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The 2009 Survey of Consumer Payment Choice

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Abstract:

This paper presents results of the 2009 *Survey of Consumer Payment Choice* (SCPC), along with revised 2008 SCPC data. In 2009, the average U.S. consumer held 5.0 of the nine payment instruments available, including cash, and used 3.8 of them during a typical month. Between the 2008 and 2009 surveys, a period that includes the trough of the latest recession, consumers significantly increased their use of cash and close substitutes for cash, such as money orders and prepaid cards. At the same time, consumers reduced their use of credit cards and (to a lesser extent) debit cards, as well as payments made using a bank account number. Weaker economic conditions, new government regulations, and bank pricing of payment card services all likely contributed to the shift back toward cash. However, it is difficult to determine how much each of these factors contributed, and whether the shift is transitory or permanent, without more data and research on consumer payment choice. In 2009, one in three consumers had a prepaid card and nearly as many had a nonbank payment account online, while 3 percent made a mobile payment. The SCPC complements the recently released 2010 Federal Reserve Payment Study, which describes the entire noncash payments economy, by focusing on payments by consumers only.

JEL Classifications: D12, D14, E42

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This paper, which may be revised, is available on the web site of the Federal Reserve Bank of Boston at <http://www.bostonfed.org/economic/ppdp/index.htm>.

Complete and detailed acknowledgments appear on the first page of this paper. The primary authors are responsible for any errors that may remain.

The views expressed in this paper are those of the authors and the Federal Reserve Bank of Boston. They do not necessarily represent the views of the other Federal Reserve Banks, the Board of Governors of the Federal Reserve System, the National Bureau of Economic Research, or the RAND Corporation.

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The first SCPC was developed in 2003 by Boston Fed staff members Marques Benton, Krista Blair, Marianne Crowe, and Scott Schuh, and was implemented with a convenience sample of Bank employees (see Benton, Blair, Crowe, and Schuh 2007). Thanks are due to Boston Fed employees for supporting and participating in that voluntary effort. The second SCPC was implemented in 2004 by the same Boston Fed team with a convenience sample of Federal Reserve System employees. Thanks are due to the System employees for supporting and participating in that voluntary effort.

A limitation of early versions of the SCPC was their reliance on convenience samples of Federal Reserve System employees. In 2006, the AARP and Woelfel Research implemented a revised version of the 2004 SCPC survey instrument with a random sample of U.S. consumers. The CPRC worked closely with the AARP to revise and improve the survey instrument. We thank S. Kathi Brown, Sharon Hermanson, and the rest of the AARP for their contributions to the SCPC program and for providing the data from their 2006 version of the survey.

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I. Executive Summary

The 2009 SCPC is the second in a series of annual studies conducted by the Federal Reserve Bank of Boston to comprehensively estimate and study the cash and noncash payment behavior of U.S. consumers. This study contains estimates of adoption rates, incidences of use, and number of payments per month by consumers for nine common payment instruments: cash, checks, money orders, travelers checks, debit cards, credit cards, prepaid cards, online banking bill payments, and bank account number payments. The study also contains a wide range of estimates of consumer activity related to banking, cash management, and payments, along with a rich set of consumer characteristics. The main findings for 2009 are:

- The average consumer held 5.0 payment instruments and used 3.8 of them during a typical month. Both numbers are slightly lower than in 2008 (5.1 and 4.2, respectively), yet they still reflect broad diversity in consumer adoption of payment instruments associated with the long-run transformation from paper instruments to cards and electronic payments. [Tables 8, 26]
- Fewer consumers held debit and credit cards than in 2008: 77.0 percent had a debit card (down from 80.2 percent) and 72.2 percent had a credit card (down from 78.3 percent). Electronic payment instruments were also popular—48.8 percent had set up online banking bill payment and 56.3 percent had used bank account number payments—but these percentages are also lower than in 2008. The noncash payment instrument still held by the most consumers was checks (85.4 percent). [Table 4]
- The average U.S. consumer made 64.5 payments in a typical month. Debit cards were the most commonly used payment instrument (19.0 payments per month) and cash the second most (18.4). Credit cards (11.2) and checks (8.2) were also commonly used. Most of the remaining payments were made by electronic means, and a small number were made by other means. [Table 20]
- The time between the 2008 and 2009 surveys includes the trough of the latest recession, which was relatively severe. During this time, total consumer payments per month declined by 4.2 percent and consumers shifted toward making more payments by cash and close cash substitutes. Cash payments increased by 26.9 percent; cash holdings and total monthly withdrawals of the average consumer also increased similarly (26.5 percent and 29.2 percent, respectively). At the same time, consumers reduced their

payments by credit card (21.9 percent), bank account number (26.1 percent), check (14.0 percent), and even debit card (10.0 percent). [Tables 20, 9]

- Several factors likely played a role in the shift of consumer payments back toward cash and related instruments. Weaker economic conditions probably encouraged a shift away from credit card payments, for both supply and demand reasons, and perhaps toward cash because it helps some consumers cut costs and improve budgeting. However, changes in government regulations toward credit and debit cards and bank pricing of payment card services during 2008–2009 may have contributed as well. Consumers’ assessments about the security of electronic payments worsened too.
- At this time, it is very difficult to assess how much each factor contributed to the shift back toward cash, and whether the shift will be transitory or permanent. However, the fact that consumers continue to tend to rate cash highest in virtually every payment characteristic (acceptance, convenience, cost, and security) suggests that consumer demand for cash is unlikely to disappear any time soon. [Tables 28A, 28B]
- Nevertheless, signs of the ongoing long-term transformation of payments from paper instruments to cards and electronics remain evident. About one in three consumers (32.3 percent) had at least one of the many forms of prepaid card, and nearly as many (30.0 percent) had a nonbank payment account, such as PayPal or Google Checkout. Mobile payments also gained a foothold in the United States, with 3.0 percent of consumers making one in the past 12 months. [Tables 1, 4, and 13]

The 2010 SCPC was conducted in 2010:Q4 with approximately 2,000 respondents, including panelists who also participated in the 2008 and 2009 surveys. In October 2010, the Consumer Payments Research Center (CPRC), which develops and manages the SCPC, also conducted a pilot study of daily consumer payments using a new *Diary of Consumer Payment Choice* (DCPC). Results of the 2010 SCPC and DCPC will be published later in 2011. These results will provide evidence on how permanent the consumer shift toward cash payments in 2009 is likely to be, as well as insights into the effects on consumer payment choice of recent policy interventions in payment card markets.

II. Introduction

The 2009 *Survey of Consumer Payment Choice* (SCPC) provides an improved and expanded snapshot of the payment choices of U.S. consumers. Together with revised data from the 2008 SCPC, the surveys also measure changes in consumer payment choices over time, in this instance around the trough of a severe recession. The SCPC reveals that, from late 2008 to late 2009, U.S. consumers significantly increased the number of payments they made using cash and close substitutes for cash payments. Whether this consumer shift toward cash payments was a transitory response to business cycle conditions or a more permanent response to other factors, such as new government policies toward payment cards, cannot be determined at this point without more data and research. The 2010 SCPC, scheduled for publication later in 2011, should cast additional light on these issues.

The SCPC is produced by the Consumer Payments Research Center (CPRC) of the Federal Reserve Bank of Boston. It is an effort to develop nationally representative, high-quality, timely, comprehensive, and publicly available data on consumer payment behavior. The survey measures the adoption and use of nine common methods, or payment “instruments,” by which U.S. consumers initiate payment, including cash. It also measures related consumer banking and payment practices. In October 2010, the CPRC implemented a pilot version of a new *Diary of Consumer Payment Choice* (DCPC), which will complement the SCPC by tracking the daily payments of U.S. consumers.¹ Results of the DCPC pilot will also be published later in 2011.

The primary purpose of this paper, like that of its predecessor (Foster, Meijer, Schuh, and Zabek 2009), is to publish and document the aggregate statistics obtained from the 2009 SCPC and compare them with those of the revised 2008 SCPC. The statistics appear in a series of tables later in this paper. More detailed supporting documents and information, including the survey itself and tables of standard errors, may be obtained from the Consumer Payments Research Center (CPRC) at the Federal Reserve Bank of Boston.² A secondary purpose of this

¹ The Federal Reserve Banks of San Francisco and Richmond co-sponsored the DCPC pilot; the Board of Governors of the Federal Reserve System also provided technical assistance.

² For more information about the CPRC and SCPC, visit <http://www.bostonfed.org/economic/cprc/index.htm>.

paper is to provide a high-level, nontechnical interpretation of the key results for general readership. We discuss the most salient facts for 2009 and provide an economic assessment of how the results fit into the long-run transformation of consumer payments from paper-based instruments to payment cards and electronic payments over the last three decades. This year, for the first time, we also provide an economic interpretation of the annual change in consumer payment behavior during 2008–2009.

Because the SCPC is in the early stages of development, it is important for readers and users of the SCPC data to be aware of two details about the survey program. First, the measurement of consumer payment choice is a relatively new field of economic statistics, so the survey itself is undergoing continual modification to improve the measurement and data. As a result, some of the 2008 estimates are not comparable with the 2009 estimates for the same concept. In these cases, the 2008 estimate is shown in *italics*. Furthermore, the changes between concepts that are not comparable and therefore not valid are indicated by dashes. Second, the calendar timing of the 2008 and 2009 SCPC is crucial to the interpretation of the results. The surveys are conducted in the fourth quarter of each year and do not represent the full calendar year. So, the 2008 and 2009 surveys were conducted in the wake of a financial crisis and following the trough of a major economic recession, both of which almost surely influenced consumer payment behavior.

Once again, the RAND Corporation administered the internet-based SCPC in 2009 to a sample of more than 2,000 U.S. consumers—twice as many as in 2008. About 40 percent of the 2009 SCPC respondents also took the 2008 SCPC, and these continuing SCPC participants will be used to construct a longitudinal panel of consumers for research purposes. Individual consumer responses from the 2008 SCPC are available to the public on the CPRC web site, and the individual responses from the 2009 SCPC will be released to the public later in 2011.

The 2009 SCPC statistics released in this paper are preliminary; both 2008 and 2009 statistics are subject to revision. Missing values due to item nonresponse have been excluded from the calculation of certain statistics in the tables rather than imputed. As a result, some statistics that should equal the sum of other statistics in theory may differ from the actual sum

of their components reported in the tables. Further evaluation and imputation of the data are likely, in which case the statistics reported in this document will be revised.

III. Overview of Methodology

The 2009 SCPC was administered online to a random sample of 2,173 U.S. consumers by the RAND Corporation as a module of the American Life Panel (ALP). Survey responses were weighted to match national population estimates from the Census Bureau's *Current Population Survey*. Each year, the SCPC is fielded in the fourth quarter (roughly October through December). Thus, the SCPC results for a particular year represent data for a "typical month" reported at the end of the year, rather than data for the entire calendar year. Changes in SCPC data from 2008 to 2009 are best interpreted as changes over the four quarters from 2008:Q4 to 2009:Q4, as discussed in more detail in Section V.

The size of the 2009 SCPC sample was more than double that of the 2008 SCPC sample (1,010), yielding greater precision in the more recent survey. The ALP is an access panel that recruits participants from other survey programs and pays them small stipends to complete surveys. The SCPC participants primarily came from the *Michigan Survey of Consumers*, with a substantial addition of respondents from the *Stanford Face-to-Face Recruited Internet Survey Platform* (FFRISP) in 2009. Michigan randomly selects U.S. consumers using telephone random digit dialing (RDD), whereas the Stanford sample was obtained with a multistage method based on address lists.³

Most 2008 respondents also completed the 2009 survey, but there are more than 1,000 new respondents in 2009. Data from the 876 continuing respondents will be used to begin building a longitudinal panel that will continue in 2010 as well. The SCPC longitudinal panel will offer data and research opportunities that are not available from any other source. Comparisons between two subsamples from 2009—the longitudinal panels that also responded

³ For more information about the ALP sample composition, see https://mmicdata.rand.org/alp/index.php/Sample_composition. For more information about the *Michigan Survey of Consumers* see <http://www.sca.isr.umich.edu/>. The Stanford FFRISP was supported by NSF Grant 0619956. For more information about FFRISP, see Yeager, Larson, Krosnick, and Thompson (2011) and Yeager and Krosnick (2010).

in 2008, and the new 2009 respondents—offers researchers the possibility of identifying the effects of prior survey experience (learning) on survey responses.

The SCPC was developed by the Consumer Payments Research Center (CPRC) and administered online by RAND with respondents viewing it using a computer or Web TV.⁴ On average, it took respondents about one-half hour to complete. Survey responses were reviewed and tabulated by the CPRC in consultation with RAND. To the extent possible, the CPRC verified the average Survey responses, and in some cases the Survey response distributions, by comparing them with actual transactions data from depository institutions and payments companies (where available) or with other consumer payment surveys. A very small number of outlier responses were replaced with values representing the mean responses of consumers with similar demographic characteristics. See **Appendix B** for more details about the survey methodology underlying the 2008 and 2009 SCPC.

IV. Changes in Content

This section briefly summarizes the changes to the economic definitions and scope of the SCPC questionnaire. The 2009 SCPC is the second in a series of annual studies conducted by the Federal Reserve Bank of Boston to comprehensively estimate and study the cash and noncash payment behavior of U.S. consumers, and the fifth version overall.⁵ The 2009 survey is very similar to its 2008 predecessor (see Foster, Meijer, Schuh, and Zabek 2009), except for some important improvements in the economic definitions and scope of the questionnaire. The field of consumer payment surveys is relatively new and there are many unresolved questions about definitions and methodology, so there are benefits to making ongoing improvements. However, an important objective is to estimate changes in U.S. consumer payment behavior (trends). Since survey changes are costly because they disrupt the comparability of data over time, the SCPC attempts to balance the benefits of survey improvements with the cost of survey changes.

⁴ For copies of the questionnaire, go to <http://www.bostonfed.org/economic/cprc/scpc/index.htm>.

⁵ For more information about the 2003–2004 SCPC, see Benton, Blair, Crowe, and Schuh (2007). For more information about the 2006 version of the survey, see AARP and Woelfel Research (2007), which implemented a modified version of the earlier surveys with assistance from the Boston Fed.

Because a payment instrument is the central concept in the SCPC and in its measurement of consumer payment behavior, the most important change to the questionnaire in 2009 was an improvement in its definition of electronic payments. First, electronic payment instruments were defined as intangible vehicles that consumers use to initiate or authorize payments. Therefore, because they are tangible physical objects, payment cards, which are usually made of plastic, are not called electronic payments even though the payment is cleared over electronic networks.⁶ Second, the 2008 payment instrument “electronic bank account deduction” (EBAD) was redefined and renamed in 2009 as “bank account number payment” (BANP).

There were two reasons for the latter change. First, the EBAD terminology was potentially unclear, especially for sophisticated consumers who may have thought about how payments clear and may have mistakenly considered a debit card payment an EBAD. Second, the term BANP emphasizes more clearly the fact that the consumer is using and disclosing his or her bank account number (possibly both the bank routing number and the actual account number) to a third party when using this payment method. Thus, BANP is distinctly different from online banking bill payment (OBBP), which is initiated from inside the bank’s online banking firewall and does not require disclosure of personal account information to a third party. Consumers can initiate BANP automatically by pre-authorizing a recurring payment, such as a monthly bill, or by authorizing a one-time, non-recurring payment, which can be made at the web site of a company to pay a bill or for an internet purchase. Both types of authorization can occur in one of several ways—in writing, by telephone, or online.

A number of additional improvements were made to the design and methodology of the questionnaire in 2009. The main changes pertained to:

⁶ In contrast, the *Federal Reserve Payment Studies* (FRPS) classify payment cards as electronic payments. The difference in treatment arises because the SCPC and FRPS approach the measurement of payments from opposite sides of the market. The FRPS looks at payments from the supply side (banks and other payment service providers) and hence focuses on the type of payment network. The SCPC looks at payments from the demand side (consumers) and hence focuses on the type of instrument used to make the payment. For most consumers, it seems more natural to think of payment cards as “plastic” rather than “electronic.”

- *Bank and payment accounts* – Savings account and bank account access definitions were expanded. Holdings of online payment service provider (OPSP) accounts were added (see Section IX for more details).
- *Payment instruments* – The nine instruments are the same, but improvements were made to the treatment of several of them.⁷ Use of cash was enhanced to clarify cash adoption; having blank checks was added to properly define check adoption (as distinct from checking account adoption); and credit card and prepaid card categories were revised and expanded to clarify and enhance the concept of adoption of those cards. The concept bank account number payments (BANP) was modified, as described earlier.
- *Cash withdrawals* – Consumers were asked to specify the number and frequency of cash withdrawals in the primary place that they withdraw cash, as well as all other locations. Additionally, the definition of locations where consumers can withdraw cash was clarified.
- *Mobile banking and payments* – Several questions were added or revised to better measure and track emerging developments in this area. Cell phone adoption is new, and adoption and use of mobile banking activity has been improved. Incidence of mobile payments by contactless and text/SMS methods is now included.
- *Use of payment instruments* – The section of the survey measuring how consumers use their payment instruments was expanded and revised in several ways. The categories of payment transactions made in person were changed to better identify person-to-person (P2P) payments. The number and types of payment instruments accepted in each transaction category were expanded to better match actual market conditions. The incidence of use of nondurable payment instruments like cash was added to improve the concept of adoption.

⁷ The case for expanding the number of payment instruments strengthened in 2009, for at least two reasons. First, prepaid cards are becoming more widespread and diverse. Second, the emergence of mobile payments raises questions about the nature and definition of payment instruments as distinct from other payment methods, venues, networks, and technologies that involve the instruments.

- *Characteristics of payment instruments* – Because of significant expansion in other areas of the survey (especially adoption and use of bank accounts and payments instruments), the number of characteristics was reduced from eight to four to meet the survey time limit. Five of the payment characteristics consumers were asked about in 2008 concerned various aspects of convenience; these were replaced with one catchall characteristic called “convenience.”

For complete details about all of the survey changes between 2008 and 2009, see **Appendix C**. To obtain the actual questionnaires for 2008 and 2009, go to the CPRC web site.⁸

V. Summary of Key Results

Explanation of Tables

Tables 1–32 provide an extensive set of detailed results from most of the questions in the SCPC for all U.S. consumers.⁹ The tables are grouped into four categories:

- Adoption of bank or payment accounts and payment instruments (Tables 1–12)
- Use of payment instruments, by incidence and frequency (Tables 13–26)
- Characteristics of payment instruments (Tables 27–28)
- Consumer demographics and miscellaneous concepts (Tables 29–32)

Each table contains a column (or several columns) of estimates for 2008 (based on 1,010 observations) and a column (or several columns) of estimates for 2009 (based on 2,173 observations). Where reasonable, the tables include a column of estimated changes from 2008 to 2009. Estimates are intended to represent the domestic, noninstitutional population of U.S. consumers. However, for technical reasons related to limitations in survey design and methodology, we recommend that readers do not convert the estimates in these tables into numbers for the entire U.S. economy by multiplying them by an estimate of the population. For more details about this issue, see **Appendix D**.

⁸ Go to <http://www.bostonfed.org/economic/cprc/scpc/index.htm>.

⁹ For an analysis of these results by consumer demographic characteristics, see Mann (2011).

Readers should be aware of some special notation in the tables. The notation “na” indicates that the estimate is not available. Numbers in *italics* in 2008 indicate estimates that are not comparable to the 2009 estimates as a result of changes in the survey. In rows where these italicized estimates appear, the change (if reported) is suppressed with a hyphen (–) to remind the reader that the change is not valid.

Consumer Payments in 2009

In 2009, U.S. consumers continued to have nine common payment instruments to choose from: four types of paper instruments—cash, check, money order, and travelers check; three types of payment cards—debit, credit, and prepaid; and two electronic instruments—online banking bill payments (OBBP) and bank account number payments (BANP).¹⁰ The average consumer held 5.0 of these nine instruments and used 3.8 of those instruments in a typical month. Some consumers (2.5 percent) held eight or more instruments. The diversity of consumer holdings of payment instruments reflects the ongoing, long-term transformation from paper instruments to cards and electronics.

Most consumers (93.6 percent) have at least one bank account—either checking (91.8 percent) or savings (76.3 percent)—that allows them to fund payments using these payment instruments.¹¹ Consumers with a bank account held 5.2 payment instruments. Having a bank account is a necessary precondition for having several of the payment instruments, such as a debit card or OBBP, and consumers without a bank account held only 2.2 payment instruments. Nearly one in three consumers (30.0 percent) had a nonbank payment account, such as PayPal or Google Checkout. Essentially all of these payment account holders also had a bank account.

¹⁰ BANP is new terminology in 2009 that replaces Electronic Bank Account Deductions (EBAD) used in 2008.

¹¹ The SCPC estimate of the “unbanked” (6.4 percent of consumers) is comparable to the analogous estimate from the more comprehensive *Survey of Consumer Finance* (see Section VII for more on the SCF). However, the SCPC and SCF may not completely reach certain hard-to-identify segments of the population such as the homeless and illegal aliens, so the actual percentage of unbanked consumers is likely to be higher. Note also that the SCF measures households and the SCPC measures individual consumers. For more information on the unbanked, see <http://www.fdic.gov/householdsurvey/>.

Consumer adoption of individual payment instruments varied widely in 2009, as shown in Figure 1. Adoption of some form of paper instrument is essentially universal. Cash is assumed to be held or used by all consumers.¹² The most widely held noncash payment instrument in 2009 was still paper checks, as 85.4 percent of consumers had blank checks or had used a check in the past 12 months. Interestingly, 6.4 percent of consumers had a checking account but did not have any blank checks. This share of those who have checking accounts but do not have blank paper checks, which was estimated for the first time in 2009, may grow as check use continues to decline. More than one in five consumers used a money order in 2009.

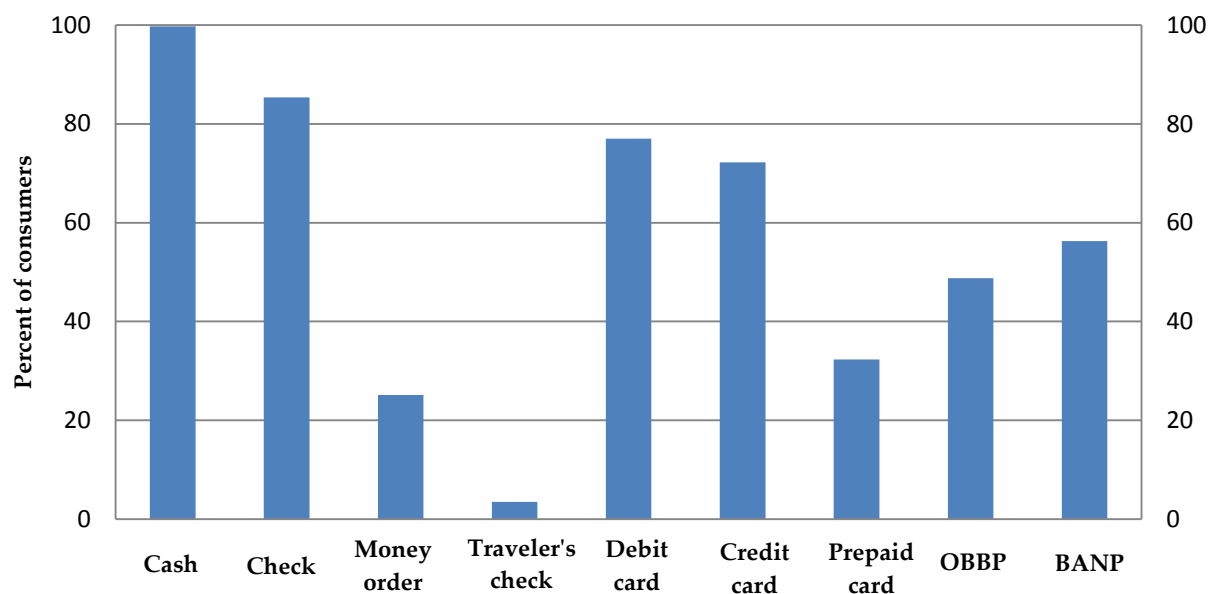


Figure 1: Adoption of Payment Instruments, 2009

Source: 2009 Survey of Consumer Payment Choice, Table 4.

Notes: Cash adoption is 100 percent by assumption; estimated cash adoption is 99.8 percent.

Most cash was held by relatively few consumers. The average consumer held \$291 in cash in 2009; only \$69 was held on his or her person (in a pocket, purse, or wallet), most likely for daily transactions.¹³ However, the median consumer held only \$78 in cash (both in person

¹² The estimated rate of cash adoption is 99.8 percent.

¹³ Of course, not all cash held by consumers is for payments. Some cash may be held as precautionary saving or even as a store of value (investment) in periods where deflation may be expected. The average amount of cash held by consumers on their property (\$229 in 2009) probably is held for unexpected payments or as precautionary saving.

and on property). This large difference between average and median cash holdings suggests that a relatively small number of consumers hold unusually large amounts of cash. The average consumer withdrew \$434 of cash in a typical month, making 5.1 withdrawals averaging \$119 each time.¹⁴

The vast majority of consumers (94.4 percent) had some kind of payment card in 2009, and most consumers (73.3 percent) also had an electronic payment instrument. More consumers had a debit card (77.0 percent) than a credit card (72.2 percent), and one in three consumers (32.3 percent) had some kind of prepaid card. The average adopter of payment cards had 1.3 debit cards, 3.7 credit cards, and 2.3 prepaid cards. About half of consumers had adopted either OBBP (48.8 percent) or BANP (56.3 percent).

The average consumer made 64.5 total payments in a typical month in 2009 and relied most heavily on debit cards and cash to make those payments, as shown in Figure 2. Consumers made 19.0 payments per month by debit card and 18.4 payments by cash—together totaling more than half of all their payments. Consumers made nearly one-third of their payments with two other payment instruments: credit cards (11.2 per month) and checks (8.2 per month). Electronic payment instruments combined accounted for about one-tenth of consumer payments (6.2 per month). Prepaid card payments (0.8 per month) are newer and still relatively rare, and money orders and travelers checks (0.5 per month) account for an even smaller percentage of overall payments.

¹⁴ The monthly amount (\$434) is averaged across consumers and thus does not equal the product of the average withdrawal (\$119) and the average number of withdrawals (5.1).

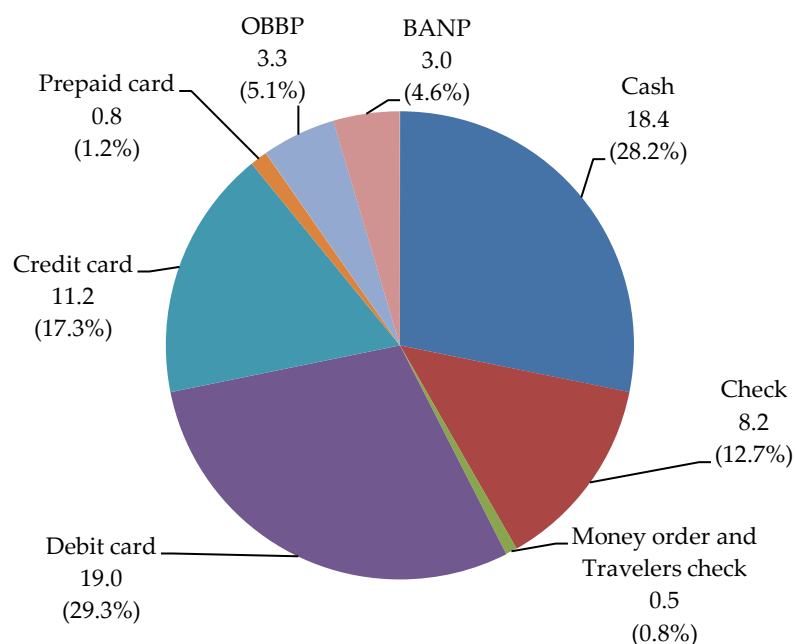


Figure 2: Number of Payments per Month, 2009

Source: 2009 Survey of Consumer Payment Choice, Table 20.

The SCPC measures three types of transactions: bill payments; online nonbill payments; and in-person, nonbill payments. Within the in-person, nonbill payments category, three types of transactions are measured: payments for retail goods, payments for services, and person-to-person payments. Consumers still made most of their payments in person in 2009. Nearly two-thirds of (64.1 percent) of consumer payments were made in person for retail goods (39.4 percent), services (19.7 percent), or person-to-person (P2P) payments (5.0). Cash was the most common instrument for in-person payments (40.5 percent of in-person payments), but debit cards were popular as well (32.0 percent). Bill payments accounted for more than one in four (28.1 percent) consumer payments in 2009. The most common payment instrument for bills was debit cards (25.2 percent of bill payments), but paper checks and OBBP—conceptually an “electronic check”—together were popular instruments for paying bills (35.0 percent) as well. Online payments for purchases (excluding bills) were still a small portion of consumer

payments (7.8 percent); debit cards were the most commonly used instrument for these (36.0 percent).

Changes in Consumer Payments, 2008–2009

The number of payment instruments commonly available to consumers and tracked in the SCPC (nine) did not change in 2009. However, the proliferation of types of prepaid cards and the emergence of mobile payments did raise questions about whether the SCPC should define and include additional instruments; see Section VIII for more discussion of the issues pertaining to mobile banking and mobile payments. The number of payment instruments held by the average consumer was essentially unchanged (5.0 in 2009 and 5.1 in 2008), but the number of those instruments used in a typical month dropped by 0.4 (from 4.2 in 2008 to 3.8 in 2009).

Although improvements to the survey limit the comparability of the adoption rates of some payment instruments between 2008 and 2009, it is reasonably clear that fewer consumers had credit and debit cards and electronic payments in 2009 than in 2008. Between the 2008 and 2009 surveys, the adoption rates of these instruments declined 6.1 percentage points for credit cards (from 78.3 percent to 72.2 percent), by 3.2 percentage points for debit cards (from 80.2 percent to 77.0 percent), and by 3.7 percentage points for OBBP (from 52.5 percent to 48.8 percent). The definitions of these three instruments were similar in the two years, so these changes in adoption rates are probably accurate. The adoption rate for BANP fell by 17.0 percentage points (from 73.4 percent to 56.3 percent) between 2008 and 2009. Because the definition of BANP was revised and improved in 2009, the decline in the BANP adoption rate may be overstated, but other measures of BANP activity seem to corroborate a significant shift away from this instrument.¹⁵

In contrast to their use of payment cards and electronic payments, consumers significantly increased their cash holdings and withdrawals in 2009. In nominal terms (not

¹⁵ The average number of payment cards per consumer was essentially unchanged in 2009. However, the types of payment card categories available to the survey respondent did change significantly, so estimates of the number of payment cards per consumer are probably not comparable between years.

adjusted for inflation), total cash holdings of the average consumer increased by 26.5 percent from 2008 to 2009 (from \$230 to \$291), while cash holdings of the median consumer increased by 13.0 percent (from \$69 to \$78). Total cash withdrawals in a typical month increased by 29.2 percent (from \$336 to \$434). The average cash withdrawal increased by 16.7 percent (from \$102 to \$119) and the frequency of cash withdrawals increased by 18.6 percent (from 4.3 per month to 5.1 per month).

The number of payments made by the average consumer in a typical month declined by 4.2 percent from 2008 to 2009, as indicated in Figure 3 (red dashed line). During this period of relatively severe economic slowdown, consumers not only got and held more cash, but they also shifted toward using cash and related instruments for more of their monthly payments. The number of cash payments by consumers increased by 26.9 percent; the number of money order payments by consumers—although tiny compared to cash—grew at a similar rate (23.6 percent).

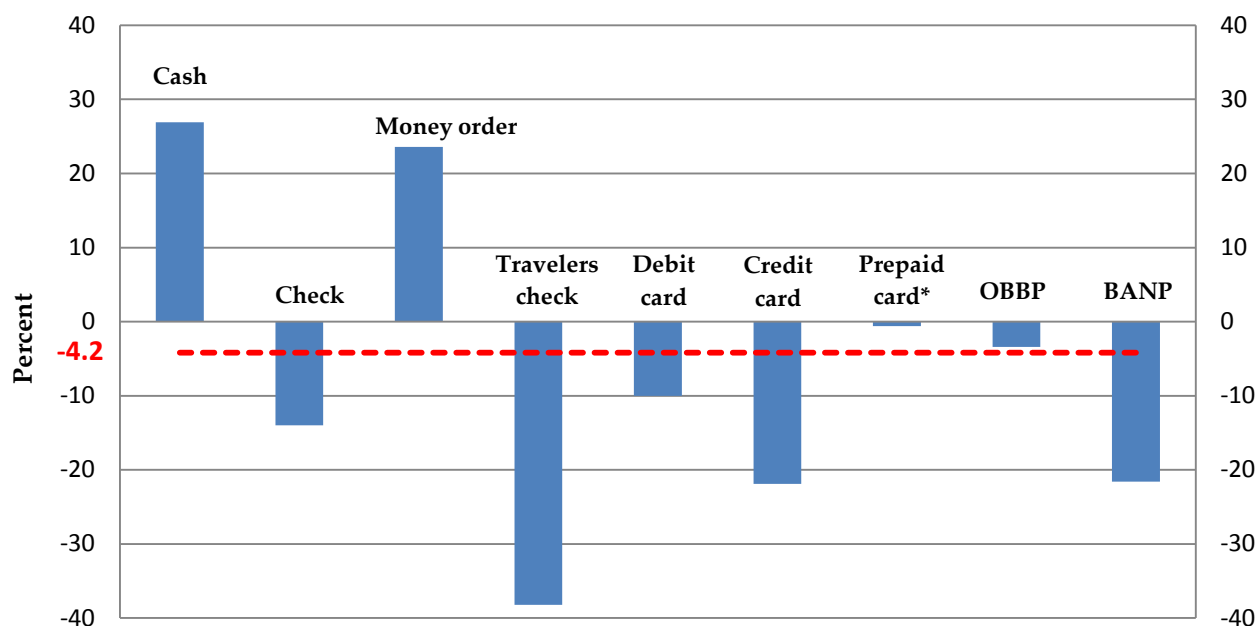


Figure 3: Growth in Number of Payments per Month, from 2008 to 2009

Source: 2009 Survey of Consumer Payment Choice, Table 20.

Notes: * The percentage change in prepaid card use is based on adopters only. The red dashed line represents the growth rate of total consumer payments across all instruments.

At the same time as consumers shifted toward cash payments in 2009, they also reduced their use of payment cards by 13.2 percent and of electronic payments by 15.1 percent, faster than the 4.2 percent decrease in total payments. As a result, the share of noncash instruments in consumer payments fell by 7.4 percentage points from 79.2 percent to 71.8 percent (and the cash share increased by the same amount, from 20.8 percent in 2008 to 28.2 percent in 2009). The decline in card payments by consumers occurred only in credit cards (21.9 percent) and debit cards (10.0 percent). The number of prepaid card payments by consumers appears to have increased, although changes in the survey questions preclude drawing a firm conclusion on this point.¹⁶ The largest contraction in electronic payments occurred in BANP, which declined by 26.1 percent—even more sharply than credit cards. Online banking bill payments (OBBP)

¹⁶ The estimated adoption rate of prepaid cards increased from 17.2 percent in 2008 to 32.3 percent in 2009 because of improved definitions of prepaid cards; this estimated increase probably caused the estimated increase in total payments per month (78.9 percent) to overstate the actual increase.

declined by only 3.4 percent, roughly the same rate of decline as total payments, implying little change in the share of OBBP payments by consumers.

This high-frequency shift toward cash contrasts sharply with the ongoing, long-run transformation of payments from paper to cards and electronics, which is documented in data from the Federal Reserve Payment Study (FRPS), Survey of Consumer Finances (SCF), and elsewhere. However, consumer payments by check fell by 14.0 percent in 2009, which is roughly in line with the trend decline in check use since the mid-1990s shown in the FRPS. A large contraction in the use of credit cards during a relatively severe recession is intuitively plausible for both supply and demand reasons. However, the relative declines in consumer use of debit cards and BANP are surprising, especially in light of the very strong trend growth in debit card payments during the past decade shown in the FRPS. Sections VI and VII offer explanations for these results.

Characteristics of Payment Instruments

Consumers rated cash very highly in all four characteristics asked about in the 2009 SCPC. When asked to rate payment instruments in terms of acceptance for payment, cost, security, and convenience, a larger share of consumers gave cash the highest rating (5) than accorded this distinction to other payment instruments. In terms of acceptance for payment, 76.7 percent said cash is “almost always accepted”; for cost, 71.9 percent said cash is “very low cost”; and for security, 31.0 percent said cash is “very secure”.¹⁷ With respect to convenience, cash was rated the highest by about the same percentage of consumers (56.6 percent said “very easy to use”) as the percentages granting this rating to credit cards (57.3 percent) and debit cards (54.5 percent). Combining the top two rating categories (4 and 5) for each characteristic yields a similarly favorable view of cash by consumers.

¹⁷ Oddly, more consumers also gave cash the lowest security rating (33.4 percent said “very risky”).

VI. Interpretations of the Key Results

The launch of annual production of the SCPC coincided with (but was not motivated by) a period of economic conditions that were unusual in three respects. First, the U.S. economy was in the midst of a severe recession following a serious financial crisis centered on the banking sector. Second, new legislation and regulation pertaining to credit card and debit card markets emerged at least in part from concerns about banks' provision of payment services. Third, the transformation of the payments system from paper to electronic methods was in high gear, bringing a proliferation of new technology and financial innovations that gave consumers a wide range of payment choices.

All three of these factors are crucial in interpreting the SCPC results. Ideally, an econometric model would aid in disentangling the impact of these factors on consumer payment choice. Unfortunately, no suitable, complete theory exists on which to base such a model and, even if a suitable theory did exist, the time-series data in the SCPC (and elsewhere) are currently too short to enable estimation of such a model. Consequently, this section provides a qualitative discussion of the economic factors that likely influenced the key results.

Business Cycle Effects

To begin, consider the economic conditions surrounding the 2008 SCPC and 2009 SCPC. Figure 4 depicts the timing of the surveys in relation to the business cycle. The shaded region represents the official period of recession as determined by the National Bureau of Economic Research (NBER). Peak to trough, the level of gross domestic product (GDP) declined by 4.3 percent and the personal saving rate increased by about 4 percentage points (from about 2 to 6 percent of disposable income). The surveys were conducted two quarters before and two quarters after the trough of the business cycle (2009:Q2). When asking respondents about their frequency of use of payment instruments, the SCPC requests an estimate for a typical month.

Therefore, respondents may be reporting payment use that includes information from one or even two quarters prior to the actual quarter when the survey was implemented.¹⁸

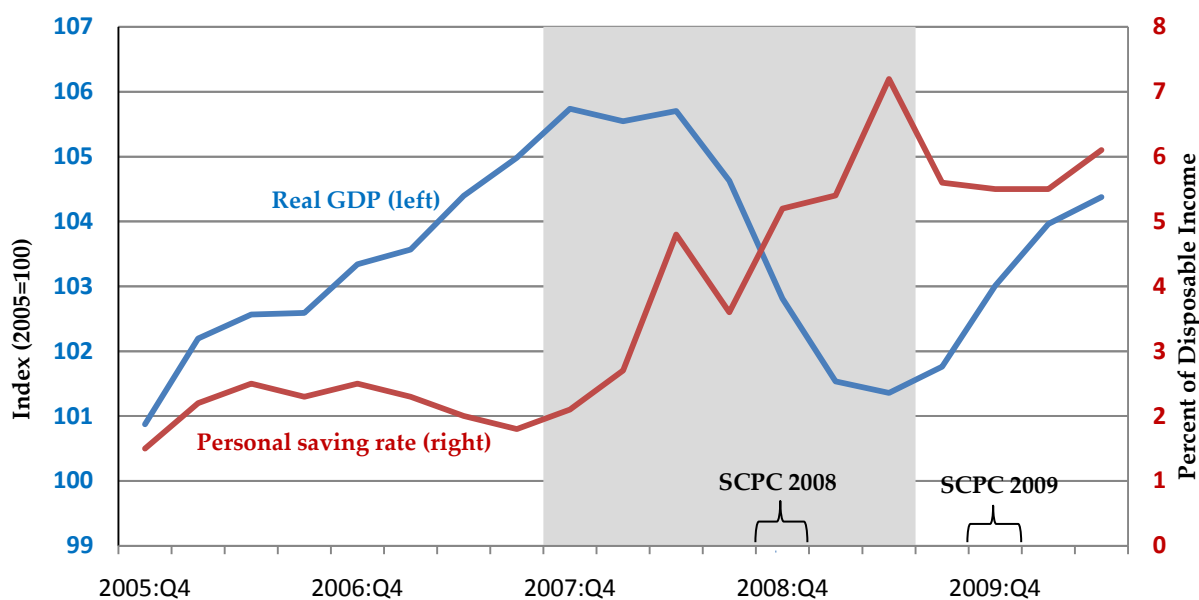


Figure 4: SCPC Surveys and the Business Cycle

Source: Haver Analytics/Bureau of Economic Analysis

As noted earlier, the total number of payments made by the average consumer in a typical month declined by 4.2 percent, from 67.4 in 2008 to 64.5 in 2009; given the actual calendar timing of the surveys, the decline is best dated between 2008:Q4 and 2009:Q4.¹⁹ By comparison, real (inflation adjusted) consumption spending in the National Income and Product Accounts (NIPA) grew by 0.2 percent during this same period. However, the SCPC number of payments is not the same as NIPA real consumption spending because the number

¹⁸ The CPRC and RAND are in the process of conducting joint research to compare and contrast the effects of using a “typical period” versus an exact calendar period for consumer reporting of payment use. The CPRC’s new *Diary of Consumer Payment Choice* will also provide valuable insight into this measurement methodology.

¹⁹ It is possible that the preceding four-quarter period (2008:Q3–2009:Q3) better represents respondents payment activity because the survey asks them to report their payments in a “typical period” and they may be thinking back over the previous month or quarter. But it is hard to determine the dates respondents had in mind, so we use the actual survey period to date the payment activity.

of payments does not contain information about the real value, type, or quality of the consumption goods purchased, whereas real consumption spending does.²⁰

Two examples are instructive on this point. First, if a consumer bought two goods on two separate days one month and then bought two identical goods as a single purchase on one day the next month, the number of payments would decline from two to one but real consumption would be unchanged. Second, consider the process of buying a car. The consumer can pay cash, and make one payment, or can finance the car and make multiple payments over time. In the latter case, the number of payments would increase, but again, real consumption would be unchanged.

Therefore, although the SCPC number of payments and NIPA real consumption spending are related, they will not be perfectly correlated over time. In fact, business cycle conditions may provide an economic incentive for consumers to alter the relationship between the two concepts. For example, if shopping becomes more costly to consumers as a result of increases in relative fuel prices, then consumers may have an incentive to economize on shopping trips to save money during recessions, or to buy in bulk to obtain price discounts. These effects would tend to reduce the number of payments consumers make per month, even if they did not change the goods they bought. On the other hand, if they needed to replace essential big-ticket items, consumers might have a greater tendency to finance such purchases in hard times, and this could result in increasing the number of payments relative to consumption spending. To capture these effects, the SCPC would have to collect data on the dollar value of payments.

In addition to the effect on total payments, weaker economic conditions in 2008 and 2009 likely affected consumers' choices of specific payment instruments. Perhaps the most obvious cyclical effect is consumers' shift away from credit card payments (a decline of 21.9 percent). During the recession, the unemployment rate about doubled from 5 percent to 10 percent and

²⁰ The SCPC contains self-reported consumer payments and thus includes only the number, not their value. Ideally, the SCPC would include the value of consumer payments as well as the number of payments. However, consumers are more likely to accurately recall the number of payments than the value of payments. Resource constraints (respondent burden and money) also limit the SCPC content.

consumers roughly tripled their rate of personal saving from about 2 percent of disposable income to 6 percent, as shown in Figure 5. Higher personal saving may reveal a decline in consumer demand for credit. Indeed, consumer revolving credit outstanding fell from 8.8 percent of disposable income to 7.8 percent between the two surveys (and further to 7.1 percent in 2010:Q3), although part of this decline probably reflects a contraction in the supply of revolving credit to consumers by banks (more on this in the next subsection). Roughly 40 percent of consumers with credit cards use them to access revolving credit, so the decline in the demand for credit almost surely contributed to a decline in the number of credit card payments.

The economic slowdown may also have encouraged consumers to shift toward cash and close substitutes to cash. One reason is that the opportunity cost of holding cash, either in currency or in another form of non-interest bearing asset (no-interest checking account, money order, or balance on a prepaid card), fell during the recession, as shown in Figure 5.²¹ Short-term interest rates available to consumers, represented by the rate on 1-month certificates of deposit, fell from about 5 percent before the recession to almost zero.²² This decline significantly reduced the nominal cost (forgone interest, not adjusted for inflation) of holding liquid assets in non-interest bearing forms like cash. Core inflation also fell but only moderately, so the *ex post* real rate of interest (interest rate minus actual inflation) also declined between the 2008 and 2009 surveys, and even turned negative. But, with nominal interest pegged near zero, there was little consumers could do to offset the loss of value through inflation of safe, liquid assets like cash, so they likely held more of it. Indeed, the similarity of the increases in cash payments (26.9 percent), cash holdings (26.5 percent), and cash withdrawals (29.2 percent) is striking.

²¹ The SCPC does not collect data on balances in checking accounts, money orders, or prepaid cards so we cannot tell whether the change in the opportunity cost had a similar effect on these non-interest bearing assets.

²² Interest rates on even more liquid assets, such as consumer checking accounts, are lower than the 1-month CD rate but the rates on these more liquid assets also declined during this time.

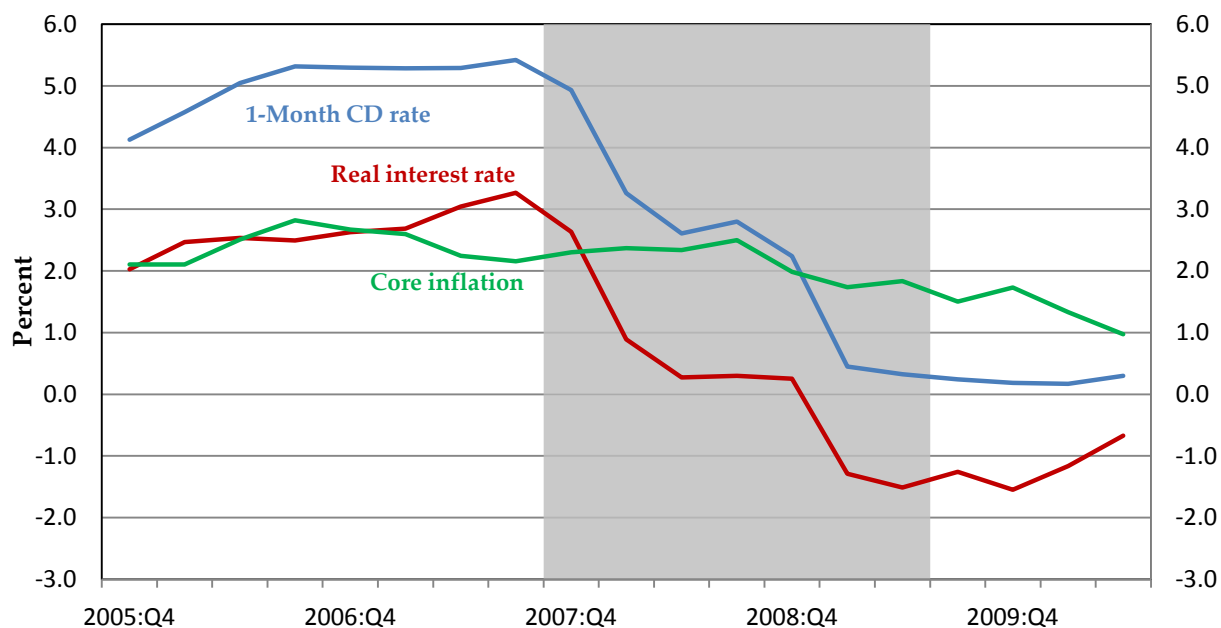


Figure 5: The Opportunity Cost of Cash

Source: Haver Analytics/ Federal Reserve Board, Bureau of Labor Statistics; authors' calculations.

Two other economic incentives may have induced consumers to shift toward cash. First, some merchants, such as gas stations, sometimes offer price discounts for consumers who pay with cash rather than with a payment card. Also, businesses that pay high merchant discount fees on credit and signature debit cards—fees that can be as much as 3 percent of sales or more—would have had added incentive to steer consumers toward cash or PIN debit cards if their profits fell during the recession.²³ Second, some consumers may find that cash and related payment instruments provide better budgeting and spending control, which is beneficial during tight economic times.²⁴ Consumers whose incomes were reduced by unemployment or whose jobs were uncertain because of the recession may have switched to cash to reduce consumption costs and help increase saving.

²³See bankrate.com <http://www.bankrate.com/finance/personal-finance/pay-cash-and-ask-for-a-discount-1.aspx>.

²⁴Prelec and Simester (2001) found that college students were willing to pay twice as much for basketball tickets with a credit card than with cash. Some financial advisors still recommend the traditional “envelope method” of budgeting in which consumers place predetermined amount of cash in envelopes designated for specific spending items and stop spending when the cash runs out (see Ramsey 2009).

Bank Payment Services and Government Policy Intervention

During the financial crisis and recession, fees for payment services provided by banks came under increasing scrutiny and criticism that eventually resulted in new federal legislation and regulations. In particular, new restrictions were imposed on banks and payment card networks in 2008 and 2009 that affected their pricing and provision of credit and debit card services; the highlights of these restrictions are shown in the timeline of Figure 6. This policy intervention was not directly related to the business cycle, but, like the recession, it probably had an effect on consumer demand for payment instruments.

Credit card spending long has been a controversial subject because of the danger to consumers of acquiring large amounts of high-interest revolving debt, and such concerns intensified in the wake of the financial crisis. One of the most significant developments was the introduction the Credit Cardholder's Bill of Rights (HR 5244) in February 2008. Though never enacted, this initial legislation formed the basis of the Credit Card Accountability, Responsibility, and Disclosure Act of 2009, which was passed by Congress and signed into law by President Obama in May 2009. In the meantime, the Federal Reserve proposed new rules for Regulation AA (Unfair or Deceptive Acts or Practices, or UDAP) on May 2, 2008, "...to prohibit unfair practices regarding credit cards and overdraft services." The new rules are intended to "protect consumers from unexpected increases in the rate charged on pre-existing credit card balances."²⁵

²⁵ For the full press release, see <http://www.federalreserve.gov/newsevents/press/bcreg/20080502a.htm>.

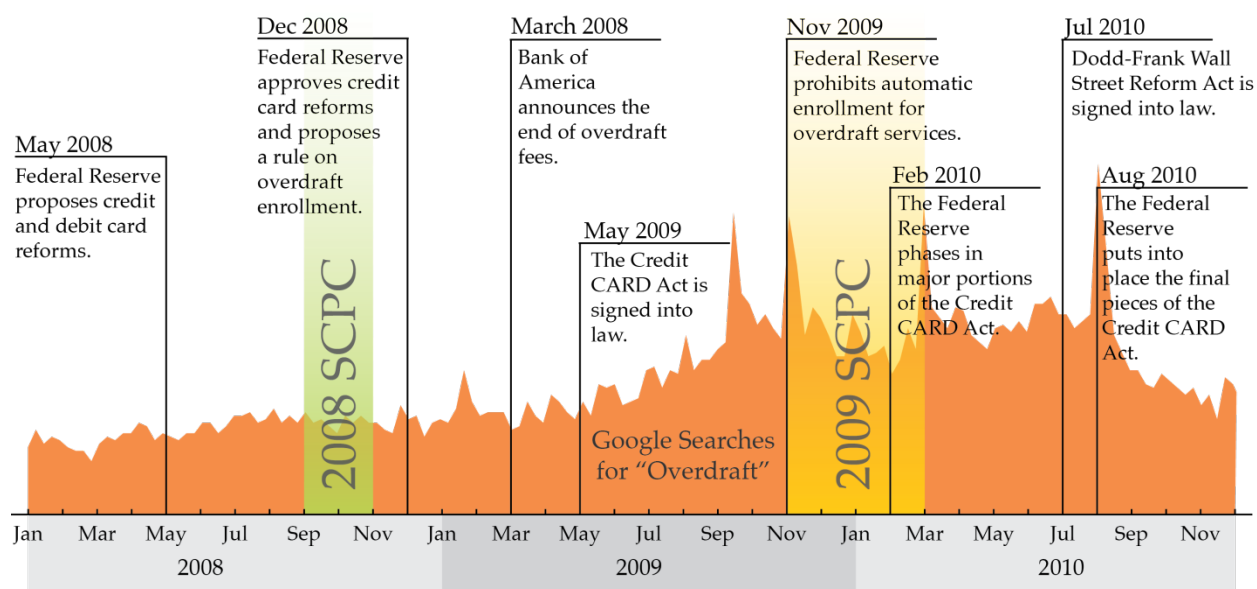


Figure 6: Timeline of Reforms and Number of Google Keyword Searches for “Overdraft”

Source: Google search data are publicly available via Google Insights (<http://www.google.com/insights/search>).

Notes: The graph of the Google search data for the term “overdraft” shows the weekly number of search queries made by Google users in the U.S. The 2009 SCPC required a longer time period for implementation than the 2008 SCPC since the 2009 SCPC approximately doubled the sample size from 2008.

The Fed’s final policy reforms to the credit card market were approved on December 18, 2008, and contained many key protections for consumers.²⁶ Among other things, the final Regulation AA rules were designed to do the following:

- Protect consumers from unexpected interest charges, including increases in the rate during the first year after account opening and from increases in the rate charged on pre-existing credit card balances.
- Forbid banks from imposing interest charges using the "two-cycle" billing method.
- Require that consumers receive a reasonable amount of time to make their credit card payments.
- Prohibit the use of payment allocation methods that unfairly maximize interest charges.
- Address subprime credit cards by limiting the fees that reduce the amount of available credit.

The legislative reforms appearing in the CARD Act were similar to these Fed regulatory changes. However, the Fed rules were not scheduled to take effect until July 1, 2010, so the passage of the CARD Act accelerated the implementation of the new policies. A few CARD Act

²⁶ For details, see <http://www.federalreserve.gov/newsevents/press/bcreg/20081218a.htm>. These rules “...were adopted under the Federal Trade Commission Act, and are being issued concurrently with substantially similar final rules by the Office of Thrift Supervision and the National Credit Union Administration.”

reforms were implemented in August 2009, but the bulk of them were implemented on February 22, 2010—essentially after the 2009 SCPC was completed.

Individually and collectively these legislative and regulatory consumer protections affected banks' ability to price their credit card services and raise revenues from such services. Therefore, it is conceivable that this policy intervention in the credit card market may have adversely affected banks' willingness to supply credit card services and revolving credit to consumers beyond any effects of lower consumer creditworthiness induced by the recession and rising unemployment. Banks and card networks are forward-looking, profit-maximizing agents that almost surely watched these policy developments carefully as they unfolded, so they probably began to respond to the anticipated policy changes even before the policies took effect. If so, then any negative effects on banks' supply of credit card services and revolving credit that might have been attributable to policy intervention probably began in 2008:Q4 and continued through the period between the 2008 and 2009 SCPC.

It is difficult to know how these new consumer protections impacted consumer demand for credit card payments. On one hand, the new policy intervention may have increased consumer awareness of the economics of using credit cards or motivated banks to alter their pricing and provision of credit card services in ways that were disadvantageous to consumers. Both of these effects likely would have reduced consumer demand for credit card payments and revolving credit. On the other hand, the reforms may have led consumers to feel more protected from banks' pricing and practices in the provision of credit card services, which would increase consumer demand for credit card payments and revolving credit. Either way, the impact of these policies on consumer behavior was probably greatest between the 2008 and 2009 surveys. Much more research is needed to answer these difficult questions.

The potential effects of recent policy interventions in debit card markets are more nuanced and even more difficult to identify than for the effects on credit cards. Debit card spending is a relatively new payment option that does not involve the extension of credit (beyond a day or two), and it raises very different policy issues than credit cards. According to the Federal Reserve Payment Study (FRPS), payments by debit card from 2000 to 2009 grew

faster than payments by any other noncash payment instrument. Not surprisingly, debit card spending became an increasingly large source of potential revenue for banks. One revenue source in particular—fees from overdrafts of consumer checking accounts—became a particularly controversial issue in recent years by reaching \$32 billion, about \$20 billion of which was attributable to the use of debit cards.²⁷ Not only were many consumers finding themselves subject to such fees of \$35 or even \$50 per overdraft occurrence, but researchers such as Cambell, Martinez-Jerez, and Tufano (2008) found that the bulk of these fees fell on consumers with lower income and education levels and poor financial literacy, heightening the case for policy intervention.

Policy intervention related to debit cards occurred primarily through new restrictions on overdraft fee rules proposed for Federal Reserve Regulation E, which implements the Electronic Fund Transfer Act.²⁸ Prior to these changes, banks tended to automatically enroll customers in overdraft protections that would trigger a fee whenever a debit card payment overdrew the consumer's demand deposit account. Consumers had the right to "opt out" of this overdraft protection, but many did not know about this right or take advantage of it. Many consumers also did not know much about the electronic mechanics of debit card transactions and the timing of postings to their accounts, or the dangers of letting their balances get too close to zero. Together, these shortcomings in consumer financial literacy probably led some consumers to experience overdraft fees. Under the new rules, banks were required to disclose overdraft policies to their customers and ask them to "opt in" to overdraft protection in advance. In the rule announcement Fed Governor Elizabeth Duke said, "Our rule will help consumers better understand the terms and conditions of overdraft services and will give them an opportunity to avoid fees when these services do not meet their needs."

²⁷ See "Bank of America to End Debit Overdraft Fees" by Andrew Martin, *New York Times*, March 9, 2010 at: http://www.nytimes.com/2010/03/10/your-money/credit-and-debit-cards/10overdraft.html?_r=1. Another source of bank revenue from debit cards is interchange fees, which are obtained from the use of debit cards for payment and which have increased in recent years. However, consumers generally do not see the interchange fees or pay them directly, so interchange fees probably did not directly affect debit card payments by consumers.

²⁸ For details, see <http://www.federalreserve.gov/newsevents/press/bcreg/20091112a.htm>.

If the overdraft policies and fees affected consumer demand for debit card payments, then the relative decline in consumer debit card use in the 2009 SCPC probably reflects these effects. Although the final rule changes to Regulation E were announced on November 12, 2009, just after the 2009 SCPC began, and although these rules were not scheduled to officially take effect until July 1, 2010, the issue of overdraft fees was fresh in the minds of consumers long before that. In December 2008, the Fed proposed changes to overdraft rules. In March 2009, Bank of America—under much criticism and pressure for collecting stiff overdraft fees—announced that it would no longer charge its customers overdraft fees.²⁹ From that time until the 2009 SCPC, the number of Google searches for the term “overdraft fees” grew steadily (see Figure 6), probably reflecting an increase in consumer awareness of the issue.

The 2010 Dodd-Frank Consumer Financial Protection Act gave the Federal Reserve Board authority to regulate interchange fee on debit cards. This new regulatory authority has garnered much attention, and the Fed issued proposed rules in December 2010. However, this controversial policy intervention almost surely had no effect on debit card use reported in the 2009 SCPC because it did not arise until U.S. Senator Richard Durbin proposed an amendment with the regulatory authority in May 2010, well after the 2009 survey had ended.

Characteristics of Payment Instruments

Economic theory suggests that consumer demand for any product depends on the price of the product, consumer income, and the prices of substitute products. In markets with differentiated products, the nonpecuniary characteristics of the products (for example, size, color, durability, etc.) may also influence consumer demand. Consumer demand for payment instruments also seems to be influenced by the characteristics of the instruments. For example, Schuh and Stavins (2010) found that changes in the relative cost and convenience of checks can explain part of the observed decline in U.S. check use.

²⁹ Again see “Bank of America to End Debit Overdraft Fees” by Andrew Martin, *New York Times*, March 9, 2010 at: http://www.nytimes.com/2010/03/10/your-money/credit-and-debit-cards/10overdraft.html?_r=1.

The persistent use of cash for payments and the increase in cash payments from 2008 to 2009 may be surprising to some observers and analysts. But the staying power of cash probably does not surprise consumers, who tend to adopt and use the payment instruments with the characteristics most important to them. In both 2008 and 2009, consumers had a relatively favorable view of cash, as discussed in Section IV. Consumers' ratings of cash characteristics also increased in 2009. The percentage of consumers who rated cash low cost or very low cost (top two ratings) rose from 75.2 percent to 81.9 percent, and the percentage of consumers who rated cash secure or very secure rose from 30.8 percent to 41.4 percent. These improvements in consumers' rating of the characteristics of cash may have contributed to the shift to cash from 2008 to 2009.

Changes in the ratings of payment instrument characteristics may have influenced consumer demand for other instruments as well. In particular, consumers' rating of the security of payments made using their bank account numbers (BANP) appears to have dropped significantly in 2009, although it is difficult to be sure by how much. In 2008, characteristics ratings were obtained for only one electronic payment instrument called "electronic bank account deductions" (EBAD), whereas in 2009 ratings were obtained separately for BANP and OBBP, so it is uncertain whether 2008 respondents were rating only BANP or an average of BANP and OBBP. In 2008, 47.9 percent of consumers rated EBAD as secure or very secure (top two ratings). In 2009, this percentage was lower for both BANP (21.1 percent) and OBBP (41.5 percent), so it is likely that the security rating of BANP fell even if the 2008 rating of EBAD represents a combination of BANP and OBBP ratings. It is hard to know the exact cause(s) of this decline in security rating, but regardless of the reason, it may help to explain the 26.1 percent drop in BANP use in 2009.

The cost rating of prepaid cards also increased significantly. In 2009, 45.6 percent of consumers rated prepaid cards low cost or very low cost (top two categories), up from 36.0 percent in 2008. Although the cost varies widely across types of prepaid cards, the change in this rating suggests that consumers have found prepaid cards cheaper on average. This improvement in cost rating may have contributed to the relative increase in the use of prepaid

cards (a decline of only 0.6 percent in prepaid payments per adopter in 2009, compared with a decline of 4.2 percent in total payments).

VII. Comparison with Related Data

The SCPC fills a niche left by other sources of data on consumer payment behavior. The Federal Reserve System produces two main sources of payments data that are available to the public: the *Federal Reserve Payments Study* (FRPS) and the *Survey of Consumer Finances* (SCF). The two main advantages of the SCPC are: (1) it is higher frequency (annual instead of triennial) and thus provides more timely information on payment trends; and (2) it contains a more comprehensive assessment of consumer payment behavior. Firms in the private sector and nonprofit institutions also produce data, some of which are quite similar to those in the SCPC. The two main advantages of the SCPC over the industry and nonprofit data sources are: (1) it is available at no cost and with no restrictions on use; and (2) it provides comprehensive and detailed documentation of all the survey methodology, data development, and underlying research. The remainder of this section compares and contrasts the SCPC data with each of these alternative data sources.

Federal Reserve Payment Study (FRPS)

The FRPS is the premier source of U.S. data on the number and volume of U.S. payments made by all sectors of the economy—households (consumers), businesses, and governments—but it does not track the adoption or acceptance of payment instruments. The FRPS is a comprehensive study of payments conducted by surveying deposit institutions and other payments providers working to supply payment services in the market. Every three years, the FRPS collects data on the number and dollar value of all noncash payments. The FRPS has estimates of the number and value of check payments for consumers, but this is the only aspect of the FRPS that identifies consumer payment behavior separately from all payments. For more information about the FRPS, see Federal Reserve (2010) and Gerdes (2008).

The SCPC complements the FRPS several ways. First, as an annual data source, the SCPC provides more up-to-date information on payment trends. Second, it includes cash payments, whereas the FRPS covers only noncash payments. Third, the SCPC focuses on payments by consumers only, collecting data that are generally not available from the FRPS. While the supply of payment services is important, basic economic theory suggests that consumer (household) demand also is an important feature of markets. In the long run, financial service providers will succeed only to the extent that they meet the needs and demands of final users of payment instruments and systems, so it is important to measure and study consumer payment behavior. Fourth, the SCPC estimates both adoption and use of payment instruments, which is important because not all consumers have all of the payment instruments, nor do all merchants always accept all payment instruments. The difference between consumer payment instrument adoption and consumer use of these payment instruments is an important distinction in understanding payment systems and behavior.

It is important to note that the SCPC has at least two notable limitations relative to the FRPS. First, the SCPC samples a relatively small number of consumers, whereas the FRPS typically obtains data from a very large sample of depository institutions and other financial service providers. In some cases, the FRPS data are based on what is essentially a census—data collected from all entities that process financial payment transactions; in these cases there is minimal or no error in the estimate. Second, the SCPC relies on consumer recall of payment behavior, which can contain be unreliable, whereas much of the FRPS is based on actual transaction records kept by the depository institutions and financial service providers it surveys. For these reasons, the FRPS data are likely to be more precise and reliable than the SCPC data.

On December 8, 2010, the Federal Reserve released preliminary estimates of U.S. payments in 2009 (data for 2000, 2003, and 2006 are available also). Exhibit 1 below reports FRPS and SCPC estimates of annual growth in the number of payments by payment instrument. The estimates are not exactly comparable for two main reasons. The FRPS estimates are average annual rates for three years (2006–2009), whereas the SCPC estimates are for one year (2008–

2009). Second, the FRPS estimates are for all payments in the economy, while the SCPC estimates cover only consumer payments; the sole exception is that the FRPS does provide estimates of check payments by consumers. Juxtaposing the FRPS and SCPC estimates helps the reader compare and contrast the two data sources.

| | FRPS | | SCPC | FRPS – SCPC |
|-------------------|--------------------|------------------|------------------|-------------|
| | Average, 2006-2009 | | 2008:Q4-2009:Q4 | Difference |
| | <i>All</i> | <i>Consumers</i> | <i>Consumers</i> | |
| TOTAL | | | -4.3 | |
| CASH & RELATED | | | 26.7 | |
| Cash | | | 26.9 | |
| Money order | | | 23.6 | |
| Travelers check | | | -38.2 | |
| NONCASH | 4.6 | | -13.3 | 17.9 |
| Check | -7.2 | -8.7 | -14.0 | 6.8 |
| Debit card | 14.8 | | -10.0 | 24.8 |
| Credit card | -0.2 | | -21.9 | 21.7 |
| Prepaid card | 21.5 | | -0.6 | 22.1 |
| ACH | 9.3 | | | |
| Converted checks | 6.0 | | | |
| Other (OBBP+BANP) | 10.1 | | -15.1 | 25.2 |

Exhibit 1—Annual Percentage Change in Number of Payments

Controlling for business cycle effects, which tend to make the SCPC estimates (2008–2009) lower relative to the FRPS (2006–2009), and for the scope of measurement (all payments versus consumer payments), the FRPS and SCPC appear to give broadly similar views on check payments. Total check use, which had been declining since the 1990s, fell another 7.2 percent per year from 2006 to 2009. Consumer check use (bold face entries in Exhibit 1) is the only estimate with comparable scope in the FRPS and SCPC. Consumer check use declined by 8.7 percent per year from 2006 to 2009 (FRPS) and by 14.0 percent from 2008 to 2009 (SCPC). Presumably, the latter estimate reflects the negative effects of the recession on check use and would be roughly consistent with an FRPS estimate for 2008 to 2009 if it were available.

For all other noncash payment instruments, the difference between the FRPS and SCPC growth rates is quite similar (approximately 22 to 25 percentage points). This result suggests

that the combined effects of differences in business cycle timing (2006–2008 versus 2008–2009) and scope (all payments versus consumer payments) is about the same across payment instruments, except for checks. The FRPS and SCPC both reveal a decline in credit card use both in absolute terms and relative to the growth in other noncheck payments.

Although the business cycle, bank business practices, and policy intervention probably inhibited the use of debit cards for payment by consumers, the SCPC estimated decline in debit card spending is surprising when compared with the FRPS estimate of +14.3 percent annual growth in total debit card payments from 2006 to 2009. Even in relative terms, growth in consumer debit card payments is estimated to have been 5.8 percentage points lower than growth in all payments (–4.2 percent versus –10.0 percent). Such a relative decline seems hard to square with the strong trend growth in debit card spending, but three explanations may fit:

- The SCPC may have underestimated growth in debit card payments between 2008 and 2009 as a result of sampling error. Compared with the other payment instruments, measurement of the level of debit card payments is relatively imprecise.³⁰ Statistically speaking, one cannot reject the hypothesis that the 2009 SCPC estimate of debit card payments per month (19.0 per consumer) is the same as the 2008 estimate (21.2 per consumer). Thus, it is statistically possible that the actual growth rate in debit card payments may have been higher than the estimated growth of –10.0 percent. In fact, actual debit card growth could have been higher than the –4.2 percent growth rate of all payments, hence increasing in relative terms, and perhaps even unchanged (zero percent).
- The actual growth rate of debit card payments may have varied significantly over the years between 2006 and 2009. If debit card payments increased in 2007 and 2008 more rapidly than the FRPS three-year trend estimate (14.8 percent) in each year, then the growth rate in 2009 would have been lower and hence closer to the SCPC estimate. On an annual basis, the year-to-year fluctuations may not have been

³⁰ In contrast, the estimated growth rates of most other payments between 2008 and 2009 are more precise and significantly different from zero percent at standard confidence levels (10 percent level or less).

enough to produce a negative growth rate for 2009. However, given the severity and suddenness of the financial crisis and recession, the four-quarter growth in debit card payments may have been even lower—perhaps even negative—for certain periods such as 2008:Q4 to 2009:Q4, when the surveys were conducted.

- Debit card spending by consumers may have declined while at the same time debit card spending by businesses increased. The SCPC does not provide hard estimates of business debit card spending and the FRPS does not distinguish between consumers and businesses. However, sources in the payment industry reported that business debit card spending, which was a very small portion of total debit card spending prior to the 2008 SCPC, has been growing very quickly since then and may now represent 10 percent or more of total debit card spending. Given strong growth in total debit card spending, extraordinarily rapid growth in business debit card spending could help to explain a small decline in consumer debit card spending.

This comparison highlights several key points. First, it is important to have annual data, like the SCPC data, because consumer demand for payments and payment industry innovations seems to fluctuate at higher frequencies than three-year periods. Second, it would be helpful for the FRPS to collect and publish data by sectors, such as consumer (household), business, and government. And third, ultimately it would be best to have actual transactions data from banks and other payment service providers rather than survey data.

Survey of Consumer Finances (SCF)

The SCF is the premier source of U.S. data on financial behavior in the household sector of the economy (consumers) but it has only limited information about consumer payments.³¹ The Federal Reserve conducts the SCF every three years, most recently in 2010, although data are only available through 2007 as of the writing of this paper. In 2007, the SCF was based on 4,422 interviews with respondents who were asked about the finances of their entire

³¹ For more information about the SCF, go to <http://www.federalreserve.gov/pubs/oss/oss2/2007/scf2007home.html>; see also Bucks, Kennickell, Mach, and Moore (2009).

households. The SCPC is conducted with individual consumers only and does not include information about households except for household income and a relative rating of responsibilities in the household. Consequently, comparison of the SCF and SCPC data is difficult for many data concepts.

Regarding payments, the SCF contains data on consumer adoption and use of a subset of the payment instruments and practices tracked by the SCPC. The SCF has adoption of three noncash payment instruments: credit cards, debit cards, and checks. As in the 2008 SCPC, the SCF measure of check adoption is inferred from adoption of a checking account; the 2009 SCPC improves this measure by asking consumers specifically whether they have blank checks. The SCF also includes adoption of “automatic bill payment” (ABP), which technically is not a payment instrument as defined by the SCPC but rather a method of payment that can be used with multiple instruments. In the SCF, ABP appears to include only bills paid by BANP, but the definition is imprecise.³² In the SCPC, the closest concept to the SCF ABP data is the ABP portion of BANP, which is used here for comparison purposes. However, the SCPC ABP and BANP concepts are both much broader; in the SCPC, ABP also can be accomplished by credit card, debit card, or OBBP, and BANP also can be made for bills that are not automatic or for online payments for internet purchases.

The annual SCPC estimates of consumer adoption of payment instruments and practices align well with the lower frequency estimates from the SCF, as can be seen in Figure 7. To enhance comparison, the figure includes 2006 estimates from the SCPC that was implemented by the AARP with the assistance of the CPRC.³³ For each of the four concepts, the SCPC estimate is roughly in line with the level and trend of the corresponding SCF estimate. Thus, with regard to adoption rates of payment instruments and practices, it appears that the

³² Automatic bill payments are defined somewhat differently in the SCF than in the SCPC. The SCF asks whether consumers have payments “automatically deducted from [their] accounts” without further specifying which accounts in particular. Furthermore, it excludes automatic payroll deductions. The SCPC includes payroll deductions and specifies payment instruments that consumers use for this purpose. For more information see the *2007 SCF Codebook*, available at <http://www.federalreserve.gov/Pubs/OSS/oss2/2007/scf2007docs.html>.

³³ For more information about this survey, see AARP (2007). The 2006 estimates came from a representative sample of consumers drawn by a private survey firm, not from the RAND American Life Panel; therefore, the sampling precision and properties are not exactly comparable to those of the SCPC in 2008 and later.

difference between a consumer-based survey (SCPC) and a household based survey (SCF) is not problematic.

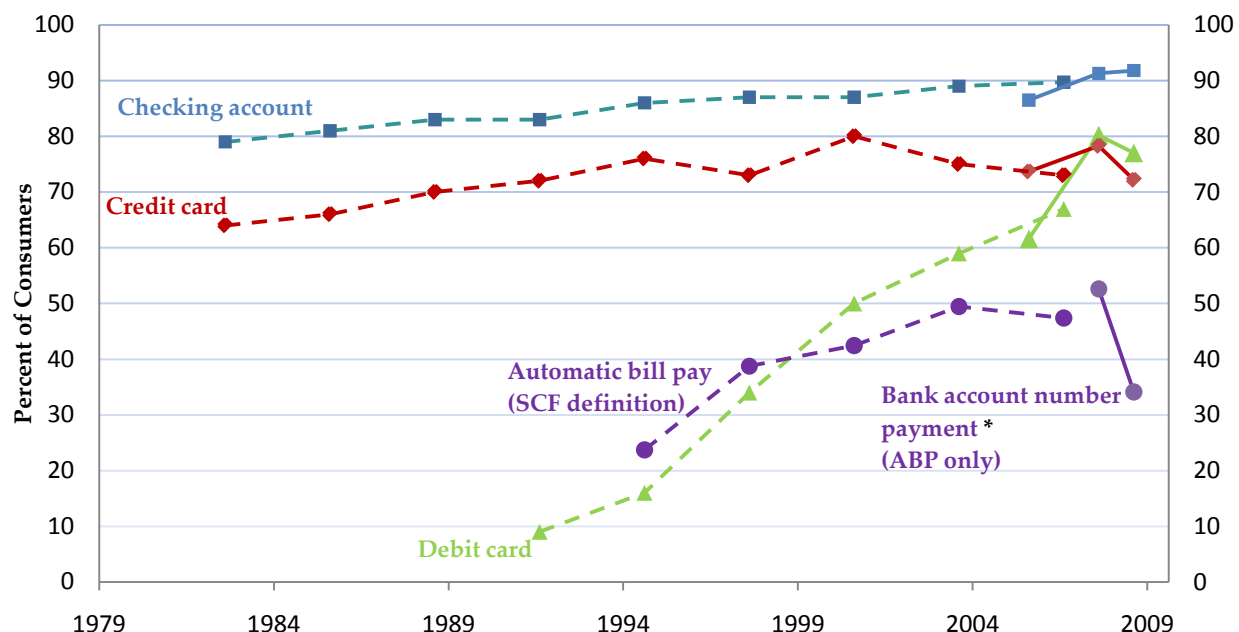


Figure 7: Adoption of Payment Instruments

Source: 1983–2007 *Survey of Consumer Finances*; 2006, 2008, and 2009 *Survey of Consumer Payment Choice*.

Notes: *This represents the portion of BANP that occurs through automatic bill payments only. Dashed lines are SCF data, and solid lines are SCPC data.

The similarity between SCPC and SCF adoption rates motivates a comparison of the average number of payment instruments held by consumers. Two measures shown in Figure 8 are worth examining. One is the average number of payment instruments held by consumers, constructed with the four instruments common to the two data sources: credit card, debit card, check, and the ABP portion of BANP. Once again, the SCPC estimates (solid lines) are roughly in line with the level and trend of the SCF estimates (dashed lines). According to this measure, the number of payment instruments held by the average consumer approximately doubled in the past 20 years, from 1.5 to 3. A second measure is the average number of payment instruments held by consumers, constructed with the nine SCPC concepts, for 2008–2009 only. According to this measure, the number of payment instruments held by the average consumer is about 5.

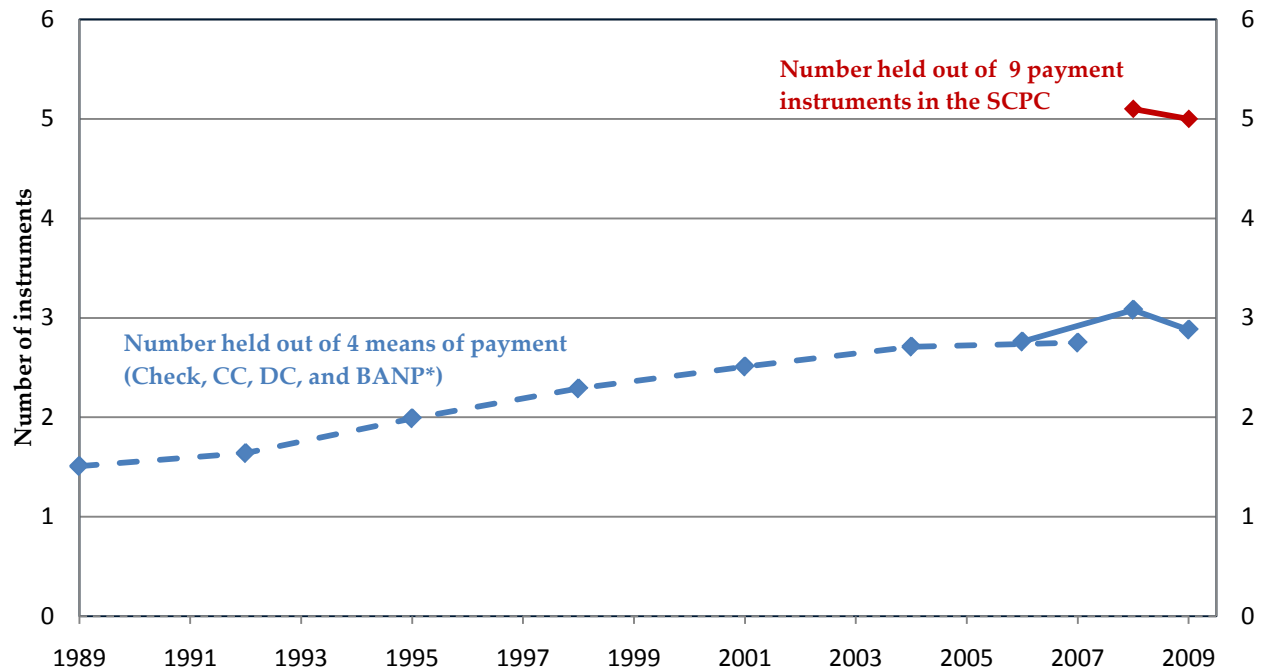


Figure 8: Number of Payment Instruments per Consumer

Source: 1983–2007 Survey of Consumer Finances; 2008 and 2009 Survey of Consumer Payment Choice.

Notes: *This represents the portion of BANP that occurs through automatic bill payments only. Dashed lines are SCF data, and solid lines are SCPC data.

The only data on the use of payment instruments in the SCF is for credit cards. According to the SCF, the average U.S. household made \$889 worth of credit card charges per month in 2007, which represented 12.7 percent of average household income. However, the SCF does not collect the number of credit card payments, and the SCPC does not collect the dollar value of credit card payments, so credit card use by consumers is not comparable across the two data sources. The SCPC and SCF have other data on credit cards in common, such as credit card debt and the propensity to use revolving credit. When comparing these common variables, the reader should keep in mind the difference between estimates for households (SCF) and for consumers (SCPC).

Private and Nonprofit Data Sources

A number of private companies and nonprofit institutions also provide some data on consumer payment behavior. These sources include: the American Bankers Association in

conjunction with Hitachi (formerly Dove Consulting), which contributed to the 2007 FRPS; Javelin Strategy & Research; McKinsey, which worked on the 2010 FRPS; the Ohio State University, which produces the *Consumer Finance Monthly*; Phoenix Marketing International; Synergistics Research Corp; the U.S. Postal Service Household Diary (NuStats); and Visa, Inc. Most of these data sources are proprietary and either unavailable to the public or prohibitively expensive. The details and methodology underlying these alternative data sources are often not clearly stated in published materials and are difficult to obtain. For these reasons, we do not compare the SCPC results with results from these surveys here.

A detailed comparison between the SCPC and other available data products would provide important information for users of any data on consumer payment behavior. The CPRC expects to release a research paper in 2011 with a detailed comparison and contrast of the SCPC with several of these alternative data sources, using 2008 data. Meanwhile, **Appendix D** provides some further information and suggestions about how (and how not) to convert and compare the statistics in this document with the comparable statistics in many other data releases, including the FRPS.

Standardizing and Expanding Payments Data

Together, the information in public and private sources of payments data overlaps a great deal. As a result, an opportunity exists to consolidate and streamline the data collection process into one publicly available, standardized, and consistent data source on consumer payment behavior. The SCPC offers that opportunity for consumer payments, and the CPRC welcomes partners in this endeavor. Toward that end, the CPRC maintains a Board of Advisors that includes representatives from industry, academia, and the public sector to provide input on the SCPC and help to develop a consolidated and standardized data source. See **Appendix E** for a list of the members of the 2010 Board.

VIII. Selected Results

This section contains a number of selected results on topics in consumer payment choice. Some topics were not covered elsewhere in the paper, while others are discussed more thoroughly here.

Cash Management

More than three quarters of consumers depended on banks to get cash in 2009. A small majority of (50.8 percent) of consumers got their cash most often from an automated teller machine (ATM), and half as many (24.3 percent) got cash most often from a bank teller. About one in 10 consumers (9.9 percent) got cash most often as cash back from payments they made at a retail or grocery store. The remaining 15.0 percent of consumers most often got cash from a variety of other sources, including check cashing stores, employers, family or friends, and other sources.

The amount of cash obtained by consumers and the frequency of their withdrawals varied widely across locations in 2009. Consumers who got cash most often from an ATM withdrew an average of \$91 each of the 3.8 times they withdrew cash in a typical month. The average consumer who got his or her cash most often from a bank teller withdrew an average of \$184 and visited the teller 2.5 times in a typical month. Finally, consumers who relied primarily on cash back at a retail or grocery store got an average of \$33 each time and did so 4.2 times per month, essentially getting cash on a weekly basis.

Because prepaid cards are close substitutes for cash wherever they are accepted, reloading a prepaid card is similar to withdrawing cash from a bank account. Of the 32.2 percent of consumers who have a prepaid card in 2009, only 6.7 percent of them reloaded their prepaid cards with money that year. However, not all prepaid cards can be reloaded. Among the subset of prepaid card adopters who had reloadable cards, about one in five (20.8 percent) reloaded them. Prepaid card reloaders typically added \$154 per reloading, and they reloaded

their cards 1.8 times in a typical month. Thus, the average amount reloaded onto a prepaid card was larger and reloading occurred less frequently than the average cash withdrawal.

Payment Cards

In 2009, the SCPC expanded its measurement of credit cards, debit cards, and prepaid cards to better track the long-term substitution of payment cards for paper payment instruments. As noted earlier, the vast majority of consumers (94.4 percent) had at least one of these types of payment cards.

Of the 72.2 percent of consumers who had a credit card in 2009, the average adopter had 3.7 credit cards. In 2009, the SCPC measured holdings of three types of credit cards rather than holdings of total credit cards as in 2008. In 2009, the average credit card adopter had 2.1 general purpose cards, 0.4 charge cards, and 1.2 branded credit cards. An important determinant of the use of credit cards for payment is the possibility of receiving rewards, such as cash back, frequent flyer miles, or other incentives. Of the 3.7 credit cards held by the average adopter, 2.0 cards earned rewards and 1.8 cards did not. (These numbers do not sum exactly to 3.7, due to rounding error.)

Debit card adopters had an average of 1.3 debit cards and bank account adopters had an average of 1.5 checking accounts in 2009. These results imply that consumers hold only 0.87 debit cards per checking account and some checking account adopters do not have a debit card.³⁴ Of course, it is not necessary for checking account adopters to have a debit card, because they can get cash from the bank or an ATM card and they can make payments from the checking account with other payment instruments. Apparently, some consumers who do not want to use a debit card to make payments either do not ask for one or they cut up the card and throw it away. Of the 77.0 percent of consumers who had a debit card in 2009, 28.5 percent of them had debit cards that earn rewards.

³⁴ Some of the consumer bank accounts could be joint accounts with another consumer, such as a spouse, and there may be more than one debit card issued per account. However, the statistic in the text should still be valid because the SCPC is a consumer-based survey. If both spouses replied to the survey, each one should properly report the holding of a debit card and a checking account, leaving the ratio of debit cards to accounts unbiased.

Of the 32.3 of consumers who had a prepaid card in 2009, the average adopter had 2.3 prepaid cards. In 2009, the SCPC measured holdings of four types of prepaid cards rather than two (prepaid cards bought or sold), as in 2008. In 2009, the average prepaid card adopters had 1.0 general purpose cards, 1.0 specific purpose cards, 0.1 payroll cards and 0.3 electronic benefit transfer (EBT) cards. Thus, one out of every 10 prepaid card adopters had a payroll card and about one out of every three prepaid adopters had an EBT card.

In 2009, nearly one in four consumers (24.0 percent) had a contactless payment card or similar device. Most contactless devices on consumer's payment cards were found on a debit card (11.3 percent) or credit card (9.6 percent), and not many were on prepaid cards (2.6 percent). Electronic toll payments (8.2 percent) were also a relatively common form of contactless payment.

Mobile Banking and Payments

Mobile banking and mobile payments have grown rapidly in markets outside of the United States, but these practices are only now gaining a foothold in the United States.³⁵ The vast majority of U.S. consumers have some kind of cell phone (89.7 percent), so the U.S. market for mobile banking and payments would seem to be primed for development.

Most new cell phones allow consumers to access the internet, either through a service plan or on a prepaid basis. Consumers who have online banking (65.7 percent of consumers) can log on with an internet enabled cell phone to access their banks' online features. Those who have set up online banking bill payment (48.8 percent of consumers) also can make such payments with their phones. However, the process of logging onto online banking via a cell phone is often more difficult than it is on a computer. Many smartphones offer mobile banking apps that make mobile banking significantly easier.

³⁵ See Crowe, Rysman, and Stavins (2010) for a critical analysis of the state of U.S. mobile payments made by contactless technology. For examples of mobile banking and payments in other countries, see Bradford and Hyashi (2007).

In 2009, 10.1 percent of U.S. consumers had set up mobile banking by downloading an app, having text message alerts from their bank sent to their phone, or logging onto online banking through the internet browser on their cell phone. Most consumers who set up mobile banking also used it (8.9 percent of all consumers). However, only 3.0 percent of consumers had made a mobile payment by either using an NFC (near field communication) chip installed in their mobile phones (1.3 percent) or by sending a text message (2.0 percent).

Mobile banking and mobile payments raise important questions about the definition and nature of payments. Although payments can be initiated by consumers using their mobile phones, the mobile devices themselves are not a payment instrument like the other nine payment instruments. Contactless mobile payments are typically linked to a traditional payment instrument, such as a debit or credit card or a bank account number payment. Some payments are made when consumers use a text/SMS message to authorize a bank account number payment or other bank payment to a third party. Still other payments can be made by online banking bill payment using a mobile phone analogously to the way OBBP is accomplished using a computer.

However, one type of mobile payment that may merit consideration as a new form of payment instrument is a text/SMS message that authorizes a nonbank third party, such as a cellular carrier, to make a payment for a consumer. For cell phones with monthly plans and bills, this type of mobile payment may involve short-term credit extended by a cellular carrier or another third party. In this regard, these kinds of payments are analogous to credit cards that allow consumers to “buy now, pay later.”³⁶ Given that such payments are still relatively rare, and are outside the legal and regulatory purview of the government, the SCPC does not yet include them as a payment instrument. However, mobile banking and mobile payments are complex and their paths uncertain, so they will be tracked carefully in the SCPC going forward, although their exact classification and definition will be postponed until later.

³⁶ Examples of such payments include those made to download cell phone apps and donations to support Haiti earthquake survivors that were made by text message.

Nonbank Payment Accounts

U.S. consumers often use payment services provided by companies that are not banks, and the SCPC is beginning to monitor and track this phenomenon. In 2009, 30.0 percent of consumers had a payment account with an online payment service provider (OPSP), such as PayPal or Google Checkout, and the average OPSP account holder had 2.2 such accounts. During the 12 months preceding the fielding of the 2009 survey, 66.0 percent of consumers with an OPSP account had used these accounts; in contrast, 91.4 percent of consumers with a bank account used their accounts during the previous 12 months.

Nonbank payment accounts are neither bank accounts nor payment instruments. A consumer can create and use a payment account with a payment instrument, such as a payment card or bank account number payment, without actually depositing money with the payment service provider. However, some of these providers do accept deposits into accounts that are similar to, but not exactly the same as, regulated bank accounts.³⁷ Because the OPSP accounts are not payment instruments and because survey resources are limited, the SCPC has not, thus far, tracked these deposits or counted the number of payments made through an OPSP, but this would be a valuable area of expansion in the future.

Another type of nonbank payment account available to consumers is a reloadable prepaid card account, such as those offered by Netspend or Green Dot.³⁸ At present, the SCPC implicitly includes these as prepaid cards. However, these types of payment cards are becoming increasingly flexible and work like a bank account in many ways, especially for those “unbanked” consumers who do not have a bank account. Future versions of the SCPC are likely to identify and track these cards and accounts separately and more carefully.

Discarding of Accounts and Instruments

³⁷ The funds in these payment service provider accounts may be held in actual commercial bank accounts by the payment service provider, and they may also afford consumers some of the same features and privileges as official bank accounts.

³⁸ See <https://www.netspend.com/> and <https://www.mygreendot.com/greendot/>.

The discard rate is the percentage of consumers who once owned or adopted a bank account or payment instrument but no longer have the account or instrument. It is derived from SCPC questions that ask respondents whether they have an account or instrument (current adoption) and whether they ever had an account or instrument (historical adoption). The discard rate is computed as the difference between historical adoption and current adoption. It reflects the minimum fraction of consumers who discarded an account or instrument over time, but it does not reflect the gross amount of discarding (and adoption) that may have occurred more than once over time. Discarding may be done voluntarily by consumers or involuntarily by suppliers of accounts and instruments, as when a bank closes a consumer's account or credit card even though the consumer would prefer to keep it.

Most consumers do not discard their bank accounts. In 2009, only 5.8 percent of consumers had discarded their sole bank account, and only 7.0 percent of consumers had discarded their checking account. However, savings accounts are less permanent: 20.3 percent of consumers had discarded one. Each of these discard rates increased by 2 or 3 percentage points in 2009, perhaps for reasons related to the banking and financial crisis. In 2009, discarding of online banking increased by 5.7 percentage points to 7.9 percent.

More consumers tended to discard their payment cards than to discard their bank accounts. In 2009, 9.0 percent of consumers had discarded a debit card, 16.5 percent had discarded a credit card, and 29.0 percent had discarded a prepaid card. The discard rate for credit cards increased by 2.5 percentage points, while the discard rate for debit cards increased by 3.1 percentage points. The increase in the discarding of credit and debit cards is consistent with the lower adoption and use of these cards in 2009 discussed earlier.

IX. Conclusion

This paper provides new estimates of U.S. consumer payment behavior in 2009 from the *Survey of Consumer Payment Choice* and compares them with estimates from 2008. In 2009, consumers had and used a wide variety of payment instruments, and they relied less on traditional paper instruments, such as cash and checks, than in the past. However, during and

following the recent financial crisis and recession (2008–2009), consumers shifted back toward using cash for more of their monthly payments. Whether this shift was merely cyclical, whether it was related to long-lasting changes in consumer perceptions, or whether it was related to policy interventions in payment card markets, remains to be seen. Also by 2009, consumers were beginning to make use of emerging payments technologies such as mobile phones, and the pace of innovation in payments markets is likely to remain high. The Boston Fed’s CPRC welcomes collaborators in developing the SCPC and partners in its broader research program of studying consumer payment behavior.

X. SCPC Tables

Table 1

Current Ownership of Deposit Accounts and Account Access Technologies

Percentage of consumers

| | 2008^r | 2009 | Change |
|--|-------------------------|-------------|---------------|
| Bank accounts | 93.8 | 93.6 | -0.2 |
| Checking..... | 91.3 | 91.8 | 0.6 |
| Savings..... | 78.0 | 76.3 | – |
| Traditional or passbook..... | na | 71.3 | na |
| Money market..... | na | 28.8 | na |
| Money market with check privileges..... | na | 16.1 | na |
| Nonbank payment accounts | | | |
| Online payment service provider..... | na | 30.0 | na |
| Bank account features | | | |
| Interest earned on primary checking account..... | 49.1 | 46.9 | -2.2 |
| Overdraft protection..... | 54.5 | 72.4 | – |
| Information and communication access technologies | | | |
| Cell phone..... | na | 89.7 | – |
| Internet access at home..... | 96.8 | 96.1 | -0.7 |
| Account access technologies | | | |
| Blank paper checks..... | na | 85.4 | na |
| ATM or debit card..... | 84.9 | 84.0 | -0.9 |
| ATM card..... | 27.0 | 35.9 | – |
| Debit card..... | 80.2 | 77.0 | -3.2 |
| Telephone banking..... | 41.3 | 41.4 | 0.1 |
| Online banking..... | 70.7 | 65.7 | -4.9 |
| Mobile banking..... | 8.2 | 10.1 | 2.0 |

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 2

Historical Ownership and Discarding of Deposit Accounts and Account Access Technologies

Percentage of consumers

| Ever Owned | 2008 ^r | 2009 | Change |
|--|-------------------|-------------|------------|
| Bank accounts | 97.5 | 99.4 | 1.9 |
| Checking..... | 96.2 | 98.8 | 2.6 |
| Savings..... | 95.6 | 96.6 | 1.0 |
| Traditional or passbook..... | na | 96.0 | na |
| Money market..... | na | 40.8 | na |
| Money market with check privileges..... | na | na | na |
| Nonbank payment accounts | | | |
| Online payment service provider..... | na | na | na |
| Bank account features | | | |
| Primary checking account bears interest..... | na | na | na |
| Overdraft protection..... | na | na | na |
| Bank account access technologies | | | |
| Blank paper checks..... | na | na | na |
| ATM or debit card..... | 92.2 | 93.3 | 1.1 |
| ATM card..... | 58.8 | 68.6 | – |
| Debit card..... | 86.1 | 86.1 | -0.1 |
| Telephone banking..... | 48.9 | 50.5 | 1.6 |
| Online banking..... | 72.9 | 73.7 | 0.8 |
| Mobile banking..... | na | 11.2 | na |
| Discarded* | 2008 ^r | 2009 | Change |
| Bank accounts | 3.7 | 5.8 | 2.1 |
| Checking..... | 4.9 | 7.0 | 2.1 |
| Savings..... | 17.6 | 20.3 | 2.8 |
| Traditional or passbook..... | na | 24.8 | na |
| Money market..... | na | 11.9 | na |
| Money market with check privileges..... | na | na | na |
| Nonbank payment accounts | | | |
| Online payment service provider..... | na | na | na |
| Bank account features | | | |
| Primary checking account bears interest..... | na | na | na |
| Overdraft protection..... | na | na | na |
| Bank account access technologies | | | |
| Paper checks (blank)..... | na | na | na |
| ATM or debit card..... | 7.2 | 9.4 | 2.2 |
| ATM card..... | 31.7 | 28.5 | – |
| Debit card..... | 5.9 | 9.0 | 3.1 |
| Telephone banking..... | 7.7 | 8.9 | 1.1 |
| Online banking..... | 2.2 | 7.9 | 5.7 |
| Mobile banking..... | na | 0.7 | na |

* "Discarded" refers to the difference between historical and current ownership rates.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 3**Primary Bank Account Holdings, by Type of Account and Financial Institution**

Percentage of bank account adopters

| | 2008^r | 2009 |
|---------------------------------|-------------------------|-------------|
| Primary checking account | | |
| Commercial bank..... | <i>76.7</i> | 70.3 |
| Savings and loan..... | <i>1.4</i> | 7.3 |
| Credit union..... | <i>20.3</i> | 19.6 |
| Brokerage..... | na | 0.2 |
| Internet bank..... | <i>0.6</i> | 1.3 |
| Other..... | <i>1.1</i> | 1.3 |
| Primary savings account | | |
| Commercial bank..... | <i>61.9</i> | 51.3 |
| Savings and loan..... | <i>1.5</i> | 7.3 |
| Credit union..... | <i>32.4</i> | 35.1 |
| Brokerage..... | na | 2.1 |
| Internet bank..... | <i>2.7</i> | 3.6 |
| Other..... | <i>1.5</i> | 0.7 |

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 4
Current Adoption of Payment Instruments
 Percentage of consumers

| | 2008^r | 2009 | Change |
|-----------------------------------|-------------------------|-------------|---------------|
| Paper instruments | 98.3 | 99.8 | — |
| Cash†..... | 98.2 | 99.8 | — |
| Check†..... | na | 85.4 | na |
| Money order*..... | 18.3 | 25.1 | 6.8 |
| Travelers check*..... | 4.7 | 3.5 | -1.2 |
| Payment cards | 93.4 | 94.4 | — |
| Debit..... | 80.2 | 77.0 | -3.2 |
| Credit..... | 78.3 | 72.2 | -6.1 |
| Prepaid..... | <i>17.2</i> | 32.3 | — |
| Electronic payments | 81.2 | 73.3 | -7.9 |
| Online banking bill payment..... | 52.5 | 48.8 | -3.7 |
| Bank account number payment*..... | 73.4 | 56.3 | -17.0 |

* Adoption means the consumer used the instrument in a given year.

† Adoption means the consumer had the instrument or used the instrument in a given year.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 5
Historical Adoption and Discarding of Payment Instruments
Percentage of consumers

| Ever Adopted | 2008^r | 2009 | Change |
|------------------------------------|-------------------------|-------------|---------------|
| Paper instruments | | | |
| Cash..... | na | na | na |
| Check..... | na | na | na |
| Money order *..... | na | 79.7 | na |
| Travelers check *..... | na | 55.9 | na |
| Payment cards | | | |
| Debit..... | 86.1 | 86.1 | -0.1 |
| Credit..... | 92.5 | 88.7 | -3.7 |
| Prepaid..... | 44.8 | 63.7 | – |
| Electronic payments | | | |
| Online banking bill payment..... | 58.3 | 59.1 | 0.8 |
| Bank account number payment *..... | na | na | na |
| Discarded[†] | 2008^r | 2009 | Change |
| Paper instruments | | | |
| Cash..... | na | na | na |
| Check..... | na | na | na |
| Money order *..... | na | 54.5 | na |
| Travelers check *..... | na | 52.4 | na |
| Payment cards | | | |
| Debit..... | 5.9 | 9.0 | 3.1 |
| Credit..... | 14.0 | 16.5 | 2.5 |
| Prepaid..... | 27.5 | 29.0 | – |
| Electronic payments | | | |
| Online banking bill payment..... | 5.0 | 7.8 | 2.7 |
| Bank account number payment *..... | na | na | na |

* Adoption means the consumer used the instrument in a given year.

† "Discarded" refers to the difference between historical and current adoption rates.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 6
Current Adoption of Payment Instruments, by Instrument Features
Percentage of consumers

| | 2008^r | 2009 | Change |
|--|-------------------------|-------------|---------------|
| Debit cards | 80.2 | 77.0 | -3.2 |
| Rewards..... | 23.4 | 22.0 | -1.5 |
| Credit cards* | 78.3 | 72.2 | -6.1 |
| Rewards..... | 59.6 | 53.7 | -5.9 |
| Nonrewards..... | 53.9 | 42.5 | -11.4 |
| General purpose..... | na | 67.3 | na |
| Rewards..... | na | 46.5 | na |
| Nonrewards..... | na | 33.6 | na |
| Charge..... | na | 15.8 | na |
| Rewards..... | na | 8.5 | na |
| Nonrewards..... | na | 6.0 | na |
| Branded..... | na | 40.0 | na |
| Rewards..... | na | 21.5 | na |
| Nonrewards..... | na | 19.8 | na |
| Prepaid cards† | 17.2 | 32.3 | — |
| General purpose..... | na | 19.7 | na |
| Specific purpose..... | na | 15.4 | na |
| Payroll‡..... | na | 2.0 | na |
| Electronic benefits transfer (EBT)‡..... | na | 7.2 | na |
| Reloadable..... | na | 15.0 | na |
| Bought for own use..... | 6.3 | na | na |
| Received from others..... | 13.6 | na | na |
| Both bought and received..... | 2.7 | na | na |
| Contactless | 44.3 | 24.0 | — |
| Debit card..... | 21.7 | 11.3 | — |
| Credit card..... | 25.7 | 9.6 | — |
| Prepaid card..... | 4.4 | 2.6 | — |
| Electronic toll payment..... | 9.5 | 8.2 | — |
| Key fob..... | 1.7 | 1.8 | — |

* General purpose credit cards have a network logo such as Visa, MasterCard, Discover, or American Express; charge cards require full payment of the balance at the end of each billing period. Branded cards have a merchant's logo on the card.

† General purpose prepaid cards have a credit card network or PIN network logo and can be used at any merchant or retailer that accepts cards from that network. Specific purpose prepaid cards, such as gift cards or public transportation cards, are limited in use to one or several merchants, retailers, or service providers.

‡ Payroll cards may also be general purpose cards.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 7
Number of Adopted Bank Accounts and Payment Cards
Number per adopter*

| | 2008^r | 2009 | Change |
|--|-------------------------|-------------|---------------|
| Bank | 2.8 | 3.2 | – |
| Checking..... | 1.5 | 1.5 | 0.0 |
| Savings..... | na | 2.1 | na |
| Traditional or passbook..... | 1.6 | 1.6 | -0.1 |
| Money market..... | na | 1.6 | na |
| Money market with check privileges..... | na | na | na |
| Nonbank payment accounts | | | |
| Online payment service provider..... | na | 2.2 | na |
| ATM or debit cards | 1.7 | 1.8 | 0.1 |
| ATM..... | 1.2 | 1.3 | 0.1 |
| Debit..... | 1.4 | 1.3 | -0.1 |
| Credit Cards** | 3.5 | 3.7 | – |
| Rewards..... | 2.3 | 2.0 | – |
| Nonrewards..... | 2.5 | 1.8 | – |
| General purpose | na | 2.1 | na |
| Rewards..... | na | 1.3 | na |
| Nonrewards..... | na | 1.2 | na |
| Charge | na | 0.4 | na |
| Rewards..... | na | 0.2 | na |
| Nonrewards..... | na | 0.2 | na |
| Branded | na | 1.2 | na |
| Rewards..... | na | 0.6 | na |
| Nonrewards..... | na | 0.8 | na |
| Prepaid cards† | 2.4 | 2.3 | – |
| General purpose..... | na | 1.0 | na |
| Specific purpose | na | 1.0 | na |
| Payroll‡..... | na | 0.1 | na |
| Electronic benefits transfer (EBT) | na | 0.3 | na |
| Bought for own use..... | 0.7 | na | na |
| Received from others..... | 1.7 | na | na |

* Bold-face numbers are per adopter of the instrument. Numbers for sub-categories of each bold-face category are per adopter of the sub-category of the instrument.

** General purpose credit cards have a network logo such as Visa, MasterCard, Discover, or American Express; charge cards require full payment of the balance at the end of each billing period. Branded cards have a merchant's logo on the card.

† General purpose prepaid cards have a credit card network or PIN network logo and can be used at any merchant or retailer that accepts cards from that network. Specific purpose prepaid cards, such as gift cards or public transportation cards, are limited in use to one or several merchants, retailers, or service providers.

‡ Payroll cards may also be general purpose cards.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 8
Number of Adopted Payment Instruments, by Type of Adopter
Number of instruments per consumer

| | 2008 ^r | 2009 | Change |
|---|-------------------|------------|--------|
| Available number of payment instruments* | 9 | 9 | — |
| Actual number of payment instruments adopted | 5.1 | 5.0 | -0.1 |
| Bank account nonadopters..... | 1.3 | 2.2 | 0.9 |
| Bank account adopters..... | 5.4 | 5.2 | -0.1 |
| Checking and savings..... | 5.5 | 5.4 | -0.2 |
| Checking, no savings..... | 5.0 | 4.9 | -0.1 |
| Savings, no checking..... | 3.1 | 3.6 | 0.5 |
| Paper adopters..... | 5.2 | 5.1 | -0.2 |
| Cash..... | 5.2 | 5.1 | -0.2 |
| Check..... | 5.4 | 5.3 | -0.2 |
| Money order..... | 5.5 | 5.3 | -0.1 |
| Travelers check..... | 6.7 | 6.5 | -0.2 |
| Payment card adopters..... | 5.4 | 5.2 | -0.2 |
| Debit..... | 5.6 | 5.5 | -0.1 |
| Credit..... | 5.6 | 5.5 | -0.1 |
| Prepaid..... | 6.0 | 5.8 | -0.2 |
| Electronic payment instrument adopters..... | 5.7 | 5.7 | 0.0 |
| Online banking bill payment..... | 6.0 | 5.9 | -0.1 |
| Bank account number payment..... | 5.7 | 5.8 | 0.1 |

* The nine instruments are cash, check, money order, traveler's check, debit card, credit card, prepaid card, online banking bill payment and bank account number payment (electronic bank account deduction in 2008). For this table only, check adoption is defined as having a checking account, to ensure comparability between 2008 and 2009.

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 9
Cash Holdings, Withdrawals, and Prepaid Card Reloadings
Dollars, except as noted

| | Mean | | Median | |
|---|-------------------|------------|-------------------|-----------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Cash holdings | 230 | 291 | 69 | 78 |
| On person..... | 79 | 69 | 28 | 34 |
| On property..... | 157 | 229 | 14 | 19 |
| Cash withdrawals | | | | |
| All locations * | | | | |
| Total per month †..... | 336 | 434 | 179 | 217 |
| Amount per withdrawal..... | 102 | 119 | 50 | 60 |
| Withdrawals (number per month)..... | 4.3 | 5.1 | 2.9 | 3.9 |
| Primary location | | | | |
| Total per month †..... | na | 345 | na | 196 |
| Amount per withdrawal..... | na | 124 | na | 58 |
| Withdrawals (number per month)..... | na | 3.5 | na | 2.0 |
| Secondary location | | | | |
| Total per month †..... | na | 91 | na | 0 |
| Amount per withdrawal..... | na | 55 | na | 4 |
| Withdrawals (number per month)..... | na | 1.6 | na | 0.1 |
| Prepaid card reloadings per month | | | | |
| Reloaders, percentage of prepaid card adopters | 5.3 | 6.7 | na | na |
| Reloaders, percentage of prepaid card adopters with reloadable c..... | 31.0 | 20.8 | na | na |
| Typical dollar amount per reloading, reloaders only..... | na | 154 | na | 47 |
| Number of reloads, reloaders only..... | 1.1 | 1.8 | 0.0 | 0.0 |

* Estimates for 2009 cash withdrawals at all locations are derived from the survey variables for cash withdrawals for primary and secondary locations.

† The SCPC questionnaire asks respondents "what amount [of cash] do you get most often"? If the amount of cash consumers get most often is different from the average amount, then the computed total amount of cash that the consumer gets per month will differ from the actual amount. Also, the total amount per month does not necessarily equal the amount per withdrawal times the number of withdrawals, because the amounts and withdrawals are negatively correlated across consumers.

‡ In 2008, this number is the typical amount per withdrawal. In 2009, this number is the withdrawal-weighted average of typical amounts per withdrawal from the primary and secondary locations.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 10**Cash Holdings, by Adoption of Bank Accounts and Payment Instruments**

Dollars per consumer

| Adopters | Mean | | Median | |
|--------------------------|-------------------|------|-------------------|------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Bank account | | | | |
| Total..... | 230 | 294 | 72 | 79 |
| On person..... | 77 | 67 | 29 | 34 |
| On property..... | 158 | 235 | 16 | 19 |
| ATM or debit card | | | | |
| Total..... | 215 | 278 | 59 | 73 |
| On person..... | 68 | 63 | 24 | 30 |
| On property..... | 152 | 222 | 10 | 18 |
| Credit card | | | | |
| Total..... | 252 | 306 | 80 | 99 |
| On person..... | 81 | 72 | 30 | 39 |
| On property..... | 177 | 241 | 18 | 22 |
| Prepaid card | | | | |
| Total..... | 212 | 353 | 80 | 89 |
| On person..... | 64 | 67 | 30 | 34 |
| On property..... | 154 | 295 | 39 | 28 |
| Money order | | | | |
| Total..... | 241 | 215 | 60 | 69 |
| On person..... | 124 | 76 | 29 | 28 |
| On property..... | 124 | 144 | 18 | 18 |
| Nonadopters | Mean | | Median | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Bank account | | | | |
| Total..... | 238 | 245 | 52 | 57 |
| On person..... | 116 | 104 | 11 | 34 |
| On property..... | 136 | 141 | 0 | 11 |
| ATM or debit card | | | | |
| Total..... | 316 | 363 | 114 | 147 |
| On person..... | 141 | 101 | 50 | 50 |
| On property..... | 186 | 266 | 40 | 45 |
| Credit card | | | | |
| Total..... | 153 | 252 | 35 | 49 |
| On person..... | 73 | 60 | 16 | 20 |
| On property..... | 84 | 198 | 0 | 5 |
| Prepaid card | | | | |
| Total..... | 234 | 262 | 66 | 78 |
| On person..... | 82 | 70 | 25 | 34 |
| On property..... | 158 | 198 | 9 | 15 |
| Money order | | | | |
| Total..... | 225 | 316 | 73 | 80 |
| On person..... | 69 | 67 | 25 | 35 |
| On property..... | 161 | 257 | 10 | 18 |

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 11
Cash Withdrawals, by Primary Location
Dollars, except as noted

| | Mean | | Median | |
|---|-------------------|------|-------------------|------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| ATM | | | | |
| Total per month*..... | na | 310 | na | 183 |
| Amount per withdrawal..... | na | 91 | na | 54 |
| Withdrawals (number per month)..... | na | 3.8 | na | 3.0 |
| Cited as most frequent location (percent)..... | 53.5 | 50.8 | na | na |
| Bank teller | | | | |
| Total per month*..... | na | 387 | na | 214 |
| Amount per withdrawal..... | na | 184 | na | 97 |
| Withdrawals (number per month)..... | na | 2.5 | na | 1.6 |
| Cited as most frequent location (percent)..... | 22.6 | 24.3 | na | na |
| Check cashing store | | | | |
| Total per month*..... | na | 947 | na | 696 |
| Amount per withdrawal..... | na | 414 | na | 342 |
| Withdrawals (number per month)..... | na | 2.4 | na | 1.6 |
| Cited as most frequent location (percent)..... | 1.8 | 2.2 | na | na |
| Retail or grocery store | | | | |
| Total per month*..... | na | 127 | na | 83 |
| Amount per withdrawal..... | na | 33 | na | 20 |
| Withdrawals (number per month)..... | na | 4.2 | na | 2.5 |
| Cited as most frequent location (percent)..... | 9.0 | 9.9 | na | na |
| Employer | | | | |
| Total per month*..... | na | 878 | na | 559 |
| Amount per withdrawal..... | na | 252 | na | 125 |
| Withdrawals (number per month)..... | na | 5.8 | na | 4.1 |
| Cited as most frequent location (percent)..... | 5.3 | 4.6 | na | na |
| Family or friend | | | | |
| Total per month*..... | na | 159 | na | 82 |
| Amount per withdrawal..... | na | 60 | na | 20 |
| Withdrawals (number per month)..... | na | 2.7 | na | 1.9 |
| Cited as most frequent location (percent)..... | 2.7 | 6.1 | na | na |
| Other | | | | |
| Total per month*..... | na | 502 | na | 116 |
| Amount per withdrawal..... | na | 260 | na | 118 |
| Withdrawals (number per month)..... | na | 2.1 | na | 0.8 |
| Cited as most frequent location (percent)..... | 0.3 | 2.2 | na | na |

* The SCPC questionnaire asks respondents "what amount [of cash] do you get most often"? If the amount of cash consumers get most often is different from the average amount, then the computed total amount of cash that the customer gets per month will differ from the actual amount. Also, the total amount per month does not necessarily equal the amount per withdrawal times the number of calculated for withdrawals, because the amounts and withdrawals are negatively correlated across consumers. Total per month for each location is consumers who named that location as their most frequent location.

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 12

Cash Withdrawals, by Adoption of Bank Accounts and Payment Instruments

Dollars per month, except as noted

| Adopters | Mean | | Median | |
|-------------------------------------|-------------------|------|-------------------|------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Bank account | | | | |
| Total per month*..... | 328 | 419 | 184 | 217 |
| Amount per withdrawal*..... | 99 | 115 | 50 | 60 |
| Withdrawals (number per month)..... | 4.3 | 5.0 | 2.9 | 3.9 |
| ATM or debit card | | | | |
| Total per month*..... | 313 | 417 | 173 | 217 |
| Amount per withdrawal*..... | 92 | 109 | 45 | 59 |
| Withdrawals (number per month)..... | 4.3 | 5.2 | 4.0 | 3.9 |
| Credit card | | | | |
| Total per month*..... | 332 | 395 | 185 | 211 |
| Amount per withdrawal*..... | 97 | 119 | 57 | 60 |
| Withdrawals (number per month)..... | 4.3 | 4.7 | 2.8 | 3.0 |
| Prepaid card | | | | |
| Total per month*..... | <i>309</i> | 436 | <i>188</i> | 208 |
| Amount per withdrawal*..... | <i>107</i> | 114 | <i>54</i> | 60 |
| Withdrawals (number per month)..... | <i>3.9</i> | 5.0 | <i>2.5</i> | 3.9 |
| Money order | | | | |
| Total per month*..... | 385 | 560 | 218 | 319 |
| Amount per withdrawal*..... | 120 | 145 | 49 | 75 |
| Withdrawals (number per month)..... | 4.6 | 6.0 | 4.0 | 3.9 |
| Nonadopters | Mean | | Median | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Bank account | | | | |
| Total per month*..... | 446 | 648 | 87 | 300 |
| Amount per withdrawal*..... | 146 | 195 | 26 | 79 |
| Withdrawals (number per month)..... | 3.6 | 5.9 | 1.1 | 3.3 |
| ATM or debit card | | | | |
| Total per month*..... | 462 | 520 | 197 | 272 |
| Amount per withdrawal*..... | 156 | 179 | 90 | 100 |
| Withdrawals (number per month)..... | 4.3 | 4.3 | 1.9 | 2.0 |
| Credit card | | | | |
| Total per month*..... | 349 | 533 | 170 | 260 |
| Amount per withdrawal*..... | 120 | 119 | 37 | 59 |
| Withdrawals (number per month)..... | 4.0 | 6.0 | 3.6 | 4.1 |
| Prepaid card | | | | |
| Total per month*..... | <i>341</i> | 432 | <i>174</i> | 220 |
| Amount per withdrawal*..... | <i>101</i> | 122 | <i>49</i> | 60 |
| Withdrawals (number per month)..... | <i>4.3</i> | 5.1 | <i>3.0</i> | 3.3 |
| Money order | | | | |
| Total per month*..... | 325 | 391 | 174 | 200 |
| Amount per withdrawal*..... | 98 | 111 | 49 | 60 |
| Withdrawals (number per month)..... | 4.2 | 4.7 | 2.6 | 3.0 |

* The SCPC questionnaire asks respondents "what amount [of cash] do you get most often"? If the amount of cash consumers get most often is different from the average amount, then the computed total amount of cash that the consumer gets per month will differ from the actual amount. Also, the total amount per month does not necessarily equal the amount per withdrawal times the number of withdrawals, because the amounts and withdrawals are negatively correlated across consumers.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 13
Incidence of Bank Account Access and Other Practices
 Percentage of consumers

| | Monthly | | Annual | |
|---|-------------------|-----------|-------------------|-------------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Bank account access | na | na | na | 91.4 |
| Bank branch visit..... | na | na | na | 77.4 |
| ATM use..... | na | na | na | 69.0 |
| Telephone banking..... | na | na | na | 32.4 |
| Online banking..... | na | na | na | 61.4 |
| Mobile banking..... | na | na | na | 8.9 |
| Other | | | | |
| Cash withdrawals..... | 92.4 | 90.6 | 96.7 | 98.0 |
| Online payment service provider..... | na | na | na | 19.8 |
| Online payment service provider, adopters only..... | na | na | na | 66.0 |
| Prepaid card reloading, reloaders only..... | na | 63.1 | na | 93.4 |
| Mobile payments..... | na | na | na | 3.0 |
| Text/SMS..... | na | na | na | 2.0 |
| Contactless..... | na | na | na | 1.3 |

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 14
Incidence of Use of Payment Instruments
 Percentage of consumers or adopters

| Percentage of consumers | Monthly | | Annual | |
|-------------------------------------|-------------------|-------------|-------------------|--------------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 94.9 | 94.2 | 96.2 | 96.9 |
| Cash..... | 85.9 | 88.5 | 88.4 | 92.2 |
| Check..... | 82.4 | 70.2 | 87.4 | 76.1 |
| Money order..... | 8.6 | 9.5 | 18.3 | 25.1 |
| Travelers check..... | 0.5 | 0.1 | 4.7 | 3.5 |
| Payment cards | 89.1 | 88.8 | 90.2 | 89.8 |
| Debit..... | 66.6 | 65.5 | 68.8 | 67.6 |
| Credit..... | 68.5 | 55.5 | 72.6 | 60.8 |
| Prepaid..... | 5.7 | 8.5 | 8.6 | 12.6 |
| Electronic payments | 73.9 | 63.5 | 76.3 | 68.0 |
| Online banking bill payment..... | 33.7 | 34.2 | 35.5 | 36.0 |
| Bank account number payment..... | 70.6 | 49.8 | 73.4 | 56.3 |
| Direct deduction from income | 18.6 | 15.1 | 19.4 | 15.9 |
| Percentage of adopters* | Monthly | | Annual | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 96.8 | 94.7 | 97.7 | 96.5 |
| Cash..... | 87.7 | 88.7 | 89.9 | 92.3 |
| Check..... | 85.6 | 82.4 | 90.5 | 89.4 |
| Money order†..... | 48.4 | 38.3 | na | 57.1 |
| Travelers check†..... | 11.5 | 2.2 | na | 77.8 |
| Payment cards | 95.1 | 94.1 | 96.2 | 95.1 |
| Debit..... | 83.3 | 85.3 | 86.0 | 88.0 |
| Credit..... | 87.7 | 77.3 | 92.9 | 84.7 |
| Prepaid..... | 33.8 | 27.7 | 50.5 | 41.4 |
| Electronic payments | 91.7 | 87.8 | 94.7 | 94.0 |
| Online banking bill payment..... | 67.0 | 70.9 | 70.6 | 74.7 |
| Bank account number payment..... | 96.3 | 88.3 | 100.0 | 100.0 |
| Direct deduction from income | 95.9 | 94.8 | 100.0 | 100.0 |

* Per adopter estimate is included due to changes in the survey design that affected the rates of adoption of payment instruments (see Table 4), making the per consumer estimates not comparable across years. Estimates are calculated using only adopters of that payment instrument, not all consumers.

† Comparison between 2008 and 2009 is not valid for annual incidence of use because adoption is defined by annual incidence of use in these payment instruments, and thus is equal to 100%.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 15
Incidence of Transactions
Percentage of consumers

| | Monthly | | Annual | |
|--|-------------------|-------------|-------------------|-------------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Bill payments | 95.5 | 95.4 | 95.7 | 96.6 |
| Automatic | 56.7 | 52.9 | 57.2 | 53.6 |
| Online | 65.5 | 63.6 | 70.2 | 68.0 |
| By mail or in person | 82.3 | 79.2 | 88.5 | 86.3 |
| Online payments, excluding bills | 61.1 | 58.6 | 78.6 | 73.2 |
| In-person payments, excluding bills | 96.3 | 96.0 | 96.3 | 96.4 |
| Retail goods | 95.5 | 95.3 | 95.8 | 95.9 |
| All other..... | 86.6 | 85.1 | 89.5 | 90.3 |
| Services | na | 81.8 | na | 89.1 |
| Person to person payments..... | na | 43.4 | na | 54.7 |

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 16**Incidence of Use of Payment Instruments, by Type of Transaction**

Percentage of consumers

| Monthly incidence | Bill Payments | | Online payments | | Retail, services, and person to person* | |
|-------------------------------------|-------------------|-------------|-------------------|-------------|---|-------------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 78.0 | 75.4 | 32.2 | 28.7 | 90.3 | 90.0 |
| Cash..... | 22.3 | 28.8 | na | na | 86.3 | 87.8 |
| Check or money order..... | 73.5 | 63.4 | 32.2 | 28.7 | 59.4 | 51.4 |
| Check..... | na | 58.4 | na | 26.0 | na | 50.1 |
| Money order..... | 7.9 | 8.4 | na | 4.8 | 4.6 | 3.7 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 72.7 | 62.5 | 47.7 | 42.4 | 88.1 | 84.2 |
| Debit..... | 58.1 | 43.3 | 30.1 | 26.0 | 64.2 | 61.9 |
| Credit..... | 57.6 | 33.1 | 30.8 | 24.6 | 64.4 | 49.3 |
| Prepaid..... | 2.2 | 2.6 | 2.5 | 3.2 | 5.3 | 6.9 |
| Electronic payments | 70.8 | 61.6 | 35.0 | 19.7 | na | na |
| Online banking bill payment..... | 33.7 | 34.0 | na | na | na | na |
| Bank account number payment..... | 62.9 | 45.4 | 35.0 | 19.7 | na | na |
| Direct deduction from income | 18.6 | 15.1 | na | na | na | na |
| Annual incidence | Bill Payments | | Online payments | | Retail, services and person to person* | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 85.8 | 84.7 | 38.9 | 36.7 | 93.3 | 92.8 |
| Cash..... | 25.8 | 36.1 | na | na | 89.1 | 91.6 |
| Check or money order..... | 81.8 | 73.6 | 38.9 | 36.7 | 69.8 | 63.3 |
| Check..... | na | 68.0 | na | 33.3 | na | 61.5 |
| Money order..... | 13.7 | 11.7 | na | 8.1 | 18.3 | 7.3 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 75.7 | 67.2 | 65.2 | 58.7 | 89.1 | 85.8 |
| Debit..... | 61.2 | 45.8 | 39.5 | 35.6 | 66.6 | 64.2 |
| Credit..... | 62.8 | 38.4 | 46.4 | 38.4 | 69.9 | 55.5 |
| Prepaid..... | 2.7 | 4.8 | 3.4 | 6.1 | 8.1 | 11.1 |
| Electronic payments | 73.6 | 64.3 | 42.5 | 28.3 | na | na |
| Online banking bill payment..... | 35.5 | 35.5 | na | na | na | na |
| Bank account number payment..... | 65.6 | 49.5 | 42.5 | 28.3 | na | na |
| Direct deduction from income | 19.4 | 15.9 | na | na | na | na |

* Adjusted for changes from 2008 to 2009 in the survey definition of transaction categories.

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 17

Incidence of Use of Payment Instruments, by Type of Bill Payment

Percentage of consumers

| Monthly incidence | Automatic | | Online | | By mail or in person | |
|---------------------------------------|-------------------|-------------|-------------------|-------------|----------------------|-------------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Any instrument | 56.7 | 52.9 | 65.5 | 63.6 | 82.3 | 79.2 |
| Excluding online banking bill payment | 56.7 | 49.5 | na | na | na | na |
| Paper instruments | na | na | na | na | 78.0 | 73.7 |
| Cash..... | na | na | na | na | 22.3 | 28.8 |
| Check or money order..... | na | na | na | na | 73.5 | 63.4 |
| Check..... | na | na | na | na | na | 58.4 |
| Money order..... | na | na | na | na | na | 8.4 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 38.3 | 32.6 | 43.3 | 41.6 | 38.5 | 37.8 |
| Debit..... | 21.4 | 19.0 | 30.8 | 30.2 | 27.3 | 26.6 |
| Credit..... | 27.9 | 21.0 | 22.1 | 19.6 | 20.5 | 18.2 |
| Prepaid..... | na | na | na | na | 2.2 | 2.6 |
| Electronic payments | 51.3 | 42.1 | 55.4 | 49.7 | na | na |
| Online banking bill payment..... | na | 20.9 | 33.7 | 30.0 | na | na |
| Bank account number payment..... | 51.3 | 31.0 | 40.8 | 32.5 | na | na |
| Direct deduction from income | 18.6 | 15.1 | na | na | na | na |
| Annual incidence | Automatic | | Online | | By mail or in person | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Any instrument | 57.2 | 53.6 | 70.2 | 68.0 | 88.5 | 86.3 |
| Excluding online banking bill payment | 57.2 | 50.3 | na | na | na | na |
| Paper instruments | na | na | na | na | 85.6 | 82.8 |
| Cash..... | na | na | na | na | 25.8 | 36.1 |
| Check or money order..... | na | na | na | na | 81.8 | 73.6 |
| Check..... | na | na | na | na | na | 68.0 |
| Money order..... | na | na | na | na | na | 11.7 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 40.7 | 34.1 | 48.7 | 47.7 | 43.6 | 45.1 |
| Debit..... | 22.8 | 19.6 | 34.7 | 33.9 | 29.4 | 31.1 |
| Credit..... | 30.9 | 23.1 | 28.0 | 24.5 | 25.9 | 23.8 |
| Prepaid..... | na | na | na | na | 2.7 | 4.8 |
| Electronic payments | 52.6 | 43.7 | 60.1 | 53.0 | na | na |
| Online banking bill payment..... | na | 22.0 | 35.5 | 31.6 | na | na |
| Bank account number payment..... | 52.6 | 34.1 | 44.7 | 36.8 | na | na |
| Direct deduction from income | 19.4 | 15.9 | na | na | na | na |

* Online banking bill pay is excluded to show direct comparison between 2008 and 2009 estimates for automatic bill payments.

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 18**Incidence of Use of Payment Instruments, by Type of Retail Goods**

Percentage of consumers

| Monthly incidence | Total | | Essential goods | | Nonessential goods | |
|----------------------------------|-------------------|-------------|-------------------|-----------|--------------------|-----------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Overall | 95.5 | 95.3 | 93.2 | na | 78.9 | na |
| Paper instruments | 88.0 | 81.6 | 77.6 | na | 55.3 | na |
| Cash..... | 85.2 | 81.6 | 74.7 | na | 48.8 | na |
| Check or money order..... | 45.8 | 30.6 | 29.1 | na | 22.2 | na |
| Check..... | na | 30.8 | 29.1 | na | 22.2 | na |
| Money order..... | na | 2.4 | na | na | na | na |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 86.8 | 81.4 | 84.1 | na | 68.1 | na |
| Debit..... | 63.7 | 59.6 | 62. | na | 46.5 | na |
| Credit..... | 63.6 | 46.0 | 55.4 | na | 45.4 | na |
| Prepaid..... | 4.9 | 5.9 | 5.0 | na | 2.4 | na |
| Electronic payments | na | na | na | na | na | na |
| Online banking bill payment..... | na | na | na | na | na | na |
| Bank account number payment..... | na | na | na | na | na | na |
| Annual incidence | Total | | Essential goods | | Nonessential goods | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Overall | 95.8 | 95.9 | 94.6 | na | 91.8 | na |
| Paper instruments | 89.8 | 85.8 | 87.5 | na | 73.1 | na |
| Cash..... | 87.1 | 85.8 | 84.4 | na | 68.0 | na |
| Check or money order..... | 53.2 | 39.3 | 42.5 | na | 41.0 | na |
| Check..... | 53.2 | 38.9 | 42.5 | na | 41.0 | na |
| Money order..... | na | 4.6 | na | na | na | na |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 88.0 | 83.6 | 86.5 | na | 83.2 | na |
| Debit..... | 66.0 | 62.5 | 65.0 | na | 58.7 | na |
| Credit..... | 68.8 | 52.1 | 64.0 | na | 63.3 | na |
| Prepaid..... | 7.8 | 10.3 | 7.8 | na | 4.6 | na |
| Electronic payments | na | na | na | na | na | na |
| Online banking bill payment..... | na | na | na | na | na | na |
| Bank account number payment..... | na | na | na | na | na | na |

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 19**Incidence of Use of Payment Instruments, by Type of Non-Retail, In-Person Transactions***

Percentage of consumers

| Monthly incidence | Total | | Services and other | | Person to person | |
|----------------------------------|-------------------|-------------|--------------------|-------------|-------------------|-------------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Overall | 86.6 | 85.1 | na | 81.8 | na | 43.4 |
| Paper instruments | 75.7 | 75.1 | na | 66.9 | na | 38.9 |
| Cash..... | 62.1 | 65.1 | na | 56.1 | na | 34.9 |
| Check or money order..... | 47.1 | 43.1 | na | 37.1 | na | 15.6 |
| Check..... | na | 42.4 | na | 37.5 | na | 15.2 |
| Money order..... | na | 2.6 | na | 2.0 | na | 1.3 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 63.1 | 63.8 | na | 63.4 | na | 8.3 |
| Debit..... | 41.3 | 43.6 | na | 43.5 | na | 6.3 |
| Credit..... | 39.6 | 35.2 | na | 34.9 | na | 3.9 |
| Prepaid..... | 1.8 | 3.6 | na | 3.6 | na | na |
| Electronic payments | na | 8.2 | na | na | na | 8.2 |
| Online banking bill payment..... | na | 4.4 | na | na | na | 4.4 |
| Bank account number payment..... | na | 5.8 | na | na | na | 5.8 |
| Annual incidence | Total | | Services and other | | Person to person | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Overall | 89.5 | 90.3 | na | 89.1 | na | 54.7 |
| Paper instruments | 81.9 | 83.7 | na | 78.0 | na | 50.5 |
| Cash..... | 67.3 | 76.4 | na | 68.2 | na | 46.0 |
| Check or money order..... | 57.8 | 58.0 | na | 51.4 | na | 27.7 |
| Check..... | na | 56.7 | na | 51.5 | na | 27.0 |
| Money order..... | na | 5.8 | na | 4.3 | na | 3.2 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 73.1 | 74.0 | na | 73.8 | na | 12.1 |
| Debit..... | 50.2 | 51.7 | na | 51.7 | na | 8.7 |
| Credit..... | 55.7 | 46.3 | na | 46.1 | na | 6.6 |
| Prepaid..... | 3.7 | 6.0 | na | 6.0 | na | na |
| Electronic payments | na | 12.5 | na | na | na | 12.5 |
| Online banking bill payment..... | na | 6.2 | na | na | na | 6.2 |
| Bank account number payment..... | na | 9.6 | na | na | na | 9.6 |

* Adjusted for changes from 2008 to 2009 in the survey definition of transaction categories. These adjustments make the two years directly comparable.

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 20**Use of Payment Instruments in a Typical Month, by Type of Instrument**

Number per consumer and percent share

| | Number per consumer | | | Percent Share | |
|--|---------------------|-------------|-------------------|-------------------|--------------|
| | Mean | | Percentage change | | |
| | 2008 ^r | 2009 | | 2008 ^r | 2009 |
| Total payments | 67.4 | 64.5 | - 4.2 | 100.0 | 100.0 |
| Paper instruments | 24.1 | 26.7 | 10.8 | 35.4 | 41.8 |
| Cash..... | 14.5 | 18.4 | 26.9 | 20.8 | 28.2 |
| Check or money order..... | 10.0 | 8.7 | -13.1 | 14.6 | 13.5 |
| Check..... | 9.6 | 8.2 | -14.0 | 13.9 | 12.7 |
| Money order..... | 0.4 | 0.5 | 23.6 | 0.6 | 0.8 |
| Travelers check..... | 0.0 | 0.0 | -38.2 | 0.0 | 0.0 |
| Payment cards | 35.4 | 30.7 | -13.2 | 52.5 | 47.8 |
| Debit..... | 21.2 | 19.0 | -10.0 | 30.8 | 29.3 |
| Credit..... | 14.4 | 11.2 | -21.9 | 21.1 | 17.3 |
| Prepaid..... | 0.4 | 0.8 | — | 0.6 | 1.2 |
| Prepaid, per adopter†..... | 2.6 | 2.6 | - 0.6 | — | — |
| Electronic payments | 7.4 | 6.2 | -15.1 | 10.9 | 9.7 |
| Online banking bill payment*..... | 3.4 | 3.3 | - 3.4 | 3.1 | 5.1 |
| Bank account number payment*..... | 4.1 | 3.0 | -26.1 | 7.9 | 4.6 |
| Bank account number payment, per adopter†..... | 7.3 | 5.4 | -26.5 | — | — |
| Direct deduction from income | 0.8 | 0.6 | -31.4 | 1.1 | 0.8 |

* Adjusted for changes from 2008 to 2009 in the survey definition of transaction categories.

† Per adopter estimate is included due to changes in the survey design that affected the rates of adoption of payment instruments (see Table 4), making the per consumer estimates not comparable across years. Estimates are calculated using only adopters of a payment instrument, not all consumers.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 21**Transactions in a Typical Month**

Number per consumer and percent share

| | Number per consumer | | | Percent Share | |
|--|---------------------|-------------|-------------------|-------------------|--------------|
| | Mean | | Percentage change | | |
| | 2008 ^r | 2009 | | 2008 ^r | 2009 |
| Total | 67.4 | 64.5 | -4.2 | 100.0 | 100.0 |
| Bill payments | 19.6 | 18.0 | -8.2 | 29.1 | 28.1 |
| Automatic..... | 6.0 | 4.6 | – | 8.7 | 7.2 |
| Direct deduction from income..... | 0.8 | 0.6 | – | 1.1 | na |
| Other automatic..... | 5.1 | 4.0 | – | 7.6 | na |
| Online..... | 6.4 | 5.5 | -13.2 | 9.4 | 8.5 |
| By mail or in person..... | 7.4 | 7.9 | 7.2 | 11.0 | 12.4 |
| Online payments, excluding bills | 6.6 | 5.0 | -23.7 | 9.7 | 7.8 |
| In-person payments, excluding bills | 41.2 | 41.0 | -0.4 | 61.1 | 64.1 |
| Retail goods..... | 28.6 | 25.2 | – | 42.5 | 39.4 |
| All other..... | 12.6 | 15.8 | – | 18.6 | 24.7 |
| Services..... | na | 12.6 | na | na | 19.7 |
| Person to person payments..... | na | 3.2 | na | na | 5.0 |

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 22

Use of Payment Instruments in a Typical Month, by Type of Transaction

Number per consumer and percent share

| Number | Bill Payments | | Online payments | | Retail, service and person to person | |
|-------------------------------------|-------------------|-------------|-------------------|------------|--------------------------------------|-------------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 5.1 | 5.5 | 1.6 | 1.4 | 17.9 | 20.1 |
| Cash..... | 1.2 | 2.1 | na | na | 13.6 | 16.6 |
| Check or money order..... | 4.1 | 3.4 | 1.6 | 1.4 | 4.5 | 3.9 |
| Check..... | 3.9 | 3.2 | na | 1.3 | 4.3 | 3.8 |
| Money order..... | 0.2 | 0.3 | na | 0.1 | 0.2 | 0.2 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 7.9 | 7.1 | 3.7 | 3.0 | 23.9 | 20.8 |
| Debit..... | 4.6 | 4.5 | 2.1 | 1.8 | 14.8 | 13.1 |
| Credit..... | 3.6 | 2.6 | 1.6 | 1.2 | 9.4 | 7.6 |
| Prepaid..... | 0.0 | 0.1 | 0.1 | 0.1 | 0.3 | 0.5 |
| Electronic payments | 6.0 | 5.2 | 1.4 | 0.7 | na | 0.4 |
| Online banking bill payment..... | 2.2 | 3.1 | na | na | na | 0.2 |
| Bank account number payment..... | 4.0 | 2.1 | 1.4 | 0.7 | na | 0.2 |
| Direct deduction from income | 0.8 | 0.6 | na | na | na | na |
| Percent | Bill Payments | | Online payments | | Retail, service and person to person | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 7.4 | 8.3 | 2.3 | 2.2 | 25.7 | 31.3 |
| Cash..... | 1.5 | 3.0 | na | na | 19.3 | 25.2 |
| Check or money order..... | 5.9 | 5.3 | 2.3 | 2.2 | 6.4 | 6.1 |
| Check..... | 5.6 | 4.9 | na | 2.0 | na | 5.8 |
| Money order..... | 0.3 | 0.4 | na | na | 0.3 | 0.3 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 11.6 | 11.0 | 5.5 | 4.6 | 35.4 | 32.2 |
| Debit..... | 6.4 | 6.8 | 3.0 | 2.7 | 21.3 | 19.8 |
| Credit..... | 5.1 | 3.9 | 2.3 | 1.8 | 13.6 | 11.6 |
| Prepaid..... | 0.0 | 0.2 | 0.1 | 0.2 | 0.5 | 0.8 |
| Electronic payments | 9.0 | 8.0 | 1.9 | 1.0 | na | 0.6 |
| Online banking bill payment..... | 3.1 | 4.8 | na | na | na | 0.3 |
| Bank account number payment..... | 5.9 | 3.3 | na | 1.0 | na | 0.3 |
| Direct deduction from income | 1.1 | 0.8 | na | na | na | na |

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 23**Use of Payment Instruments in a Typical Month, by Type of Bill Payment**

Number per consumer and percent share

| Number | Automatic | | Online | | By mail or in person | |
|-------------------------------------|-------------------|------------|-------------------|------------|----------------------|------------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | na | na | na | na | 5.1 | 5.3 |
| Cash..... | na | na | na | na | 1.2 | 2.1 |
| Check or money order..... | na | na | na | na | 4.1 | 3.4 |
| Check..... | na | na | na | na | na | 3.2 |
| Money order..... | na | na | na | na | na | 0.3 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 2.9 | 2.1 | 2.7 | 2.5 | 2.4 | 2.7 |
| Debit..... | 1.6 | 1.2 | 1.7 | 1.9 | 1.4 | 1.7 |
| Credit..... | 1.4 | 0.9 | 1.1 | 0.7 | 1.2 | 1.0 |
| Prepaid..... | na | na | na | na | 0.0 | 0.1 |
| Electronic payments | 2.3 | 2.1 | 3.8 | 3.1 | na | na |
| Online banking bill payment*..... | 1.3 | 1.1 | 2.2 | 2.0 | na | na |
| Bank account number payment..... | 1.1 | 1.0 | 1.8 | 1.2 | na | na |
| Direct deduction from income | 0.8 | 0.6 | na | na | na | na |
| Percent | Automatic | | Online | | By mail or in person | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | na | na | na | na | 7.4 | 8.3 |
| Cash..... | na | na | na | na | 1.5 | 3.0 |
| Check or money order..... | na | na | na | na | 5.9 | 5.3 |
| Check..... | na | na | na | na | na | 4.9 |
| Money order..... | na | na | na | na | 0.3 | 0.4 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 4.2 | 3.1 | 3.8 | 3.8 | 3.6 | 4.1 |
| Debit..... | 2.3 | 1.7 | 2.3 | 2.7 | 1.9 | 2.4 |
| Credit..... | 1.9 | 1.4 | 1.5 | 1.1 | 1.7 | 1.5 |
| Prepaid..... | na | na | na | na | 0.0 | 0.2 |
| Electronic payments | 3.4 | 3.2 | 5.6 | 4.8 | na | na |
| Online banking bill payment..... | 1.8 | 1.7 | 3.1 | 3.0 | na | na |
| Bank account number payment..... | 1.6 | 1.5 | 6.4 | 1.7 | na | na |
| Direct deduction from income | 1.1 | 0.8 | na | na | na | na |

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

*The 2008 automatic bill payment number for online banking bill payment is derived from the ratio of total electronic automatic bill payments to total number of online banking bill payments in the 2009 SCPC.

Table 24**Use of Payment Instruments in a Typical Month, by Type of Retail Goods***

Number per consumer and percent share

| Number | Total | | Essential goods | | Nonessential goods | |
|----------------------------------|-------------------|-------------|-------------------|-----------|--------------------|-----------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 11.2 | 11.3 | 7.4 | na | 3.9 | na |
| Cash..... | 9.7 | 10.0 | 6.5 | na | 3.2 | na |
| Check or money order..... | 1.7 | 1.8 | 1.0 | na | 0.7 | na |
| Check..... | na | 1.8 | na | na | na | na |
| Money order..... | na | 0.1 | na | na | na | na |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 17.8 | 14.1 | 11.9 | na | 5.9 | na |
| Debit..... | 11.5 | 8.9 | 7.9 | na | 3.8 | na |
| Credit..... | 6.6 | 5.3 | 4.4 | na | 2.3 | na |
| Prepaid..... | 0.3 | 0.4 | 0.2 | na | 0.1 | na |
| Electronic payments | na | na | na | na | na | na |
| Online banking bill payment..... | na | na | na | na | na | na |
| Bank account number payment..... | na | na | na | na | na | na |
| Percent | Total | | Essential goods | | Nonessential goods | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 16.1 | 17.6 | 10.5 | na | 5.6 | na |
| Cash..... | 13.7 | 14.8 | 9.2 | na | 4.6 | na |
| Check or money order..... | 2.4 | 2.7 | 1.4 | na | 1.0 | na |
| Check..... | na | na | na | na | na | na |
| Money order..... | na | na | na | na | na | na |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 26.5 | 21.8 | 17.7 | na | 8.8 | na |
| Debit..... | 16.5 | 13.4 | 11.2 | na | 5.4 | na |
| Credit..... | 9.6 | 7.9 | 6.3 | na | 3.3 | na |
| Prepaid..... | 0.4 | 0.5 | 0.3 | na | 0.1 | na |
| Electronic payments | na | na | na | na | na | na |
| Online banking bill payment..... | na | na | na | na | na | na |
| Bank account number payment..... | na | na | na | na | na | na |

* Adjusted for changes from 2008 to 2009 in the survey definition of transaction categories.

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 25**Use of Payment Instruments in a Typical Month, by Type of Non-Retail, In-Person Transactions***

Number per consumer and percent share

| Number | Total | | Services and other | | Person to person | |
|----------------------------------|-------------------|-------------|--------------------|-------------|-------------------|------------|
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 6.8 | 8.8 | na | 6.5 | na | 2.3 |
| Cash..... | 4.0 | 6.9 | na | 5.2 | na | 1.9 |
| Check or money order..... | 2.9 | 2.1 | na | 1.6 | na | 0.5 |
| Check..... | na | 2.1 | na | 1.6 | na | 0.5 |
| Money order..... | na | 0.1 | na | 0.1 | na | 0.0 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 6.1 | 6.7 | na | 6.2 | na | 0.5 |
| Debit..... | 3.4 | 4.3 | na | 3.9 | na | 0.4 |
| Credit..... | 2.9 | 2.5 | na | 2.4 | na | 0.1 |
| Prepaid..... | 0.1 | 0.2 | na | 0.2 | na | na |
| Electronic payments | na | 0.4 | na | na | na | 0.4 |
| Online banking bill payment..... | na | 0.2 | na | na | na | 0.2 |
| Bank account number payment..... | na | 0.2 | na | na | na | 0.2 |
| Percent | Total | | Services and other | | Person to person | |
| | 2008 ^r | 2009 | 2008 ^r | 2009 | 2008 ^r | 2009 |
| Paper instruments | 9.6 | 12.7 | na | 10.1 | na | 3.6 |
| Cash..... | 5.6 | 9.6 | na | 7.6 | na | 2.8 |
| Check or money order..... | 4.0 | 3.4 | na | 2.5 | na | 0.8 |
| Check..... | na | 3.2 | na | 2.4 | na | 0.7 |
| Money order..... | na | 0.2 | na | 0.1 | na | 0.1 |
| Travelers check..... | na | na | na | na | na | na |
| Payment cards | 9.0 | 8.3 | na | 9.5 | na | 0.8 |
| Debit..... | 4.8 | 5.2 | na | 5.8 | na | 0.6 |
| Credit..... | 4.1 | 3.1 | na | 3.5 | na | 0.2 |
| Prepaid..... | 0.1 | 0.3 | na | 0.3 | na | na |
| Electronic payments | na | 0.5 | na | na | na | 0.5 |
| Online banking bill payment..... | na | 0.2 | na | na | na | 0.2 |
| Bank account number payment..... | na | 0.3 | na | na | na | 0.3 |

* Adjusted for changes from 2008 to 2009 in the survey definition of transaction categories.

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 26**Payment Instruments Used in a Typical Period, by Type of Instrument and Transaction**

Number per consumer

| Typical Month | 2008 ^r | 2009 |
|---|-------------------|------------|
| All payments (9 instruments) | 4.2 | 3.8 |
| Paper instruments..... | 1.8 | 1.7 |
| Payment cards..... | 1.4 | 1.3 |
| Electronic payments..... | 1.0 | 0.8 |
| Bill payments (8 instruments) | 3.1 | 2.6 |
| Paper instruments..... | 1.0 | 0.9 |
| Payment cards..... | 1.1 | 0.8 |
| Electronic payments..... | 0.9 | 0.8 |
| Online payments (6 instruments) | 1.2 | 1.0 |
| Paper instruments..... | 0.3 | 0.3 |
| Payment cards..... | 0.6 | 0.5 |
| Electronic payments..... | 0.3 | 0.2 |
| In-person payments (8 instruments) | 2.8 | 2.6 |
| Paper instruments..... | 1.5 | 1.4 |
| Payment cards..... | 1.3 | 1.2 |
| Electronic payments..... | na | 0.1 |
| Typical Year | 2008 ^r | 2009 |
| All payments (9 instruments) | 4.5 | 4.2 |
| Paper instruments..... | 2.0 | 1.9 |
| Payment cards..... | 1.5 | 1.4 |
| Electronic payments..... | 1.1 | 0.9 |
| Bill payments (8 instruments) | 3.4 | 2.9 |
| Paper instruments..... | 1.2 | 1.1 |
| Payment cards..... | 1.2 | 0.9 |
| Electronic payments..... | 1.0 | 0.8 |
| Online payments (6 instruments) | 1.6 | 1.4 |
| Paper instruments..... | 0.4 | 0.4 |
| Payment cards..... | 0.9 | 0.8 |
| Electronic payments..... | 0.4 | 0.3 |
| In-person payments (8 instruments) | 3.2 | 3.0 |
| Paper instruments..... | 1.7 | 1.6 |
| Payment cards..... | 1.4 | 1.3 |
| Electronic payments..... | na | 0.2 |

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values. Numbers are derived from incidence of use statistics.

Table 27
Assessments of Characteristics of Payment Instruments
Percentage of consumers

| | Most important | 2nd most important | 3rd most important | Least important |
|---|---------------------------|-------------------------------|-------------------------------|----------------------------|
| 2009 | | | | |
| Instrument characteristic rating | | | | |
| Acceptance for payment..... | 22.2 | 23.8 | 26.0 | 27.6 |
| Cost..... | 25.5 | 27.2 | 21.4 | 25.5 |
| Convenience..... | 27.7 | 25.2 | 25.4 | 21.1 |
| Security..... | 54.9 | 25.7 | 13.6 | 5.2 |
| 2008^r | | | | |
| Instrument characteristic rating | | | | |
| Acceptance for payment..... | 8.6 | na | na | 7.6 |
| Acquisition and setup..... | 0.4 | na | na | 41.3 |
| Control over payment timing..... | 10.9 | na | na | 18.1 |
| Cost..... | 10.1 | na | na | 5.5 |
| Ease of use..... | 28.7 | na | na | 4.7 |
| Payment records..... | 5.8 | na | na | 4.1 |
| Payment speed..... | 4.0 | na | na | 17.9 |
| Security..... | 31.6 | na | na | 0.8 |

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 28A

Assessments of Payment Instruments, by Characteristic
Percentage of consumers

| Acceptance for payment | Rarely accepted | Occasionally accepted | Often accepted | Usually accepted | Almost always accepted |
|-------------------------------------|-----------------------|-----------------------|----------------------------------|------------------|------------------------|
| Cash | | | | | |
| 2008 ^r | 1.9 | 2.3 | 7.9 | 11.6 | 76.3 |
| 2009..... | 2.5 | 1.7 | 7.3 | 11.7 | 76.7 |
| Check | | | | | |
| 2008 ^r | 1.6 | 11.3 | 31.5 | 36.3 | 19.3 |
| 2009..... | 3.8 | 16.1 | 27.7 | 33.5 | 19.0 |
| Debit card | | | | | |
| 2008 ^r | 1.4 | 1.6 | 12.4 | 36.6 | 47.9 |
| 2009..... | 2.0 | 0.7 | 12.6 | 32.0 | 52.8 |
| Credit card | | | | | |
| 2008 ^r | 1.7 | 0.1 | 7.1 | 31.8 | 59.3 |
| 2009..... | 2.0 | 0.8 | 7.2 | 29.5 | 60.5 |
| Prepaid card | | | | | |
| 2008 ^r | 3.8 | 10.2 | 22.9 | 28.9 | 34.2 |
| 2009..... | 3.7 | 6.7 | 24.2 | 31.8 | 33.6 |
| Bank account number payment* | | | | | |
| 2008 ^r | 13.5 | 19.3 | 26.3 | 19.4 | 21.5 |
| 2009..... | 30.4 | 22.5 | 21.4 | 13.1 | 12.5 |
| Online banking bill payment* | | | | | |
| 2008 ^r | 13.5 | 19.3 | 26.3 | 19.4 | 21.5 |
| 2009..... | 9.2 | 9.7 | 26.3 | 26.8 | 27.9 |
| Cost | Very high cost | High cost | Neither high nor low cost | Low cost | Very low cost |
| Cash | | | | | |
| 2008 ^r | 1.8 | 4.1 | 18.9 | 8.3 | 66.9 |
| 2009..... | 1.2 | 2.7 | 14.2 | 10.0 | 71.9 |
| Check | | | | | |
| 2008 ^r | 2.1 | 12.4 | 21.8 | 40.9 | 22.8 |
| 2009..... | 1.5 | 7.7 | 21.5 | 38.8 | 30.5 |
| Debit card | | | | | |
| 2008 ^r | 2.5 | 9.2 | 25.2 | 30. | 33.2 |
| 2009..... | 2.1 | 7.9 | 23.1 | 30.1 | 36.7 |
| Credit card | | | | | |
| 2008 ^r | 20.2 | 31.3 | 17.0 | 18.2 | 13.3 |
| 2009..... | 23.1 | 32.1 | 15.2 | 14.2 | 15.3 |
| Prepaid card | | | | | |
| 2008 ^r | 5.2 | 15.5 | 43.4 | 17.3 | 18.7 |
| 2009..... | 4.4 | 13.8 | 36.2 | 23.2 | 22.4 |
| Bank account number payment* | | | | | |
| 2008 ^r | 3.1 | 10.2 | 31.3 | 22.6 | 32.8 |
| 2009..... | 4.3 | 5.9 | 34.8 | 24.7 | 30.3 |
| Online banking bill payment* | | | | | |
| 2008 ^r | 3.1 | 10.2 | 31.3 | 22.6 | 32.8 |
| 2009..... | 2.7 | 6.9 | 26.8 | 25.0 | 38.6 |

* In 2008 respondents were asked to assess "electronic deduction." We substituted the rating of electronic deduction for "bank account number payment" and "online banking bill payment" in this table.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 28B

Assessments of Payment Instruments, by Characteristic

Percentage of consumers

| Convenience | Very hard to use | Hard to use | Neither hard nor easy to use | Easy to use | Very easy to use |
|-------------------------------------|------------------|-------------|------------------------------|-------------|------------------|
| Cash | | | | | |
| 2008 ^r | na | na | na | na | na |
| 2009..... | 3.1 | 5.6 | 13.7 | 20.9 | 56.6 |
| Check | | | | | |
| 2008 ^r | na | na | na | na | na |
| 2009..... | 4.0 | 16.7 | 27.8 | 31.0 | 20.5 |
| Debit card | | | | | |
| 2008 ^r | na | na | na | na | na |
| 2009..... | 1.7 | 2.1 | 12.2 | 29.6 | 54.5 |
| Credit card | | | | | |
| 2008 ^r | na | na | na | na | na |
| 2009..... | 2.0 | 2.0 | 9.5 | 29.2 | 57.3 |
| Prepaid card | | | | | |
| 2008 ^r | na | na | na | na | na |
| 2009..... | 4.8 | 9.3 | 30.8 | 25.2 | 29.9 |
| Bank account number payment* | | | | | |
| 2008 ^r | na | na | na | na | na |
| 2009..... | 12.7 | 21.4 | 31.1 | 19.5 | 15.4 |
| Online banking bill payment* | | | | | |
| 2008 ^r | na | na | na | na | na |
| 2009..... | 5.6 | 7.5 | 24.9 | 27.9 | 34.1 |
| Security | Very risky | Risky | Neither risky nor secure | Secure | Very secure |
| Cash | | | | | |
| 2008 ^r | 41.5 | 14.1 | 13.6 | 8.4 | 22.4 |
| 2009..... | 33.4 | 12.1 | 13.0 | 10.4 | 31.0 |
| Check | | | | | |
| 2008 ^r | 11.9 | 33.4 | 19.7 | 24.4 | 10.6 |
| 2009..... | 11.5 | 32.4 | 17.9 | 30.6 | 7.6 |
| Debit card | | | | | |
| 2008 ^r | 13.3 | 30.0 | 18.7 | 27.9 | 10.0 |
| 2009..... | 14.1 | 28.6 | 19.2 | 26.6 | 11.6 |
| Credit card | | | | | |
| 2008 ^r | 15.4 | 27.8 | 14.6 | 28.9 | 13.3 |
| 2009..... | 17.2 | 27.3 | 15.9 | 27.3 | 12.2 |
| Prepaid card | | | | | |
| 2008 ^r | <i>25.1</i> | <i>22.3</i> | <i>24.8</i> | <i>16.7</i> | <i>11.2</i> |
| 2009..... | 21.1 | 19.1 | 25.3 | 19.9 | 14.5 |
| Bank account number payment* | | | | | |
| 2008 ^r | <i>10.4</i> | <i>19.4</i> | 22.2 | 25.8 | <i>22.1</i> |
| 2009..... | 31.7 | 29.5 | 17.6 | 14.2 | 6.9 |
| Online banking bill payment* | | | | | |
| 2008 ^r | <i>10.4</i> | <i>19.4</i> | 22.2 | 25.8 | <i>22.1</i> |
| 2009..... | 16.4 | 22.2 | 19.9 | 26.2 | 15.3 |

* In 2008 respondents were asked to assess "electronic deduction." We substituted the rating of electronic deduction for "bank account number payment" and "online banking bill payment" in this table.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 29
Demographics: Gender, Age, Race, and Education*
 Percentage of consumers

| | 2008 ^r | 2009 |
|-----------------------------|-------------------|------|
| Gender | | |
| Male..... | 48.3 | 48.3 |
| Female..... | 51.7 | 51.7 |
| Age | | |
| 18–24..... | 13.0 | 12.7 |
| 25–34..... | 17.8 | 18.3 |
| 35–44..... | 19.4 | 18.2 |
| 45–54..... | 19.3 | 19.9 |
| 55–64..... | 14.6 | 14.5 |
| 65 and older..... | 15.8 | 16.4 |
| Race | | |
| White..... | 76.7 | 74.1 |
| Black..... | 11.5 | 12.0 |
| Asian..... | 4.8 | 3.3 |
| Other..... | 7.0 | 10.6 |
| Ethnicity | | |
| Hispanic or Latino..... | 13.5 | 14.9 |
| Education | | |
| No high school diploma..... | 7.1 | 6.1 |
| High school..... | 38.2 | 39.0 |
| Some college..... | 26.5 | 27.8 |
| College..... | 19.2 | 18.0 |
| Post-graduate study..... | 9.1 | 9.1 |

* Tables of unweighted sample demographics available upon request.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 30
Income and Labor Force Status*
 Percentage of consumers

| | 2008 ^r | 2009 |
|--|-------------------|------|
| Household income | | |
| Less than \$25,000..... | 17.5 | 18.3 |
| \$25,000–\$49,999..... | 33.1 | 33.7 |
| \$50,000–\$74,999..... | 21.6 | 23.4 |
| \$75,000–\$99,999..... | <i>14.2</i> | 12.4 |
| \$100,000–\$124,999..... | 6.3 | 4.8 |
| \$125,000 or more..... | 7.0 | 7.3 |
| \$125,000–\$199,999..... | na | 5.0 |
| \$200,000 or more..... | na | 2.3 |
| \$75,000 or more, breakdown not specified..... | <i>0.2</i> | na |
| Respondent income | | |
| Highest in household..... | 53.3 | 48.3 |
| About equal with highest..... | 13.9 | 12.1 |
| 2nd highest..... | 24.6 | 25.4 |
| 3rd highest or lower..... | 8.2 | 14.2 |
| Labor force status | | |
| Working now..... | 70.5 | 77.2 |
| Unemployed and looking for work..... | 2.3 | 1.2 |
| Temporarily laid off, on sick or other leave..... | 0.1 | 0.2 |
| Disabled..... | 3.5 | 2.8 |
| Retired..... | 17.3 | 14.3 |
| Homemaker..... | 4.4 | 2.8 |
| Other..... | 2.0 | 1.4 |

* Tables of unweighted sample demographics available upon request.

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Table 31
Consumers' Financial Responsibility in the Household
Percentage of consumers

| Task | 2008 ^r | 2009 |
|-------------------------|-------------------|------|
| Budgeting | | |
| All..... | 46.4 | 43.5 |
| Most..... | 12.6 | 12.7 |
| Shared equally..... | 21.4 | 22.7 |
| Some..... | 13.2 | 10.0 |
| None..... | 6.4 | 11.1 |
| Bill payment | | |
| All..... | 50.3 | 47.6 |
| Most..... | 9.7 | 10.5 |
| Shared equally..... | 17.2 | 13.9 |
| Some..... | 12.5 | 13.6 |
| None..... | 10.4 | 14.5 |
| Shopping | | |
| All..... | 40.1 | 38.4 |
| Most..... | 13.3 | 13.2 |
| Shared equally..... | 25.7 | 23.8 |
| Some..... | 16.1 | 18.5 |
| None..... | 4.8 | 6.1 |
| Asset management | | |
| All..... | 40.2 | 36.8 |
| Most..... | 11.7 | 9.8 |
| Shared equally..... | 23.4 | 21.2 |
| Some..... | 9.7 | 9.6 |
| None..... | 14.9 | 22.5 |

NOTES: Superscript "r" denotes revised. Numbers may not sum exactly due to rounding or missing values.

Table 32**Selected Assets and Liabilities**

Percentage of consumers, except as noted

| | 2008^r | 2009 | Change |
|--|-------------------------|-------------|---------------|
| Credit card debt | | | |
| Carried unpaid balance at any time during the past 12 months | 56.3 | 40.3 | -15.9 |
| Credit card balance unpaid, previous month (dollars)..... | | | |
| Per credit card adopter..... | 3,396 | 4,244 | 848 |
| Per revolver..... | 6,052 | 7,654 | 1,602 |
| Change in unpaid balance since a year ago | | | |
| Much lower..... | 19.6 | 13.2 | -6.5 |
| Lower..... | 25.9 | 25.9 | 0.0 |
| About the same..... | 28.8 | 30.5 | 1.7 |
| Higher..... | 16.2 | 19.1 | 2.9 |
| Much higher..... | 9.5 | 11.3 | 1.8 |
| Home ownership | | | |
| Home ownership rate | 71.1 | 68.1 | -2.9 |

NOTES: Superscript "r" denotes revised. Numbers in italics are not comparable across years due to changes in the survey. Numbers may not sum exactly due to rounding or missing values.

Appendix A: Definitions

This appendix contains the definitions of concepts used in the *Survey of Consumer Payment Choice* and associated tables of statistics. The SCPC measures the payment choices of consumers, so the survey concepts and definitions are constructed from the perspective of a typical consumer. This demand-side approach to payments helps to fill a gap in knowledge about consumer payment behavior. It also provides the information needed to understand payment trends and to develop optimal public policies toward payments.

The consumer-oriented concepts and definitions sometimes differ from the terminology and perspectives of the supply side of the payment system, especially in the area of electronic payments. For example, the supply-side perspective (banks, the Federal Reserve System, nonbank payment service providers and consultants, and merchants who accept payment from consumers) focuses on the network on which payments are settled.³⁹ In contrast, the SCPC looks at payments from the perspective of how a consumer initiates the payment.

A.1 Definitions of Banking Concepts

Most consumer payments involve some form of depository or banking institution. The SCPC asks questions about two types of depository accounts (checking and saving) and about the type of banking institution where consumers have their primary accounts (commercial bank, saving and loan, credit union, internet bank, and other). Collectively, these institutions are referred to as “banks” for simplicity. The SCPC also asks questions about numerous technologies consumers use to access their bank accounts for making payments and for other purposes. **Appendix Table A.1** contains the definitions of banking concepts.

³⁹ For example, see the 2010 *Federal Reserve Payment Study* Federal Reserve System (2010).

Table A.1 – Definitions of Banking Concepts

| Concept | Definition |
|--------------------------------|--|
| Assets | Items of monetary value, such as bank accounts, real estate, stocks, bonds, annuities, retirement accounts, motor vehicles, jewelry, rare or collectable goods, and personal or household goods. |
| Automated teller machine (ATM) | A machine that allows customers to use an ATM card, debit card, or credit card to withdraw cash, make deposits, view account balances, transfer money across accounts at the customer's bank, and make other banking transactions. |
| ATM card | A card used at an ATM to access one's bank account in order to deposit or withdraw cash and/or to transfer funds across one's account at the same bank, but that cannot be used for purchases or making payments. |
| Bank | An institution that accepts deposits and offers checking accounts or savings accounts, including regular or internet-based commercial banks, credit unions, and savings and loans. |
| Checking account | A demand deposit account at a bank from which you can make an essentially unlimited number of withdrawals or payments by check, among other methods. |
| Mobile banking | A method of accessing one's bank account using a mobile device. This can be done either by accessing the bank's web page through the web browser on a mobile device, via text messaging or SMS, or by using a downloadable application on a mobile device. |
| Nonbank online payment account | A payment service provided by a company that is not a bank. These services allow a consumer to send and receive money online. Examples of nonbank online payment services include PayPal, Google Checkout, and Amazon Payments. |
| Online banking | A transaction conducted on the website of a bank, including viewing account balances, making transfers between accounts at the bank, or paying bills electronically (see Bank account number payment for additional definitions). |
| Savings account | A time deposit account at bank from which a customer can make a limited number of withdrawals or payments each month by a variety of methods other than by check. |
| Telephone banking | A method of accessing one's bank account by calling a phone number that the bank has provided. The customer interacts with the system using voice commands, a phone's numeric keypad, or by speaking with a live customer service representative. |

A.2 Definitions of Payment Instruments

The central focus of the SCPC is on measuring consumer choices about payment instruments. The 2009 SCPC asks questions about nine payment instruments commonly available to consumers: four types of paper instruments—cash, checks, money orders, and travelers checks; three types of payment cards—debit, credit, and prepaid; and two types of electronic payment instruments—online banking bill payment (OBBP) and bank account number payments (BANP); the latter was called “electronic bank account deduction” (EBAD) in 2008.⁴⁰

The BANP instrument is a prime example of how the consumer perspective on payments differs from the supply-side perspective. BANP is any electronic payment in which a consumer gives his or her bank account number to a third party who then uses the number to obtain payment from the consumer’s bank. In a sense, it is like an electronic check. Payments made by consumers using their OBBP function are also similar to electronic checks, except that the consumer’s bank does not disclose the bank account number (or other personal information) to a third party. Yet viewed from the supply side of payments, both OBBP and BANP consumer payments settle on the Automatic Clearing House (ACH) network and thus are often combined and classified collectively as a single “ACH payment” instrument, as done in the *Federal Reserve Payment Studies* (for example, Federal Reserve 2007, 2010). **Appendix Table A.2** contains the definitions of payment instruments.

⁴⁰ The 2008 SCPC used the terminology “electronic bank account deduction” (EBAD) to refer to what is now called BANP. However, the term EBAD was not entirely satisfactory, partly because OBBP also is an “electronic bank account deduction,” strictly speaking. BANP is a more accurate term because these are payments in which consumers use their bank account (and bank routing) numbers in a way they do not with OBBP or any other payment instrument.

Table A.2 – Definitions of Payment Instruments

| Concept | Definition |
|-----------------------------|---|
| Bank account number payment | A payment made by providing one's bank account number to a third party, such as an employer or a utility company. The number can be provided on websites, paper forms, etc. One does not have to visit the bank's website to make these payments. |
| Cash | Coins and paper bills. |
| Check | A written order 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 that will be paid back to the credit card company later. |
| Debit card | Also called a check card. A card that allows the cardholder to make purchases or payments in addition to allowing access to the cardholder's bank accounts through an ATM. |
| Money order | A 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 | An electronic payment made directly from a bank's online banking website. This payment does not require the customer or the bank to disclose the customer's bank account number to a third party. |
| Prepaid card | A card that has money stored or loaded onto it. Also known as a stored value card or gift card. |
| Travelers check | A written order, similar to a check, that is signed by the buyer both when purchased and again in the payee's presence at the time of cashing. A travelers check is protected against loss or theft. Travelers checks are purchased in advance and issued for a specific amount of money. |

A.3 Definitions of Adoption

Consumers make three basic choices about payment instruments: (1) whether to get, or “adopt,” them; (2) whether to use them (incidence of use); and (3) how often to use them (frequency of use, or simply “use”). The SCPC measures consumers’ adoption of payment instruments, as well as various banking and other payments practices of consumers. **Appendix Table A.3** contains the definitions of adoption.

Table A.3 – Definitions of Adoption

| Concept | Consumer Behavior that Defines Adoption |
|-------------------------------------|---|
| ATM card* | Has a bank account and has an ATM card. |
| Bank account | Has at least one checking account, savings account, or money market 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 a checking account and blank paper checks. |
| 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, for example, at the time of the survey. |
| Debit card* | Has a bank account and 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, for example, but discarded it and therefore 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, for example, 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 market account | Has at least one money market account. |
| 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* (OBPP) | Has a bank account, has set up online banking, and has set up access to the online bill payment function. |

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

Table A.3 – Definitions of Adoption (continued)

| Concept | Consumer Behavior that Defines Adoption |
|--------------------|--|
| Online banking* | Has a bank account and has set up online banking. |
| Ownership | Equivalent to adoption for bank accounts. |
| Prepaid card* | Has a prepaid card of any type. |
| Savings account | Has at least one savings account. |
| Telephone banking* | Has a bank account and has set up telephone banking. |
| Travelers check | Has used a travelers check in the past 12 months. |

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

A.4 Definitions of Use

The SCPC also measures the use of payment instruments by incidence (the percentage of consumers who use them) and frequency (the number of payments made by consumers).⁴¹ Most SCPC results concerning use are reported in terms of a typical month, but survey respondents were allowed to respond in terms of a frequency of their choice (typical week, month, or year).

Appendix Table A.4 contains the definitions of payment use.

Table A.4 – Definitions of Payment Use

| Concept | Consumer Behavior that Defines Use |
|---------------------------|--|
| Frequency of use | See “Use.” |
| Incidence of use | The percentage of consumers who used a particular payment instrument at least once during a typical period of time. |
| Incidence of use, annual | The percentage of consumers who used a particular payment instrument at least once in a typical year. |
| Incidence of use, monthly | The percentage of consumers who 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 when 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. |

⁴¹ Ideally, the SCPC would also measure use of payment instruments by the dollar value of payments, but the 2009 survey did not provide enough time to include both measures (number and dollar value). Number of payments was chosen, rather than dollar value, based on the assumption that consumer recall would be easier and more accurate for the number of payments than for the dollar value of payments.

A.5 Definitions of Transactions

Consumers use their payment instruments for various types of transactions. The 2009 SCPC asks questions about seven types of payment transactions: three types of bill payments—automatic, online, and in person/by mail; one type of nonbill online payment; and three types of in-person, nonbill payments—retail goods, services and other, and person-to-person payments. For each of the seven transaction types, the SCPC asks questions about the number of payments made with each payment instrument that can be used for that type of transaction. **Appendix Table A.5** contains the definitions of types of transactions.

Table A.5 – Definitions of Transaction Types

| Concept | Definition |
|--------------------------------|---|
| Automatic bill payment | A bill payment set up to occur on a regularly scheduled basis, typically monthly. Once set up, it does not require any additional effort on the consumer's part. It can be processed via bank account deductions, debit card transactions, or credit card charges, or paid directly from income. |
| Bill payment | A payment made to a company or person at a date after the time when the company or person 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. Most bill payments occur at regular frequencies such as weekly, monthly or yearly. |
| In person/By mail bill payment | A bill payment made in person or through the mail. |
| Online bill payment (OBP) | A bill payment made using the internet, either via the website of a bank, company, or other institution that sent the bill, or via a payment intermediary such as PayPal. Consumers make an OBP at their discretion and as needed, not automatically. An OBP can be made via bank account number payment (BANP), online banking bill payment (OBBP), or debit or credit card. |

Table A.5 – Definitions of Transaction Types (continued)

| Concept | Definition |
|-----------------------------|---|
| Online payment (OP) | A payment (other than payment of a bill) made for an online transaction or transfer of funds. The purchase or transfer is initiated either via the website of a seller of goods and services or other institution, or via a payment intermediary, such as PayPal. Consumers make an OP at their discretion and as needed. Included in this concept are payments made via check or money order (sent by mail) as well as payments made via debit or credit card or via bank account number payment (BANP), if the payment is made in connection with a transaction initiated online. |
| Person-to-person payment | Transfers or transactions made between two private individuals. Examples include payments for babysitting or allowances, paying a person for something that is not business related, and account-to-account payments from one person's bank account to another person's bank account. |
| Retail payment | A payment made while shopping in person to buy basic goods from retail outlets, including food and grocery stores, restaurants; superstores, warehouses, and club stores; drug or convenience stores; gas stations; department stores; electronics, hardware and appliance stores; home goods and furniture stores. |
| Services and other payments | A payment made in person by a consumer for services such as transportation and tolls; medical, dental, health and fitness; education and child care; personal care (for example, hair care); recreation, entertainment, and travel; maintenance and repairs; other professional services (business, legal, etc.); charitable donations. |

A.6 Definitions of Characteristics of Payment Instruments

Payment instruments have characteristics that are important to consumers who choose among the available instruments.⁴² The 2009 SCPC asks respondents to rate four types of payment instrument characteristics—acceptance for payment; convenience; cost; and security. The survey obtains these ratings for each of seven payment instruments—cash, check, debit card, credit card, prepaid card, bank account number payment and online banking bill pay.

Appendix A.6 contains the definitions of payment instrument characteristics.

Table A.6 – Definitions of Payment Instrument Characteristics

| Characteristic | Text from SCPC Questions |
|------------------------|---|
| Acceptance for payment | Please rate how likely each payment method is to be accepted for payment by stores, companies, online merchants, and other people or organizations. <i>Examples: none</i> |
| Convenience | Please rate the convenience of 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 | Please rate 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 (like frequent flyer miles) reduce the cost.</i> |
| Security | Suppose a payment method has been stolen, misused, or accessed without the owner's permission. Rate the security of each method against permanent financial loss or unwanted disclosure of personal information. <i>Examples: none</i> |

⁴² For example, see the paper by Schuh and Stavins (2009).

A.7 Definitions of Miscellaneous Payment Practices and Concepts

In order to construct a broad overview of consumer payment choice, the 2009 SCPC asks about several miscellaneous payment practices or concepts. **Appendix A.7** contains definitions of many of the terms used in the survey.

Table A.7 – Definitions of 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 allowing 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 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 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 thereby enables the customer to avoid 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. |

Table A.7 – Definitions of Other Terms and Concepts (continued)

| Concept | Definition |
|---------------------------|---|
| Paid directly from income | A payment made for a consumer by an employer or other income provider directly from the consumer's wages and salaries or from other income payments (such as interest and dividends, Social Security payments, retirement plan distributions, alimony, child support, welfare, trust fund distributions, and/or from other money received). |
| Reward | Any type of benefit given to payment cardholders when they use their cards to make purchases or 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. |

Appendix B: Survey Methodology

American Life Panel

The RAND Corporation administered the 2008 and 2009 SCPC modules with the American Life Panel (ALP). In the fall of 2009, the ALP contained approximately 2,500 individuals from U.S. households who respond to internet-based surveys either by using their own computers or by using a Web TV device that gives internet access via a television.⁴³ Web TV allows respondents who lack regular internet access to participate in the ALP and browse the internet or use email. Approximately 7 percent of ALP respondents use Web TV.

Participants in the ALP are invited simultaneously to complete survey modules on a first-completed, first-included basis. About twice a month, respondents receive an e-mail message with a request to visit the ALP URL and fill out questionnaires on the internet. Typically an interview will take no more than 30 minutes. Respondents are paid an incentive of about \$20 per 30 minutes of interviewing (and proportionately less if an interview is shorter). Once the desired sample size for a survey module is reached, RAND closes the survey.

Official participants in the ALP are recruited from survey programs that collect representative samples of U.S. consumers. At the time of the 2008 SCPC, participants in the ALP were recruited from among individuals ages 18 years and older who had responded to the *Monthly Survey* (MS) of the University of Michigan's Survey Research Center (SRC).⁴⁴ Each month, the MS interviews approximately 500 households, of which 300 are a list-assisted random-digit-dial (RDD) sample and 200 are re-interviewees from the RDD sample of six months earlier. The 200 re-interviewees were referred to RAND each month. Through August 2008, about 51 percent of these referrals from the six-month ago survey agreed to be considered for the ALP, and about 58 percent of them actually participated in at least the household

⁴³ For more details about Web TV, see <http://www.webtv.com/pc/>.

⁴⁴ The MS is a consumer sentiment survey that incorporates the long-standing *Survey of Consumer Attitudes* (SCA) and produces, among other outputs, the widely used Index of Consumer Expectations. For more details, see <http://www.src.isr.umich.edu/>.

characteristics module of the ALP. Thus, about 30 percent (51 percent \times 58 percent) of the Michigan recruits participated in the ALP during the recruitment period.

Originally, the ALP included only respondents 40 years of age and older. However, since November 2006, the ALP has included respondents 18 years of age and older. Because the SCPC target population is adults of ages 18 years and older, the ALP sample of respondents in the 2008 SCPC was restricted to include only individuals recruited after November 2006. The 2009 SCPC attempted to obtain maximum sample size and therefore also included the pre-November 2006 cohorts of members. As in the 2008 SCPC (and all surveys that aim to be nationally representative), sampling weights were used to correct for differences between the sample composition and the target population, so adding these members to the sample does not bias the results.

In 2003, RAND received a five-year grant from the National Institute on Aging to study methodological issues of internet interviewing among an older population. Part of the study concentrated on comparing internet interviewing with CATI (Computer Assisted Telephone Interviewing). To that end, RAND recruited both a small internet panel and a parallel telephone panel. Both subpanels were obtained from the University of Michigan, as described above. Once the experiments comparing internet interviewing with CATI were complete, the members of the CATI sample were invited to join the internet panel, and about 80 of the original 500 CATI panel members agreed to do so. In the ALP, this group is called the SRG sample, after RAND's Survey Research Group, which administered the CATI study.

After August 2008, the ALP did not receive new respondents from the University of Michigan. Instead, participants in the Face-to-Face Recruited Internet Survey Platform (FFRISP) were offered the opportunity to join the ALP. The FFRISP was an NSF-funded panel of Stanford University and Abt SRBI. Respondents were sampled from June to October 2008 in a multi-stage procedure based on address lists. The sample was representative of a target population of individuals 18 years or older who resided in a household in the 48 contiguous states or the District of Columbia and who were reportedly comfortable speaking and reading English. They

were recruited in a face-to-face interview. Recruits were offered a laptop (worth \$500) and a broadband internet subscription, or \$200 upfront and \$25 per month (for 12 months) if they already had a computer and internet access. Additionally, they were paid \$5 per monthly survey. The FFRISP recruited 1,000 respondents from a gross sample of 2,554 addresses that were not known to be ineligible. The panel was terminated after September 2009, but participants were offered the opportunity to join the ALP under the same conditions (laptop, high-speed internet, but with monetary compensation according to standard ALP conventions). From the 1,000 participants in the Stanford sample, 457 agreed to join the American Life Panel.

In addition to the directly sampled panel members, the ALP also invites (adult) household members of the sampled panel members to join, thus allowing intra-household comparisons. These panel members are called "added members" in the data. However, this part of the ALP is still very small, with fewer than 10 percent of the households having more than one panel member, so the ALP cannot be used as a proper household survey and should still be considered an individual survey.

The ALP also includes some respondents who were recruited by giving official ALP respondents the opportunity to suggest friends or acquaintances who might want to participate in the ALP. RAND then contacted those friends and invited them to participate. Because this "snowball" sample is not randomly selected or representative of U.S. consumers, it is used only to test survey modules. ALP snowball recruits tested the 2008 SCPC but were not included among the official respondents.

Once in the ALP, participants tend to remain indefinitely; approximately three participants leave the ALP each month. However, there are panel members who have not formally left but also have not responded to any survey over a prolonged period of time. About once a year, RAND attempts to contact these members to ask them whether they are still interested in participating, and if contact attempts fail, removes them from the ALP. Because this is done infrequently, the set of panel members who are invited to respond to a survey will typically include a number of panel members who should be considered inactive. Therefore, in

computing response rates for an individual survey, these should not be considered part of the panel. Below we discuss how we dealt with this.

Sample for the 2009 SCPC and response rates

Of the 1,010 respondents to the 2008 SCPC, 997 were invited to answer the 2009 SCPC. (The other 13 either died or quit the panel.) In addition, panel members who did not participate in the 2008 SCPC were also invited to answer the 2009 SCPC. These included members recruited through Michigan (before and after November 2006, including the SRG sample mentioned above) and Stanford, as well as added family members of panel members.

The survey was fielded in November 2009, and kept open until July 2010. However, the sample used in this report was frozen on March 15, 2010. Although there were a small number of respondents who filled out the questionnaire between March and July 2010, and their data are included in the online data set on the ALP website, these are considered nonrespondents for the current report. The vast majority of respondents (76 percent) filled out the questionnaire in November 2009, and another 18 percent did so in December 2009, with only 6 percent doing so in the January–March 2010 period.

As indicated above, the set of invited panel members contains members who are inactive and thus effectively no longer members of the panel; and these inactive panelists should not be included in the computations for the response rates of this particular study. For defining response rates in the 2009 SCPC, we define "active members" as members who participated in the panel between the start of the 2008 SCPC and the closing date of the 2009 SCPC (March 15, 2010), so it by definition includes all respondents to the 2008 SCPC and the 2009 SCPC. The following table gives the resulting response rates.

Table B.1 Response rates for the 2009 SCPC and sample composition by recruitment source.

| Source | Number of active members eligible for the 2009 SCPC | Number participating in the 2009 SCPC | Response rate (%) |
|-------------------------|---|---------------------------------------|-------------------|
| 2008 SCPC | 997 | 876 | 87.9 |
| Michigan | 942 | 827 | 87.8 |
| Added member | 55 | 49 | 89.1 |
| <i>Not in</i> 2008 SCPC | 1,523 | 1,293 | 84.9 |
| Michigan | 871 | 704 | 80.8 |
| Stanford | 457 | 412 | 90.2 |
| SRG | 33 | 28 | 84.8 |
| Added member | 162 | 149 | 92.0 |
| Total | 2,520 | 2,169 | 86.1 |

Survey instrument

The questionnaire for the 2009 *Survey of Consumer Payment Choice* was developed primarily by the Consumer Payments Research Center (CPRC) of the Federal Reserve Bank of Boston. The online survey instrument was programmed and hosted by the RAND Corporation. The 2009 SCPC is the fifth in a series of surveys focusing on U.S. consumer payment behavior that have been developed and implemented by the CPRC or AARP since 2003. The 2003, 2004, 2008, and 2009 SCPC can be downloaded from the CPRC website.⁴⁵ The 2006 version of the survey can be downloaded from the AARP website.⁴⁶ See **Appendix C** for a detailed description of the changes in the questionnaire between 2008 and 2009.

Item nonresponse and extreme observations

As with all surveys, the SCPC contains two types of problematic responses: (1) missing responses due to the nonresponse of consumers to survey questions (called “item

⁴⁵ See <http://www.bostonfed.org/economic/cprc/scpc/index.htm>.

⁴⁶ See http://www.aarp.org/research/surveys/money/credit/debt/articles/consumer_payment.html.

nonresponse”); and (2) contaminated responses due to respondent error, ambiguity in the survey question or survey instrument, and/or other factors (known as measurement error). This subsection explains briefly how each of these issues was handled in compiling the aggregate statistics in this document. For more information on item nonresponse see Groves et al. (2009).

Many statistical agencies mitigate the effects of item nonresponse by imputing missing values. The statistics in this document reflect a limited set of imputations for item nonresponse and data cleaning of a small number of extreme outlier responses. Missing values were resolved by performing consistency edits and using information from other survey questions wherever possible. Otherwise, statistics were calculated by excluding missing values. The CPRC anticipates performing more rigorous and comprehensive imputation procedures in the future and revising data as appropriate. For a further discussion of survey imputation, see Kalton and Kasprzyk (1982).

Overall, nonresponse bias is likely to have a relatively small impact on the statistics presented in this document. Most SCPC questions outside of the payment use section have nonresponse rates of less than 5 percent and most use questions have nonresponse rates in the single digits. Several survey design features were chosen to minimize nonresponse. Some of the key survey questions included online verification of nonresponses. Also, the survey instrument solicited zero responses where it was difficult to distinguish a nonresponse from a zero response. The latter problem was largest in the payment use section. Missing values for payment use were treated as zeros in the calculation of aggregate statistics and percentage shares, so higher nonresponse rates in the payment use questions are less troubling.

The data underlying the statistics in this document have been partially cleaned for extreme outliers. Many survey questions produce categorical or bounded responses that do not allow for extreme outliers. Consequently, all of the outliers identified were associated with continuous variables whose responses were expressed in dollar values (for example, cash holdings) or in terms of the number of payments in a typical period. In some cases the survey instrument discouraged outliers by prompting respondents to verify their answer if they answered an unusually large value or a value that seemed inconsistent with earlier responses.

Outliers were identified by extensive investigation and analysis using a variety of quantitative and qualitative methods that exploit the structure and interrelationships of the entire SCPC. In addition to the survey itself, the analysis of outliers used evidence from outside the SCPC, including logic as well as economic and statistical theory. For dollar values, the distributions of both individual variables and the linear combinations of variables reported in the tables were evaluated for outliers.

In some cases, outliers could be cleaned by correcting obvious and logical errors. In most cases, however, extreme outlier observations were set to missing and then imputed. (Note that only missing values resulting from outliers were imputed; missing values resulting from item nonresponse, described above, were not imputed.) The imputed values were obtained from simple cell means for similar consumers. In most cases, the cell means were constructed with one or two demographic variables (often including income) and one other economic variable. The variables used to construct the cell means were chosen according to their correlation with the data for the imputed variable and hence accounted for a high proportion of variance in the data.

In theory, the sampling weights used to construct the statistics presented here (see the next subsection) should be adjusted to account for item nonresponse, and standard errors should be adjusted for the imputation of extreme outliers. In the future, the statistics may be revised to account more fully for these issues and republished. At present, each aggregate statistic is constructed with the same set of unadjusted sampling weights without adjustment for nonresponse on specific questions.

Other data adjustments

In order to reconcile some differences between the 2008 SCPC questionnaire and the 2009 version, CPMC staff adjusted some 2008 estimates for retail payments and money order payments. These adjustments were made in order to enable sensible comparisons between the 2008 and 2009 estimates.

In 2008, the SCPC asked respondents to report in-person, nonbill payments in three categories: retail basic goods, retail other goods, and retail services/other. For the 2009 survey, these in-person, nonbill categories were changed to retail goods, services, and person-to-person.

Adjustments were made by taking the ratio of the 2009 estimates for retail payments over the sum of all in-person, nonbill payments. These ratios were created for cash, check, debit card, credit card, and prepaid card in-person, nonbill payments. Then the ratios were applied to the 2008 estimates for in-person, nonbill payments for the same payment instruments. A similar technique was used to adjust money order payments for point-of-sale transactions.

Further details for the adjustments and the SAS code are available from CPRC staff upon request.

Sampling weights

As in all surveys based on random samples, the composition of the unweighted sample differs from the composition of the population. RAND constructs sampling weights to correct for this sampling error and to make the sample as representative of the population of interest as possible, so that the SCPC statistics presented in this document will be unbiased estimates of characteristics of the U.S. noninstitutionalized population 18 years of age and older. The benchmark distributions against which the ALP is weighted are derived from the *Current Population Survey* (CPS). This choice follows common practice in surveys of consumers, for example, the *Health and Retirement Study* (HRS). The sampling weights for the 2009 SCPC were constructed using the March 2009 wave of the CPS, which includes the annual income supplement.

Three weighting methods have been implemented for the ALP: cell-based post-stratification, logistic regression, and raking.⁴⁷ After some experimentation, raking was found to give the best results for the SCPC. This method allows finer categorizations of variables of interest (in particular, age) than cell-based post-stratification does, while still matching these distributions exactly. Variables were created that account for interactions with gender, so all

⁴⁷ Each of these methods has advantages and disadvantages. For a detailed description of these (and other) weighting methods, see Kalton and Flores-Cervantes (2003) for example.

distributions are matched separately for males and females. The resulting set of variables whose distributions are matched exactly is:

- Gender × age, with 14 categories: (1) male, 18–24; (2) male, 25–34; (3) male, 35–44; (4) male, 45–54; (5) male, 55–64; (6) male, 65–74; (7) male, 75+. Categories (8) – (14) are the same as (1) – (7), except that they are for females instead of males.
- Gender × race/ethnicity, with six categories: (1) male, non-Hispanic white; (2) male, non-Hispanic African American; (3) male, Hispanic and other; (4) female, non-Hispanic white; (5) female, non-Hispanic African American; (6) female, Hispanic and other.
- Gender × (household) income, with eight categories: (1) male, <\$25,000; (2) male, \$25,000–\$49,999; (3) male, \$50,000–\$74,999; (4) male, \$75,000+; (5) female, <\$25,000; (6) female, \$25,000–\$49,999; (7) female, \$50,000–\$74,999; (8) female, \$75,000+.
- Gender × education, with six categories: (1) male, high school or less; (2) male, some college or a bachelor's degree; (3) male, more than a bachelor's degree; (4) female, high school or less; (5) female, some college or a bachelor's degree; (6) female, more than a bachelor's degree.

All aggregate U.S. statistics for the SCPC were weighted using the sampling weights constructed in this manner.

Standard errors

Standard errors of the estimates reported in the 2009 SCPC tables were calculated using conventional methods but are not included in this document. Tables containing the complete set of standard errors can be downloaded from the CPRC website.⁴⁸

The 2009 SCPC tables report two types of estimates: means (averages) and medians. Median statistics are reported alongside the mean statistics for questions for which the distribution of responses indicates large differences between the mean and median. These questions include the dollar values of cash (Tables 9–12).

Standard errors of the estimates were calculated using the SAS software package. Weighted standard errors of the estimates were computed using the SAS procedure

⁴⁸ See <http://www.bostonfed.org/economic/cprc/scpc/index.htm>.

“SURVEYMEANS” with the SCPC weighting variable (*r_weight*). All standard errors were calculated after the treatment of item nonresponse and the data cleaning had been completed.⁴⁹

The 95-percent confidence intervals for the estimates are obtained from the formula $\hat{\theta} \pm 1.96 \times SE$, where $\hat{\theta}$ is the estimated statistic and *SE* is the standard error of our estimate. For some types of survey estimates that are bounded, such as percentages, the 95-percent confidence intervals may contain the bound (0 percent or 100 percent). For example, the percentage of consumers who have adopted cash as a payment instrument is 99.8 percent (Table 4) and the 95-percent confidence interval for this estimate includes the 100 percent bound. This inclusion is an imperfection of the method of approximation by the normal distribution that underlies these confidence intervals. There are ways to avoid such anomalies, such as computing confidence intervals for a nonlinear transformation of the statistics and then retransforming them back to the original scale. Instead of making such transformations, we simply interpret our confidence intervals as implying that “very high” percentages are not excluded on statistical grounds, although an estimate of exactly 100 percent is excluded on logical grounds.

Another way to measure the precision of the estimates is to construct the relative standard error (RSE), which is defined as $SE / \hat{\theta}$. The RSE is a normalized statistic, like the coefficient of variation (CV), which can be used to determine the relative precision and reliability of an estimate in terms of the percentage deviation of the standard error from the estimate. A common standard of precision for the RSE is 30 percent ($RSE \times 100$). For estimates (mean or median) that are very near zero, the RSE can be particularly sensitive to small changes in the *SE*. Users of the SCPC should exercise caution when interpreting data results with an RSE of 30 percent or greater.

⁴⁹ The data cleaning and imputation process has a very minor effect on a small number of the standard errors.

Appendix C: Survey Changes, 2008–2009

Between 2008 and 2009, the CPRC made numerous detailed improvements to the survey. This appendix describes the changes to the economic definitions and scope, which improved and clarified the measurement of many consumer payment concepts, and the changes to the questionnaire design and methodology, which improved the measurement of consumer payment concepts. A detailed listing of all changes in questionnaire content also is provided.

Economic definitions and scope: bank and payment accounts

Improvements and additions were made to questions that identify accounts that fund consumer payments. The definitions and categories of savings accounts were expanded, and respondents were asked to explain how they access their bank accounts. For the first time, questions were added about payment accounts managed by nonbanks called “online payment service providers” (OPSP), such as PayPal and Google Payments. The 2009 SCPC includes the following changes to its measurement of bank and payment accounts:

- *Saving accounts* – The 2008 category “savings account” was divided into traditional passbook accounts and money market accounts for 2009, as in the *Survey of Consumer Finances*. This survey change likely increases the estimated fraction of consumers holding savings accounts of any kind, which was 76.3 percent in 2009, relative to the single category in 2008. The 2009 survey also identified consumer holdings of money market accounts with checking privileges (16.1 percent).
- *Payment accounts* – Respondents were asked whether they had signed up for a payment account with an OPSP. Typically, these accounts can be used with payment cards and bank account number payments. Customers can also deposit money into an account with the OPSP that works like a bank account, but respondents were not asked whether they had done so. Respondents were asked whether they had used the account in the past year, as well as how much their typical payments were.

- *Bank account access* – The 2009 survey asked respondents how they had accessed their bank accounts during the previous 12 months. Visiting a bank branch (77.4 percent) was the most common response, followed by ATM (69.0 percent) and online banking (61.4 percent). Much less often, consumers stated that they accessed telephone banking (32.4 percent) or mobile banking (8.9 percent).

Economic definitions and scope: payment instruments

The payment instrument is the central concept in the SCPC, which measures the adoption and use of instruments by consumers. Thus, the definition of a payment instrument itself is a critical ingredient to measuring consumer payment behavior in a precise, comprehensive, and useful fashion. In 2009, the SCPC included nine common payment instruments used by consumers—the same as in 2008—but made the following specific improvements:

- *Cash* – Respondents were asked whether they had made at least one payment with cash during the past 12 months. Their answers were used to enhance the definition of cash adoption, which stood at 99.8 percent in 2009 (up from 98.5 in 2008 under a narrower definition). Thus, essentially all consumers adopt and use cash.
- *Check* – Respondents were asked whether they had any blank paper checks. Their answers were used to enhance the definition of adoption checks by adding ownership of checks to the narrower definition based solely on incidence of use. Check adoption stood at 85.4 percent of consumers in 2009, compared with 91.8 percent of consumers having a checking account.⁵⁰ Thus, 6.4 percent of checking account owners did not even have blank checks to use, presumably because they rely on other related payment instruments, for example, a debit card. This percentage is likely to increase over time as the use of checks continues to trend downward.
- *Credit card* – Respondents were asked whether they had a credit card in each of three categories (general purpose, charge, or branded). If so, they were asked how many of

⁵⁰ The change in this check adoption number cannot be calculated because the 2008 SCPC did not ask about having blank checks.

the cards they had in each of these categories gave rewards. The categories add detail to credit card holding data relative to the 2008 survey, which asked only for total credit cards and rewards. This change probably did not affect the estimate of the rate of adoption of credit cards in 2009 (72.2 percent) because respondents in 2008 were probably already familiar with credit cards and therefore probably answered accurately. However, the new credit card categories may have caused estimates of the number of credit cards in 2009 (3.7 per adopter) to be higher than they would have been without the category detail reminding respondents to include more of their cards.

- *Prepaid card* – Respondents were asked whether they had a prepaid card in each of four categories (general purpose, specific purpose, payroll, or electronic benefits transfer (EBT)). If so, they were asked how many prepaid cards they had in each of these categories and whether any of these cards were reloadable (meaning the card owner can add monetary value to the card). The categories add detail to credit card holding data relative to the 2008 survey, which asked only whether prepaid cards were bought or received. Unlike the additional detail on credit cards, this change probably did affect the estimate of the adoption rate of prepaid cards in 2009 (32.3 percent). Because prepaid cards are not homogeneous and are less well known by consumers, the additional categories probably led significantly more respondents to claim ownership than in 2008 (17.2 percent), although prepaid card adoption by consumers is probably trending upward too. Like credit cards, the new prepaid card categories may have caused estimates of the number of prepaid cards in 2009 (2.3 per adopter) to be higher than they would have been without the category detail reminding respondents to include more of their cards.
- *Bank account number payment (BANP)* – The name of this payment instrument in 2008, “Electronic Bank Account Deduction” (EBAD), was changed and its definition was explained more clearly to respondents, but it is essentially the same payment instrument. The name EBAD was not clearly distinct from online banking bill payment (OBBP) and was potentially confusing to consumers who realized that

debit cards clear electronically, for instance. Furthermore, calling this concept BANP now makes it clear that these payments are initiated by consumers when they give their bank account and routing number to a third party (other than their bank), in any form (oral, written, or online) to initiate and authorize an electronic deduction from their bank accounts.⁵¹ In addition, the 2008 SCPC did not handle BANP completely or consistently in all questions, so there were incremental changes in many questions involving BANP to address these shortcomings. BANP can be used for automatic bill payments, online bill payments that are not automatic, online payments for goods and services that are not bills, or person-to-person payments.

Economic definitions and scope: cash withdrawals

Before using cash for payment, consumers have to get (withdraw) it. The 2009 SCPC fixed problems in the 2008 question that asked respondents to rank the locations of their cash withdrawals. In 2009, the respondents were simply asked the one location where they get cash most often: ATM (53.5 percent), bank teller (22.6 percent), or five other options (check cashing store, retail store, employer, family/friend, or other). However, in 2009 respondents were then asked to report the average dollar value of cash withdrawals and the number of cash withdrawals for both the primary cash withdrawal location and for all other withdrawal locations. This change provided more detailed and accurate information about cash withdrawals than in the 2008 survey, when respondents were asked for value and number of withdrawals for all locations at once. The greater detail in 2009 likely increased the 2009 estimates of the number of cash withdrawals (5.1 per month) and hence the total value of cash withdrawals (\$434 per month) as measured by the product of the number of withdrawals and the average amount per withdrawal (\$119).

⁵¹ In contrast, OBBP are made from inside the firewall of a bank's online banking web site and do not require the consumer to disclose personal information to a third party.

Economic definitions and scope: mobile banking and mobile payments

To better track the emerging developments in mobile banking and mobile payments in the United States, the 2009 SCPC improved its measurement these activities. Among the improvements are the following:

- *Cell phone* – In 2009, respondents were asked whether they have a cell phone (89.1 percent).
- *Mobile banking* – The definition of mobile banking was improved to make it clear to respondents that mobile banking involves using a mobile device to access a bank account in one of three ways: (1) through an internet browser (that is, online banking via a mobile device rather than a computer); (2) via text/SMS messaging; or (3) using a downloadable application (“app”). Cell phone adopters were asked in 2009 whether they had adopted mobile banking (10.1 percent) or used mobile banking (8.9 percent).
- *Mobile payments* – The concept of a mobile payment, as distinct from mobile banking, was introduced.⁵² Two types of mobile payments were tracked: payments made by text message or SMS and contactless payments made with the mobile device. Contactless mobile payments are charged to a pre-existing payment instrument, such as a credit card or a bank account number.

Economic definitions and scope: other revisions and refinements

To improve the precision and quality of estimates of consumer use of payment instruments, the 2009 SCPC included the following revisions and refinements:

- *Transaction types* – The categories of nonbill, in-person payments was redefined primarily to better track person-to-person (P2P) payments. In 2008, the three in-person payment categories were essential retail, nonessential retail, and other, the last category including nonretail and P2P. In 2009, retail was combined into one category called retail goods, because the essential/nonessential distinction was

⁵² A consumer can make payments with a mobile phone using online banking bill payment through his or her bank’s online banking web site, but these are not included as mobile payments.

somewhat unclear. Also, the other category was divided into services and P2P, in order to better define and isolate these important categories. This change in categories affected the average levels of payments per month, so the 2009 SCPC results were adjusted to make the categories comparable to 2008.

- *Instrument acceptance* – Respondents are asked simultaneously for the number of payments by payment instrument and transaction type. Consequently, the SCPC must decide which payment instruments to include in which transaction categories. In 2009, the survey expanded the list of instruments available to consumers for some of the transaction categories. For example, automatic bill payments made through online banking bill payment was added in 2009.
- *Incidence of use* – Some payment instruments or methods are nondurable in the sense that consumers no longer have them after using them. Thus, at any point in time, consumers may not have the payment instrument, but they may have used it previously. If this is the case, these consumers should be included as adopters of the payment instrument even if they do not have it at the time of the survey. To address this possibility, the 2009 SCPC included new questions asking respondents directly whether they had used a payment instrument or method during the past 12 months. Examples include cash, money orders, and travelers checks.

Economic definitions and scope: characteristics of payment instruments

The SCPC asks respondents to assess payment instrument characteristics, which have been found to be important explanatory variables of consumer demand for payment instruments.⁵³ In 2009, the SCPC included four characteristics: acceptance for payment, convenience, cost, and security. The survey asks respondents to rate the characteristics on a scale from 1 (least favorable) to 5 (most favorable) for *each* payment instrument, with characteristic-specific rating labels. Consequently, each characteristic question is challenging and very time consuming. Improvements to the survey in 2009 required substantial expansion

⁵³ For examples of this in recent research, see Schuh and Stavins (2010, 2011).

of the section on adoption of bank accounts and payment instruments, so some of the 2008 characteristics were dropped to stay within the 30-minute time limit.

Five of the 2008 characteristics were dropped in 2009: acquisition and set up, control over payment timing, ease of use, payment speed, and record keeping. In 2008, these five characteristics collectively replaced convenience, which had been in earlier versions of the SCPC. Previous research had found that convenience is the most statistically and economically important determinant of consumer demand for payment instruments. However, the concept of convenience is not well defined in economics, so the 2008 SCPC included these other five characteristics to test whether they might provide more insight and detail about what consumers mean by the term “convenience” when they apply it to payment instruments. Preliminary research with these five characteristics was inconclusive in establishing their relation to convenience, so they were dropped to help satisfy survey time constraints. In the 2009 survey, convenience may represent the combined effects of these five dropped characteristics. Much more research and development is needed in this area of the survey needed.

Questionnaire design and methodology

One of the major changes made between the 2008 SCPC and the 2009 SCPC was adding the definition of certain payment concepts to the screen. Studies show that as few as 8 percent of respondents will click on a link to see a definition, but up to 78 percent will read a definition if it is already on the screen (Galesic et al., 2008). To see a definition in the 2008 SCPC, the respondent had to click on the word, which was highlighted in the usual web hyperlink manner (blue text, underlined). For the 2009 SCPC we added the definition directly to the screen the first time a concept was introduced; for all other occurrences of that concept, the definition hyperlink was provided.

Another change to the 2009 survey was the disaggregation of several concepts in the 2008 survey. Two major disaggregation changes were in the credit card questions and the prepaid card questions. Another area that was disaggregated was the retail services and other category of the payment use section, which was split into retail services and person-to-person

payments. The literature shows that question disaggregation is helpful to the respondent and more accurate in situations where a large number of items are to be estimated (Tourangeau et al., 2000).

At the same time, essential retail purchases and nonessential retail purchases were aggregated into a category called retail goods. Finally, the CPRC added error checks to the online survey instrument. These checks are in the form of queries to the respondent that are applied to the open-ended numerical response questions, such as those in the payment use section, the assets and liabilities section, and the cash in wallet/in house section. CPRC staff set some upper limits on what we believe to be reasonable amounts, and if the respondent answered with a value above those limits, the respondent was prompted to verify his or her answer as correct.

Details of changes to questionnaire content

The 2009 questionnaire changes described in this paper and in the preceding sections of this appendix occurred primarily in three ways: (1) 2008 questions were deleted; (2) new questions were added in 2009; and (3) 2008 questions were changed in 2009. The following three tables contain an exhaustive list of each type of change from the 2008 SCPC to the 2009 SCPC.

Summary of questions from the 2008 SCPC deleted in the 2009 SCPC, by section

| <i>Variable ID</i> | <i>Question description</i> |
|--|---|
| Assessment of Characteristics section | |
| AS003 | Acquisition & set-up |
| AS003 | Control over payment timing |
| AS003 | Payment records |
| AS003 | Payment speed |
| AS003 | Ease of use |
| AS011a | Most important characteristic |
| AS011b | Least important characteristic |
| Payment Adoption section | |
| PA021_a | Number of prepaid cards bought |
| PA021_b | Number of prepaid cards received |
| PA028 | Time when respondent first got or adopted payment instruments |
| Payment Use section | |
| PU006b | Frequency of use of nonessential retail goods |
| PU007 | Portion of retail purchases made online |
| PU008_a | Frequency of bill payments using money order |
| PU008_b | Frequency of nonbill payments using money order |
| PU012 | How payment method use has changed |
| PU013 | Expected changes in payment method use |
| PU014 | Conversion of a paper check to an electronic payment |
| PU015 | Response to paper check conversion |
| PU016 | Would-be response if paper check is converted |
| PU017 | Response to banks adding fees to paper checks |
| PU018 | Response to elimination of check float |
| PU020 | Response to banks not returning original paper checks |
| Payment History section | |
| PH001 | Used self-service in the past year |
| PH003 | Telephone privacy questions |
| PH010 | Timing of payments for bills |
| PH011 | Incidence of forgetting to pay bills on time |
| PH013 | Not using membership privileges as much as expected |
| Demographics section | |
| DE001 | Mother's highest level of education |
| DE006 | Type of internet connection at home |
| DE017 | Primary religion or secular philosophy |
| DE018 | Referring to financial records while taking the survey |

Summary of new questions in the 2009 SCPC, by section

| <i>Variable ID</i> | <i>Question description</i> |
|--|---|
| Preliminaries | |
| cellphone | Adoption of cellphones |
| Assessment of Characteristics section | |
| AS003 | Convenience |
| Payment Adoption section | |
| PA001_c | Number of money market accounts |
| PA001_d | Number of nonbank online payment instruments |
| PA017_b | Typical amount of cash gotten from secondary sources |
| PA018_2 | Frequency of getting cash from secondary sources |
| PA029 | Amount loaded to prepaid cards most often |
| PA030 | Ever adopted money market account |
| PA031 | Currently have blank unused checks |
| PA032 | Visited bank branch or spoke to a bank teller in the past 12 months |
| PA033_a | Used telephone banking in the past 12 months |
| PA033_b | Used online banking in the past 12 months |
| PA033_c | Used mobile banking in the past 12 months |
| PA039 | Adoption of reloadable prepaid cards |
| PA040 | Used money order in the past 12 months |
| PA041 | Ever used money order |
| PA042 | Used travelers check in the past 12 months |
| PA043 | Ever used travelers check |
| PA044 | Used nonbank online payment in the past 12 months |
| PA045 | Frequency of nonbank online payment |
| PA046 | Typical amount spent in a nonbank online payment |
| PA047 | Money market account allows check writing and bank account number payment |
| PA049 | Used ATM in the past 12 months |
| PA050 | Used cash in the past 12 months |
| PA051 | Made mobile payment in the past 12 months |
| PA053 | Adoption of credit cards |
| PA054 | Number of rewards/nonrewards credit cards of different types |
| PA099 | Adoption of prepaid cards of different types |
| PA100 | Number of prepaid cards of different types |
| PA101 | Most common way to reload prepaid cards |
| PA126 | Ever set up access to mobile banking |

Summary of new questions in the 2009 SCPC, by section (continued)

| <i>Variable ID</i> | <i>Question description</i> |
|--------------------------------|---|
| Payment Use section | |
| PU021 | Frequency of person-to-person payments |
| Payment History section | |
| PH020 | Financial difficulties in the past 7 years |
| PH021 | Inflation estimation and expectation |
| Demographics section | |
| DE019 | Debts excluding mortgage on primary home |
| DE020 | Location of access to the internet for personal use |

Summary of questions from the 2008 SCPC that were changed in the 2009 SCPC, by section

| <i>Variable ID</i> | <i>Question description</i> | <i>Description of change</i> |
|--|--|--|
| Assessment of Characteristics section | | |
| AS003 | Assessment of all characteristics of 7 instruments | Definitions of 7 instruments were added to the screen. Payment characteristics categories were changed from 2008 to 2009. |
| AS012 | Rank of payment characteristics | Respondents were asked to rank the 4 characteristics, while in 2008 they were asked to rate each payment method on a scale of 1 to 10. |
| Payment Adoption section | | |
| PA002 | Reason for no checking account | Response categories were changed. |
| PA004 | Checking account earning interest | Specific ranges of interest rates were given. |
| PA005 | Adoption of overdraft protection | Definition of overdraft protection was changed and added to screen. |
| PA006 | Primary checking account institution | Response categories were changed. |
| PA007 | Primary saving account institution | Response categories were changed. |
| PA008 | Number of debit and ATM cards | Definitions of debit cards and ATM cards were added to the screen. |
| PA011 | Debit cards with rewards | Definition of rewards was added to the screen. |
| PA012 | Adoption of telephone banking | Definition was changed and added to the screen. |
| NEWTB | Ever adopted telephone banking | Definition was changed and added to the screen. |

**Summary of questions from the 2008 SCPC that were changed in the 2009 SCPC, by section
(continued)**

| <i>Variable ID</i> | <i>Question description</i> | <i>Description of change</i> |
|----------------------------|--|--|
| PA013 | Adoption of online banking | Definition was changed and added to the screen. |
| NEWOB | Ever adopted online banking | Definition was changed and added to the screen. |
| PA014 | Adoption of online banking bill payment | Definition was added to the screen. |
| NEWOB BP | Ever adopted online banking bill payment | Definition was added to the screen. |
| PA016 | Primary location of getting cash | One primary location was chosen in 2009, while in 2008 respondents were to rank top 3 primary locations. |
| PA017_a | Amount of cash per withdrawal | Amount of cash per withdrawal was changed to primary location only, not all locations. |
| PA018_1 | Frequency of cash withdrawal | Frequency of cash per withdrawal was changed to primary location only, not all locations. |
| PA019 | Adoption of credit cards | Yes or no question was asked in 2009; number of credit cards were asked in 2008. |
| PA024 | Adoption of automatic bill payment | Definition was added to the screen. |
| PA026 | Adoption of mobile banking | Definition was added to the screen. |
| PA027 | Adoption of contactless cards | Definition was changed and added to the screen. |
| Payment Use section | | |
| PU002 | Frequency of automatic bill payment | Online banking bill payment was added as an option. |
| PU004 | Frequency of bill payment by mail or in-person | Check and money order were separated as two options. |
| PU005 | Frequency of online payment | Check and money order were separated as two options. Debit card question text was changed. |
| PU006a | Frequency of retail goods purchases | Check and money order were separated as two options; only essential goods purchases were included in 2008; all retail goods were included in 2009. |
| PU006c | Frequency of service and other purchases | Check and money order were separated as two options; person-to-person payments were dropped in 2009. |
| | | |

**Summary of questions from the 2008 SCPC that were changed in the 2009 SCPC, by section
(continued)**

| <i>Variable ID</i> | <i>Question description</i> | <i>Description of change</i> |
|--------------------------------|--|---|
| Payment History section | | |
| PH005 | Have entered information on the internet | Address and phone number were removed from the response categories. |
| PH009 | Financial difficulties in the past | Time frame was changed to the past 12 months; response categories were changed; different financial difficulties were asked separately. |
| PH012 | Incidence of various shopping behaviors | Questions were asked separately for each type of shopping behavior. |
| Demographics section | | |
| DE010 | Household income | Response categories were changed. |

Appendix D: Detailed Instructions for Data Users

Conversion of statistics for other uses

In the 2009 SCPC discussion paper, it was suggested that data users could convert the micro level estimates presented in the tables to total U.S. estimates. This was usually done by multiplying the micro estimate by the total U.S. civilian noninstitutionalized population. The CPRC reminded users that any numbers derived from converting to macro level estimates should not be considered official numbers from the SCPC.

This year, the CPRC continues to recommend against converting the micro level statistics, as they appear in the tables, to macro level statistics for the entire United States. We are in the process of benchmarking our data against other Federal Reserve surveys, such as the *Federal Reserve Payments Study*, and until this work is completed the CPRC does not recommend converting the SCPC estimates to the macro U.S. level.

Data analysis

Readers interested in performing their own data analysis on the SCPC can download the datasets for both the 2009 SCPC and the 2008 SCPC. It is recommended that data users read the Data User Manual before beginning their own analysis. Both datasets and the Data User Manual are available on the SCPC website⁵⁴. Please note that no technical assistance is available from the CPRC for these datasets.

⁵⁴ See <http://www.bostonfed.org/economic/cprc/SCPC/index.htm>.

Appendix E: Board of Advisors (2010)

Academia

| | |
|----------------|---------------------------|
| Andrew Caplin | New York University |
| Richard Curtin | University of Michigan |
| David Humphrey | University of Florida |
| Peter Ireland | Boston College |
| Martha Starr | American University |
| Jay Zigorsky | The Ohio State University |

Government

| | |
|----------------|---------------------------------------|
| Carlos Arango | Bank of Canada |
| Paul Bauer | Federal Reserve Bank of Cleveland |
| Geoff Gerdes | Federal Reserve Board of Governors |
| Chad Harper | Federal Reserve Bank of San Francisco |
| Fumiko Hayashi | Federal Reserve Bank of Kansas City |
| Dan Littman | Federal Reserve Bank of Cleveland |
| Rich Oliver | Federal Reserve Bank of Atlanta |
| Adrienne Wells | Federal Reserve Bank of Atlanta |

Industry

| | |
|-----------------|-----------------------------------|
| Peter Burns | Heartland Payment Systems |
| Roger Johnston | Fiserv |
| Leon Majors | Phoenix Marketing International |
| Bill McCracken | Synergistics Research Corporation |
| Aaron McPherson | International Data Corporation |
| Steve Mott | BetterBuyDesign |
| Tom Welander | Global Concepts |
| Jane Yao | American Bankers Association |

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