

The 2016 and 2017 Surveys of Consumer Payment Choice: Summary Results

Claire Greene and Joanna Stavins

Abstract: Despite the introduction of new technology and new ways to make payments, the Survey of Consumer Payment Choice (SCPC) finds that consumer payment behavior has remained stable over the past decade. In the 10 years of the survey, debit cards, cash, and credit cards consistently have been the most popular payment instruments. In 2017, U.S. consumers ages 18 and older made 70 payments per month on average. Debit cards accounted for 31.8 percent of those monthly payments, cash for 27.4 percent, and credit cards for 23.2 percent.

The SCPC continues to measure new ways to shop and pay and found that the increase in the number of purchases made online between 2015 and 2017 is statistically significant. In 2017, consumers on average made 5.6 online purchases per month, which account for 8 percent of all transactions and are up from 6.9 percent of all transactions in 2015. Use of mobile technologies continued to grow: In 2017, one-third of consumers made a mobile payment, compared with one-fourth in 2015.

Compared with the findings for 2015, a greater share of credit card adopters paid their balance in full at the end of the month in 2017: 45 percent in 2017 versus 41 percent in 2015.

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

Claire Greene is a retail payments risk expert at the Federal Reserve Bank of Atlanta. Joanna Stavins is a senior economist and policy advisor at the Federal Reserve Bank of Boston. Their email addresses are claire.greene@atl.frb.org and joanna.stavins@bos.frb.org, respectively.

This report, which may be revised, is available at <http://www.bostonfed.org/economic/rdr/index.htm>. It is also available at <http://www.bostonfed.org/economic/cprc/SCPC>, along with additional information about the SCPC that includes surveys from previous years.

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.

This version: May 10, 2018

Acknowledgments

The Survey of Consumer Payment Choice (SCPC) is a collaborative project of the Federal Reserve Bank of Boston and the Federal Reserve Bank of Atlanta. The following individuals contributed directly to the production and dissemination of the 2016 and 2017 SCPC. From the Atlanta Fed: Kevin Foster, Claire Greene, and Marcin Hitczenko. From the Boston Fed: Patricia Allouise, Randi Cavanaugh, Jeffrey Kelley, Jason Premo, Scott Schuh (retired), Joanna Stavins, and Liang Zhang. From the University of Southern California: Marco Angrisani, Tania Gutsche, Arie Kapteyn, Erik Meijer, Bart Orriens, and Albert Weerman.

The former members of the Consumer Payments Research Center (CPRC), which was part of the Boston Fed's research department, acknowledge and thank the CPRC Board of Advisors who served during the production and dissemination of the 2016 and 2017 SCPC; see Section XII for a list of the advisors.

Contact List

Please contact the following individuals for more information about the Survey of Consumer Payment Choice.

Media and Public Relations

Thomas Lavelle, Vice President and Public Information Officer
Federal Reserve Bank of Boston
(617) 973-3647
Thomas.L.Lavelle@bos.frb.org

Survey Reporting

Claire Greene, Payments Risk Expert
Federal Reserve Bank of Atlanta
(404) 498-7508
Claire.Greene@atl.frb.org

Survey Methods

Kevin Foster, Senior Business Survey Specialist
Federal Reserve Bank of Atlanta
(617) 973-3955
Kevin.Foster@atl.frb.org

University of Southern California, Center for Social and Economic Research (CESR)

Tania Gutsche, Managing Director
(310) 448-0371
tgutsche@dornsife.usc.edu

Table of Contents

Acknowledgments.....	2
Table of Contents	3
I. Introduction.....	4
A. Summary of tables.....	6
II. Account adoption	7
III. Cash management	8
IV. Payment instrument adoption	9
V. Incidence of payment instrument use	10
VI. Consumer use of payment instruments	11
A. Payments by instrument type	12
B. Payments by transaction type	13
C. Payments by transaction type and payment instrument	15
D. Credit card debt	16
VII. Assessments of payment instruments	17
VIII. Loss, theft, and fraud.....	18
IX. Survey methodology	18
A. Diary of Consumer Payment Choice.....	19
B. Questionnaire changes.....	19
X. Conclusions.....	19
XI. Definitions of concepts	20
Definitions Table 1 – Banking Concepts	21
Definitions Table 2 – Payment Instruments.....	22
Definitions Table 3 – Adoption	23
Definitions Table 4 – Payment Use	24

Definitions Table 5 – Transaction Types	25
Definitions Table 6 – Payment Instrument Characteristics	26
XII. Consumer Payments Research Center Board of Advisors, 2017.....	28
Former CPRC Advisors	29
XIII. References	30
XIV. 2016 and 2017 SCPC Tables.....	32

I. Introduction

The 2017 Survey of Consumer Payment Choice (SCPC) is the 10th in a series of annual studies that aim to gain a comprehensive understanding of the payment behavior of U.S. consumers.¹ This report includes 15 tables showing detailed estimates of consumers’ payment choices. The report also contains estimates of consumer activity related to banking and cash management, consumer assessments of payment characteristics, and a rich set of consumer and household demographic characteristics. For more details about definitions and motivations, please consult earlier papers describing the SCPC surveys, particularly Schuh and Stavins (2014).

This paper reports major findings on consumer payment behavior from 2008 through 2017 and details SCPC results from 2015 through 2017. The longer-term results show that consumer payment choices have been fairly stable over the past 10 years. Due to changes in the sampling frame in 2015, we do not discuss previous years’ results in detail. From 2008 through 2014, SCPC results were based on the Rand Corporation’s American Life Panel (ALP). In 2015, the SCPC was implemented using the Understanding America Study (UAS) panel, managed by the University of Southern California (USC) Dornsife Center for Economic and Social Research. Both panels are intended to be representative of U.S. consumers; nevertheless, some results may not be comparable. Due to changes in the sample, sample size, and questionnaire over the years, users

¹ 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); and Greene, Schuh, and Stavins (2016, 2017).

should focus on the 2015 through 2017 results. A total of 1,429 respondents completed the 2015 SCPC; 3,404 completed the 2016 SCPC; and 3,099 finished the 2017 SCPC. For more information on the sample selection, see the technical appendix (Angrisani, Foster, and Hitczenko, forthcoming).

This report presents a new way of understanding consumers' assessments of payment instrument characteristics, which include security, convenience, and cost (SCPC Table 13). The new analysis highlights the best- and worst-ranked payment instruments for each characteristic. This simplified presentation enables the reader to quickly see the relative performance of payment instruments based on security, convenience, etc. Previously, the SCPC reported in separate tables for each characteristic the percentage share of consumers who choose each of the five options on a Likert scale.²

The SCPC data complements information from the Diary of Consumer Payment Choice (DCPC), in which consumers record specific transactions (including dollar values) and their payment choices.³ Respondents participate in the surveys in September (SCPC) and October (DCPC). Some questions that were previously in the SCPC are instead in the 2017 DCPC. These include questions about consumers' cash holdings. Therefore, data on 2017 consumer cash holdings are not reported here.

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 official SCPC results (SCPC Tables).

² See Greene, Schuh, and Stavins (2017), Tables 36a through 36f and 37a for a comparison. These detailed shares of ratings are included in the 2017 dataset, available free at <https://www.bostonfed.org/about-the-boston-fed/business-areas/consumer-payments-research-center.aspx#pubs-and-data>.

³ See Briglevics and Shy (2012), Shy (2013), Shy and Stavins (2014), Schuh (2017), Greene and Schuh (2017), and Greene, O'Brien, and Schuh (2017).

A. 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 2016 and 2017 results appear in SCPC Tables 1–15 of this paper, organized into seven sections:

1. *Adoption of accounts and payment instruments*: consumer adoption of bank accounts, nonbank payment accounts, and payment instruments. **[SCPC Tables 1 through 3]**
2. *Cash and account management*: cash holdings (2015 and 2016 only), cash withdrawals, and checking account balances. **[SCPC Tables 4 and 5]**
3. *Incidence of use of accounts and payments instruments*: share of consumers using their adopted payment instruments and share making a transaction by transaction type. **[SCPC Tables 6 and 7]**
4. *Frequency of use of payment instruments*: number and share of payments by payment instrument and type of transaction; use of credit card debt also is reported. **[SCPC Tables 8 through 11]**
5. *Loss, theft, or fraud*: percentage of consumers experiencing loss, theft, or fraud, by payment instrument. **[SCPC Table 12]**
6. *Assessments*: consumer assessments of key characteristics of payment instruments and payment practices. **[SCPC Table 13]**
7. *Household characteristics*: information about consumer demographic characteristics and financial status. **[SCPC Tables 14 and 15]**

All SCPC data are available free to the public at <https://www.bostonfed.org/about-the-boston-fed/business-areas/consumer-payments-research-center.aspx#pubs-and-data>.

Online resources include the following:

- 2016 and 2017 SCPC public-use microdata sets containing consumer-level SCPC responses to all survey questions, including those used to create the official tables
- Tables containing estimates of the standard errors for the SCPC results
- Survey questionnaire, including a complete list of variables
- Data and reports of previous years' surveys

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

II. Account adoption

In each of the 10 years of the SCPC, bank account adoption has been high—always greater than 90 percent of U.S. consumers. In 2017, 92.3 percent of U.S. consumers had a bank account. Three-quarters of consumers used online banking; half used mobile banking (SCPC Table 1). Of those consumers who did not have a bank account, 4 in 10 cited reasons related to expense (“don’t write enough checks to make it worthwhile,” “minimum balance is too high,” and/or “fees and service charges are too high”).

Consumers also adopted nonbank payment accounts. In 2017, 44.9 percent had a nonbank account; the most common was PayPal. As **Table A** shows, bank account adoption and adoption of nonbank payments accounts have been stable over the last three years. The increase in mobile app or online account adoption was statistically significant.⁴ The adoption of mobile apps for storing funds or making payments (such as Android Pay, Apple Pay, Samsung Pay) grew by about 25 percent in the last three years, from 40.4 percent of consumers in 2015 to 52.1 percent in 2017.

	2015	2016	2017
Checking account	91.1	90.7	90.8
Savings account	73.3	71.9	73.4
Nonbank payment accounts	48.8	43.3	44.9
Mobile apps or online accounts	40.4	41.9	52.1

Source: Survey of Consumer Payment Choice.

Table A: Adoption rates of bank and other accounts (percentage of U.S. consumers)

⁴ Throughout this report, statistical significance is reported at the .05 level.

III. Cash management

Essentially all U.S. consumers adopted cash in the year that ended in October 2017 (99.8 percent) (SCPC Table 3). The SCPC defines adopting cash as having used cash at least once in the past 12 months and/or having some cash on one's person (pocket, purse, or wallet) or on one's property (home, car, or office).

In October 2016, 90 percent of U.S. consumers had some cash on their person (pocket, purse, or wallet) or elsewhere; the same percentage of consumers held some cash in October 2015. Eighty-five percent carried some cash on their person in October 2016. This discussion of cash holdings includes only 2016 data, because in 2017, respondents reported cash holdings in the Diary of Consumer Payment Choice (DCPC). Hence, the reporting of cash holdings for that year is not comparable to previous years, so it is not discussed here.⁵

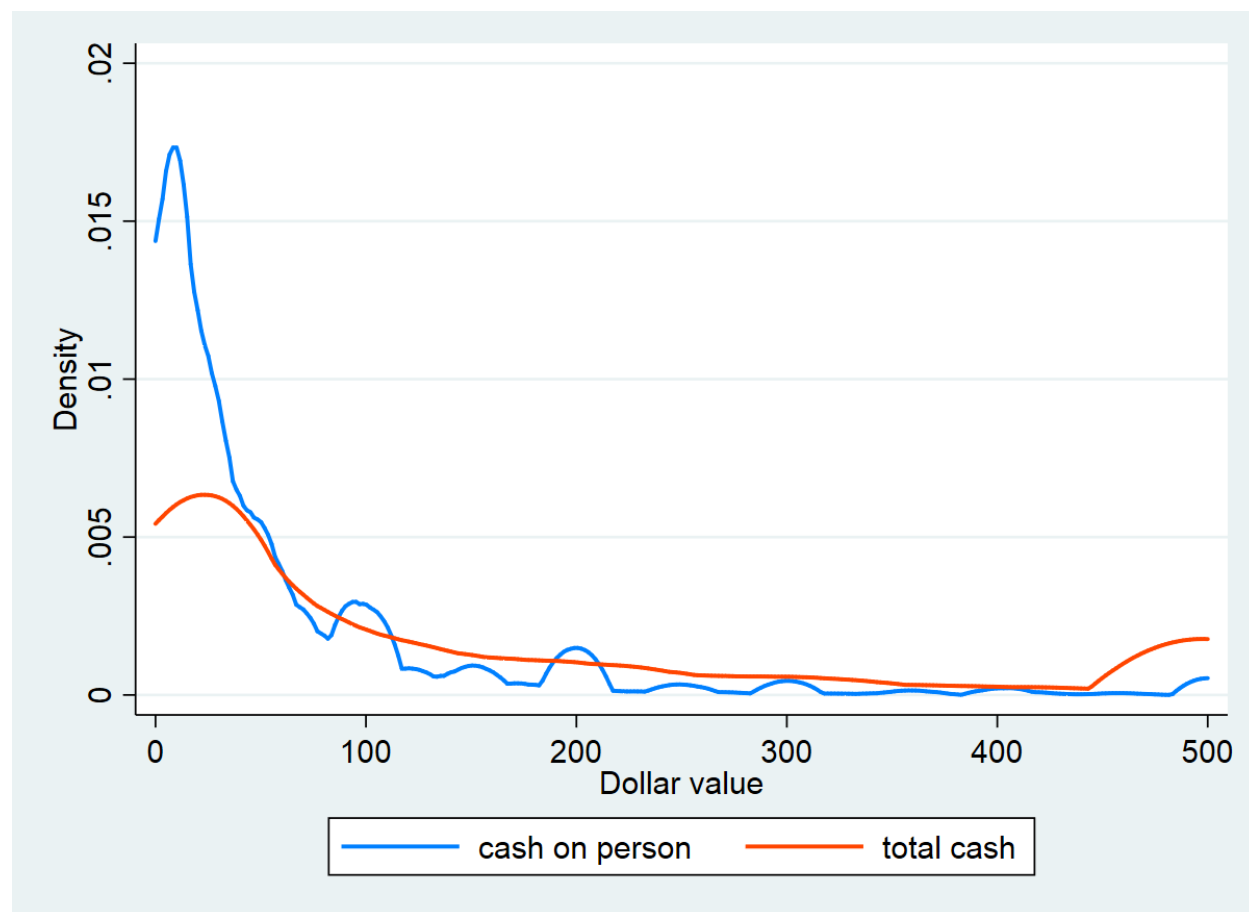
In 2016, U.S. consumers' average total cash holdings (on person plus on property) were \$219 (SCPC Table 4), about the same as they were the previous year.⁶ Cash holdings vary greatly among consumers. For purposes of this discussion, large-value holdings (the largest 2 percent reported) are omitted. The average [median] amount in pocket, purse, or wallet was \$61 [\$22]. The average [median] amount stored elsewhere was \$158 [\$6] (SCPC Table 4). **Figure 1** shows the distributions of cash holdings on person and total (including stored elsewhere) in 2016.

For all consumers, the median amount per cash withdrawal was \$60. Withdrawals are defined broadly and can occur at a bank teller, ATM, check cashing store, payday lender, or

⁵ In 2017, respondents counted and reported bills by denomination in the Diary of Consumer Payment Choice. In previous years, Survey of Consumer Payment Choice respondents answered a series of questions that each began with "About how much cash do you have...?"

⁶ This estimate excludes the top 2 percent of cash holdings (roughly \$2,500 or more) due to small sample sizes and high year-to-year volatility of large-value observations. They are excluded because the SCPC obtains only a very small number of observations of very large cash holdings each year; hence, fluctuations in the composition of large-value cash holdings exert statistically excessive influence on estimates of the average value of total cash holdings. The 98th percentiles are \$424 for cash in pocket, purse, or wallet and \$3,000 for cash stored elsewhere. See the technical appendix for more information. See SCPC Table 4 for quantities, including large-value holdings.

employer (paid in cash) or by receiving cash from a family member or friend. The median number of cash withdrawals per consumer per month was three.

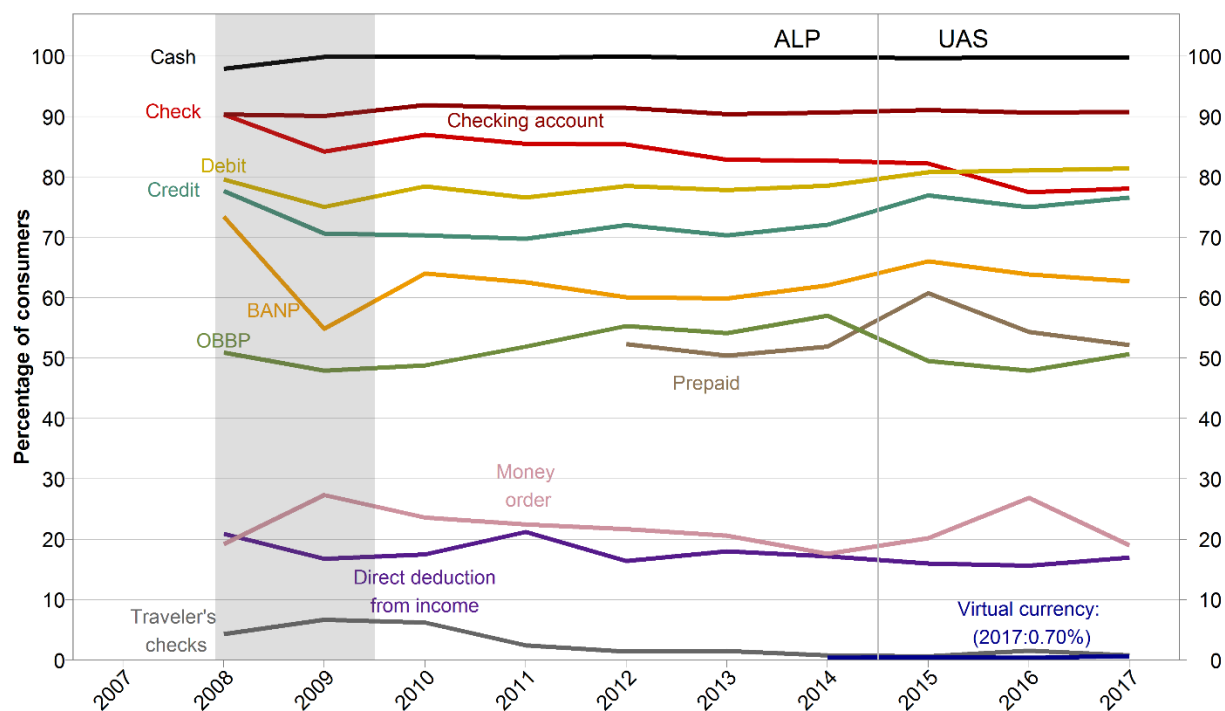


Source: 2016 Survey of Consumer Payment Choice. Notes: All values are truncated at \$500 dollars.

Figure 1: Distribution of cash holdings on person and total cash holdings, 2016

IV. Payment instrument adoption

The adoption rate for the most popular payment instruments has remained relatively stable over the past 10 years (**Figure 2**), including the years 2015 through 2017 (SCPC Table 3). In every year of the SCPC, more than 70 percent of consumers adopted each of the following payment instruments: cash, debit cards, credit cards, and paper checks. For cash, adoption is defined as having some cash on person or stored elsewhere at the time of the survey or having made at least one cash payment in the previous 12 months. Note that beginning in 2015, more consumers were adopting debit cards than were holding blank paper checks on hand.



Source: Survey of Consumer Payment Choice. Note: 2008 through 2014 results are based on the American Life Panel (ALP); 2015 through 2017 results are based on the Understanding America Study (UAS) panel. OBBP stands for online banking bill payment; BANP stands for bank account number payment.

Figure 2: Percentage of U.S. consumers adopting payment instruments

Most consumers owned five or six payment instruments as of October 2017; the portfolios owned are quite varied (see Greene, Schuh, and Stavins [2017] for a discussion of portfolios owned). Most consumers owned one debit card; the median number of debit cards owned was one. Among credit card adopters, the median number of credit cards owned was three, but the range was wide. Three-quarters of credit card adopters owned two or more credit cards, and one-fifth owned six or more.

V. Incidence of payment instrument use

Most people who adopted a payment instrument used it at least once during the year. More than 70 percent of adopters used all but two payment instruments (money orders and prepaid cards) at least once during the year that ended in October 2017. Notably, 12 percent of consumers report that they did not pay with cash, even once, during the year. The share of paper check adopters has steadily declined over the past 10 years, and fewer than 80 percent of

consumers who had paper checks on hand reported using them in 2017. Of all the payment instruments that consumers owned, prepaid cards were used the least frequently.

In the SCPC, respondents report use in terms of underlying payment instruments. For example, a PayPal payment funded by a credit card is reported as a credit card payment; a mobile payment funded by a coffee shop prepaid card is reported as a prepaid card payment. Respondents also report incidence of use for these newer modes of payment. As **Table B** shows, in 2017, 77 percent of PayPal account holders reported making a payment through PayPal. These users reported all the funding methods they used (multiple methods reported): 51 percent used a bank account number linked to their PayPal account; 39 percent used a credit card; and 32 percent used a debit card. Notably, 23 percent of users reported using money stored with PayPal.

In 2017, one-third of all consumers made a mobile payment, compared with just one-fourth in 2015. Of consumers who made mobile payments, about half reported using a debit card as their primary method of funding mobile payments; one-third said they mostly used a credit card.

	2015	2016	2017
Credit card	36.17	30.43	39.17
Debit card	26.87	27.62	32.12
Bank account	38.41	37.52	50.63
Money stored with PayPal	21.10	18.67	23.45
Other	1.39	3.16	5.99
PayPal users (as a % of PayPal adopters)	75.67	69.53	77.11

Source: Survey of Consumer Payment Choice.

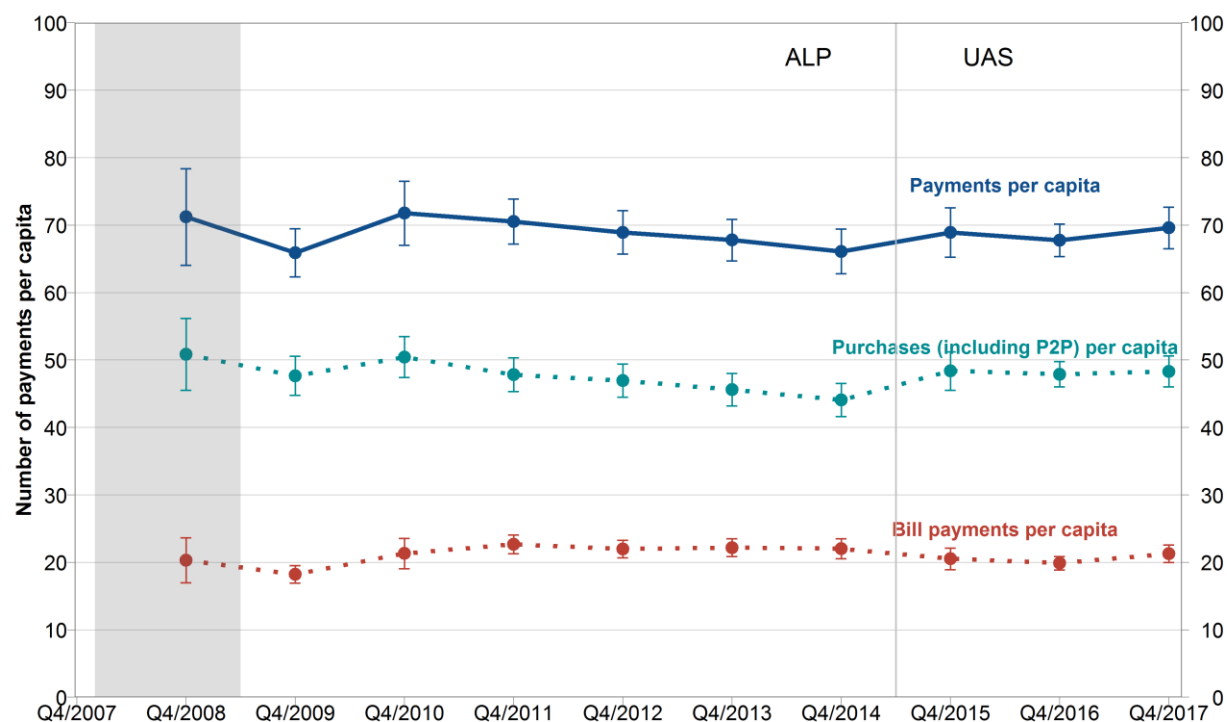
Note: PayPal users defined as PayPal adopters who have used PayPal to make a payment in the past 12 months.

Table B: Most frequently used PayPal payment method, percentage of PayPal users

VI. Consumer use of payment instruments

The findings from the 2017 SCPC are consistent with those from previous editions of the SCPC; that is, in a typical month consumers made about 70 payments, comprising purchases and person-to-person (P2P) payments (hereafter referred to as “purchases” for simplicity) and bill payments. As **Figure 3** shows, about 70 percent of payments were for purchases and 30 percent

were bill payments. This mix of payment types has remained consistent over the 10 years of the SCPC.



Source: Survey of Consumer Payment Choice. Note: 2008 through 2014 results are based on the American Life Panel (ALP); 2015 through 2017 results are based on the Understanding America Study (UAS) panel.

Figure 3: Total number of payments per month per U.S. consumer

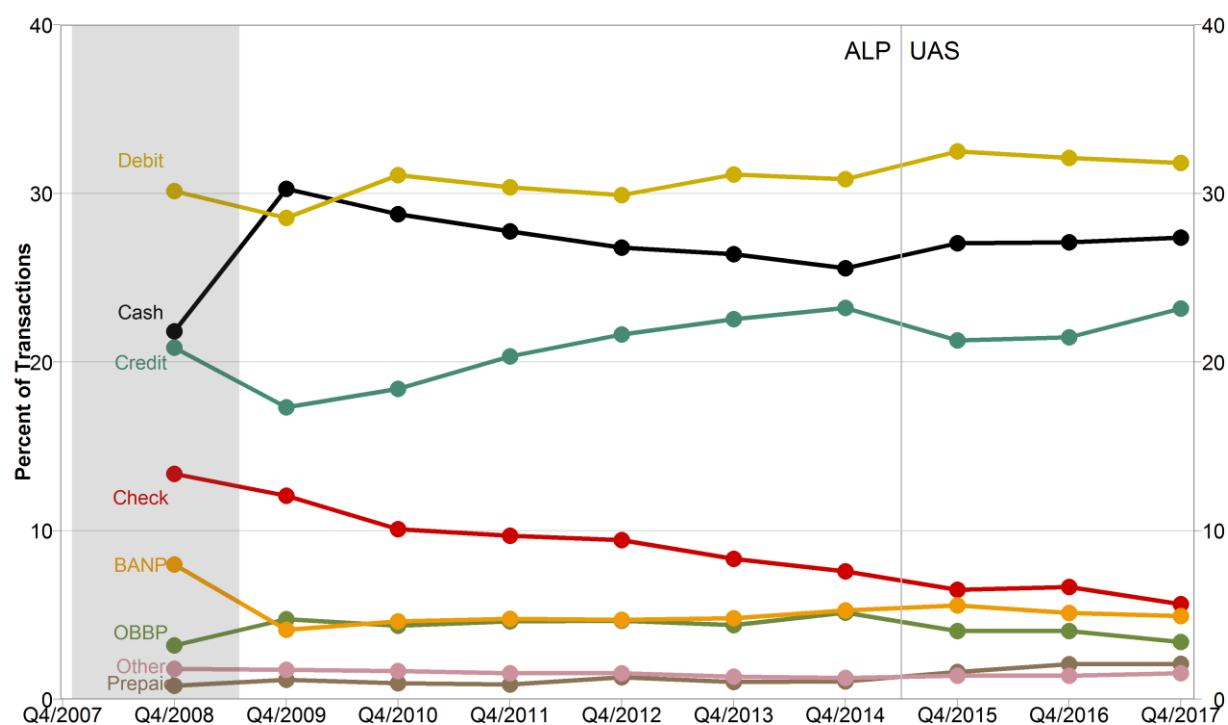
A. Payments by Instrument type

In 2017, consumers made most of their payments with debit cards, followed by cash and then credit. Over the 10 years of the survey, debit, cash, and credit have consistently been the most popular ways to pay. In a typical month in 2017, consumers on average made 22.1 debit card payments (31.8 percent of all payments), 19.1 cash payments (27.4 percent), and 16.1 credit or charge payments (23.2 percent) (SCPC Table 8).

By mode, card payments were more popular than paper or electronic payments in 2017. In a typical month, consumers made an average of 40 payments using debit, credit, or prepaid cards (57.1 percent of total payments); 23.4 payments using cash, paper checks, and other paper

instruments (33.6 percent); and 5.8 payments using electronic and other means of payment (8.3 percent).

Between 2015 and 2017, the share of use of cash remained unchanged (no statistically significant change). Since 2008, the SCPC has tracked a steady decline in check-use share. Bank account number payments (BANP) and online banking bill payments (OBBP) have consistently represented less than 10 percent of consumer payments.



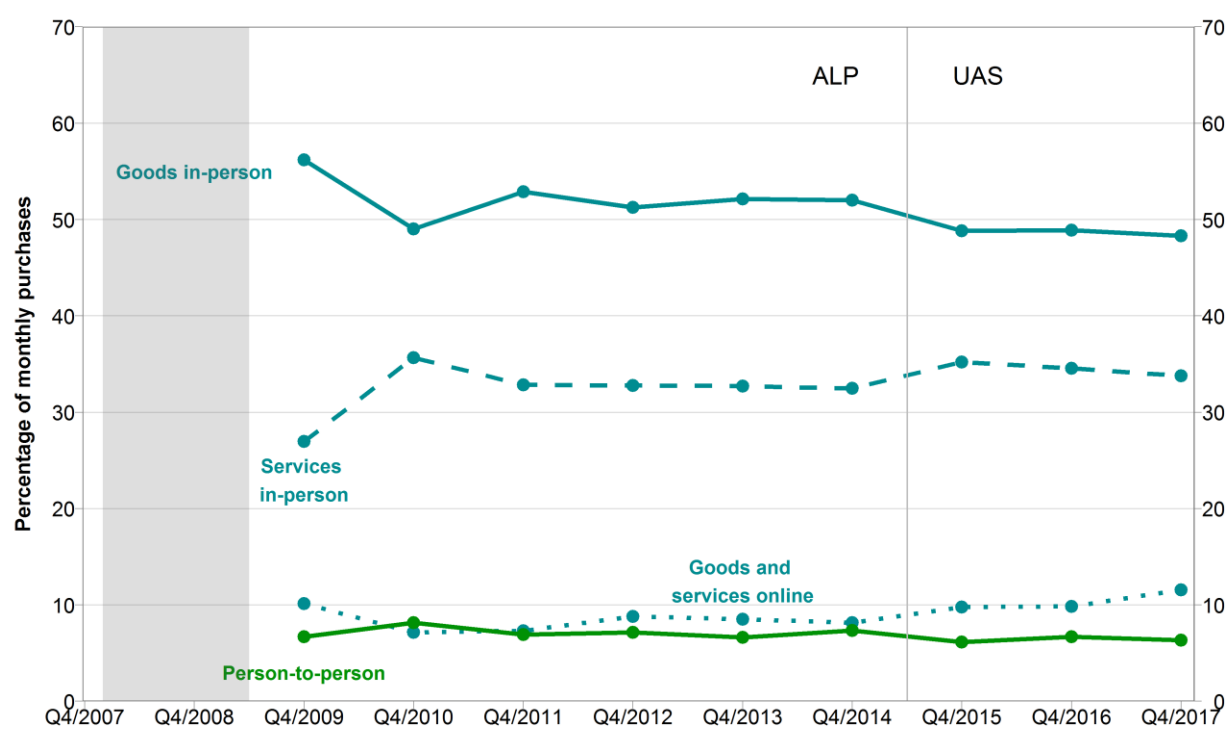
Source: Survey of Consumer Payment Choice. Note: 2008 through 2014 results are based on the American Life Panel (ALP); 2015 through 2017 results are based on the Understanding America Study (UAS) panel. OBBP stands for online banking bill payment; BANP stands for bank account number payment.

Figure 4: Percentage share of consumer payments in a typical month, by type of payment instrument

B. Payments by transaction type

Previous research has found that consumers make different payment choices depending on the payment scenario, for example, paying a bill versus paying another person. Therefore, it is useful to examine the mix of transactions that consumers reported making in a typical month in 2017.

Perhaps most important, the increase in the number of online purchases between 2015 and 2017 is statistically significant (**Figure 5**).⁷ In 2017, consumers on average made 5.6 online purchases per month, which represent 8 percent of all transactions and are up from 6.9 percent of all transactions in 2015. Focusing only on purchases, in 2017, 12 percent of all purchases were made online, compared with 10 percent in 2015. Note that online purchases remained a small share of all payments, as well as a small share of purchases. In-person purchases of retail goods continued to account for the largest share of all payments, about one-third, and in-person retail purchases of goods represent about half of all purchases.



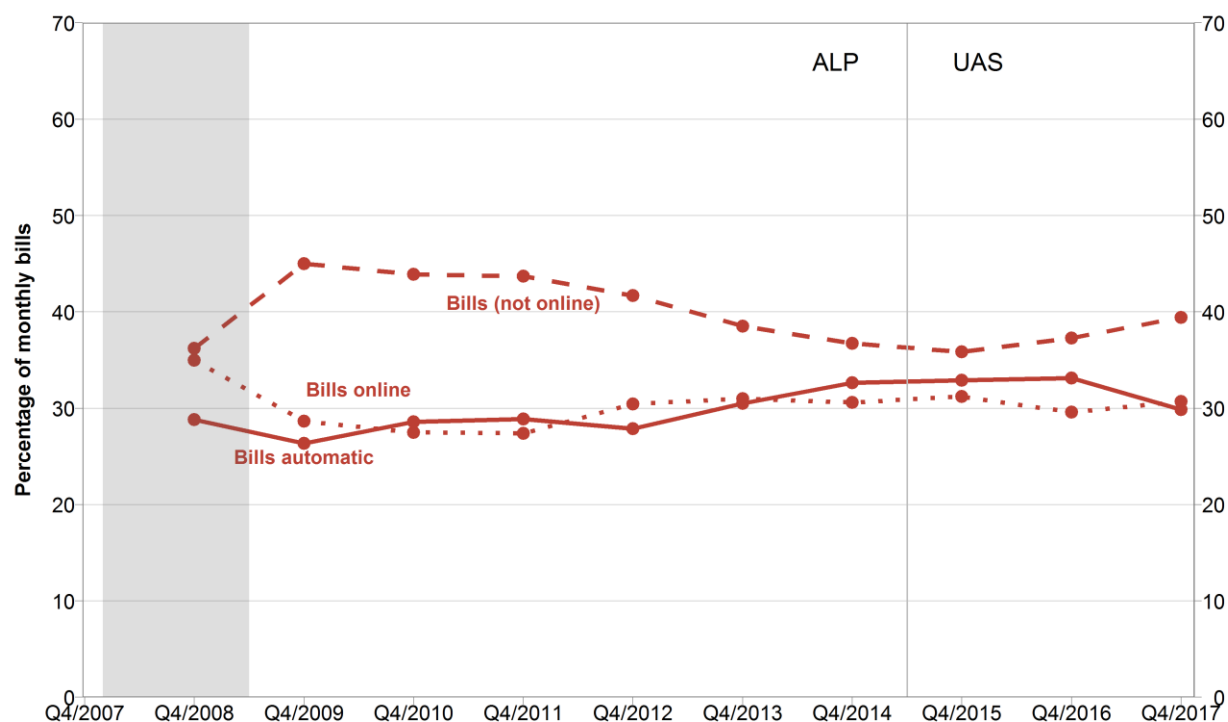
Source: Survey of Consumer Payment Choice. Note: 2008 through 2014 results are based on the American Life Panel (ALP); 2015 through 2017 results are based on the Understanding America Study (UAS) panel.

Figure 5: Percentage shares of purchases (including P2P) in a typical month

Most bills are paid by using a card or electronic methods. In a typical month in 2017, consumers on average paid 12.9 bills automatically or online, and 8.4 bills by mail, in person, or by phone. This means that they paid 6 in 10 bills using methods that don't require a paper check

⁷ Statistically significant at the .05 level.

or cash. However, the share of bills paid online did not increase from 2015 to 2017. As noted above, bills represent about 30 percent of consumer payments overall. **Figure 6** shows the breakdown of bill payments over time.



Source: Survey of Consumer Payment Choice. Note: 2008 through 2014 results are based on the American Life Panel (ALP); 2015 through 2017 results are based on the Understanding America Study (UAS) panel.

Figure 6: Percentage share of bill payments by transaction type in a typical month

C. Payments by transaction type and payment instrument

In each year from 2015 through 2017, cash was the most frequently used payment instrument for in-person purchases (which include P2P payments). Debit cards were the most popular for both online purchases and bill payments (SCPC Table 10).

Debit cards were the second-most popular choice for in-person purchases. Taken together, cards (debit, credit, and prepaid) were preferred over paper instruments for in-person purchases: Consumers on average made 35 percent of in-person purchases with cards and 26 percent with paper instruments.

They made most online purchases with cards: 2.5 per month with debit cards and 1.9 with credit cards. Card purchases account for 81 percent of online purchases overall (**Table C**). Note that the ways of making online purchases have become increasingly varied, with merchants enabling consumers to buy online and pay in store, or buy and pay online and pick up in store.

In 2017, consumers paid more than half of their bills using payment cards. In a typical month, they made, on average, 11 bill payments using debit, credit, or prepaid cards. They made about five bill payments from a bank account using electronic methods and five from a bank account using paper methods (cash, check, money order). Note that consumers used debit cards the most for both online purchases and online bill payments.

	Bill Payments			Purchases (includes P2P)			
	Automatic	Online	In person or by mail or phone	Online	Retail Goods	Services & other	Person to Person
Cash			2.84		8.60	5.85	1.87
Check			1.72	0.52	0.74	0.65	0.32
Money Order			0.19	0.09	0.08	0.05	0.03
Traveler's Check							
Debit Card	1.87	2.25	2.09	2.49	8.04	5.19	0.32
Credit Card	1.52	1.32	1.43	1.88	5.51	4.30	0.24
Prepaid Card	0.08	0.23	0.17	0.14	0.49	0.37	
OBBP	0.95	1.30					0.13
BANP	1.33	1.46		0.48			0.18
Income Deduction	0.65						

Source: 2017 Survey of Consumer Payment Choice. Note: Traveler's checks are reported elsewhere and average 0.0 payments after rounding. Source: SCPC Table 10.

Table C: Average number of payments made in a typical month of 2017, by transaction type and payment instrument

D. Credit card debt

Compared with the results from 2015, a statistically significant greater share of credit card adopters paid their balance in full at the end of each month in 2017. At some point in the 12 months before October 2017, 54.5 percent of credit card adopters carried an unpaid balance, compared with 59 percent in 2015. In addition, proportionally fewer credit card “revolvers” reported that their unpaid balance had increased from the previous year (28 percent in 2017 compared with 34 percent in 2015).

VII. Assessments of payment instruments

Consumers' assessments of payment instrument have remained fairly stable since 2015 and, indeed, since the SCPC began in 2008. In 2017, consumers gave credit cards the highest ratings—compared with other payment instruments—for acceptance, convenience, payment records, and security. These high ratings are notable given the increase in credit card use between 2015 and 2017. Previous research has found that consumers' assessments significantly affect their decision to adopt and use payment instruments (Schuh and Stavins 2013), so these ratings could be a factor in the trend of rising credit card use. Credit cards received the most No. 1 ratings, scoring the highest in all three years for acceptance and payments records, and best in two years out of three for security and convenience (SCPC Table 13). As one might expect, they were rated worst for cost, defined as a combination of interest and fees (which increase cost) and rewards (which reduce cost).

Among all payment instruments, cash was rated best for acquisition/setup and cost in all three years. As one might expect, it was rated worst for payment records. Cash also scored poorly for security, presumably due to the risk of loss. The survey question asks respondents to “rate the security of each method against permanent financial loss or unwanted disclosure of personal information.”

Two payments instruments received the lowest ratings for two characteristics in all three years: BANP for acceptance and security, and money order for acquisition/setup and convenience.

As noted above, this report includes a new way of presenting consumers' assessments of payment instrument characteristics (SCPC Table 13). The new analysis highlights the payment instruments ranked best and worst for each characteristic. The rankings are determined by first

calculating the mean of each payment instrument assessment and then ranking the payment instruments according to those means.⁸

VIII. Loss, theft, and fraud

In each of the years 2015, 2016, and 2017, about 5 percent of consumers reported that they had lost a debit card or had it stolen, and 5 percent reported that a credit card of theirs had been lost or stolen (SCPC Table 12). Less than 1 percent of consumers reported the loss or theft of paper checks. Of the consumers whose credit card was lost or stolen, about half reported that fraudulent charges were added to it (43 percent for a stolen debit card and 56 percent for a stolen credit card).⁹ Most consumers said they incurred no financial liability for the theft (99 percent of those who reported fraudulent credit card charges and 85 percent of those who reported fraudulent debit card charges). In each of the three years, one-quarter of consumers reported that they or someone they knew well had been a victim of identity theft during the previous 12 months. (The results from earlier years are not comparable, because the question was changed in 2015.)

As noted above, consumers gave credit cards the highest rating for security in 2015 and 2016, possibly because cardholders typically bear no financial liability for fraudulent credit card transactions. As shown in SCPC Table 13, consumers differentiated among different card types for security ratings. They rated prepaid cards and cash similarly for security (relatively poorly in both instances) and consistently rated debit cards lower than credit cards, again possibly because consumers rarely suffer financial losses when their credit cards' security is compromised.

IX. Survey methodology

This is the third year that the SCPC has been conducted using the Understanding America Study (UAS), managed by the Dornsife Center for Economic and Social Research at USC. Of the 3,099 respondents to the 2017 SCPC, 895 also took the 2015 and 2016 SCPC (the technical appendix

⁸ See Greene, Schuh, and Stavins (2017), Tables 36a through 36f and 37a for a comparison. These detailed shares of ratings are included in the dataset for 2017, available free at <https://www.bostonfed.org/about-the-boston-fed/business-areas/consumer-payments-research-center.aspx#pubs-and-data>.

⁹ The sample of consumers reporting paper checks lost or stolen is too small for further analysis.

contains more details on the longitudinal panel). As noted above, 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. A vertical line on each chart shows when a switch from the ALP to the UAS took place (that is, between 2014 and 2015).

A. Diary of Consumer Payment Choice

Most SCPC respondents complete the companion survey instrument, the Diary of Consumer Payment Choice (Greene and Schuh 2017). 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 collection methods, estimates from the two surveys should not be compared directly. Reports and data for the 2016 DCPC are available on the Boston Fed website at <https://www.bostonfed.org/publications/diary-of-consumer-payment-choice/2016-diary.aspx>; the 2017 DCPC results are forthcoming.

B. Questionnaire changes

As noted above, in 2017 questions about cash holdings were moved to the DCPC and will be reported in the 2017 DCPC summary results (forthcoming). Some special questions related to security (described above), which had been asked in previous years, were included in the SCPC 2016. These questions were not asked in 2017, because earlier experience showed that the answers change little from one year to the next. Questions about international remittances and holdings of virtual currency were moved to the DCPC.

For details about questionnaire changes, see the technical appendix (Angrisani, Foster, and Hitczenko, forthcoming).

X. Conclusions

Consistently over the past decade, U.S. consumers have mostly used debit cards, cash, and credit cards when making payments. Payment trends have remained stable over the long term despite changes in technology, demonstrating that consumers adapt slowly to new offerings and that their preferences do not change a great deal over time. Online purchases rose to an

average of 8 percent of each consumer's total transactions in 2017, a statistically significant increase compared to the findings from 2015. More than half of U.S. consumers had six or more payment instruments in 2017, and the median credit card adopter owned three credit cards, so consumers had many choices when it was time to pay.

XI. 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.

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 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 pre-authorized 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 via a mobile phone, either by accessing the bank's web page on one's mobile phone, via text messaging, by reading emails from the bank, or by using a downloadable app on one's mobile phone.
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 via a bank's website to perform such actions as viewing account balances, transferring funds between accounts, or paying bills electronically.
Savings account	Savings accounts allow 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 account by calling a phone number that the bank has provided. Customers interact with the system using voice commands, by using the phone's numeric keypad, or by speaking with a customer service representative.

Definitions Table 2 – Payment Instruments

Concept	Definition
Bank account number payment (BANP)	A payment made by providing one's bank account number to a third party, such as one's employer or a utility company. The number can be given on websites, paper forms, etc.
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 one to make purchases or payments by accessing funds in one's bank account, in addition to allowing access to one's bank accounts through an ATM.
Money order	A type of payment that can be purchased from a bank or other institution and 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. 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 a credit or debit card. 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, and TANF card. 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.
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).

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 check 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 bank account number payment 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, has 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.
Smart phone	Has a smart phone.
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 via bank account deductions, debit card transactions, or credit card charges, or be 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 <i>not</i> made through a retail establishment, such as payments for allowances, paying back a friend, or 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, or for child care, 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. <i>Examples: speed; record keeping; control over payment timing; ease of use; effort to carry, get, or set up; ability to keep or store.</i>
Cost	The COST of using each payment method. <i>Examples: fees, penalties, postage, interest paid or lost, subscriptions or materials raise the cost; cash discounts and rewards (such as frequent flyer miles) reduce the cost.</i>
Getting & setting up	The task of GETTING and SETTING UP each payment method before a consumer can use it. <i>Examples: getting cash at the ATM, length of time to get or set up a credit card, learning to use or install online banking bill pay.</i>
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. <i>Examples: proof of purchase, account balances, spending history, usefulness in correcting errors or dispute resolution, and ease of storage.</i>
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 swiping, signing, or entering a personal identification number.
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, rather than stopping to pay. Examples are EZ-Pass, I-Pass, Smart Lane, and Smart Tag. The payment can be made from a bank account, 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.

Concept	Definition
Key fob	A contactless payment technology that attaches to a key chain. 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 that 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, for instance.
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 cash back (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) and/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.
Virtual currency	Virtual or digital currencies exist online and are different from U.S. dollars (\$), the euro (€), or other official foreign currencies. They are sometimes called cryptocurrencies

XII. Consumer Payments Research Center Board of Advisors, 2017

Barbara Bennett (joined 2009)

Federal Reserve System

Debbie Bianucci (2013)

Bank Administration Institute

Ron Borzekowski (2016)

Consumer Financial Protection Bureau

Andrew Caplin (2009)

New York University

Christopher Carroll (2014)

Johns Hopkins University

Bob Chakravorti (2012)

Karyen Chu (2016)

Federal Deposit Insurance Corporation

Richard Curtin (2009)

University of Michigan

Laura Erhard (2017)

Bureau of Labor Statistics

Janet Estep (2013)

NACHA

Geoffrey Gerdes (2009)

Federal Reserve Board

Ray Graber (2013)

Graber Associates

Chad Harper (2009 and 2015)

Federal Reserve Bank of Richmond

Fumiko Hayashi (2009)

Federal Reserve Bank of Kansas City

Tony Hayes (2013)

Oliver Wyman

Robert Hunt (2013)

Federal Reserve Bank of Philadelphia

Kim P. Huynh (2013)

Bank of Canada

Beth Kiser (2017)

Federal Reserve Board

Dan Latimore (2017)

Celent

Dan Littman (2009)

Federal Reserve Bank of Cleveland

May Liu (2011)

Federal Reserve Board

Leon Majors (2009)

ESP/Phoenix Consulting

Bill McCracken (2009)

Synergistics Research

Aaron McPherson (2009)

Mercator Advisory Group

Kevin Moore (2015)

Federal Reserve Board

Steve Mott (2010)

BetterBuyDesign

Max Schmeiser (2015)

Amazon Lending

Martha Starr (2009)

American University

Wilbert van der Klaauw (2016)

Federal Reserve Bank of New York

Joe Waring (2017)

MasterCard Advisors

Martin Weiderstrand (2010)

Ikea

Tom Welander (2009)

Welander Analytics

Jane Yao (2009)

American Bankers Association

Jay Zagorsky (2010)

Ohio State University

Former CPRC Advisors

Carlos Arango (2009–2010)

Bank of Canada

Paul Bauer (2009)

Federal Reserve Bank of Cleveland

Marla Blow (2013–2014)

Consumer Financial Protection Bureau

Peter Burns (2009–2012)

Federal Reserve Bank of Philadelphia
(retired)

Jeff Carter (2009)

MIT Media Lab

David Evans (2011–2016)

Market Platform Dynamics

Dave Humphrey (2009–2014)

Florida State University

Peter Ireland (2009)

Boston College

Roger Johnston (2010–2016)

Fiserv

Beth Klee (2009)

Federal Reserve Board

Rich Oliver (2009–2011)

Federal Reserve Bank of Atlanta

William Roberds (2011–2012)

Federal Reserve Bank of Atlanta

Jay Ryan (2013–2014)

Bureau of Labor Statistics

John Sabelhaus (2012–2015)

Federal Reserve Board

Adam Safir (2014–2017)

Bureau of Labor Statistics

Peter Shortall (2013–2017)

MasterCard Advisors

Geoffrey Thomas (2011–2012)

Citizens Bank

Chris Van Steenberg (2013–2015)

Citizens Bank

Adrienne Wells (2009–2010)

Federal Reserve Bank of Atlanta

XIII. References

Angrisani, Marco, Kevin Foster, and Marcin Hitczenko. Forthcoming. "The 2016 and 2017 Surveys of Consumer Payment Choice: Technical Appendix." Federal Reserve Bank of Boston Research Data Reports.

Briglevics, Tamás, and Oz Shy. 2012. "Why Don't Most Merchants Use Price Discounts to Steer Consumer Payment Choice?" Federal Reserve Bank of Boston Research Department Public Policy Discussion Papers No. 12-9.

Federal Reserve Payments Study: 2017 Annual Supplement.
www.federalreserve.gov/paymentsystems/fr-payments-study.htm

Foster, Kevin, Erik Meijer, Scott Schuh, and Michael A. Zabek. 2009. "The 2008 Survey of Consumer Payment Choice." Federal Reserve Bank of Boston Research Department Public Policy Discussion Papers No. 09-10.

Foster, Kevin, Erik Meijer, Scott Schuh, and Michael A. Zabek. 2011. "The 2009 Survey of Consumer Payment Choice." Federal Reserve Bank of Boston Research Department Public Policy Discussion Papers No. 11-1.

Foster, Kevin, Scott Schuh, and Hanbing Zhang. 2013. "The 2010 Survey of Consumer Payment Choice." Federal Reserve Bank of Boston Research Data Reports No. 13-2.

Greene, Claire, and Scott Schuh. 2017. "The 2016 Diary of Consumer Payment Choice." Federal Reserve Bank of Boston Research Data Reports No. 17-7.

Greene, Claire, Shaun O'Brien, and Scott Schuh. 2017. "U.S. Consumer Cash Use, 2012–2015: An Introduction to the Diary of Consumer Payment Choice." Federal Reserve Bank of Boston Research Data Reports No. 17-6.

Greene, Claire, Scott Schuh, and Joanna Stavins. 2016. "The 2014 Survey of Consumer Payment Choice: Summary Results." Federal Reserve Bank of Boston Research Data Reports No. 16-3.

Greene, Claire, Scott Schuh, and Joanna Stavins. 2017. "The 2015 Survey of Consumer Payment Choice: Summary Results." Federal Reserve Bank of Boston Research Data Reports No. 17-3.

Schuh, Scott, and Joanna Stavins. 2013. "How Consumers Pay: Adoption and Use of Payments." 2013. *Accounting and Finance Research* 2(2): 1–21.

Schuh, Scott, and Joanna Stavins. 2014. "The 2011 and 2012 Surveys of Consumer Payment Choice." Federal Reserve Bank of Boston Research Data Reports No. 14-1.

Schuh, Scott, and Joanna Stavins. 2015. "The 2013 Survey of Consumer Payment Choice: Summary Results." Federal Reserve Bank of Boston Research Data Reports No. 15-4.

Schuh, Scott. 2017. "Measuring Consumer Expenditures with Payment Diaries." Federal Reserve Bank of Boston Research Department Working Papers No. 17-2.

Shy, Oz, and Joanna Stavins. 2014. "Merchant Steering of Consumer Payment Choice: Evidence from a 2012 Diary Survey Merchant Steering of Consumer Payment Choice: Evidence from a 2012 Diary Survey." Federal Reserve Bank of Boston Research Department Working Papers No. 14-1.

2016 and 2017 SCPC Tables

Adoption of Accounts and Payment Instruments

Table 1	Ownership of Accounts and Adoption of Account Access Technologies
Table 2	Reasons for Nonadoption of Checking Accounts
Table 3	Adoption of Payment Instruments

Cash and Account Management

Table 4	Cash and Account Balances
Table 5	Cash Withdrawals

Incidence of Use of Accounts and Payment Instruments

Table 6	Share of Consumers Using Payment Instruments
Table 7	Share of Consumers Making a Transaction, by Type of Transaction

Frequency of Use of Payment Instruments

Table 8	Consumer Payments in a Typical Month, by Payment Instrument
Table 9	Consumer Payments in a Typical Month, by Type of Payment Transaction
Table 10	Consumer Payments in a Typical Month, by Payment Instrument and Type of Transaction
Table 11	Use of Credit Card Debt

Loss, Theft, or Fraud

Table 12	Loss, Theft, or Fraudulent Use of Payment Instruments
----------	---

Assessments

Table 13	Assessments of Payment Instruments
----------	------------------------------------

Household Characteristics

Table 14	Income and Labor Force Status
Table 15	Demographics and Homeownership

Notes to the SCPC Tables

Numeric superscripts in tables correspond to the notes listed below. Extra footnotes on each table are otherwise indicated by a symbol and explained below the table. For definitions of concepts in these tables please refer to **Section XI, Definitions of Concepts**.

Footnote	Description
----------	-------------

General

- | | |
|---|---|
| 1 | The em-dash notation (—) indicates that the estimate is not available, often because the related survey question was not asked in the associated year [applies to Tables 4, 5, 10, 11]. |
| 2 | Numbers may not sum exactly due to rounding or missing values [applies to Tables 2, 4, 8, 9, 10, 11, 12, 14, 15]. |
| 3 | Dollar values are not adjusted for inflation [applies to Tables 4, 5, 11, 12, 14]. |

Adoption

- | | |
|---|--|
| 4 | Adoption of payment instrument means the consumer had the instrument, with the following exceptions:

a. For cash, adoption means the consumer used the instrument in the given year, held it on person, held it on property, or obtained it at least once in the past 12 months [applies to Table 3].

b. For money order, bank account number payment, direct deduction from income, and mobile payments, adoption means the consumer used the instrument or method in a given year [applies to Table 3].

c. For online banking bill payment, adoption means the consumer signed up for online banking bill pay at a bank's website [applies to Table 3]. |
| 5 | Mobile banking adoption is defined as having downloaded a mobile banking app [applies to Table 1]. |

Other

- | | |
|---|--|
| 6 | The notation "s" indicates that the cell was suppressed due to an insufficient number of observations [applies to Table 12]. |
|---|--|

Table 1**Ownership of Accounts and Adoption of Account Access Technologies**

Percentage of consumers

	2015	2016	2017
Deposit and payment accounts.....	93.0	93.7	93.6
Bank deposit accounts*.....	91.8	92.1	92.3
Checking.....	91.1	90.7	90.8
Savings.....	73.3	71.9	73.4
Nonbank payment accounts.....	48.8	43.3	44.9
PayPal.....	42.9	40.0	41.1
Other nonbank payment services†.....	14.9	11.9	13.4
Mobile apps or online accounts‡.....	40.4	41.8	52.1
Deposit account access technologies.....	83.4	82.7	85.9
ATM card (no debit feature).....	34.2	30.1	33.8
Telephone banking.....	38.6	37.9	40.0
Online banking.....	71.4	72.2	75.6
Mobile banking.....	45.0	44.1	51.5

* "Bank" is defined as any institution that accepts deposits and offers checking accounts or savings accounts, including regular or internet-based commercial banks, credit unions, and savings and loans. Some checking accounts pay interest on deposits and may be called money market checking accounts.

† Includes Amazon Payments and Google Checkout.

‡ Includes mobile banking apps issued by banks, Android Pay, Apple Pay, Google Wallet, Amazon Payments, Samsung Pay, Square Cash, Dash, Facebook Messenger, iTunes, LevelUp, PopMoney, Venmo, and Zelle.

Notes: 5.

Table 2**Reasons for Nonadoption of Checking Accounts**

Percentage of nonadopters

	2015	2016	2017
I don't write enough checks to make it worthwhile.....	16.0	25.3	24.3
The minimum balance is too high.....	3.9	6.4	5.0
I don't like dealing with banks.....	28.6	26.3	22.9
The fees and service charges are too high.....	16.7	10.8	10.4
No bank has convenient hours or location.....	0.3	1.6	5.4
No bank will give me a checking account.....	18.6	6.4	2.1
Other.....	15.9	23.2	29.8

Notes: 2.

Table 3**Adoption of Payment Instruments**

Percentage of consumers

	2015	2016	2017
Paper instruments.....	100.0	100.0	100.0
Cash.....	99.7	99.8	99.8
Check.....	82.2	77.5	78.1
Money order.....	20.2	26.9	19.0
Payment cards.....	96.9	97.2	96.6
Debit.....	80.8	81.1	81.4
Number of debit cards per consumer.....	1.4	1.2	1.2
Credit or charge*.....	76.9	75.0	76.6
Number of credit or charge cards per consumer.....	3.1	2.8	2.9
Prepaid.....	60.8	54.3	52.2
Number of prepaid cards per consumer.....	1.9	1.3	1.2
Electronic payments.....	78.0	77.2	77.7
Online banking bill payment.....	49.6	47.9	50.7
Bank account number payment.....	66.0	63.9	62.7
Direct deduction from income.....	16.0	15.7	17.0
Virtual currency.....	0.6	0.4	0.7
Mobile phone payments.....	25.3	22.1	34.4

* The estimate is calculated slightly differently in 2017 compared to previous years. This is due to a small change in the conditional skip logic in the survey questionnaire.

Notes: 4.

Table 4**Cash and Account Balances**

Dollars per consumer

	Mean			Median		
	2015	2016	2017*	2015	2016	2017*
Cash holdings	364	361	—	54	59	—
On person.....	71	70	—	25	24	—
On property.....	293	291	—	5	9	—
Excluding large-value holdings†.....	202	219	—	52	56	—
On person.....	66	61	—	24	22	—
On property.....	137	158	—	4	6	—
Checking account balances						
Primary checking account.....	4,034	4,018	—	492	527	—
Secondary checking account.....	1,973	2,511	—	0	0	—

* The questions for 2017 were moved to the Diary of Consumer Payment Choice, and the results will be reported in those tables.

† Large-value holdings are values greater than the 98th percentile of all observations. Estimates are for the sub-sample of respondents with total cash holdings of less than or equal to the 98th percentile.

Notes: 1, 2, 3.

Table 5**Cash Withdrawals**

Dollars per consumer, except as noted

Total, per month	Median		
	2015	2016	2017*
Cash withdrawals per month†	238	200	—
Amount per withdrawal.....	60	60	—
Number of withdrawals per month.....	3	3	—
Most frequented location per month	179	172	—
Amount per withdrawal.....	57	59	—
Number of withdrawals per month.....	2	2	—
All other locations per month	0	3	—
Amount per withdrawal.....	0	5	—
Number of withdrawals per month.....	0	0	—

* The questions for 2017 were moved to the Diary of Consumer Payment Choice, and the results will be reported in those tables.

† Cash withdrawals per month are calculated by multiplying the amount per withdrawal times the number of withdrawals for most frequent location for getting cash, multiplying the same for all other locations of getting cash, and adding the two products.

Notes: 1, 3.

Table 6**Share of Consumers Using Payment Instruments**

Percentage of consumers

	Monthly			Annual		
	2015	2016	2017	2015	2016	2017
Paper instruments.....	91.2	91.0	90.3	93.1	92.6	91.8
Cash.....	85.7	84.1	84.4	88.6	86.8	86.8
Check.....	56.2	54.7	51.8	64.2	61.7	59.6
Money order.....	8.5	7.9	8.7	11.0	10.2	10.7
Payment cards.....	87.6	88.1	89.4	88.9	88.7	90.0
Debit.....	65.4	65.2	63.8	67.3	66.2	65.6
Credit or charge.....	59.7	56.9	60.2	63.2	59.8	63.0
Prepaid.....	13.2	15.2	15.9	17.2	17.9	20.1
Electronic payments.....	69.5	68.3	67.5	72.7	70.3	69.6
Online banking bill payment.....	32.7	32.2	33.0	34.8	33.4	34.5
Bank account number payment.....	60.2	60.0	59.1	66.0	63.9	62.7
Direct deduction from income.....	15.3	14.4	15.2	15.8	15.3	16.4

Table 7**Share of Consumers Making a Transaction, by Type of Transaction**

Percentage of consumers

	Monthly			Annual		
	2015	2016	2017	2015	2016	2017
Any transaction.....	97.2	97.5	97.1	97.2	97.5	97.2
Bill payments.....	93.0	94.4	93.6	93.4	94.8	94.5
Automatic.....	60.6	59.8	58.6	60.7	60.5	59.2
Online.....	72.3	70.5	72.9	74.9	74.0	76.4
In person, by mail, or by phone.....	74.8	76.5	73.8	79.8	81.0	78.9
Nonbill payments.....	96.2	96.0	95.3	96.3	96.3	95.7
Retail goods.....	92.6	92.3	92.0	93.2	93.0	92.9
Services.....	89.8	88.5	87.5	91.8	90.3	90.2
Online or electronic.....	54.3	58.0	59.9	65.4	66.6	68.8
Person to person.....	48.0	46.1	42.8	62.4	58.3	54.5

Table 8**Consumer Payments in a Typical Month, by Payment Instrument**

Number and share of payments

Number per consumer (mean)	2015	2016	2017	Growth rate (%)	
				15–16	16–17
Total payments.....	68.9	67.8	69.6	-1.7	2.7
Paper instruments.....	23.5	23.3	23.4	-1.1	0.6
Cash.....	18.7	18.4	19.1	-1.5	3.7
Check.....	4.5	4.5	3.9	0.6	-13.0
Money order.....	0.4	0.4	0.4	-1.0	9.2
Payment cards.....	38.2	37.7	39.7	-1.2	5.3
Debit.....	22.4	21.8	22.1	-2.8	1.7
Credit or charge.....	14.7	14.5	16.1	-0.9	10.9
Prepaid.....	1.1	1.4	1.5	25.7	4.1
Electronic payments.....	6.6	6.2	5.8	-6.2	-6.7
Online banking bill payment.....	2.8	2.7	2.4	-1.8	-13.8
Bank account number payment.....	3.8	3.5	3.4	-9.5	-1.1
Direct deduction from income.....	0.6	0.6	0.6	-1.8	16.9
Percentage share				Change	
Total payments.....	100.0	100.0	100.0	—	—
Paper instruments.....	34.1	34.4	33.6	0.2	-0.7
Cash.....	27.1	27.1	27.4	0.1	0.3
Check.....	6.5	6.7	5.6	0.2	-1.0
Money order.....	0.6	0.6	0.6	0.0	0.0
Payment cards.....	55.4	55.7	57.1	0.2	1.4
Debit.....	32.5	32.1	31.8	-0.4	-0.3
Credit or charge.....	21.3	21.5	23.2	0.2	1.7
Prepaid.....	1.6	2.1	2.1	0.5	0.0
Electronic payments.....	9.6	9.2	8.3	-0.4	-0.8
Online banking bill payment.....	4.0	4.0	3.4	0.0	-0.7
Bank account number payment.....	5.6	5.1	4.9	-0.4	-0.2
Direct deduction from income.....	0.8	0.8	0.9	0.0	0.1

Notes: 2.

Table 9**Consumer Payments in a Typical Month, by Type of Payment Transaction**

Number and share of payments

Number per consumer (mean)	2015	2016	2017	Growth rate (%)	
				15–16	16–17
Total.....	68.9	67.8	69.6	-1.7	2.7
Bill payments.....	20.5	19.9	21.3	-3.2	7.1
Automatic.....	6.8	6.6	6.4	-2.5	-3.5
Online.....	6.4	5.9	6.5	-8.3	11.1
In person, by mail, or by phone.....	7.4	7.4	8.4	0.6	13.3
Nonbill payments.....	48.4	47.9	48.3	-1.0	0.9
Retail goods.....	23.6	23.4	23.3	-0.9	-0.3
Services.....	17.0	16.6	16.3	-2.8	-1.4
Online or electronic.....	4.7	4.7	5.6	-0.4	18.3
Person to person.....	3.0	3.2	3.1	7.3	-4.2
Percentage share				Change	
Total.....	100.0	100.0	100.0	—	—
Bill payments.....	29.8	29.3	30.6	-0.5	1.3
Automatic.....	9.8	9.7	9.1	-0.1	-0.6
Online.....	9.3	8.7	9.4	-0.6	0.7
By mail, in person, or by phone.....	10.7	10.9	12.1	0.2	1.1
Nonbill Payments.....	70.2	70.7	69.4	0.5	-1.3
Retail goods.....	34.3	34.6	33.5	0.3	-1.0
Services.....	24.7	24.4	23.5	-0.3	-1.0
Online or electronic.....	6.9	7.0	8.0	0.1	1.1
Person to person.....	4.3	4.7	4.4	0.4	-0.3

Notes: 2.

Table 10**Consumer Payments in a Typical Month, by Payment Instrument and Type of Transaction**

Number and share of payments

Number per consumer	Bill payments			Nonbill payments					
				Not online*			Online		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Paper instruments.....	4.2	4.3	4.7	18.6	18.3	18.1	0.7	0.7	0.6
Cash.....	2.2	2.2	2.8	16.5	16.2	16.2	—	—	—
Check.....	1.9	1.9	1.7	2.0	2.0	1.7	0.6	0.6	0.5
Money order.....	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1
Payment cards.....	10.2	9.7	10.9	24.5	24.5	24.3	3.5	3.5	4.5
Debit.....	6.3	5.6	6.2	14.2	14.3	13.5	1.9	1.9	2.5
Credit or charge.....	3.6	3.8	4.3	9.7	9.3	10.0	1.3	1.4	1.9
Prepaid.....	0.3	0.4	0.5	0.6	0.8	0.9	0.3	0.2	0.1
Electronic payments.....	5.6	5.3	5.0	0.5	0.4	0.3	0.6	0.5	0.5
Online banking bill payment.....	2.6	2.5	2.2	0.2	0.2	0.1	—	—	—
Bank account number payment.....	3.0	2.7	2.8	0.3	0.2	0.2	0.6	0.5	0.5
Direct deduction from income.....	0.6	0.6	0.6	—	—	—	—	—	—
Percentage share									
Paper instruments.....	6.1	6.3	6.8	27.1	27.0	26.0	1.0	1.0	0.9
Cash.....	3.1	3.3	4.1	23.9	23.8	23.3	—	—	—
Check.....	2.7	2.8	2.5	2.9	3.0	2.4	0.9	0.9	0.7
Money order.....	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1
Payment cards.....	14.8	14.4	15.7	35.6	36.1	35.0	5.0	5.2	6.5
Debit.....	9.1	8.2	8.9	20.6	21.1	19.4	2.7	2.8	3.6
Credit or charge.....	5.3	5.6	6.1	14.1	13.8	14.4	1.9	2.1	2.7
Prepaid.....	0.4	0.6	0.7	0.9	1.2	1.2	0.4	0.3	0.2
Electronic payments.....	8.1	7.8	7.2	0.7	0.6	0.4	0.9	0.7	0.7
Online banking bill payment.....	3.8	3.8	3.2	0.3	0.3	0.2	—	—	—
Bank account number payment.....	4.3	4.0	4.0	0.4	0.3	0.3	0.9	0.7	0.7
Direct deduction from income.....	0.8	0.8	0.9	—	—	—	—	—	—

* *Not online* refers to payments for retail goods, services, and person-to-person payments.

Notes: 1, 2.

Table 11**Use of Credit Card Debt**

Credit card adopters

Percentage	2015	2016	2017
Carried unpaid balance at any time during the past 12 months	59.0	57.3	54.5
Carried unpaid balance last month	53.3	50.9	46.2
Change in unpaid balance since a year ago:*			
Much lower.....	18.4	15.4	17.6
Lower.....	22.1	25.5	23.3
About the same.....	24.6	28.3	24.5
Higher.....	26.8	15.3	20.3
Much higher.....	8.1	8.5	8.0
Did not have balance 12 months ago.....	—	7.1	6.2
Dollar values			
Mean credit card balance unpaid, previous month, all adopters.....	2,840	2,832	2,342
Per adopter with unpaid balance.....	4,816	4,951	4,306
Median credit card balance unpaid, previous month, all adopters.....	186	93	0
Per adopter with unpaid balance.....	1,492	1,912	1,484
Total credit limit on all credit cards owned by adopter.....	19,596	20,499	21,029
During the past 12 months:			
Adopters who carried unpaid balance at any time.....	17,934	19,005	18,919
Adopters who did not carry an unpaid balance at any time.....	22,005	22,549	23,557

* This question is asked to all credit card adopters who indicated that they carried an unpaid balance at some point in the past 12 months.

Notes: 1, 2, 3.

Table 12**Identity Theft, Loss, Theft, or Fraudulent Use of Payment Instruments**

Percentage of consumers or adopters and mean dollar value, in the past 12 months

Percentage of consumers	2015	2016	2017
Incidence of identity theft.....	23.5	24.8	25.2
Myself and someone I know well.....	5.9	5.4	6.6
Someone I know well only.....	11.7	14.7	13.3
Myself only.....	5.8	4.7	5.3
Percentage of adopters			
Incidence of loss, theft or fraud in past 12 months	15.2	12.8	11.2
Cash.....	9.2	7.6	5.0
Check.....	0.9	0.5	0.9
Credit card.....	5.7	4.2	5.2
Debit card.....	5.8	5.1	5.2
Mean dollar value*			
Amount lost or stolen			
Cash.....	153	212	333
Amount of fraudulent charges†			
Check.....	s	s	s
Credit card.....	561	381	268
Debit card.....	283	120	142

* For each payment instrument listed, the value is the average amount for all consumers who experienced loss, theft, or fraud of that instrument over the past 12 months.

† The amount of fraudulent charges may not be the actual amount of the loss borne by consumers. Actual consumer loss depends on the policies of depository institutions and card network agreements.

Notes: 2, 3, 6.

Table 13**Assessments of Payment Instruments**

Rankings*

	Cash	Check	Money order	Debit card	Credit card	Prepaid card	BANP†	OBBP
Acceptance								
2015.....	2	6	7	3	①	4	⑧	5
2016.....	2	6	7	3	①	4	⑧	5
2017.....	3	6	7	2	①	4	⑧	5
Acquisition and setup								
2015.....	①	4	⑧	2	3	5	7	6
2016.....	①	3	⑧	2	4	5	7	6
2017.....	①	4	⑧	2	3	7	6	5
Convenience								
2015.....	3	7	⑧	2	①	5	6	4
2016.....	3	7	⑧	①	2	5	6	4
2017.....	3	7	⑧	2	①	5	6	4
Cost								
2015.....	①	5	7	3	⑧	6	4	2
2016.....	①	5	7	2	⑧	6	4	3
2017.....	①	5	7	2	⑧	6	4	3
Payment records								
2015.....	⑧	5	6	2	①	7	4	3
2016.....	⑧	5	6	2	①	7	4	3
2017.....	⑧	5	6	2	①	7	4	3
Security								
2015.....	7	5	2	4	①	6	⑧	3
2016.....	7	5	①	4	2	6	⑧	3
2017.....	6	5	2	4	①	7	⑧	3

* ① indicates that on average, consumers ranked that payment instrument the highest for a given characteristic. Similarly, ⑧ indicates that on average, consumers ranked that payment lowest. For example, consumers ranked credit cards the highest for Acceptance and lowest for Cost.

† BANP = Bank account number payment, OBBP = Online banking bill payment.

Table 14**Income and Labor Force Status**

Percentage of consumers*

	2015	2016	2017
Household income			
Less than \$25,000.....	21.8	21.1	18.3
\$25,000–\$49,999.....	24.1	23.8	23.4
\$50,000–\$74,999.....	19.2	17.8	19.4
\$75,000–\$99,999.....	11.7	12.0	13.2
\$100,000–\$124,999.....	8.6	10.5	10.2
\$125,000–\$199,999.....	11.0	11.1	11.7
\$200,000–\$499,999.....	2.8	3.4	3.6
\$500,000 or more.....	0.9	0.3	0.2
Respondent income			
Highest in household.....	50.8	50.2	50.0
About equal with highest.....	14.4	14.7	14.2
2nd highest.....	23.9	24.0	25.0
3rd highest or lower.....	10.9	11.1	10.8
Labor force status			
Currently working.....	58.8	59.6	61.7
On sick or other leave.....	0.6	0.5	0.2
Unemployed – on layoff†.....	0.8	0.8	0.5
Unemployed – looking.....	6.1	5.7	4.6
Retired.....	15.5	16.1	15.1
Disabled.....	6.8	6.5	6.3
Other.....	4.4	6.0	5.9
Selected multiple categories.....	6.9	4.8	5.7

* Estimates are weighted. The table of unweighted sample demographics is available upon request.

† The numbers for unemployment differ from the official BLS numbers due to differences between the UAS panel and the BLS in the methodologies for collecting the data and computing the unemployment rate.

Notes: 2, 3.

Table 15**Demographics and Homeownership**

Percentage of consumers, except where noted*

	2015	2016	2017
U.S. Population age 18 or older (millions)†.....	242.6	245.3	246.3
Number of survey respondents.....	1,429	3,404	3,099
Gender			
Male.....	48.2	48.3	48.2
Female.....	51.8	51.7	51.8
Age			
18–24.....	6.7	6.8	5.1
25–34.....	23.3	23.2	24.6
35–44.....	16.4	16.3	16.2
45–54.....	17.7	17.4	17.1
55–64.....	16.7	16.8	17.0
65 and older.....	19.2	19.5	20.1
Race			
White.....	76.3	74.3	74.2
Black.....	13.2	13.3	13.7
Asian.....	4.1	3.1	3.6
Other.....	1.7	2.2	1.4
Ethnicity			
Hispanic or Latino.....	13.2	12.1	11.9
Education			
No high school diploma.....	9.0	7.3	7.0
High school.....	32.8	33.4	33.0
Some college.....	28.3	28.5	28.4
College.....	17.0	17.3	18.0
Post-graduate study.....	13.0	13.4	13.5
Homeownership rate	61.9	66.4	64.4

* Estimates are weighted. The table of unweighted sample demographics is available upon request.

† Source: Haver Analytics. October estimate, Civilian Noninstitutional Population by Sex and Age (A-13), PN18@EMPL + PN20@EMPL

Notes: 2.