and April 2020 and their behavior in August 2020, see Kim et al. (2020a), Kim et al. (2020b), and Foster and Greene (2021). While the increase in the number of online purchases from 2019 was just statistically significant, the drop in the number of in-person purchases was not (Figure 5).

Of all payments, 32 percent were bill payments. There were 22 bill payments in 2020, compared to 21 in 2019, a change that is not statistically significant. Six in 10 bills were paid automatically or online. On average, consumers made 14 bill payments automatically or online and 8 by mail, in person, or by phone. The increase in bills paid by mail, in person, or by phone is statistically significant.

Of all payments in 2020, 6 percent were payments to another person (Table 7), increased from 3 payments in 2019 to 4 payments in 2020, statistically significant.

The distribution of the number of transactions reported by type varied among consumers (Figure 3 and Table 8). For example, the median number of purchases of goods at the in-person point of sale was 14, with half of all consumers making between 5 and 28 in-person purchases of goods per month. For online purchases, the median was 2, with half between zero and 8. (Dots show the average number of payments per consumer in a typical month; vertical rules inside the boxes show the median.)

Figure 3: Distribution of the number of payments by transaction type



Notes: Retail payments and services payments by definition are made in person. The vertical rule inside the box displays the median value, and the box spans the 25% to 75% percentiles. The horizontal rules display the 5% and 95% percentiles. The dots lying along the distributions are the population means.

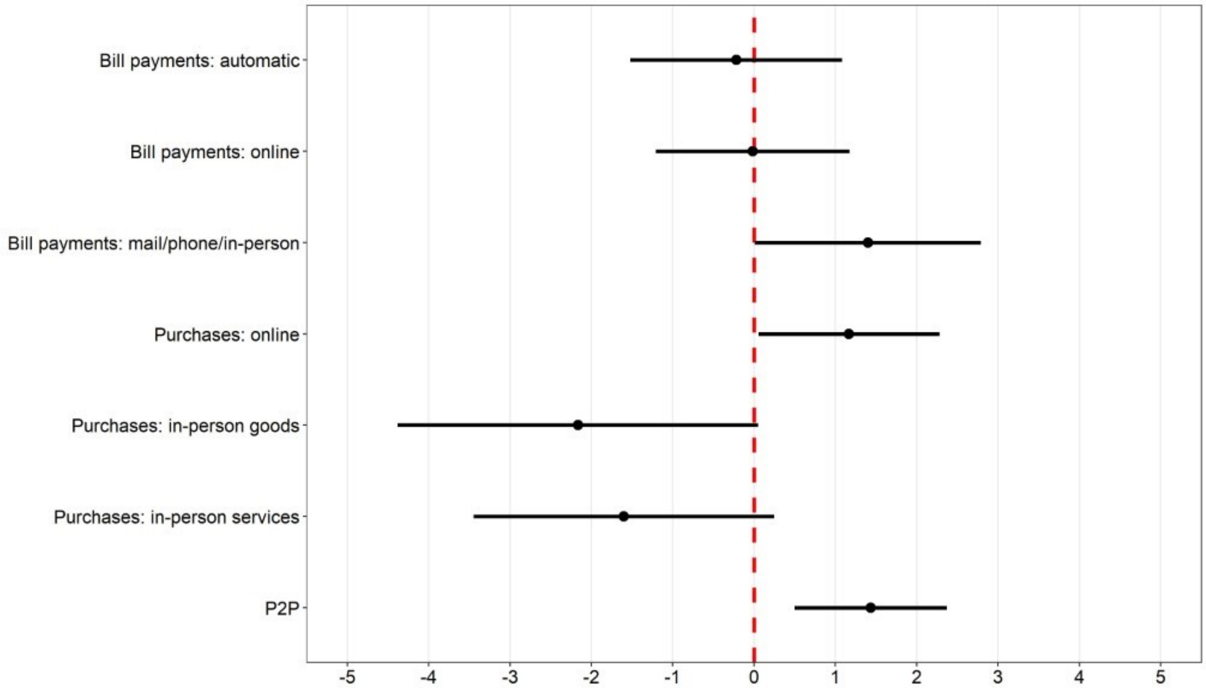
Source: 2020 Survey of Consumer Payment Choice

Over the past five years, the mix of payments by transaction types has changed slightly (Figure 4). The percentage share of payments that are for in-person goods and services (totaling 41 percent in 2015 and 36 percent in 2020) has drifted slowly down. Bill payments as a share of all payments increased from 30 percent to 32 percent, online purchases from 7 percent to 9 percent and P2P payments from 4 percent to 6 percent. In the COVID year of 2020, as a share of all transactions, the share of online purchases and of P2P payments increased and the share of in-person purchases of goods decreased, as one might expect given consumer efforts to avoid infection and lockdowns. Perhaps less expected, bill payments by mail, in person, or by voice call increased as a share of all payments from 2019 to 2020 (Figure 5).

Figure 4: Share of consumer payments in a typical month, by transaction type

Note: Results from 2009 through 2014 are based on the American Life Panel; 2015 through 2020 results are based on the Understanding America Study panel. OBBP stands for online banking bill payment; BANP stands for bank account number payment.
Source: 2009–20 Surveys of Consumer Payment Choice

Figure 5: Changes in shares of transaction types, 2019–20



Note: The horizontal lines depict the 95 percent confidence intervals of the changes in the shares of payments between 2018 and 2019, and the dots depict the point estimates. Confidence intervals that lie entirely to the left or to the right of the vertical zero line indicate changes that are statistically significantly different from zero.
Source: 2019 and 2020 Surveys of Consumer Payment Choice

Payments by payment instrument

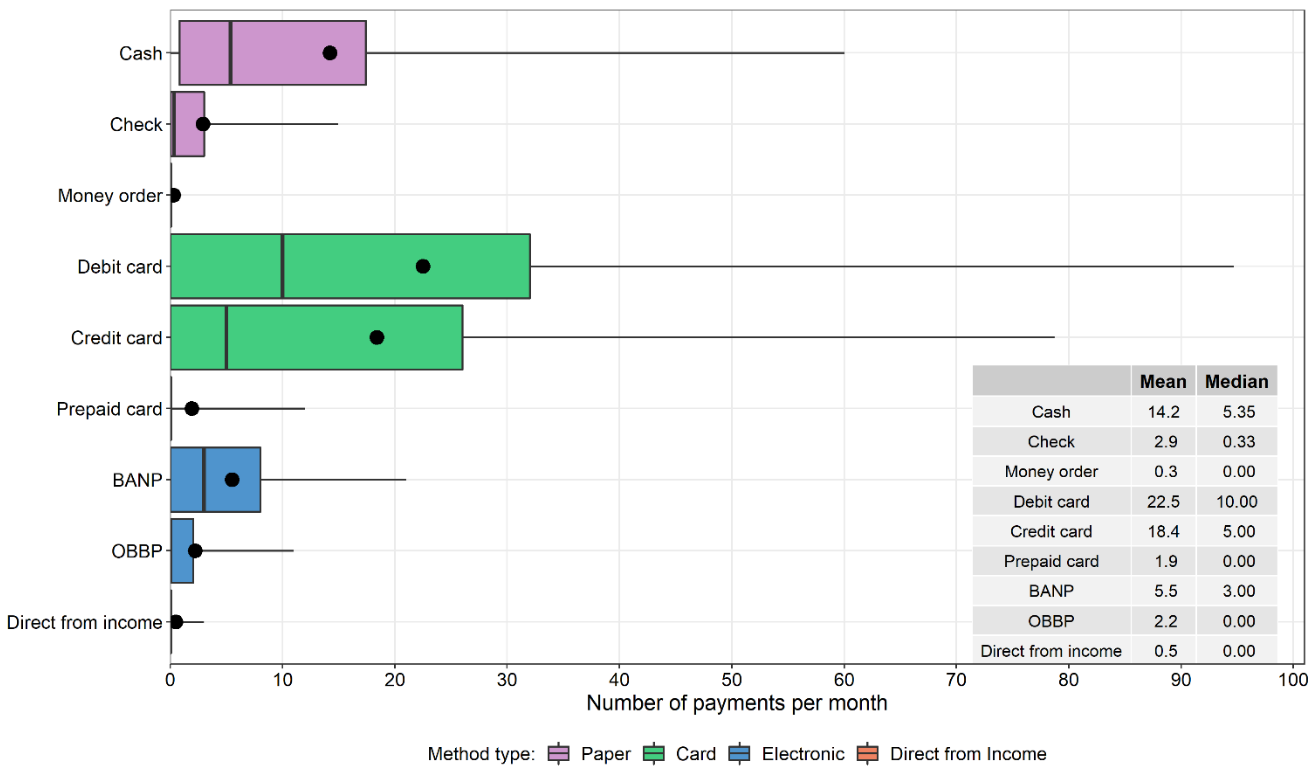
As was the case in 2019, consumers made most of their payments with debit cards, followed by credit cards and cash. In a typical month in 2020, consumers on average made 23 debit card payments (33 percent of all payments), 18 credit or charge payments (27 percent), and 14 cash payments (21 percent) (SCPC Table 5). Consumers made three check payments per month on average in 2020, and eight payments directly from a bank account, through either BANP or OBBP. Checks were 4 percent of all payments, and electronic payments were 11 percent.

In the SCPC, respondents report use in terms of underlying payment instruments. For example, they reported a PayPal payment funded by a credit card as a credit card payment and a mobile payment funded by a coffee shop prepaid card or account as a prepaid card payment. Data about the use of nonbank payment accounts and of mobile and other devices associated with specific transactions and dollar values are collected via the DCPC. The SCPC does not collect data about the number of payments that involve a user-interface wrapper funded by one of the payment instruments reported here.

By mode, card payments were more popular than paper or electronic payments in 2020. In a typical month, consumers made an average of 43 payments using debit, credit, or prepaid cards (or 63 percent of total payments); 17 payments using cash, paper checks, and other paper instruments (26 percent); and eight payments using electronic and other means of payment (11 percent).

SCPC Table 6 shows that the median number of card payments was 31, with the middle 50 percent of consumers making between 13 and 58 card payments. As noted above in the discussion of payment instrument adoption, consumer behavior was highly varied. Figure 6 shows the distribution of the number of payments by payment instrument. Note that debit cards, credit cards, and cash, which were used most, also had the greatest variation in use from one consumer to another. The median number of cash payments declined from 8.70 in 2019 to 5.35 in 2020, a large change.

Figure 6: Distribution of consumer payments in a typical month, 2020

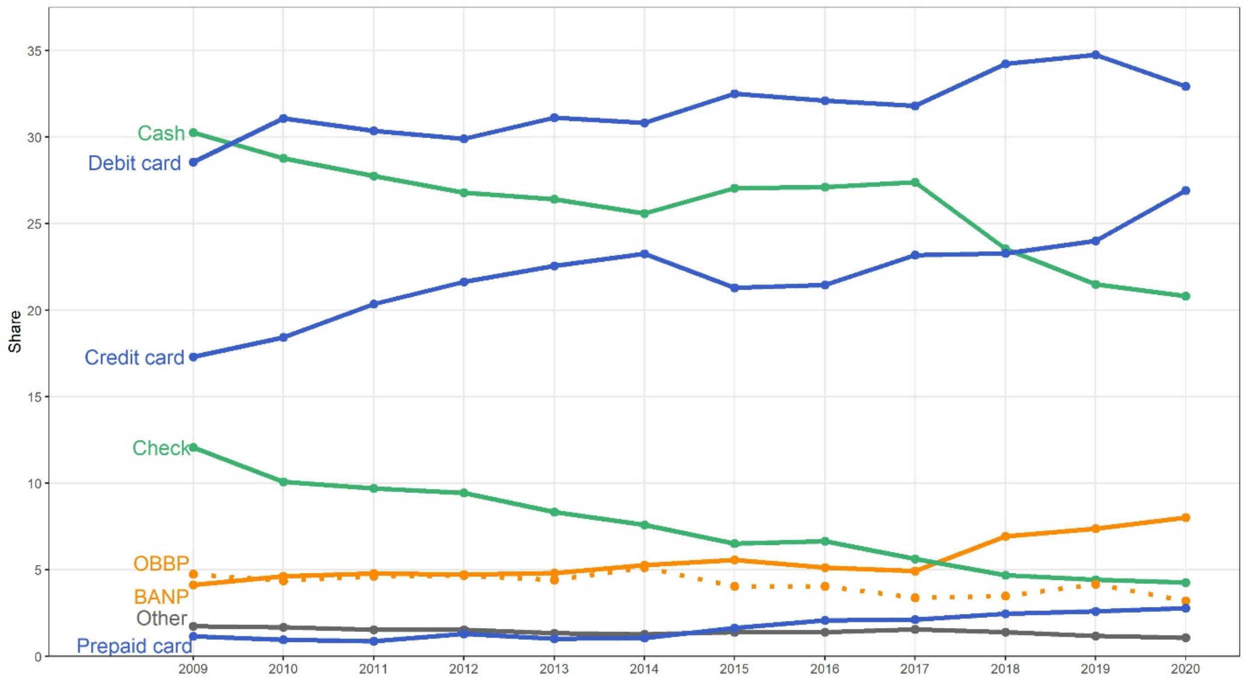


Notes: The vertical rule inside the box displays the median value, and the box spans the 25% to 75% percentiles. The horizontal rules display the 5% and 95% percentiles. The dots lying along the distributions are the population means. OBBP stands for online banking bill payment; BANP stands for bank account number payment.

Source: 2020 Survey of Consumer Payment Choice

Over the 13 years of the survey, debit, credit, and cash have consistently been the most popular ways to pay (Figure 7). These “big three” payment instruments accounted for 81 percent of consumer payments in 2015, and this relationship remains true for 2020, with the three payment instruments comprising 81 percent of all consumer payments. In every year since 2010, debit card payments have consistently been the largest share of consumer payments. The share of cash payments has declined gradually since the financial crisis. In 2019, for the first time, the share of credit card payments exceeded the share of cash payments. In 2020, the share of credit card payments continued to grow. The increase in the share of credit card payments from 2019 is statistically significant (Figure 8).

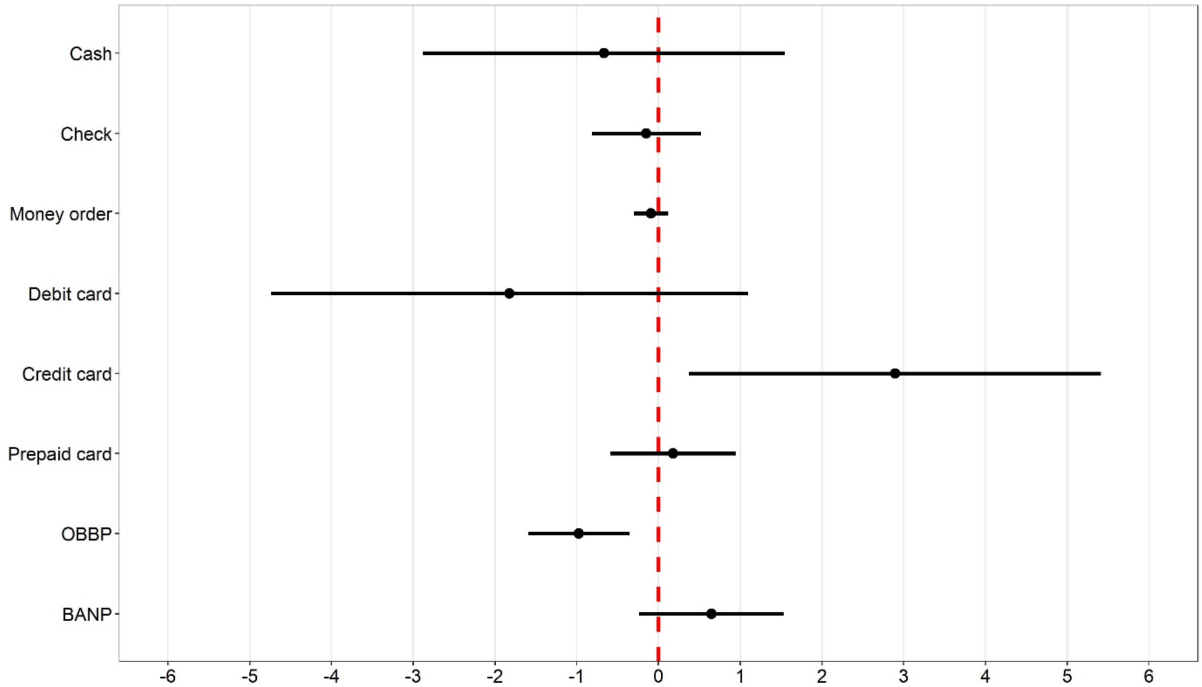
Figure 7: Share of consumer payments in a typical month, by type of payment instrument



Note: Results from 2009 through 2014 are based on the American Life Panel; 2015 through 2020 results are based on the Understanding America Study panel. OBBP stands for online banking bill payment; BANP stands for bank account number payment.

Source: 2009–20 Surveys of Consumer Payment Choice

Figure 8: Changes in shares of payments instrument use, 2019–20



Note: The horizontal lines depict the 95 percent confidence intervals of the changes in the shares of payments between 2019 and 2020, and the dots depict the point estimates. Confidence intervals that lie entirely to the left or to the right of the vertical zero line indicate changes that are statistically significantly different from zero.

Source: 2019 and 2020 Surveys of Consumer Payment Choice

Payments by transaction and payment instrument

As noted above, debit cards were the most-used payment method overall in a typical month in 2020. Debit cards also were the most-used payment instrument for the transaction categories of bills, in-person purchases, and online purchases. A chart posted online with this paper enables the user to examine payment instrument use by four transaction types (bills, purchases, P2P payments, and online payments).

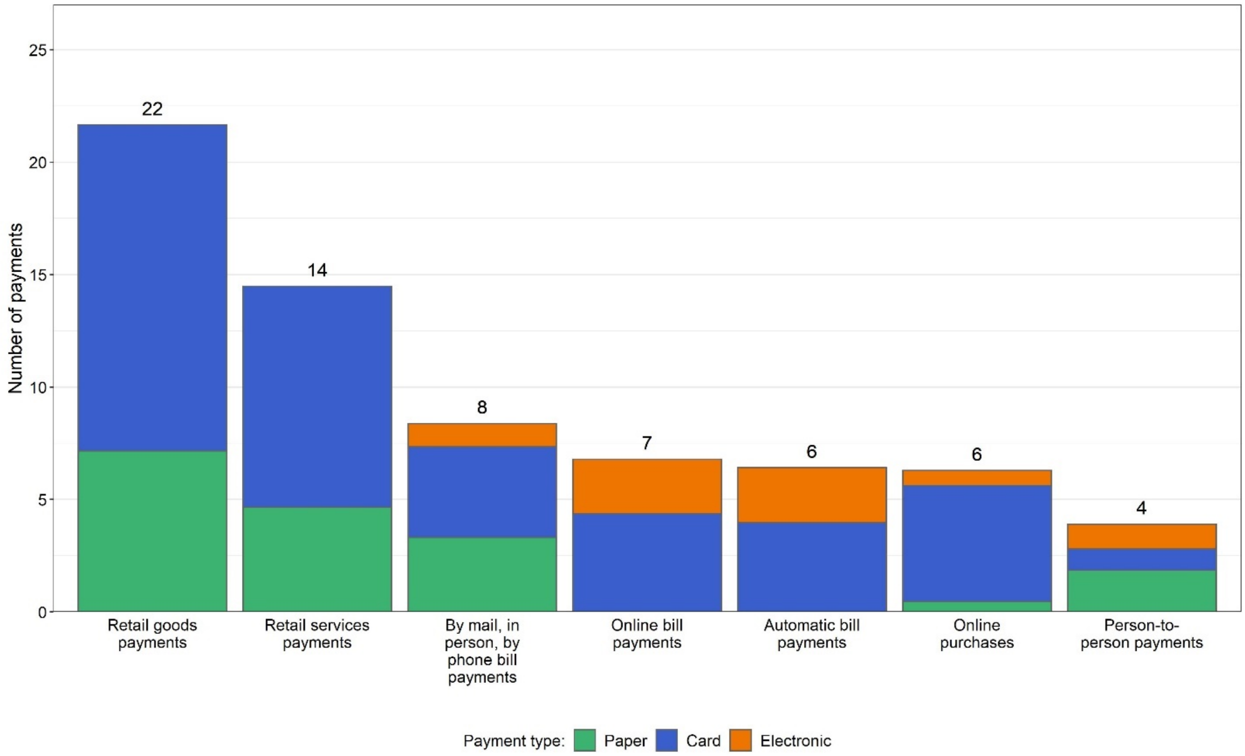
Bill payments are executed via three channels, with roughly one-third of bill payments in each channel: automatic pay; online pay; and payment by mail, in person, or phone. Consumers paid more than half of their bills using debit, credit, or prepaid cards. Debit cards were used most for bill payments overall—29 percent of bill payments—as well as for each of the three types of bill payments individually (automatic, online, mail/in person/phone). Use of debit cards was most pronounced for online bill payments, used for 34 percent of online bills. Consumers made 27 percent of bill payments using electronic methods (OBBP or BANP) and 15 percent using paper methods (cash, check, money order) (Figure 9). Paper methods represented 40 percent of bills paid by mail, in person, or by voice call.

Debit cards have been used more than cash for in-person purchases since 2018; in 2020 they were used for 36 percent of in-person purchases of goods and services. Cash payments, 36 percent of purchases in 2017 (the last year that they were used most) were 30 percent in 2020. Taken together, cards (debit, credit, and prepaid) were preferred two-to-one over paper instruments (cash, check, money order) for in-person purchases. Consumers on average made 67 percent of in-person purchases with cards and 33 percent with paper instruments (Figure 9), unchanged from 2019.

Debit cards also were used most for online purchases: 38 percent (SCPC Table 9). Cards overall were used for 82 percent of online purchases (SCPC Table 9 and Figure 9). The ways of making online purchases have become increasingly varied, with merchants allowing consumers to buy and pay online and pick up in store or to buy online and pay in store—thus the occasional use of paper instruments to effect an online purchase.

As noted above, P2P payments grew significantly from 2019 to 2020. Forty-seven percent of P2P payments were made with paper instruments – 41 percent with cash and 6 percent with a paper check, a decline from 56 percent in 2019. Twenty-four percent of P2P payments were made with cards and 28 percent by electronic means, payments that could be conducted using the payment apps used to facilitate transfers between individuals, such as PayPal, Venmo, and Zelle. Notably, after cash, bank account number payment was the next-most-popular way of making a P2P payment, 22 percent (increased from 17 percent in 2019).

Figure 9: Number of payments by transaction type and payment type



Source: 2020 Survey of Consumer Payment Choice

Assessments of payment instruments

Consumers' assessments of payment instruments have remained fairly stable since 2015—and, indeed, since the SCPC began in 2008 (SCPC Table 14). Consumers gave credit cards the highest rating for security in 2020 and in all years but one since 2015. As SCPC Table 14 shows, consumers differentiated among different card types for security ratings. They gave prepaid cards and cash similar ratings for security (relatively poor in both instances) and consistently rated debit cards lower than credit cards, again possibly because consumers rarely suffer financial losses when the security of their credit cards is compromised. The survey question asks respondents to "rate the security of each method against permanent financial loss or unwanted disclosure of personal information."

Eight percent of consumers reported that a payment instrument had been lost, stolen, or used fraudulently in 2020. The shares of consumers reporting loss, theft, or fraud for cash and credit cards declined, and the share for debit cards was flat. In 2020, fewer consumers reported any experience of identity theft affecting either themselves or someone they know. Eight percent of consumers reported that they had personally experienced identity theft in the previous 12 months (SCPC Table 13).

Consumers consistently rate cash best for acquisition and cost and worst for recordkeeping. Both credit cards and debit cards are rated above cash for acceptance, that is, “how likely each payment method is to be accepted for payment by stores, companies, online merchants, and other people or organizations.” The rankings are determined by first calculating the mean of each payment instrument assessment and then ranking the payment instruments according to those means.[14]

The SCPC defines convenience, a somewhat amorphous quality, as encompassing qualities including speed, control over payment timing, ease of use, effort to carry, and the ability to keep or store the payment method. The three most-used payment instruments—debit cards, credit cards, and cash—were rated highly, with both kinds of cards (credit and debit) ranked above cash for convenience.

As one might expect, credit cards consistently were rated worst for cost, defined as a combination of interest and fees (which increase cost) and rewards (which reduce cost). Money orders also were rated relatively unfavorably for cost.

Survey methodology

This is the sixth year the SCPC has been conducted using the Understanding America Study (UAS), managed by the University of Southern California Dornsife Center for Economic and Social Research. Of the 2020 SCPC’s 1,909 respondents, 689 also responded to the four prior surveys: 2016, 2017, 2018, and 2019 (Table B). Before the 2015 survey, the SCPC was conducted using the Rand Corporation’s American Life Panel (ALP). Both panels are nationally representative. The charts presented in this report incorporate data from both panels. ALP data are used in 2014 and before; UAS data are used for 2015 and after.

Table B: SCPC Number of respondents, 2015–20

Survey year	Number of respondents
2020	1,909
2019	3,372
2018	3,153
2017	3,099
2016	3,404
2015	1,429

[14] See Greene, Schuh, and Stavins (2017), Tables 36a through 36f and 37a, for a comparison. These detailed shares of ratings are included in the data set for 2017, available free at https://www.atlantafed.org/banking-and-payments/consumer-payments/survey-of-consumer-payment-choice/2017-survey.

Note: Half of the 2020 sample, or 1,909 respondents, completed the 2020 SCPC. Half completed an experimental survey that combines the Survey with the Diary of Consumer Payment Choice.

Source: Federal Reserve Bank of Atlanta

The sample size in 2020 is reduced from 2019 due to an experiment to investigate various ways of assisting respondents to remember transactions and to reduce respondent burden for the SCPC and DCPC. Half (1,909) of respondents completed the traditional combination of SCPC and DCPC; the other half (1,799) completed an experimental combination in which the SCPC section asking respondents to recall their transactions in a "typical" month is eliminated in favor of the DCPC method of reporting specific individual transactions in detail: dollar value, date, time, payee, etc. The experimental questionnaire is posted at atlantafed.org.

To enable better inference of the entire population of U.S. consumers, SCPC respondents were assigned post-stratified survey weights designed to align as much as possible the composition of the SCPC sample with that of the Current Population Study (CPS). This follows common practice in other social science surveys, such as the Consumer Expenditure Survey (see Angrisani, Foster, and Hitczenko 2017). Table C compares the SCPC 2019 panel to the October 2019 CPS.

Table C: Comparison of SCPC panel to Current Population Survey[15]

	October 2020 CPS	2020 SCPC
Average age	47	48
Female	52%	52%
Married	51%	55%
Employed	58%	57%
Race: Asian	6%	5%
Race: Black	13%	14%
Race: White	77%	72%
Race: Multiple	2%	7%
Hispanic/Latino	17%	12%
Median household income	\$60,000–\$74-999	\$60,000–\$74,999
Number of respondents	57,221	1,909

Source: Federal Reserve Bank of Atlanta and Bureau of Labor Statistics. Note: Median household income is calculated by weighting a survey variable that bins incomes into ranges.

Most SCPC respondents also complete the companion survey instrument, the Diary of Consumer Payment Choice (Greene and Stavins 2019). The DCPC collects data on individual payments from daily records kept by consumers, including the dollar values of payments. Due to the differences in data

[15] https://www.census.gov/programs-surveys/cps.html

collection methods, some estimates from the two surveys differ and may not be comparable. Reports and data for the 2018 DCPC are online at atlantafed.org/banking-and-payments/consumer-payments/diary-of-consumer-payment-choice. The 2020 DCPC results are forthcoming.

Conclusion

U.S. consumers faced many challenges in 2020. This report describes their payment behavior in the pandemic, with fewer consumers using cash at least once in a typical month and more consumers making an online purchase at least once. The share of consumers making at least one mobile payment also increased. In 2020, credit cards were used more often as a share of all payments. Consumers' assessments of payment instruments were generally stable, although cash dropped slightly in consumers' assessment of relative convenience.

Definitions of concepts

This section contains tables with the definitions of concepts used in the SCPC questionnaire and in the construction of the official tables of statistics. Some of the definitions presented to the survey respondents may have been phrased differently from the way they are specified here. For more information, consult the SCPC questionnaire, which is available online, https://www.atlantafed.org/banking-and-payments/consumer-payments/survey-of-consumer-payment-choice.

Definitions Table 1: Banking concepts

Concept	Definition
Asset	Any item of monetary value, including bank accounts, real estate, stocks, bonds, annuities, retirement accounts, motor vehicles, jewelry, rare or collectible goods, and personal or household goods.
Automated teller machine (ATM)	A machine that allows customers to access their bank accounts with an ATM card, debit card, or credit card to withdraw cash, make deposits, view account balances, transfer money, and perform other related banking transactions.
ATM card	A card that allows a customer to deposit or withdraw cash from an automated teller machine, but that cannot be used for purchases or payments.
Bank	An institution that accepts deposits and offers checking accounts or savings accounts. Includes regular or internet-based commercial banks, credit unions, and savings and loan associations.
Checking account	An account that allows a customer to make payments or withdrawals as often as necessary, using checks, debit or ATM cards, or online or preauthorized withdrawal payments. Some checking accounts pay interest on deposits and may be called money market checking accounts.
Mobile banking	A method of accessing one's bank account with a mobile phone, by using the phone to access the bank's web page on the mobile phone, send text messages, read emails from the bank, or use a downloaded app.
Money market account	A type of savings account offered by banks and credit unions that is similar to a regular savings account. The difference is that money market accounts usually pay higher interest, have higher minimum balance requirements, and allow fewer withdrawals per month. Another difference is that, similar to a checking account, many money market accounts allow the customer to write checks on the account, though no more than three a month.
Nonbank online payment account	A payment service provided by a company that is not a bank. These services allow an individual to send and receive money online.
Online banking	A method of accessing a bank account through a bank's website to perform such actions as viewing account balances, transferring funds between accounts, or paying bills electronically.
Savings account	A bank account that allows only a limited number of payments, withdrawals, or transfers. Savings accounts pay interest on deposits at rates that are usually higher than rates on interest-bearing checking accounts. Examples include traditional savings accounts, money market savings accounts, Christmas Club accounts, and Coverdell or 529 education accounts.
Telephone banking	A method by which a bank's customers can access their accounts by calling a phone number that the bank has provided. Customers interact with the system by using voice commands, using the phone's numeric keypad, or speaking with a customer service representative.

Definitions Table 2: Payment instruments

Concept	Definition
Bank account number payment (BANP)	A payment made by providing a bank account number to a third party, such as an employer or utility company. The number can be given on websites, paper forms, and more.
Cash	Coins and paper bills
Check	A piece of paper directing a financial institution to pay a specific amount of money to a person or business.
Credit card	A card that allows the cardholder to make a purchase by borrowing funds that will be paid back to the credit card company later.
Debit card	A type of card that allows the holder to make purchases or payments by accessing funds in a bank account. It also allows access to bank accounts through an ATM.
Deduction from income	Direct payments from income—for example, automatic deductions for an employee's portion of health insurance or for transportation expenses (applies only for automatic bill payments).
Money order	A type of payment that can be purchased from a bank or other institution. This payment allows the individual named on the order to receive a specified amount of cash on demand.
Online banking bill payment (OBBP)	A payment made from a bank's website or mobile app that accesses funds from a customer's checking or savings account to pay a bill or to pay other people. This payment does not require the bank or the customer to disclose his or her bank account number to a third party.
Prepaid card	A card that stores or records a dollar value. It is also known as a stored-value card or gift card. Some of these cards may have a Visa, MasterCard, Discover, or American Express logo on them, but they are not credit or debit cards. Some cards—for example, a phone card—are for specific types of payment, and others, like a NetSpend or Green Dot card, work for many types of payment. In addition, there are government-issued prepaid cards, such as an EBT, Direct Express, SNAP, or TANF cards. Most prepaid cards have a dollar value that can be used to make payments, which are deducted from the value stored on the card. Other types of prepaid cards, such as a monthly public transit pass, are valid for use over a specific period of time, rather than having the value of the payment deducted each time the card is used.
Traveler's check	A piece of paper that is similar to a check but works like cash and is protected against loss or theft. Traveler's checks are purchased in advance and issued for a specific amount of money.

Definitions Table 3: Adoption

Concept	Consumer Behavior That Defines Adoption
ATM card*	Has an ATM card
Bank account	Has at least one checking account or savings account
Cash	Has used cash to make a payment at least once in the past 12 months, holds cash (on person or on property), gets cash on a regular basis, or uses cash in a typical year
Cell phone	Has a cell phone
Check	Has used a check to make a payment at least once in the past 12 months, currently has blank checks, or uses checks in a typical year
Checking account	Has at least one checking account
Credit card*	Has a credit card
Current adoption	The percentage of consumers who own a bank account or have a payment instrument and have not discarded it as of the time of the survey
Debit card*	Has a debit card
Discarding rate	The difference between historical and current adoption or ownership rates. It measures the minimum percentage of consumers who owned a bank account or had a payment instrument but discarded it and thus do not own or have it now.
Bank account number payment (BANP)	Makes an electronic BANP in a typical year
Historical adoption	The percentage of consumers who have ever owned a bank account or had a payment instrument at any time (currently or in the past)
Mobile banking	Has a bank account and a cell phone, and has set up mobile banking
Money order	Has used a money order in the past 12 months
Nonbank online payment account	Has at least one nonbank online payment account
Online banking bill payment* (OBBP)	Has a bank account, has set up online banking, and has set up access to the online bill payment function
Online banking*	Has a bank account and has set up online banking
Ownership	Equivalent to adoption, but for bank accounts
Prepaid card*	Has a prepaid card of any type
Savings account	Has at least one savings account
Smartphone	Has a smartphone
Telephone banking*	Has a bank account and has set up telephone banking
Traveler's check	Has used a traveler's check in the past 12 months

*In a small number of cases where respondents did not answer the direct-adoption question for this concept, additional information from other questions was used to infer adoption in a manner consistent with the primary definition.

Definitions Table 4: Payment use

Concept	Consumer Behavior That Defines Use
Frequency of use	See *Use*.
Incidence of use	The percentage of consumers who have used a particular payment instrument at least once during a typical period of time
Incidence of use, annual	The percentage of consumers who have used a particular payment instrument at least once in a typical year
Incidence of use, monthly	The percentage of consumers who have used a particular payment instrument at least once in a typical month
Use	The number of times consumers use a particular instrument for payment during a typical month. (*Use* for a typical week or year was converted to a typical month for comparability.)
Typical period	A recent week, month, or year in which the consumer did not experience any unusual payments or other related events. Consumers choose the reporting frequency they prefer most. The most recent period is implied and assumed but not stated explicitly in the survey questions.

Definitions Table 5: Transaction types

Concept	Definition
Automatic bill payment	A bill payment set up to occur on a regularly scheduled basis, typically monthly. Once set up, these do not require any additional effort on the consumer's part. They can be processed through bank account deductions, debit card transactions, credit card charges, or paid directly from the consumer's income.
Bill payment	A payment made to a company or person at some date after the company or person has provided goods or services to a consumer. Examples include a payment to a utility company for energy services provided during a month, or a payment to service a loan such as a mortgage payment. Most bill payments occur at regular frequencies, such as weekly, monthly, or yearly.
By mail, in person, or by phone bill payment	Payments for bills, subscriptions, or debt payments that one mails in, pays in person, or calls in on one's phone
Online bill payment (OBP)	Payments made online for bills, subscriptions, or debt payments, but not set up to be paid automatically
Online payment (OP)	Payments for items bought over the internet or donations made online
Person-to-person payment	Payments to people *not* made through a retail establishment, such as payments for allowances, paying back a friend, or presenting gifts to other people
Retail purchases of goods	Purchases of goods at stores, such as grocery stores, superstores, department stores, or drug stores
Retail services and other payments	Purchases of services, such as those made at restaurants, bars, fast food and beverage establishments, transportation and toll locations, doctor's visits, childcare, haircuts, education, recreation, or entertainment

Definitions Table 6: Payment instrument characteristics

Concept	Definition
Acceptance for payment	How likely each payment method is to be **ACCEPTED** for payment by stores, companies, online merchants, and other people or organizations.
Convenience	The **CONVENIENCE** consumers attribute to each payment method. *Examples: speed; recordkeeping; control over payment timing; ease of use; effort to carry, get, or set up; ability to keep or store*
Cost	The **COST** of using each payment method *Examples: Fees, penalties, postage, interest lost, subscriptions, or materials raise cost. Cash discounts and rewards (such as frequent flyer miles), and interest paid reduce cost.*
Getting and setting up	The task of **GETTING and SETTING UP** each payment method before a consumer can use it. *Examples: getting cash at the ATM, spending time to get or set up a credit card, and learning to use or install online banking bill pay*
Payment records	The quality of **PAYMENT RECORDS** offered by each method of payment, as assessed by consumers, taking into consideration both paper and electronic records *Examples: proof of purchase, account balances, spending history, usefulness in correcting errors or dispute resolution, and ease of storage*
Security	The **SECURITY** of each method against permanent financial loss or unwanted disclosure of personal information if a payment method is stolen, misused, or accessed without the owner's permission

Definitions Table 7: Other terms and concepts

Concept	Definition
Contactless payment technology	Allows the consumer to make a payment by tapping or waving a card or other instrument near a special electronic reading device without the consumer swiping, signing, or entering a personal identification number
Cryptocurrency	Cryptocurrency exists online and is different from U.S. dollars ($), the euro (€), or other official foreign currencies. Cryptocurrency is sometimes called virtual currency or digital currency.
Electronic toll payment	A contactless payment technology that allows motor vehicle drivers to drive through a toll without stopping and have the toll automatically billed to them. Examples are EZ-Pass, I-Pass, Smart Lane, and Smart Tag. The payment can be made from a bank account or by credit card, and sometimes by other methods.
Identity theft or fraud	All types of crime in which someone uses (or attempts to use) someone else's personal information or data without the owner's permission to purchase goods or services, make payments, steal money, set up accounts, or commit fraud. Examples of information used include name and address, social security number, credit card or debit card number, and other related financial information.
Key fob	A contactless payment technology that attaches to a keychain. Key fobs are branded by gas stations and credit card companies such as American Express, Visa, and MasterCard. An example is the Mobil Speedpass.
Overdraft protection	A service a bank provides when a customer makes a transaction that exceeds his or her account balance. It covers the difference between the transaction amount and the account balance and enables the customer to avoid incurring a fee from the retailer or merchant for having insufficient funds. Overdraft protection can be activated by linking a savings account or credit card to a checking account, or through overdraft insurance.
Overdraft	Withdrawal of more money from a bank account than is currently in the account (also termed "insufficient funds"). Overdraft may occur, for example, when paying with a check, debit card, or electronic deduction.
Paid directly from income	A payment made for a consumer by an employer or other income provider directly from the consumer’s wages, salary, or other income payment such as interest, dividends, social security payments, retirement plan distributions, alimony, child support, welfare, trust fund distributions, or other money received
Reward	Any type of benefit given to payment cardholders when they use their card to make purchases and other payments. A reward is usually proportional to the dollar value of the purchase or payment. Examples include cashback (a percentage of the dollar value), frequent flyer miles (airlines), frequent stay points (lodging), college tuition funding, and shopping network points.
Unbanked	A person who does not have any checking or savings accounts at a bank, credit union, brokerage, or investment firm
Underbanked	Following the FDIC definition, a person who has a checking or savings account and who has purchased any of five services from a nonbank in the past 12 months (money order, cashier’s checks, check cashing, remittances, and payday loans) or who has used personal property to secure a loan at a pawn shop, used rent-to-own services, or taken out a tax refund anticipation loan

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