Estimating Population Means in the 2012 Survey of Consumer Payment Choice

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Abstract:

This paper examines the extent to which the addition of newly recruited respondents to a longitudinal panel in the 2012 Survey of Consumer Payment Choice affects population estimates. The new respondents were specifically targeted to fill segments of the U.S. population that tend to be underbanked and underrepresented in the longitudinal panel. We discuss key differences between the longitudinal panelists and the new members and how those differences could affect certain population estimates. We look at a collection of 54 variables and find that changes in estimates of most variables are not significant. As expected, there is evidence that the improved coverage of individuals who are young, low income, or members of a minority population leads to lower estimates of certain variables most closely related to ownership and use of traditional banking accounts.

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1   Introduction

This report examines the effect of adding newly recruited respondents to a longitudinal panel on estimates of population parameters in the 2012 Survey of Consumer Payment Choice (SCPC). The SCPC is administered annually by the Consumer Payment Research Center (CPRC) to study trends in the adoption and use of payment instruments among U.S. consumers (Foster et al. 2011; Foster, Schuh, and Zhang 2013; Schuh and Stavins 2014). Because detecting changes in consumer behavior is a primary interest, the CPRC has focused on preserving a longitudinal component to the annual cohort of respondents. Longitudinal studies, as opposed to repeated cross-sectional ones, increase the statistical power to ascertain trends by removing sampling variability attributed to the selection of individuals (Baltagi 2008; Duncan and Kalton 1987; Frees 2004; Lynn 2009).

In 2012, as part of a process to launch and integrate a consumer payments diary with the SCPC, the sample size of the SCPC was increased from around 2,000 to more than 3,000 individuals. As a result, the survey was administered not only to the longitudinal panel, but also to a set of newly recruited respondents. In many ways, the new respondents have fundamentally different characteristics from the ongoing respondents. To minimize confounding sources of change to annual estimates when making comparisons across years, the official 2012 publication was based on the longitudinal panel only (Schuh and Stavins 2014). The goal of this research data report is to present estimates based on all available responses and evaluate the effect of the additional panelists on these estimates.

The paper is arranged as follows. Section 2 provides a brief overview of our findings. Details of sample selection into the SCPC and a comparison of respondent characteristics are featured in Section 3. Section 4 discusses the adopted methodology for generating population estimates, and Section 5 compares the estimates to those of the official report. Finally, Section 6 provides a discussion of the implications for future work.

2   Summary of Results

As detailed below, the new SCPC respondents in 2012 were generally chosen to fill underrepresented demographic groups in the longitudinal panel. As such, the new individuals tend to be younger, more likely to come from households with lower incomes, and more likely to represent minority groups, especially Hispanic ones. Many of these respondents were recruited by targeted sampling of ZIP codes with

particularly high proportions of lower-income and minority groups. These individuals likely represent heretofore unobserved subpopulations in the SCPC.

Perhaps the most obvious expectation is that the new respondents are more likely than the longitudinal panelists to include consumers who are classified as unbanked or underbanked. The unbanked are defined by the Federal Deposit Insurance Corporation (FDIC) as individuals who do not have an account with a federally insured institution, while the underbanked are those who do, but also rely on nonbank services. The 2013 FDIC National Survey of Unbanked and Underbanked Households found that almost 8 percent of households in the United States are unbanked and 20 percent are underbanked (Burhouse et al. 2014; FRB Kansas City). The highest rates of being unbanked or underbanked occurred in young, lower-income, Hispanic households, similar to the type of households more heavily featured among new respondents.

This group of individuals has unique payment tendencies, and its inclusion in a sample is likely to affect population estimates of variables relating to these tendencies. Indeed, as would be expected with better coverage of the underbanked, estimates based on the full sample show lower adoption rates of bank accounts and, most notably, lower adoption rates of payments associated with such accounts, such as checks, debit cards, online banking, and bank account number payments. Naturally, differences in adoption lead to differences in the frequency of use. However, even when considering the mean number of monthly uses for payment instrument adopters only, we find that the payment instruments most closely tied with bank accounts are used less frequently. We also observe relatively weak evidence of lower cash holdings on person, lower value of prepaid card reloadings, and higher use of mobile banking.

For most variables, however, there is little evidence of substantial differences in the estimates based on the two samples.[1] Consequently, estimates derived from the 2008–2012 longitudinal panel are generally reliable and particularly useful when making comparisons across years. Nevertheless, the improved coverage with respect to the socio-economic spectrum causes estimates based on the full sample to be more accurate. Therefore, we recommend using data from the full sample for the best estimates of population levels in 2012. A complete set of 2012 SCPC tables with estimates based on the full sample and the longitudinal panel accompanies this paper.

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[1]A discussion of the sources of these differences is given in Section 4.

3   2012 SCPC Composition

All respondents to the SCPC in a given year are recruited from RAND's American Life Panel (ALP), an internet cohort of individuals aged 18 and over. A complete history of the ALP and its applications in surveys can be found at `www.rand.org/alp`. In many ways, the development of the annual SCPC cohort mirrors that of the ALP. Below, we provide a background of how respondents were chosen for the SCPC in each year and discuss how the 2012 sampling methodology influenced the composition of the SCPC respondents in that year.

The inaugural SCPC, administered in the Fall of 2008, planned for a sample size of 1,000 respondents. Due to limitations of the ALP size, achieving this required a virtual census of the 1,113 individuals in the ALP. In 2009, growth of the ALP and a desire for more statistical power saw the SCPC add around 1,000 respondents. The desired minimum number of annual responses remained at 2,000 from 2009 to 2011. In each year, in order to maximize the size of the longitudinal panel, an invitation to participate in the SCPC was extended to everyone who had participated in the previous years. Approximately 85 to 90 percent of prior participants agreed to do so, so it was not necessary to recruit many new respondents to compensate for attrition. Table 1 shows the number of respondents in each year grouped by the extent of prior experience with the SCPC.

Year	Repeat from previous year	Repeat from other years	New to SCPC	Total
2008	0	0	1010	1010
2009	876	0	1293	2169
2010	1913	0	167	2102
2011	1801	14	318	2151
2012	1926	97	1111	3176

Table 1: Composition of annual SCPC cohorts by experience.

In 2012, the CPRC developed the Diary of Consumer Payment Choice (DCPC), which asks respondents to track detailed information about spending and cash flow for three consecutive days. The DCPC, which includes data about the merchant, dollar value, and payment instrument used for every payment, naturally pairs with the SCPC to provide a deeper understanding of each individual's choices. [2] Therefore, the primary goal was to generate a sample of individuals representative of the U.S. population of adults to whom both the SCPC and the DCPC would be administered. Representativeness was assessed

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[2] A report on the 2012 DCPC and its results is due to be published by the CPRC in 2015.

via a comparison of the sample composition to U.S. population levels with respect to 15 strata defined by age, race, and household income. Thus, the CPRC determined the necessary composition of a subset of the roughly 4,500 individuals available in the ALP so that the expected set of individuals who agreed to complete the surveys was of size 2,500 and matched U.S. population proportions for the chosen strata.

A second goal was to preserve the longitudinal aspect of the SCPC respondents. In the interest of producing this effect, as many individuals who had taken the SCPC in the past as possible were used to fill the quotas for the dual survey cohort, with a priority put on the 1,801 who had taken it in 2011. Finally, to complete the panel, all remaining individuals who had taken the SCPC in the past were asked to participate in the SCPC, but not the DCPC. As shown in the sixth row of Table 1, the result is a sample of 3,176 respondents in 2012, of whom 1,111 were first-time takers. In this paper, we consider population estimates based on the full set of respondents as well as estimates based on the longitudinal subset of 2,065.

Unlike in the previous two years, the number of new respondents in 2012 is sizeable, constituting roughly one-third of all 2012 respondents. By design, these new individuals were chosen to fill demographic gaps in the longitudinal panel, at least with respect to the 15 designated strata. As a result, the new respondents are markedly different from the longitudinal panelists. From 2011 to 2012, RAND made a concerted effort to improve coverage of the ALP. Up to that point, most ALP members had been recruited from other pre-existing cohorts, most notably the Monthly Survey of the University of Michigan's Survey Research Center (SRC). However, starting in 2011, RAND relied on address-based sampling in ZIP codes with high percentages of Hispanics and low-income households. This set of recruits is referred to by RAND as the "Vulnerable Population Cohort," so called because it includes individuals who are not well integrated into certain aspects of society. Of the longitudinal panelists, 84 percent were originally recruited via contact with a member of a pre-existing cohort, and only 6 percent came from the Vulnerable Population Cohort. By contrast, of the new members, the corresponding proportions are 9 percent and 80 percent.

With respect to demographic variables, there are several key differences between the longitudinal panel and the new respondents. For example, the average age of the new respondents is 44 compared to 51 for the longitudinal panelists, with 21 percent of the former under 30, as opposed to only 11 percent of the latter. The new respondents also tend to come from households with lower incomes. The median income for new respondents lies in the $35,000–$39,999 range, while that for panelists lies in the $50,000–$59,999

range. Perhaps the most pronounced difference relates to the racial composition of the two groups. Of the panel, 7 percent consider themselves to be Hispanic, whereas of the new members this fraction is 29 percent. The targeting of the Vulnerable Population Cohort also narrowed the geographic locations of respondents. Over 50 percent of the new respondents come from New York, California, and Texas, with about 20 percent coming from each of the latter. Only 23 percent of longitudinal panelists come from this set of three states.

The overall effect of the new additions is that the full cohort seems to better match the U.S. population than the longitudinal panel. Table 2 shows the marginal population proportions based on the CPS for several marginal demographic groups, as well as the sample proportions for the full panel and the longitudinal panel. With respect to age and race, the full panel is uniformly closer to the true population benchmarks. In income by household size, there is some variation, although the full panel better matches the population in eight out of 11 designated strata. In terms of education, it seems that the full sample is a better reflection of the population, although the difference between the two is relatively small. Interestingly, the new panelists are more likely to be female, as evidenced by the fact that the full sample is skewed further from gender levels in the population than the original panel.

Demographics		CPS	Full	Longitudinal
Age	18–32	26.8	**20.5**	15.6
	33–43	18.7	**17.3**	15.0
	44–54	20.4	**22.1**	23.4
	55–64	16.3	**22.9**	26.0
	65+	17.7	**17.2**	20.0
HH Size, Income	1, $< \$30K$	7.6	8.8	**7.6**
	1, $\$30K - \$59K$	4.1	**6.5**	7.4
	1, $> \$60K$	2.6	**4.1**	4.5
	2, $< \$30K$	9.4	**7.2**	5.4
	2, $\$30K - \$59K$	10.4	**11.7**	12.0
	2, $\$60K - \$99K$	7.8	**9.7**	11.1
	2, $> \$100K$	6.4	**7.9**	10.0
	3+, $< \$30K$	12.2	**11.9**	9.1
	3+, $\$30K - \$59K$	13.8	**12.9**	10.8
	3+, $\$60K - \$99K$	13.0	10.5	**11.5**
	3+, $> \$100K$	12.6	8.8	**10.7**
Education	HS or Less	42.9	**20.5**	18.6
	Some College	28.8	38.4	**36.8**
	Bachelor's or More	28.3	**41.0**	44.6
Race	White	66.4	**70.1**	81.3
Gender	Male	48.1	41.3	**43.6**

Table 2: Population proportions from the Current Population Survey (CPS) as well as corresponding proportions in the full and longitudinal panels. Bold numbers represent closer matches to the CPS.

Other than differences in demographic composition, there are at least two less-obvious distinctions between the new panelists and the longitudinal panelists. The first relates to the method of recruitment. While members recruited prior to 2012 were predominantly volunteers and had a history of participation in a variety of surveys, those recruited in 2012 were contacted at random via mail and, in some instances, follow-up phone calls. Selection biases related to recruitment type could lead to different characteristics among the two groups. For example, the large fraction of females in the Vulnerable Population Cohort might be a result of recruitment methods. Propensity to select individuals with other, less well defined characteristics, such as enthusiasm for surveys or household role, could also be linked to recruitment strategies. A second key difference relates to experience with the SCPC. Longitudinal panelists have taken the survey as many as five times, which could lead to a better understanding of concepts being asked or more attention being paid to purchasing habits, thus producing different tendencies in the responses. In the following section, we describe in more detail how differences in panel composition can lead to

different estimates of population parameters.

4   Generating Population Estimates

In this section, we begin by broadly describing the poststratification methodology adopted to generate population parameter estimates from a nonprobability sample. More details are found in Appendix A. We also discuss how an expansion of the sample can affect the estimates, focusing on expected changes in the 2012 SCPC.

Consider μ to be some population parameter of interest. In the context of the SCPC, it might represent the adoption rate of a payment instrument or the average number of monthly payments made with a particular instrument. Poststratification essentially involves breaking the population of interest down into S disjoint strata, which we index with $s = 1, \ldots, S$. If $f[s]$ represents the proportion of the population that belongs to stratum s and μ_s represents the mean within stratum s, then

$$\mu \;=\; \sum_{s=1}^{S} f[s]\mu_s.$$

A natural estimate then takes the form

$$\hat{\mu} \;=\; \sum_{s=1}^{S} f[s]\hat{\mu}_s, \tag{1}$$

where $\hat{\mu}_s$ is a sample-based estimator of μ_s.

In cases where all strata have ample representation in the sample, the simplest form for the estimate $\hat{\mu}_s$ is the sample average of all individuals in stratum s. However, if stratum has few or even no representatives in the sample, it is necessary to estimate stratum mean by smoothing data from other strata. For example, data from observed, similar strata can be pooled to generate an estimate. To produce weights, RAND relies on a raking algorithm, which determines the weights according to known marginal distributions within the population of a set of chosen demographic variables and the observed sample composition (Deming and Stephan 1940; Gelman and Lu 2003). RAND generates weights based on the 31 marginal groups shown in Table 3. Population proportions are generated from the Current Population Survey Annual Social and Economic Supplement, administered in March of 2012 (CPS). The result is 660 unique strata. Two sets of estimates are generated according to different sets of weights: one for the full panel and one for the longitudinal panel.

Gender × Age				
M, $18-32$	M, $33-43$	M, $44-54$	M, $55-64$	M, 65+
F, $18-32$	F, $33-43$	F, $44-54$	F, $55-64$	F, 65+

Gender × Ethnicity	
M, White	M, Other
F, White	F, Other

Gender × Education		
M, High School or Less	M, Some College	M, Bachelor's Degree or More
F, High School or Less	F, Some College	F, Bachelor's Degree or More

Household Size × Household Income			
Single, $< \$30K$	Single, $\$30K - \$59K$	Single, $\geq 60K$	
Couple, $< \$30K$	Couple, $\$30K - \$59K$	Couple,$\$60K - \$99K$	Couple, $\geq \$100K$
≥ 3 , $< \$30K$	≥ 3 , $\$30K - \$59K$	≥ 3 ,$\$60K - \$99K$	≥ 3 , $\geq \$100K$

Table 3: The set of weighting variables. "M" stands for male, and "F" stands for female. The highest income brackets for single households were combined to avoid small cell sizes.

The infusion of a unique subset of the population into an existing panel potentially changes the coverage within and across strata. By including individuals into previously unobserved strata, estimates for each such stratum place less weight on observations from other strata, as the sample provides direct insight into stratum behavior. The less an estimate is based on smoothing across strata, the less likely that it is masking unobserved heterogeneity in behavior. Of the 660 strata defined by the CPRC, the longitudinal panel features 217 unobserved strata, while the full panel reduces this to 123. The improvement in this type of coverage is a direct result of the targeted nature of the recruiting done by the CPRC. Similarly, different coverage within a stratum affects the population estimate by affecting the stratum estimate, $\hat{\mu}_s$. There is an implicit assumption of exchangeability among individuals of the same stratum, but if new members of a stratum show systematic differences from the rest, estimates may differ based on the subset used to estimate the stratum mean. While having different levels of coverage does not necessarily imply having more accurate estimates, it does imply changes in the estimates.

5   Results: Details

A key statistical question is to what extent any observed differences in the estimates are due to changes in coverage and to what extent they might be due to sampling variation. Conceptually, we are interested in assessing how consistent the estimate based on the longitudinal panel is with that based on the full

sample. Under a fixed sampling strategy, the addition of new respondents would not change the expected value of a population estimate. Of course, variability associated with sampling makes it so that each particular iteration of the estimate will be different. Estimates based on each sample and the differences between the two estimates for all survey variables included in the official 2012 release (Schuh and Stavins 2014) can be found in *2012 Survey of Consumer Payment Choice: A Comparison of the Longitudinal Panel to the Full Sample* (FRB Boston).

In this section, we provide analysis for 54 variables central to understanding consumer payment choice. The statistical theory behind the tests and p-values are found in Appendix A. Results are presented in tables grouped by different payment concepts in Sections 5.1–5.4, with the corresponding table or tables in the official release shown in parentheses. The tables provide the point estimates based on each sample, along with the difference and the estimated p-value for several key variables in the SCPC. In addition, the tables include distributions for estimates associated with each sample.[3]

In the tables, there are several small p-values, although it is important to remember that with 54 tests, we run into the problem of multiple comparisons.[4] Added complications come from the fact that the hypothesis tests are not independent. Some tested variables are aggregates of others. Also, adoption of an instrument is necessary for its use, and the adoption of one payment-related variable may be heavily correlated with the adoption of another. For example, the adoption of a checking account is necessary for the adoption of checks and debit cards. Similarly, access to online or mobile technology is naturally a prerequisite to making online payments. As a result, it is useful to consider not only the extent of statistical evidence, but also whether the perceived differences have a natural economic interpretation.

5.1 Ownership and Adoption of Accounts

This subsection discusses current ownership of accounts and account access technologies, as shown in Tables 4 and 5 of this report (Table 1 of the 2012 SCPC Tables). It also discusses current adoption of payment instruments, as shown in Table 6 of this report (Table 6 of the 2012 SCPC Tables).

The most striking differences are observed in the adoption of payment instruments. Specifically, the three that most obviously satisfy this are the adoption of checks, credit cards, and online banking bill

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[3]Perhaps the most natural way of interpreting the plots is to consider them to be posterior distributions of μ conditional on the relevant subset of responses, as approximated with a Normal distribution with uninformative priors for both location and scale parameters.

[4]The probability of attaining a significant result increases as the number of hypothesis tests increases, even if all null hypotheses are true. See Miller (1981) for details.

payment, all of which have p-values of 0.01 or less. For all three of these instruments, the results suggest that the newly added respondents have significantly lower adoption rates leading to a lower population estimates, with estimates based on the full sample ranging from about 3 to 5 percent lower than those based on the longitudinal panel.

At least a part of this change can be attributed to declines of at least 1 percent in estimates of adoption rates of checking, savings, or online accounts. Although the associated p-values are not low, the consistency of the direction of change suggests that the observed changes may be real, but with insufficient power to reject the hypothesis that the differences are due to sampling variability.

5.2 Payments in a Typical Month

The tables discussed in this subsection are Table 7 in this report (Table 28 in the 2012 SCPC Tables) and Table 8 in this report (Table 27 in the 2012 SCPC Tables). These are labelled "Number of Transactions" and "Payments in a Typical Month per Adopter" for Tables 7 and 8, respectively.

There is little evidence that the estimate of the total number of payments based on the full sample differs significantly from the estimate based on the longitudinal panel. However, with regard to payments made by the type of transaction, the estimates based on the full sample are lower for all types of transactions except in-person payments for retail and services. The largest changes relate to bill payments, with the estimated total number of bill payments decreasing by 1.2 payments per month. A decrease in the estimates of the number of monthly online payments and automatic bill payments is consistent with lower adoption rates of checking and online accounts.

Lower adoption rates of payment instruments or account types will naturally affect consumers' frequency of use of these instruments. Thus, we consider the number of uses per adopter to adjust for the different adoption rates between the two samples. The use of check, credit, and bank account number-based payments (OBBP, BANP) also show signs of being less frequently used even among those who adopt those instruments. The estimates for check and credit decrease by 0.75 and 1 payment per month, respectively, both of which are economically meaningful differences.

5.3 Cash and Prepaid Card Use

This subsection discusses prepaid card use and reloadings, shown in Table 9 of this report (Table 13 in the 2012 SCPC Tables), and cash holdings and cash withdrawals, shown in Table 10 of this report (Tables 13

and 15 of the 2012 SCPC Tables).

No overwhelming evidence exists to suggest that the addition of the new respondents significantly alters the estimates of variables related to the use of prepaid cards and cash. However, variables that relate to dollar amounts are highly variable, so it is possible that the sample sizes simply do not afford us the power to distinguish real changes from natural variation. Most notably, the mean value of estimates of cash holdings on person are lower by around $10 when based on the full sample. Similarly, the dollar value per prepaid card reloading is estimated to be around 20 percent lower using the full sample than with the longitudinal panel. These changes, if real, are perhaps driven by better representation of low-income individuals.

5.4 Mobile Banking

The tables discussed in this subsection are Table 5 in this report (Table 1 in the 2012 SCPC Tables) and Table 11 in this report (Table 19 in the 2012 SCPC Tables). These are labelled "Current Ownership of Accounts and Account Access Technologies" (Table 5) and " Mobile Banking and Mobile Payments" (Table 11).

Estimates based on the full sample reveal a higher percentage of the population making use of mobile banking, with an increase of 2.2 percentage points. This is predominantly driven by increased use of bill pay with a mobile phone and a higher likelihood of checking a balance or recent transactions using a mobile phone. The latter is likely driven by the fact that low-income individuals need to be better informed of their financial standing before making purchases. Increased reliance on mobile phones may relate to less access to traditional and online banking services among the new respondents.

6 Discussion

Overall, the above analysis above suggests that for a vast majority of variables, the two estimates are similar and show no evidence of a difference due to anything beyond chance. It seems that in many respects the panel relied on for estimates in the 2008–2012 SCPC provides adequate estimates for the U.S. population as a whole, at least as compared with the full sample. Nevertheless, there are several key differences between the newly sampled individuals and the longitudinal panelists that result in meaningful changes in population estimates. These differences are most striking in the adoption and use of checks, credit cards, and online banking. It is possible that the inclusion of new panelists better represents a particular class of the underbanked, who might not rely on certain types of account-based instruments as much as

they do on others, despite having access to some of these instruments.

In terms of determining parameter estimates for 2012, there is little reason to avoid using the full sample of 2012 responses. These estimates are not only based on a larger number of respondents, but seem to improve the population coverage of the sample considerably. To quantify this, we can consider the relative efficiency of the two estimators:

$$\text{Eff}(F, L) \quad = \quad \frac{\text{Var}[\hat{\mu}_F]}{\text{Var}[\hat{\mu}_L]}, \tag{2}$$

where the subscript "F" denotes estimates based on the full sample and the subscript "L" denotes those based on the longitudinal cohort only. In general, the variance of an estimator is proportional to the inverse of the sample size. Therefore, an estimate based on a sample of size $3{,}176$ would be expected to have a variance about one-third smaller than one based on a sample of size $2{,}065$ (corresponding to a relative efficiency of 0.65). Using the strata defined above, the variances of the estimates based on the full sample are anywhere from 40 to 55 percent smaller than those based on the longitudinal panel only (relative efficiencies range from around 0.45 to 0.60). This suggests a greater improvement in efficiency than would normally be expected from the increased sample size. It seems likely that this is due to improved coverage of various strata, leading to less uncertainty about the behaviors of certain subsets of the population. Overall, the targeted recruiting into the ALP by RAND and the sampling strategy of the CPRC seem to have improved the quality of the population parameters by improving coverage of important subpopulations.

The results of this work illustrate that it is important to have good coverage across the entire socio-economic spectrum to generate accurate population estimates. Heterogeneity in payment behavior across age, income, and race means that poor sample coverage may lead to relatively biased estimates of certain variables. Therefore, the development of sampling strategies that yield good coverage of the population is key to improving the quality of insight in future renditions of the SCPC.

The conclusions in this work are based on one particular analysis that relies on certain key assumptions. Alternatively, one could define the strata in different ways, either through different levels and combinations of the same variables or through the use of different demographic variables altogether. Different forms for the estimator are sure to give different estimates, and doing so might shed more light into the extent to which the two samples differ. Model-based approaches and further study of individual strata could lead to insight into which demographic groups are driving any of the differences observed.

Such work can hopefully lead to better understanding of the pockets of heterogeneity within the population, thereby providing insight into which demographic groups should be well sampled and used for post-survey adjustments.

	Full Mean	Long. Mean	Difference	p-value	Plot
Checking account	90.1	91.4	-1.30	0.14	
Savings account	74.4	75.8	-1.50	0.16	
Online account	52.5	53.5	-1.00	0.34	
Amazon	14.2	14.4	-0.20	0.74	
Google	2.7	3.0	-0.3	0.34	
Paypal	48.0	49.0	-1.0	0.33	
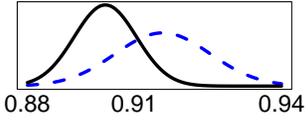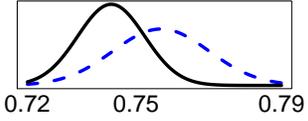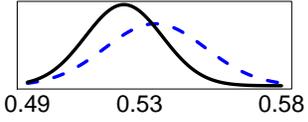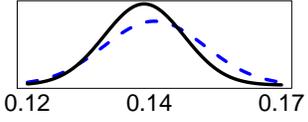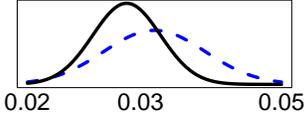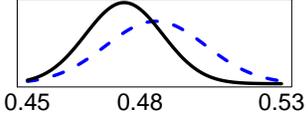
Table 4: Current Ownership of Accounts. Black, solid curves correspond to the full sample.

	Full Mean	Long. Mean	Difference	p-value	Plot
ATM card	82.8	83.6	-0.9	0.35	0.8 0.83 0.87
Telephone banking	31.5	31.6	-0.1	0.96	0.28 0.32 0.35
Online banking	70.1	72.0	-1.9	0.07	0.67 0.71 0.76
Mobile banking	38.0	35.8	2.2	0.03	0.32 0.37 0.41
Tablet adoption	27.1	28.7	-1.5	0.08	0.25 0.28 0.32
Mobile phone adoption	93.8	94.8	-1.1	0.02	0.92 0.94 0.96
Smart phone	53.1	52.7	0.4	0.69	0.49 0.53 0.56
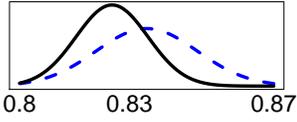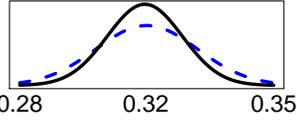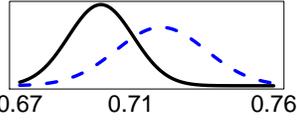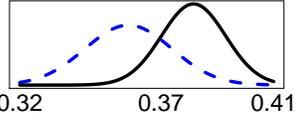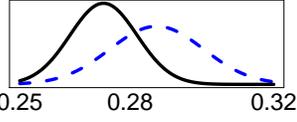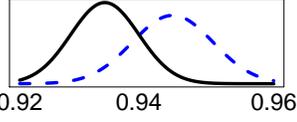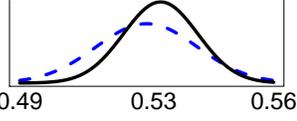
Table 5: Current Ownership of Account Access Technologies. Black, solid curves correspond to the full sample.

	Full Mean	Long. Mean	Difference	p-value	Plot
Cash	100	100	-0.1	0.36	
Check	82.8	85.4	-2.6	0.01	
Money order	23.5	21.7	1.9	0.08	
Credit	68.7	72.1	-3.3	<0.01	
Debit	78.0	78.5	-0.5	0.58	
Prepaid	52.2	52.3	-0.2	0.89	
BANP	61.9	62.7	-0.8	0.43	
OBBP	51.6	55.3	-3.8	<0.01	
Income	15.8	16.4	-0.7	0.36	
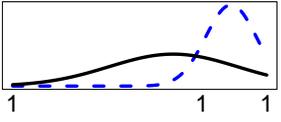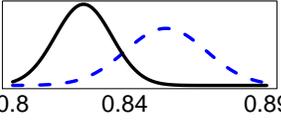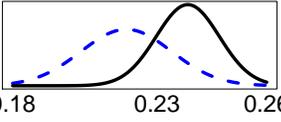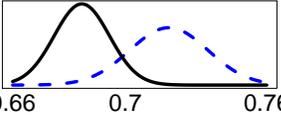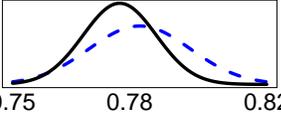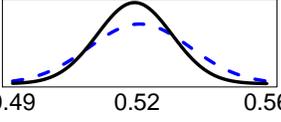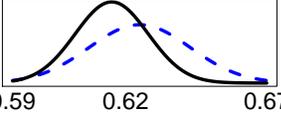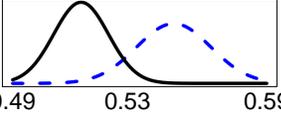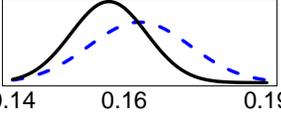
Table 6: Current Adoption of Payment Instruments. "BANP" represents "bank account number payment," and "OBBP" represents "online banking bill payments." Black, solid curves correspond to the full sample.

	Full Mean	Long. Mean	Difference	p-value	Plot
Total	67.3	68.9	-1.61	0.17	64.4 · 68.2 · 73
Automatic bill payments	5.78	6.10	-0.33	0.10	5.2 · 5.9 · 6.8
Online bill payments	6.29	6.68	-0.39	0.04	5.8 · 6.5 · 7.4
In person bill payments	8.68	9.17	-0.49	0.02	8 · 8.9 · 10.1
Retail and services: online	3.70	4.09	-0.39	0.04	3.3 · 3.9 · 4.8
Retail and services: in person	39.63	39.58	0.05	0.95	36.9 · 39.6 · 42.2
P2P: online	0.84	0.88	-0.04	0.49	0.7 · 0.9 · 1.1
P2P: in person	2.43	2.46	-0.03	0.79	2.1 · 2.4 · 2.8
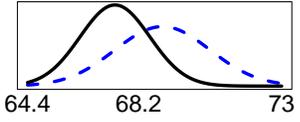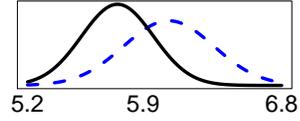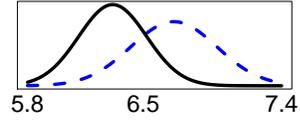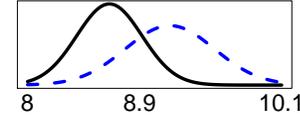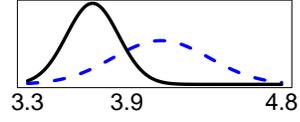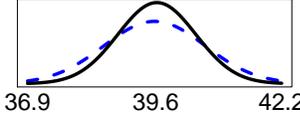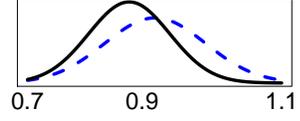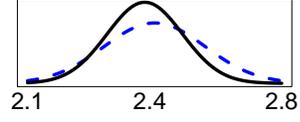
Table 7: Number of Transactions. "P2P" represents "person to person." Black, solid curves correspond to the full sample.

	Full Mean	Long. Mean	Difference	p-value	Plot
Cash	19.00	18.48	0.52	0.33	16.9 18.9 20.4
Check	5.78	6.51	-0.73	<0.01	6.5 7.4 8.4
Money order	0.50	0.50	0.00	0.98	1.1 2.2 3.5
Credit	13.87	14.86	-0.99	0.03	18.5 20.6 23
Debit	20.73	20.69	0.05	0.93	24.2 26.7 29.1
Prepaid	0.97	0.91	0.06	0.64	1.1 1.8 2.4
BANP	3.06	3.26	-0.19	0.03	4.8 5.3 5.9
OBBP	2.94	3.21	-0.27	0.01	5.1 5.8 6.7
Income	0.50	0.55	-0.05	0.17	2.9 3.6 4.3
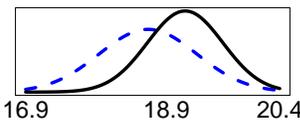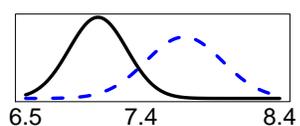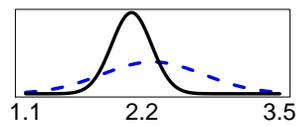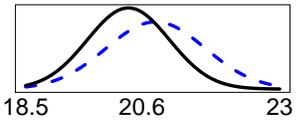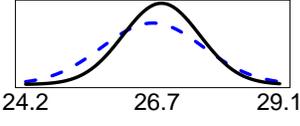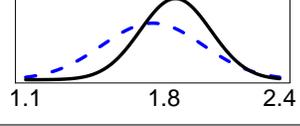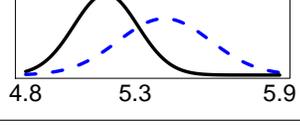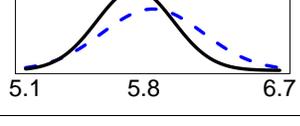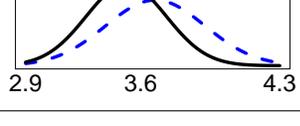
Table 8: Payments in a Typical Month per Adopter. "BANP" represents "bank account number payment," and "OBBP" represents "online banking bill payments." Black, solid curves correspond to the full sample.

	Full Mean	Long. Mean	Difference	p-value	Plot
Number per adopter	2.86	2.79	0.07	0.68	
Percent reloading	12.6	11.8	0.8	0.26	
Dollar amount per reloading	166.83	204.85	-38.02	0.18	
Number of reloads per month	1.58	1.40	0.18	0.26	

Table 9: Prepaid Card Use and Reloadings. Black, solid curves correspond to the full sample.

	Full Mean	Long. Mean	Difference	p-value	Plot
Cash holdings	424.45	463.67	-39.22	0.42	270 444.1 657.3
Cash on person	62.78	73.45	-10.65	0.01	53.3 68.1 92.3
Cash on property	373.51	401.12	-27.60	0.58	203.5 387.3 598.8
Cash withdrawals per month	635.88	674.85	-38.97	0.28	543.6 655.4 806.1
Amount per withdrawal	130.98	131.76	-0.77	0.86	116.9 131.4 146.6
Withdrawals	6.18	6.52	-0.34	0.27	5.5 6.3 7.6
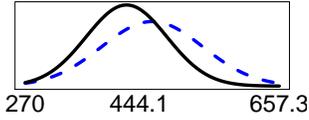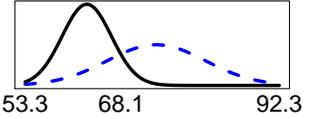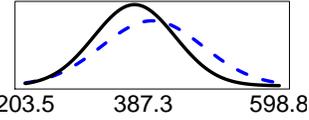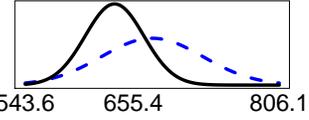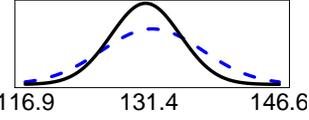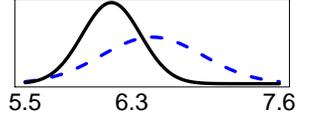
Table 10: Cash Holdings and Cash Withdrawals. Black, solid curves correspond to the full sample.

	Full Mean	Long. Mean	Difference	p-value	Plot
Mobile banking app installed	22.5	22.3	0.2	0.85	0.19 0.22 0.26
Check balance or recent transactions with mobile phone	32.1	30.0	2.1	0.04	0.26 0.31 0.35
Bill pay with mobile	18.4	16.3	2.2	0.01	0.13 0.17 0.21
Receive a text message alert from your bank	17.7	17.0	0.6	0.49	0.14 0.17 0.2
Transfer money between two accounts with mobile phone	19.0	18.2	0.8	0.38	0.15 0.19 0.21
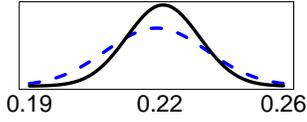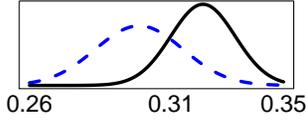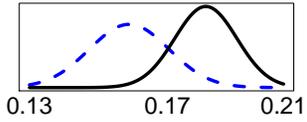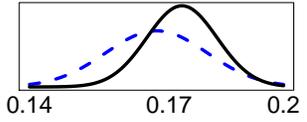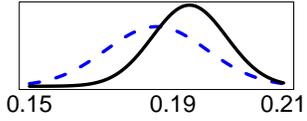
Table 11: Mobile Banking and Mobile Payments. Black, solid curves correspond to the full sample.

A   Appendix A

Here, we describe in more detail the methodology used to generate and compare estimates for population parameters under the two samples. For each stratum, $s = 1, \ldots, 660$, we let $f[s]$ represent the proportion of U.S. adults that belong in stratum s. Under the raking procedure, the estimate in (1), under the full sample, can be represented as

$$\hat{\mu}_F = \sum_{s=1}^{S} w[s]\hat{\mu}_s,$$

where w[s] represents the weight given to stratum s and $\hat{\mu}_s$ will be the sample average of all responses from stratum s. For simplicity of notation, we assume that $\sum_{s=1}^{S} w[s] = 1$. The strata not represented in the sample will have $w[s] = 0$, with that weight redistributed to strata with observations. Then, $\delta_F[s] = w[s] - f[s]$ represents the discrepancy in weights based on the full sample. A similar value, $\delta_L[s] = v[s] - f[s]$,

can be computed for the longitudinal panel, where $v[s]$ has a similar interpretation as $w[s]$, but for the strata weights based on the longitudinal panel only.

Figure 1 displays histograms of $\delta_F[s]$ and $\delta_L[s]$, which by construction have an average of 0. The plots show that the deviations for the weights based on the full sample are more tightly distributed around 0 and the standard deviation of these differences is roughly two-thirds of that for the longitudinal panel. In short, the addition of the new respondents does help the weighted sample proportions better represent the true population proportions. In the context of raking, better matching in weights means less smoothing necessary to generate appropriate strata estimates. It also allows dispensing of weights more uniformly among respondents, limiting the number of influential data points.

Strata Weight Differences: Longitudinal Panel Only

Std. Dev. =9.95e−4

Difference: CPS− Longitudinal Panel

Strata Weight Differences: Full Sample

Std. Dev. =1.47e−3

Difference: CPS−Full Panel
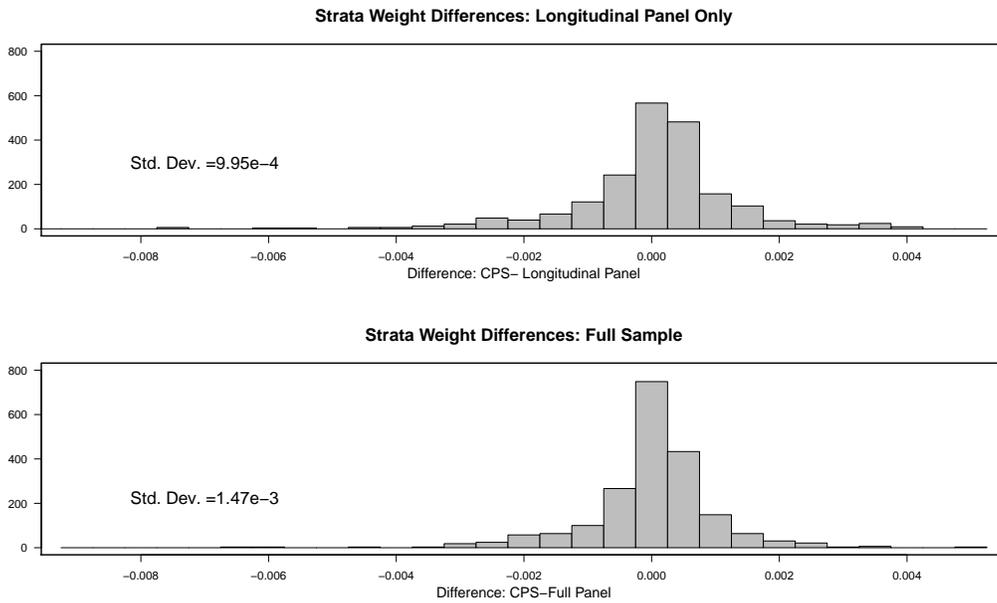
Figure 1: Histograms of $\delta_L[s]$ and $\delta_F[s]$ for the 2012 SCPC.

We rely on the methodologies used by the CPRC to compare the estimates based on the two cohorts by calculating p-values for the observed statistics. We consider $\hat{\mu}_F$ and $\hat{\mu}_L$ to be two particular realizations of the random variables $\hat{\mu}_F^*$ and $\hat{\mu}_L^*$. To define these random variables, it is necessary to define which aspects of the statistic-generating process we are conditioning on. In this case, for simplicity, we assume that the demographic information of all sampled respondents, at least with respect to the 31 variables in Table 3, is fixed. This means that the strata count and, as a result, the poststratification weights, are held constant. All variation in estimates is thus assumed to come from differing responses and not from different sample compositions.

A natural measure of consistency is a p-value of the form

$$\text{Prob}(|\hat{\mu}_F^* - \hat{\mu}_L^*| \geq |\hat{\mu}_F - \hat{\mu}_L|). \tag{3}$$

Equation (3) quantifies the long-run probability that the difference in the two generated estimates is greater than the difference in the observed values in the 2012 SCPC.

In order to evaluate (3), it is necessary to define the distribution of $\hat{d}^* = \hat{\mu}_F^* - \hat{\mu}_L^*$. Perhaps the simplest approach with a sufficiently large sample size is a Normal distribution approximation, such that

$$\hat{d}^* \quad \sim \quad \text{Normal}(\hat{\mu}_F - \hat{\mu}_L, \hat{\sigma}_d^2),$$

where $\hat{\sigma}_d^2$ is an estimate of the standard error of the statistic. The specific form is

$$\hat{\sigma}_d^2 \quad = \quad \text{Var}[\hat{\mu}_F^*] + \text{Var}[\hat{\mu}_L^*] - 2\text{Cov}[\hat{\mu}_F^*, \hat{\mu}_L^*]. \tag{4}$$

The term in (4) is estimated via Huber-White estimators (Eicker 1967; Huber 1967; White 1980), which are naturally generated through the use of the SURVEYMEANS procedure in SAS (SAS Institute Inc. 1999). First, we introduce some notation. We let N represent the total number of respondents in the full sample, with each indexed by $i = 1, \ldots, N$. Then, we can re-express each estimate in terms of individual-level weights determined through the raking algorithm. Thus, for the full sample, the estimate in (1) can be written as

$$\hat{\mu}_F \quad = \quad \sum_{i=1}^{N} w_i Y_i, \tag{5}$$

where w_i is the weight given to individual i and Y_i is the response given by individual i. Therefore, if $n_F[s]$ represents the number of individuals from stratum s in the full sample, then $w_i = \frac{w[s]}{n_F[s]}$. Note that if $n_F[s] = 0$, then the raking algorithm ensures that $w[s] = 0$, so $w_i = \frac{0}{0}$, which we define as 0. A similar form for the estimator in 5 can be written for the estimates based on the longitudinal panel, except that the weights will correspond to $v_i = \frac{v[s]}{n_L[s]}$, where $n_L[s]$ represents the number of individuals from the longitudinal panel in stratum s.

The forms of the terms on the right-hand side of (4) can be estimated by

$$\hat{\text{Var}}[\hat{\mu}^*] \quad = \quad \sum_{i=1}^{N} w_i^2 (Y_i - \hat{\mu})^2, \tag{6}$$

and

$$\hat{\text{Cov}}[\hat{\mu}_F^*, \hat{\mu}_L^*] = \sum_{i \in \mathcal{S}} w_i v_i (Y_i - \hat{\mu}_F)(Y_i - \hat{\mu}_L). \tag{7}$$

The test statistic takes the form

$$T = \frac{\hat{\mu}_F - \hat{\mu}_L}{\hat{\sigma}_d}, \tag{8}$$

and can be used to assign a p-value. Low p-values suggest an inconsistency in some form of coverage between the new panelists and the longitudinal panel, while high values simply mean that no evidence of such a discrepancy is found using this particular test.

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2012 SCPC Table of Contents

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Notes to the SCPC Tables

Numeric superscripts in tables correspond to the notes listed below. Extra footnotes on each table are indicated by a symbol and explained below the table. Definitions of concepts in these tables are provided in Section XIV of the report "The 2011–2012 Survey of Consumer Payment Choice."

Footnote	Description
General	
1	Superscript "r" indicates that numbers in the table may be revised, that is, 2010 data may have been updated since their initial release.
2	The notation "na" indicates that the estimate is not available, often because the related survey question was not asked in the associated year.
3	Numbers in italics are not comparable across years due to changes in the survey questionnaire or methodology.
4	Numbers may not sum exactly due to rounding or missing values.
5	Dollar values are not adjusted for inflation [applies to Tables 14, 15, 16, 17].
6	The nine available payment instruments are cash, check, money order, travelers check, debit card, credit card, prepaid card, online banking bill payment, and bank account number payment [applies to Tables 12, 32, 33].
Adoption	
7	Adoption of payment instrument means the consumer had the instrument, with the following exceptions: a. For cash, adoption means the consumer used the instrument in the given year, held it on person, held it on property, or had obtained it at least once in a given year [applies to Tables 5, 6, 7, 8, 12, 20, 21b]. b. For money order, travelers check, bank account number payment, and direct deduction from income, adoption means the consumer used the instrument or method in a given year [applies to Tables 5, 6, 7, 8, 12, 14, 17, 20, 21b]. c. In 2011, the SCPC discontinued asking respondents about their typical use of travelers checks in a week, month, or year. Travelers check adoption is determined by the response to "In the past 12 months, have you used a travelers check, even once?" d. For online banking bill payment, adoption means having signed up for online banking bill pay at a bank's website [applies to Tables 6, 7, 10, 11, 12, 21b].
8	Ever owned includes current adopters as well as respondents who have stated that they have used an account or technology in the past, but currently do not adopt the account and technology [applies to Tables 2, 7].
9	Discarded refers to the difference between ever-owned and current ownership rates [applies to Tables 3, 8].
10	General purpose credit cards have a network logo such as Visa, MasterCard, Discover, or American Express. Branded cards also have a merchant's logo on the card. Some branded cards have a merchant logo only (no payment network). Charge cards require full payment of the balance at the end of each billing period [applies to Tables 9, 11].

11   In 2011, adoption of online payment service provider was redefined as someone who had adopted at least one of the following services: (1) PayPal; (2) Google Checkout; (3) Amazon Payments; and (4) Other. Previously, adoption of an online payment service provider was inferred if "number of nonbank online payment accounts" of the respondent exceeded zero [applies to Tables 1, 2, and 3].

12   Mobile banking adoption is defined as having downloaded a mobile banking app or having performed one of the following activities using a mobile phone: (1) Checked a balance or recent transaction; (2) Paid a bill; (3) Received a text message alert from bank; (4) Transferred money between two accounts. In 2010 and prior years, mobile banking adoption was based on a single question [applies to Tables 1, 2, 3, and 19].

Prepaid Cards

13   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 [applies to Table 10].

14   Prepaid card adoption in 2011 was estimated from two random subsamples, with respondents asked about four categories (n = 1,063) or 12 categories (n =1,088) of prepaid cards. Unless otherwise indicated, reported 2011 estimates are based on 12 categories to be more consistent with 2012 estimates, which are based on 13 categories of prepaid card. In 2012, one additional category was added for clarification, "Other federal, state, or local government benefit card." See the technical appendix for details on estimates with four categories [applies to Tables 5, 6, 7, 8, 10, 11, 12, 14, 21b].

15   The four categories of prepaid cards presented to the respondent in the 2011 survey are "government issued," "employer issued," "general purpose," and "specific purpose." In the 2010 survey, employer issued was called "payroll card," and specific purpose was called "merchant specific" [applies to Tables 6, 7, 8].

16   A reloader is defined as having reported adopting a prepaid card that is reloadable and having added money to it in the past 12 months [applies to Table 18].

Other

17   The notation "s" indicates that the cell was suppressed due to an insufficient number of observations.

Table 1

Current Ownership of Accounts and Account Access Technologies
Percentage of consumers

	Full panel	Longitudinal panel	Difference
Deposit and payment accounts	**98.0**	**98.8**	**-0.8**
Deposit accounts	**91.2**	**92.5**	**-1.3**
Checking...	90.1	91.4	-1.3
Primary account earns interest...............................	44.6	44.9	-0.3
Overdraft protection..	67.8	69.5	-1.8
Savings..	74.4	75.8	-1.5
Traditional or passbook.......................................	74.4	75.8	-1.5
Money market...	na	na	na
With check privileges..	na	na	na
Nonbank payment accounts			
Online payment service provider......................................	52.5	53.5	-1.0
Amazon payments...	14.2	14.4	-0.2
Google checkout..	2.7	3.0	-0.3
Paypal...	48.0	49.0	-1.0
Other..	1.7	1.5	0.2
Other accounts			
Prepaid	52.2	52.3	-0.2
Prepaid (4 categories)...	na	na	na
Account access technologies			
Deposit account access technologies			
ATM card..	82.8	83.6	-0.9
ATM card (no debit feature)................................	39.5	39.2	0.3
Debit card..	78.0	78.5	-0.5
Telephone banking..	31.5	31.6	-0.1
Online banking...	70.1	72.0	-2.0
Mobile banking..	38.0	35.8	2.2
App installed...	22.5	22.3	0.2
Used mobile phone, with or without app....................	na	na	na
Check balance or recent transactions with mobile phone...........	32.1	30.0	2.1
Bill pay with mobile phone................................	18.4	16.3	2.2
Receive a text message alert from your bank..............	17.7	17.0	0.6
Transfer money between two accounts with mobile phone..........	19.0	18.2	0.8
Information and communication technologies			
Tablet...	27.1	28.7	-1.5
Mobile phone...	93.8	94.8	-1.1
Smart phone (iPhone, Android, BlackBerry, etc.).................	53.1	52.7	0.4

Notes: 1–4, 11, 12, 14, 15.

Table 2

Historical Ownership of Accounts and Account Access Technologies
Percentage of consumers

Ever owned	Full panel	Longitudinal panel	Difference
Deposit and payment accounts	**98.8**	**99.2**	**-0.4**
Deposit accounts	**96.6**	**96.0**	**0.6**
Checking...	95.5	95.7	-0.2
Primary account earns interest.....................................	na	na	na
Overdraft protection...	na	na	na
Savings...	91.2	90.2	1.0
Traditional or passbook...	91.2	90.2	1.0
Money market...	na	na	na
With check privileges..	na	na	na
Nonbank payment accounts	na	na	na
Online payment service provider..	na	na	na
Amazon payments...	na	na	na
Google checkout..	na	na	na
Paypal..	na	na	na
Other...	na	na	na
Other accounts	na	na	na
Prepaid	78.3	79.8	-1.5
Prepaid (4 categories)...	na	na	na
Account access technologies			
Deposit account access technologies			
ATM card..	90.5	89.9	0.5
ATM card (no debit feature)...	63.9	63.5	0.4
Debit card..	86.0	85.0	1.0
Telephone banking..	44.3	44.9	-0.6
Online banking..	76.0	76.6	-0.6
Mobile banking..	49.4	46.6	2.9
App installed...	27.9	26.9	1.0
Used mobile phone, with or without app...............................	na	na	na
Check balance or recent transactions with mobile phone............	43.3	40.3	3.0
Bill pay with mobile phone...	28.3	25.2	3.1
Receive a text message alert from your bank............................	23.8	22.8	1.0
Transfer money between two accounts with mobile phone..........	24.3	23.2	1.2
Information and communication technologies			
Tablet..	na	na	na
Mobile phone..	97.5	97.9	-0.4
Smart phone (iPhone, Android, BlackBerry, etc.)...........................	na	na	na

Notes: 1–4, 8, 11, 12, 14, 15.

Table 3
Discarding of Accounts and Account Access Technologies
Percentage of consumers

Discarded	Full panel	Longitudinal panel	Difference
Deposit and payment accounts	**0.9**	**0.6**	**0.4**
Deposit accounts	**5.2**	**3.4**	**1.8**
Checking..	5.4	4.2	1.2
Primary account earns interest.......................................	na	na	na
Overdraft protection..	na	na	na
Savings...	16.6	14.3	2.3
Traditional or passbook..	16.6	14.3	2.3
Money market...	na	na	na
With check privileges...	na	na	na
Nonbank payment accounts			
Online payment service provider......................................	na	na	na
Amazon payments...	na	na	na
Google checkout..	na	na	na
Paypal...	na	na	na
Other..	na	na	na
Other accounts			
Prepaid	26.2	27.5	-1.3
Prepaid (4 categories)..	na	na	na
Account access technologies			
Deposit account access technologies			
ATM card...	7.6	6.2	1.4
ATM card (no debit feature)...	24.2	24.1	0.1
Debit card..	7.9	6.2	1.7
Telephone banking...	12.5	13.1	-0.6
Online banking...	5.8	4.6	1.3
Mobile banking...	7.0	7.1	-0.2
App installed...	2.7	2.3	0.4
Used mobile phone, with or without app...........................	na	na	na
Check balance or recent transactions with mobile phone...........	6.4	6.3	0.2
Bill pay with mobile phone...	7.1	6.8	0.3
Receive a text message alert from your bank........................	3.5	3.5	0.0
Transfer money between two accounts with mobile phone..........	2.4	2.5	0.0
Information and communication technologies			
Tablet..	na	na	na
Mobile phone...	3.7	3.1	0.6
Smart phone (iPhone, Android, BlackBerry, etc.)........................	na	na	na

Notes: 1–4, 9, 11, 12, 14, 15.

Table 4

Primary Bank Account Holdings, by Type of Deposit Account and Financial Institution

Percentage of consumers	Full	Long.	Difference
Primary checking account			
Commercial bank...	60.7	61.1	-0.4
Savings and loan...	6.7	7.3	-0.6
Credit union..	20.1	21.3	-1.3
Brokerage..	0.4	0.3	0.1
Internet bank..	1.0	0.7	0.3
Other..	0.9	0.6	0.3
Primary savings account			
Commercial bank...	37.8	37.3	0.6
Savings and loan...	5.9	6.1	-0.2
Credit union..	24.3	26.0	-1.7
Brokerage..	1.5	1.5	-0.1
Internet bank..	2.7	3.0	-0.3
Other..	0.9	0.7	0.2
Percentage of account adopters*	Full	Long.	Difference
Primary checking account			
Commercial bank...	67.7	66.9	0.8
Savings and loan...	7.5	8.0	-0.5
Credit union..	22.4	23.4	-1.0
Brokerage..	0.4	0.3	0.1
Internet bank..	1.1	0.8	0.3
Other..	1.0	0.7	0.3
Primary savings account			
Commercial bank...	51.8	50.0	1.8
Savings and loan...	8.1	8.2	-0.1
Credit union..	33.2	34.8	-1.6
Brokerage..	2.0	2.1	0.0
Internet bank..	3.6	4.0	-0.4
Other..	1.2	0.9	0.3

* Adopters are respondents who have identified themselves as owning and/or using that type of account. For example, 66.9% of checking account adopters identified "commercial bank" as the location of their primary checking account in the Long. column.

Notes: 1–4.

Table 5
Current Adoption of Payment Instruments, by Type of Asset or Liability
Percentage of consumers

	Full panel	Longitudinal panel	Difference
Assets			
Money (M1)*	**100.0**	**100.0**	**0.0**
Cash (currency)..	99.9	100.0	**-0.1**
Travelers check	1.2	1.4	-0.2
Demand deposit accounts, consumer	95.5	96.3	-0.7
Checks..	82.8	85.4	-2.6
Personal..	82.8	85.4	-2.6
Certified..	4.2	4.4	-0.1
Debit card...	78.0	78.5	-0.5
Online banking bill payment...........................	51.6	55.3	-3.8
Bank account number payment.......................	61.9	62.7	-0.8
Other deposit accounts...................................			
Cashier's check...	7.9	8.2	-0.3
Other (unknown/unspecified)	**67.8**	**67.3**	**0.5**
Direct deduction from income	15.8	16.4	-0.7
Money order..	23.5	21.7	1.9
Prepaid..	52.2	52.3	-0.2
Liabilities			
Credit or charge card......................................	68.7	72.1	-3.3
Credit..	68.0	71.6	-3.5
Charge...	9.6	10.9	-1.3
Text/SMS mobile payment................................	3.0	2.8	0.1

* For M1 official definition, see Federal Reserve Statistical Release H.6.

Notes: 1–4, 7, 14.

Table 6
Current Adoption of Payment Instruments, by Form of Instrument and Other Means of Payment
Percentage of consumers

	Full panel	Longitudinal panel	Difference
Paper instruments	**100.0**	**100.0**	**0.0**
Cash..	99.9	100.0	-0.1
Checks...	82.8	85.4	-2.6
Certified check...	4.2	4.4	-0.1
Cash and check substitutes.................................	31.0	29.8	1.1
Money order...	23.5	21.7	1.9
Travelers check...	1.2	1.4	-0.2
Cashier's check...	7.9	8.2	-0.3
Payment cards	**96.3**	**97.1**	**-0.8**
Payment cards (4 categories)	na	na	na
Debit..	78.0	78.5	-0.5
Credit or charge card..	68.7	72.1	-3.3
Credit..	68.0	71.6	-3.5
Charge	9.6	10.9	-1.3
Prepaid	52.2	52.3	-0.2
Prepaid (4 categories)...	na	na	na
Electronic payments	**75.4**	**77.6**	**-2.2**
Online banking bill payment.................................	51.6	55.3	-3.8
Bank account number payment.............................	61.9	62.7	-0.8
Other means of payment			
Direct deduction from income..............................	15.8	16.4	-0.7

Notes: 1–4, 7, 14, 15.

Table 7

Historical Adoption of Payment Instruments, by Form of Instrument and Other Means of Payment
Percentage of consumers

Ever adopted	Full panel	Longitudinal panel	Difference
Paper instruments			
Cash..	na	na	na
Checks...	na	na	na
Certified check...	na	na	na
Cash and check substitutes...			
Money order...	80.8	80.9	-0.1
Travelers check..	na	na	na
Cashier's check..	na	na	na
Payment cards			
Payment cards (4 categories)			
Debit..	86.0	85.0	1.0
Credit or charge card..	85.0	86.3	-1.3
Credit...	na	na	na
Charge..	na	na	na
Prepaid..	78.3	79.8	-1.5
Prepaid (4 categories)..	na	na	na
Electronic payments			
Online banking bill payment..	58.1	61.0	-2.9
Bank account number payment..	na	na	na
Other means of payment			
Direct deduction from income..	na	na	na

Notes: 1–4, 7, 8, 14, 15.

Table 8

Discarding of Payment Instruments, by Form of Instrument and Other Means of Payment
Percentage of consumers

Discarded	Full panel	Longitudinal panel	Difference
Paper instruments			
Cash..	na	na	na
Checks...	na	na	na
Certified check..	na	na	na
Cash and check substitutes................................	na	na	na
Money order..	57.3	59.4	-2.1
Travelers check...	na	na	na
Cashier's check...	na	na	na
Payment cards			
Payment cards (4 categories)			
Debit..	7.9	6.2	1.7
Credit or charge card..	16.3	14.2	2.1
Credit..	na	na	na
Charge...	na	na	na
Prepaid..	26.2	27.5	-1.3
Prepaid (4 categories)...................................	na	na	na
Electronic payments			
Online banking bill payment...............................	6.7	5.9	0.8
Bank account number payment............................	na	na	na
Other means of payment			
Direct deduction from income.............................	na	na	na

Notes: 1–4, 9, 14, 15.

Table 9
Current Adoption of Debit, Credit, and Charge Cards, by Instrument Type and Features
Percentage of consumers

	Full	Long.	Difference
Debit cards	**78.0**	**78.5**	**-0.5**
Rewards..	na	20.2	na
Nonrewards...	na	na	na
Contactless..	10.4	10.2	0.2
Credit cards or charge cards	**68.7**	**72.1**	**-3.3**
Rewards..	54.1	56.4	-2.3
Nonrewards...	40.3	42.1	-1.8
Credit	**68.0**	**71.6**	**-3.5**
Rewards..	53.2	55.3	-2.1
Nonrewards...	39.9	41.9	-1.9
Contactless..	8.7	10.1	-1.5
General purpose...	67.2	70.8	-3.6
Visa, MasterCard, Discover	66.7	70.2	-3.6
American Express	10.7	11.8	-1.1
Rewards..	50.7	52.6	-1.9
Nonrewards..	31.0	32.0	-1.0
Company or store branded	41.7	45.4	-3.8
Rewards..	20.0	22.0	-2.1
Nonrewards..	21.6	24.0	-2.3
Charge	**9.6**	**10.9**	**-1.3**
Rewards..	6.7	7.4	-0.7
Nonrewards...	1.6	1.6	0.0
American Express charge cards..........................	9.1	10.3	-1.2
Rewards..	6.5	7.1	-0.6
Nonrewards..	1.3	1.2	0.1
Diners Club or other charge cards......................	1.4	1.8	-0.5
Rewards..	0.4	0.6	-0.2
Nonrewards..	0.4	0.5	0.0

Notes: 1–4, 10.

Table 10

Current Adoption of Prepaid Cards and Contactless Technologies, by Instrument Type and Features

Percentage of consumers

	Full	Long.	Difference
Prepaid cards (4 categories)	**na**	**na**	**na**
Contactless..	na	na	na
General purpose..	na	na	na
Merchant specific...	na	na	na
Payroll...	na	na	na
Government issued..	na	na	na
Prepaid cards (12 or 13 categories)	**52.2**	**52.3**	**-0.2**
Contactless..	3.0	3.3	-0.3
Government related	**20.7**	**19.5**	**1.2**
Direct express card..	1.6	1.6	0.0
Electronic benefits transfer (EBT) card...................................	11.6	11.1	0.5
Public transportation card..	10.1	8.4	1.7
Other federal, state, or local government benefit card..	3.0	2.6	0.4
Employer related	**10.5**	**11.5**	**-1.0**
Payroll card...	1.9	2.1	-0.2
Incentive card..	1.9	2.2	-0.3
Benefit card..	8.1	8.7	-0.7
Other	**39.1**	**40.7**	**-1.7**
Gift card..	30.2	32.3	-2.2
Phone card...	5.7	6.2	-0.4
Remittance card...	0.8	0.8	0.0
Rebate card..	7.0	7.9	-0.9
Location specific card..	2.8	2.6	0.1
Other general purpose card..	9.9	9.7	0.2
Contactless Technologies	**27.3**	**27.9**	**-0.6**
Any payment card...	17.5	18.5	-1.0
Electronic toll payment..	9.8	10.6	-0.9
Key fob..	1.6	1.8	-0.3
Mobile phone*...	0.8	1.0	-0.2

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

Notes: 1–4, 7, 13, 14.

Table 11

Number of Adopted Accounts and Payment Cards

Mean number per adopter*

	Full	Long.	Difference
Deposit accounts	**3.0**	**3.1**	**-0.1**
Checking..	1.6	1.6	0.0
Savings..	1.8	1.8	0.0
Traditional or passbook..	na	na	na
Money market...	na	na	na
Nonbank payment accounts			
Online payment service provider..	na	na	na
ATM and debit cards			
ATM...	1.5	1.4	0.0
Debit..	1.6	1.6	0.0
Credit cards	**3.9**	**4.0**	**-0.2**
Rewards...	2.3	2.3	-0.1
Nonrewards...	1.6	1.7	-0.1
General purpose	2.4	2.4	-0.1
Rewards...	1.5	1.6	-0.1
Nonrewards...	0.9	0.9	0.0
Charge	0.2	0.2	0.0
Rewards...	0.1	0.1	0.0
Nonrewards...	0.0	0.0	0.0
Branded	1.4	1.5	-0.1
Rewards...	0.7	0.7	0.0
Nonrewards...	0.9	0.9	-0.1
Prepaid cards	**2.9**	**2.8**	**0.1**

* Bold-face numbers are per adopter of the instrument. The denominator for each of the subcategories is the number of adopters of the bold-faced instrument.

Notes: 1–4, 7, 10, 14.

Table 12

Mean Number of Payment Instruments Adopted by Account and Payment Instrument Adopters

	Full	Long.	Difference
Available number of payment instruments	**9**	**9**	**9**
Total (all consumers)	**5.2**	**5.3**	**-0.1**
Paper instruments..	2.1	2.1	0.0
Card instruments...	2.0	2.0	0.0
Electronic instruments...	1.1	1.2	0.0
Deposit account non-adopters	**2.2**	**2.3**	**-0.1**
Deposit account adopters	**5.5**	**5.6**	**0.0**
Checking and savings account adopters.....................................	5.7	5.7	0.0
Checking account adopters, no savings.....................................	5.1	5.1	0.0
Savings account adopters, no checking.....................................	s	s	s
Paper instrument adopters	**5.2**	**5.3**	**-0.1**
Cash adopters..	5.2	5.3	-0.1
Check adopters..	5.6	5.6	0.0
Money order adopters..	5.6	5.7	-0.1
Travelers check adopters...	s	s	s
Payment card adopters	**5.4**	**5.4**	**0.0**
Debit adopters...	5.7	5.8	0.0
Credit adopters..	5.8	5.8	0.0
Prepaid adopters..	5.7	5.8	-0.1
Electronic payment adopters	**5.9**	**5.9**	**0.0**
Online banking bill payment adopters.......................................	6.2	6.2	0.0
Bank account number payment adopters....................................	6.0	6.1	0.0

Notes: 1, 3, 4, 6, 7, 14, 17.

Table 13
Cash and Prepaid Card Holdings and Prepaid Card Reloadings
Dollars per consumer, except as noted

	Mean			Median		
	Full	**Long.**	**Diff**	**Full**	**Long.**	**Diff**
Cash holdings	**424**	**464**	**-39**	**63**	**69**	**-7**
On person..	63	73	-11	25	29	-4
On property..	374	401	-28	5	10	-5
Excluding large-value holdings*.................	155	174	-19	59	62	-3
On person..	52	61	-9	23	25	-2
On property..	107	117	-10	2	5	-3
Prepaid card holdings, adopters†	**301**	**346**	**-45**	**78**	**99**	**-21**
Prepaid card reloading						
Percentage of consumers reloading prepaid cards............................	12.6	11.8	0.8	—	—	—
Dollar amount per reloading, reloaders only.....................................	167	216	-49	46	46	0
Number of reloads per month, reloaders only...................................	1.6	1.4	0.2	0.9	0.7	0.1

Notes: 1–4.

Table 14

Cash Holdings, by Adoption of Deposit Accounts and Payment Instruments
Dollars per consumer*

Adopters	Mean			Median		
	Full	Long.	Diff	Full	Long.	Diff
Deposit account	**446**	**469**	**-23**	**70**	**75**	**-5**
On person...	63	68	-5	27	29	-2
On property...	396	412	-17	9	13	-4
ATM or debit card	**390**	**396**	**-6**	**62**	**67**	**-4**
On person...	58	63	-5	25	25	-1
On property...	342	342	1	6	10	-3
Credit card	**455**	**428**	**27**	**93**	**99**	**-6**
On person...	73	83	-10	35	39	-4
On property...	392	353	39	19	19	-1
Prepaid card	**428**	**420**	**8**	**69**	**80**	**-11**
On person...	61	72	-10	25	29	-4
On property...	379	357	21	9	18	-9
Money order	**428**	**309**	**118**	**51**	**65**	**-14**
On person...	64	93	-29	20	27	-7
On property...	373	219	154	4	8	-4

Nonadopters	Mean			Median		
	Full	Long.	Diff	Full	Long.	Diff
Deposit account	**213**	**426**	**-213**	**11**	**35**	**-25**
On person...	64	145	-81	5	17	-11
On property...	154	293	-139	0	0	0
ATM or debit card	**601**	**834**	**-232**	**66**	**104**	**-38**
On person...	84	128	-44	24	41	-17
On property...	533	730	-198	0	8	-8
Credit card	**359**	**561**	**-202**	**28**	**34**	**-6**
On person...	40	49	-9	15	19	-4
On property...	333	531	-198	0	0	0
Prepaid card	**422**	**514**	**-92**	**60**	**63**	**-3**
On person...	64	76	-11	24	27	-3
Demographics...	370	452	-83	2	5	-2
Money order	**425**	**509**	**-84**	**69**	**70**	**-1**
On person...	63	68	-6	26	29	-3
On property...	375	455	-80	5	10	-5

* "On person" is defined as cash held in the respondent's wallet, purse, and/or pocket. "On property" is defined as cash held elsewhere by the respondent (in the respondent's home, car, office, etc.) instead of on person.

Notes: 1–5, 7, 14, 17.

Table 15

Cash Withdrawals, Total and at Most Frequented Location
Dollars per consumer per location, except as noted*

Total	Mean			Median		
	Full	Long.	Diff	Full	Long.	Diff
Cash withdrawals per month†	**636**	**655**	**-19**	**260**	**280**	**-20**
Amount per withdrawal..................................	131	131	0	67	74	-7
Withdrawals (number per month)........................	6.2	6.4	-0.2	4.0	4.0	0.0
Most frequent location per month	**476**	**470**	**6**	**200**	**200**	**0**
Amount per withdrawal..................................	139	138	0	60	78	-18
Withdrawals (number per month)........................	4.1	4.1	0.0	2.0	2.0	0.0
All other locations per month	**165**	**189**	**-24**	**13**	**18.1**	**-5**
Amount per withdrawal..................................	50	58	-8	19	17	3
Withdrawals (number per month)........................	2.1	2.3	-0.2	0.4	0.4	0.0

At Most Frequented Location	Mean			Median		
	Full	Long.	Diff	Full	Long.	Diff
ATM per month	**415**	**445**	**-29**	**200**	**200**	**0**
Amount per withdrawal..................................	111	113	-3	59	60	0
Withdrawals (number per month)........................	4.2	4.3	-0.1	2.9	2.7	0.3
Bank teller per month	**622**	**535**	**87**	**300**	**290**	**10**
Amount per withdrawal..................................	234	222	12	100	99	0
Withdrawals (number per month)........................	3.0	2.9	0.1	1.8	2.0	-0.2
Check cashing store per month	**1110**	**s**	**s**	**688**	**s**	**s**
Amount per withdrawal..................................	389	s	s	385	s	s
Withdrawals (number per month)........................	3.0	s	s	1.4	s	s
Retail or grocery store per month	**150**	**122**	**28**	**80**	**80**	**0**
Amount per withdrawal..................................	37	34	2	20	20	0
Withdrawals (number per month)........................	4.1	3.9	0.3	2.4	2.3	0.1
Employer per month	**1042**	**1101**	**-60**	**588**	**481**	**107**
Amount per withdrawal..................................	218	202	16	99	119	-20
Withdrawals (number per month)........................	6.0	6.3	-0.4	3.9	4.1	-0.2
Family or friend per month	**291**	**319**	**-28**	**50**	**50**	**0**
Amount per withdrawal..................................	59	61	-2	26	39	-13
Withdrawals (number per month)........................	5.0	4.6	0.4	1.7	1.0	0.7
Other per month	**881**	**985**	**-104**	**386**	**503**	**-117**
Amount per withdrawal..................................	200	155	45	97	83	14
Withdrawals (number per month)........................	6.8	9.0	-2.2	2.2	4.1	-1.9

* The amount for each location is the dollar amount of withdrawals at that location only by consumers who named that location as their most frequent location. Amount withdrawn per month is obtained from the amount per withdrawal times the number of withdrawals, calculated for each consumer.

† *Cash withdrawals per month* is the withdrawal-weighted average of typical amounts per withdrawal from the primary and all other locations.

Notes: 1, 4, 5, 17.

Table 16

Cash Withdrawal Preferences, by Location and Method
Percentage of consumers

Total	Mean		
	Full	**Long.**	**Difference**
Cash withdrawals (monthly)..	92.2	90.2	2.0
Cash withdrawals (annually)..	98.6	99.0	-0.4

Most Frequented Location	Mean		
	Full	**Long.**	**Difference**
ATM...	49.9	49.6	0.3
Bank teller...	22.1	24.0	-1.8
Check cashing store..	2.3	1.8	0.5
Retail or grocery store..	12.0	12.6	-0.6
Employer..	3.5	3.4	0.1
Family or friend...	6.1	4.8	1.3
Other..	4.1	3.9	0.2

Most Frequent Method, by Location	Mean		
	Full	**Long.**	**Difference**
ATM			
Debit card..	76.1	72.3	3.9
ATM card..	19.3	21.3	-2.1
Prepaid card..	2.6	4.2	-1.7
Credit card cash advance...	0.4	0.2	0.2
Other type of card...	1.7	1.9	-0.3
Retail store			
Debit card..	84.6	89.0	-4.4
Write a check...	2.5	2.1	0.4
Prepaid card..	3.4	1.0	2.5
Other method...	9.5	7.9	1.6

Notes: 1–5.

Table 17

Total Cash Withdrawals, by Adoption of Deposit Accounts and Payment Instrument

Dollars per month per location, except as noted*

Adopters	Mean			Median		
	Full	Long.	Diff	Full	Long.	Diff
Deposit account per month	**578**	**563**	**16**	**247**	**260**	**-13**
Amount per withdrawal...	122	122	1	60	68	-8
Withdrawals (number per month)..	5.9	5.8	0.1	4.0	4.0	0.0
ATM or debit card per month	**567**	**548**	**19**	**240**	**240**	**0**
Amount per withdrawal...	113	112	1	60	60	0
Withdrawals (number per month)..	6.1	5.9	0.1	4.0	4.0	0.0
Credit card per month	**554**	**572**	**-18**	**236**	**242**	**-6**
Amount per withdrawal...	124	119	5	70	73	-3
Withdrawals (number per month)..	5.4	5.8	-0.4	3.0	3.5	-0.5
Prepaid card per month	**621**	**649**	**-28**	**267**	**300**	**-33**
Amount per withdrawal...	129	127	2	70	75	-5
Withdrawals (number per month)..	6.3	6.7	-0.4	3.9	4.0	-0.1
Money order per month	**952**	**1046**	**-93**	**400**	**433**	**-34**
Amount per withdrawal...	139	132	6	70	78	-8
Withdrawals (number per month)..	9.5	10.7	-1.2	4.3	4.6	-0.2

Nonadopters	Mean			Median		
	Full	Long.	Diff	Full	Long.	Diff
Deposit account per month	**1182**	**1538**	**-356**	**476**	**621**	**-146**
Amount per withdrawal...	228	234	-6	100	114	-14
Withdrawals (number per month)..	8.2	11.4	-3.2	3.1	3.5	-0.4
ATM or debit card per month	**939**	**1089**	**-150**	**400**	**502**	**-102**
Amount per withdrawal...	222	224	-2	103	129	-26
Withdrawals (number per month)..	6.5	7.8	-1.3	2.3	3.0	-0.7
Credit card per month	**819**	**871**	**-52**	**319**	**400**	**-81**
Amount per withdrawal...	148	166	-18	60	77	-17
Withdrawals (number per month)..	8.0	7.9	0.1	4.0	4.0	0.0
Prepaid card per month	**646**	**652**	**-7**	**240**	**241**	**-1**
Amount per withdrawal...	133	136	-3	62	72	-10
Withdrawals (number per month)..	6.0	6.0	0.0	3.3	3.3	0.1
Money order per month	**535**	**541**	**-6**	**220**	**240**	**-20**
Amount per withdrawal...	128	131	-2	64	73	-9
Withdrawals (number per month)..	5.2	5.2	0.0	3.0	3.0	0.0

* Amount withdrawn per month is obtained from the amount per withdrawal times the number of withdrawals, calculated for each consumer.

Notes: 1–5, 7, 17.

Table 18

Share of Consumers Using Accounts and Technologies in a Given Year

Percentage of consumers	Full	Long.	Diff
Deposit account access	**88.5**	**89.2**	**-0.7**
Bank branch visit*..	72.3	73.7	-1.4
ATM..	73.4	73.5	-0.2
Telephone banking..	23.0	22.3	0.7
Online banking..	68.5	70.3	-1.8
Using a computer or laptop..	66.1	68.3	-2.2
Using a mobile phone...	22.3	21.2	1.1
Using other internet connected device...............................	23.7	24.3	-0.6
Using other device..	0.0	0.0	0.0
Mobile banking...	37.0	34.5	2.5
App installed..	na	na	na
Used mobile phone, with or without app............................	37.0	34.5	2.5
Check balance or recent transactions with mobile phone..........	32.1	30.0	2.1
Bill pay with mobile phone...	18.4	16.3	2.2
Receive a text message alert from your bank....................	17.7	17.0	0.6
Transfer money between two accounts with mobile phone...........	19.0	18.2	0.8
Nonbank payment accounts			
Online payment service provider...	38.7	38.5	0.1
Prepaid card reloading..	12.6	11.8	0.8

Percentage of adopters	Full	Long.	Diff
Deposit account access	**97.4**	**97.0**	**0.4**
Bank branch visit..	79.2	79.6	-0.4
ATM..	81.1	80.1	1.0
Telephone banking..	25.3	24.3	1.0
Online banking..	75.4	76.4	-1.1
Using a computer or laptop..	72.8	74.3	-1.5
Using a mobile phone...	22.3	21.2	1.1
Using other internet connected device...............................	26.1	26.4	-0.3
Mobile banking...	40.6	37.3	3.3
App installed..	na	na	na
Used mobile phone, with or without app............................	40.6	37.3	3.3
Check balance or recent transactions with mobile phone..........	35.2	32.5	2.7
Bill pay with mobile phone...	20.2	17.6	2.6
Receive a text message alert from your bank....................	19.4	18.4	0.9
Transfer money between two accounts with mobile phone...........	20.9	19.7	1.1
Demographics			
Online payment service provider...	73.9	72.1	1.8
Prepaid card reloading, reloaders only (monthly)...................	na	na	na

* Bank branch visit is defined as visiting a bank and interacting with a teller or other bank employee. It does not include visiting an ATM located at a bank branch.

Notes: 1–4, 16.

Table 19

Mobile Banking and Mobile Payments
Percentage of consumers, except as noted

	Full	Long.	Difference
Current adoption and use of mobile banking	**38.0**	**35.8**	**2.2**
Mobile banking app installed..	22.5	22.3	0.2
Check balance or recent transactions with mobile phone........................	32.1	30.0	2.1
Bill pay with mobile phone..	18.4	16.3	2.2
Receive a text message alert from your bank...	17.7	17.0	0.6
Transfer money between two accounts with mobile phone......................	19.0	18.2	0.8
Historical adoption of mobile banking	**49.4**	**46.6**	**2.9**
Mobile banking app installed..	27.9	26.9	1.0
Check balance or recent transactions with mobile phone........................	43.3	40.3	3.0
Bill pay with mobile phone..	28.3	25.2	3.1
Receive a text message alert from your bank...	23.8	22.8	1.0
Transfer money between two accounts with mobile phone......................	24.3	23.2	1.2
Discard rate of mobile banking	**7.0**	**7.1**	**-0.2**
Mobile banking app installed..	2.7	2.3	0.4
Check balance or recent transactions with mobile phone........................	6.4	6.3	0.2
Bill pay with mobile phone..	7.1	6.8	0.3
Receive a text message alert from your bank...	3.5	3.5	0.0
Transfer money between two accounts with mobile phone......................	2.4	2.5	0.0
Use of mobile payments on an annual basis	**19.5**	**18.0**	**1.5**
Text/SMS..	3.0	2.8	0.1
Contactless...	0.8	1.0	-0.2
Scanned a barcode..	2.0	2.0	-0.1
Used your mobile phone's web browser..	12.2	12.0	0.2
Used a mobile app..	7.6	7.0	0.6
Swiped card in device attached to mobile phone.....................................	6.6	6.4	0.2
Use of mobile payments on an annual basis (percentage of users)			
Text/SMS..	**15.2**	**15.8**	**-0.5**
Contactless...	3.9	5.5	-1.6
Scanned a barcode..	10.2	11.5	-1.3
Used your mobile phone's web browser..	62.6	66.7	-4.1
Used a mobile app..	39.3	39.0	0.2
Swiped card in device attached to mobile phone.....................................	34.1	36.0	-1.9

Notes: 1–4, 11.

Table 20

Share of Consumers Using Payment Instruments, by Type of Asset or Liability

Percentage of consumers	Monthly			Annual		
	Full panel	Longitudinal panel	Difference	Full panel	Longitudinal panel	Difference
Assets						
Money (M1)*						
Cash (currency)...	84.8	84.7	0.1	87.4	87.3	0.1
Travelers check...	na	na	na	1.2	1.4	-0.2
Demand deposit accounts, consumer						
Checks...						
Personal...	61.7	65.5	-3.9	68.1	72.0	-4.0
Certified...	na	na	na	4.2	4.4	-0.1
Debit card..	62.7	61.7	1.1	65.1	64.4	0.7
Online banking bill payment..	33.0	35.6	-2.6	34.1	36.8	-2.7
Bank account number payment....................................	53.5	53.7	-0.3	59.4	60.1	-0.7
Other deposit accounts, bank...						
Cashier's check..	na	na	na	7.9	8.2	-0.3
Other (unknown/unspecified)						
Direct deduction from income...	13.5	14.2	-0.7	14.4	15.1	-0.7
Money order..	11.1	9.4	1.7	14.4	12.7	1.7
Prepaid..	11.5	10.3	1.2	16.3	15.8	0.5
Liabilities						
Credit or charge card..	53.6	55.9	-2.3	57.3	59.7	-2.4
Credit...	na	na	na	na	na	na
Charge..	na	na	na	na	na	na
Text/SMS mobile payment...	na	na	na	3.0	2.8	0.1

* For M1 official definition, see Federal Reserve Statistical Release H.6.

Notes: 1–4, 7, 14.

Table 21a

Share of Consumers Using Payment Instruments

Percentage of consumers	Monthly			Annual		
	Full panel	**Longitudinal panel**	**Difference**	**Full panel**	**Longitudinal panel**	**Difference**
Paper instruments	**91.5**	**91.7**	**-0.2**	**92.5**	**92.4**	**0.1**
Cash..........................	84.8	84.7	0.1	87.4	87.3	0.1
Check........................	61.7	65.5	-3.9	68.1	72.0	-4.0
Certified check............	na	na	na	4.2	4.4	-0.1
Money order................	11.1	9.4	1.7	14.4	12.7	1.7
Travelers check............	na	na	na	1.2	1.4	-0.2
Cashier's check............	na	na	na	7.9	8.2	-0.3
Payment cards	**85.9**	**85.4**	**0.5**	**86.8**	**86.4**	**0.4**
Debit.........................	62.7	61.7	1.1	65.1	64.4	0.7
Credit or charge card......	53.6	55.9	-2.3	57.3	59.7	-2.4
Credit........................	na	na	na	na	na	na
Charge.......................	na	na	na	na	na	na
Prepaid......................	11.5	10.3	1.2	16.3	15.8	0.5
Prepaid (4 categories)......	na	na	na	na	na	na
Electronic payments	**64.5**	**66.1**	**-1.6**	**67.8**	**69.2**	**-1.4**
Online banking bill payment......	33.0	35.6	-2.6	34.1	36.8	-2.7
Bank account number payment......	53.5	53.7	-0.3	59.4	60.1	-0.7
Unknown/unspecified instrument						
Mobile payments..............	na	na	na	19.5	18.0	**1.5**
Text/SMS...................	na	na	na	3.0	2.8	0.1
Contactless.................	na	na	na	0.8	1.0	-0.2
Scanned a barcode...........	na	na	na	2.0	2.0	-0.1
Used your mobile phone's web browser.....	na	na	na	12.2	12.0	0.2
Used a mobile app............	na	na	na	7.6	7.0	0.6
Swiped card in device attached to mobile phone..............	na	na	na	6.6	6.4	0.2
Other means of payment						
Direct deduction from income............	13.5	14.2	-0.7	14.4	15.1	-0.7

Notes: 1–4, 14, 15.

Table 21b

Share of Adopters Using Payment Instruments

Percentage of adopters†	Monthly			Annual		
	Full panel	Longitudinal panel	Difference	Full panel	Longitudinal panel	Difference
Paper instruments	**91.7**	**91.9**	**-0.2**	**92.6**	**92.5**	**0.1**
Cash..	85.3	85.2	0.1	87.9	87.8	0.1
Check..	75.1	77.6	-2.5	82.9	85.3	-2.4
Certified check...	na	na	na	na	na	na
Money order...	47.5	43.6	3.9	61.6	59.3	2.3
Travelers check..	na	na	na	na	na	na
Cashier's check..	na	na	na	na	na	na
Payment cards	**89.7**	**88.6**	**1.0**	**90.6**	**89.6**	**1.0**
Debit...	81.1	79.4	1.7	84.1	82.9	1.3
Credit or charge card..	78.5	78.3	0.3	83.9	83.6	0.3
Credit..	na	na	na	na	na	na
Charge...	na	na	na	na	na	na
Prepaid...	22.1	19.8	2.4	31.4	30.4	1.1
Prepaid (4 categories)...................................	na	na	na	na	na	na
Electronic payments	**87.8**	**87.4**	**0.4**	**92.4**	**91.5**	**0.9**
Online banking bill payment............................	64.9	65.4	-0.5	67.1	67.6	-0.5
Bank account number payment*........................	90.1	89.5	0.6	100.0	100.0	0.0
Unknown/unspecified instrument						
Mobile payments..						
Text/SMS..	na	na	na	15.2	15.8	-0.5
Contactless..	na	na	na	3.9	5.5	-1.6
Scanned a barcode...	na	na	na	10.2	11.5	-1.3
Used your mobile phone's web browser...........	na	na	na	62.6	66.7	-4.1
Used a mobile app...	na	na	na	39.3	39.0	0.2
Swiped card in device attached to mobile phone..............	na	na	na	34.1	36.0	-1.9
Other means of payment						
Direct deduction from income*.........................	93.8	94.0	-0.2	100.0	100.0	0.0

* Estimates are 100 percent whenever adoption is defined solely as annual incidence of use.

Notes: 1–4, 7, 14, 15.

Table 22

Share of Consumers Making a Transaction, by Type of Transaction

	Monthly			Annual		
	Full	**Long.**	**Diff**	**Full**	**Long.**	**Diff**
Any transaction	**95.1**	**94.9**	**0.2**	**95.1**	**94.9**	**0.2**
Online or electronic	83.7	84.4	-0.7	86.0	86.4	-0.4
By mail, in person, or by phone	94.1	94.0	0.1	94.2	94.1	0.1
Bill payments	**91.9**	**92.0**	**-0.1**	**92.5**	**92.4**	**0.1**
Automatic...	51.7	53.8	-2.0	52.2	54.3	-2.1
Direct deduction from income...	13.5	14.2	-0.7	14.4	15.1	-0.7
Online..	65.5	66.0	-0.5	69.0	69.4	-0.4
By mail, in person, or by phone..	78.0	78.2	-0.2	83.5	83.9	-0.4
Non-bill payments	**93.2**	**93.1**	**0.2**	**93.5**	**93.2**	**0.3**
Online or electronic..	53.2	54.7	-1.5	65.6	66.9	-1.3
By mail, in person, or by phone..	92.8	92.8	0.0	93.0	92.9	0.2
Retail goods..	89.2	88.2	1.0	90.2	89.3	1.0
Services...	85.2	84.8	0.4	87.4	87.1	0.3
Person to person	51.5	53.9	-2.4	64.8	67.3	-2.5
Online or electronic...	16.4	17.1	-0.7	23.9	24.9	-0.9
By mail, in person, or by phone...	46.1	48.9	-2.8	60.5	63.4	-3.0

Notes: 1–4.

Table 23

Share of Consumers Using Payment Instrument, by Type of Transaction

| Monthly | Bill Payments | | | Nonbill payments | | | | | |
| | | | | Online | | | Non-online* | | |
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Paper instruments	**71.3**	**72.0**	**-0.7**	**19.4**	**21.0**	**-1.6**	**86.5**	**86.7**	**-0.2**
Cash..	33.4	31.3	2.1	na	na	na	83.4	83.3	0.1
Check..	52.3	55.5	-3.2	16.2	17.8	-1.7	37.4	40.5	-3.1
Money order.................................	9.1	7.4	1.7	4.2	4.0	0.2	4.3	3.4	0.8
Travelers check............................	na	na	na	na	na	na	na	na	na
Payment cards	**68.7**	**68.4**	**0.3**	**41.1**	**41.7**	**-0.6**	**80.8**	**81.1**	**-0.3**
Debit...	46.2	44.5	1.7	23.1	22.6	0.5	57.9	57.2	0.7
Credit or charge card....................	36.3	38.9	-2.6	22.4	23.5	-1.1	48.2	50.6	-2.3
Prepaid..	4.6	4.4	0.3	3.6	4.0	-0.4	9.2	8.4	0.8
Prepaid (4 categories).................	na	na	na	na	na	na	na	na	na
Electronic payments	**62.1**	**63.9**	**-1.9**	**16.1**	**16.1**	**0.0**	**11.4**	**12.5**	**-1.1**
Online banking bill payment..........	31.9	34.5	-2.5	na	na	na	6.1	7.1	-1.0
Bank account number payment.......	49.2	49.5	-0.3	16.1	16.1	0.0	7.2	7.8	-0.6
Other means of payment									
Direct deduction from income........	13.5	14.2	-0.7	na	na	na	na	na	na

| Annual | Bill Payments | | | Nonbill payments | | | | | |
| | | | | Online | | | Non-online | | |
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Paper instruments	**79.3**	**80.2**	**-0.9**	**26.1**	**27.8**	**-1.8**	**88.3**	**88.4**	**-0.1**
Cash..	38.3	36.1	2.3	na	na	na	86.0	85.9	0.1
Check..	61.4	65.5	-4.1	22.3	24.4	-2.1	47.9	52.8	-4.8
Money order.................................	11.9	10.0	1.9	6.0	5.8	0.2	6.3	5.4	0.8
Travelers check............................	na	na	na	na	na	na	na	na	na
Payment cards	**71.9**	**71.5**	**0.4**	**55.2**	**56.0**	**-0.8**	**82.0**	**82.2**	**-0.2**
Debit...	48.5	47.5	1.0	32.0	31.4	0.5	60.3	60.1	0.2
Credit or charge card....................	41.4	43.6	-2.3	34.5	36.2	-1.7	52.3	54.9	-2.6
Prepaid..	6.8	6.7	0.1	6.4	6.9	-0.5	13.6	13.4	0.2
Prepaid (4 categories).................	na	na	na	na	na	na	na	na	na
Electronic payments	**64.8**	**66.6**	**-1.7**	**24.5**	**24.9**	**-0.4**	**16.9**	**18.0**	**-1.0**
Online banking bill payment..........	33.2	35.7	-2.6	na	na	na	8.1	9.5	-1.4
Bank account number payment.......	53.9	54.4	-0.6	24.5	24.9	-0.4	12.2	12.9	-0.7
Other means of payment									
Direct deduction from income........	14.4	15.1	-0.7	na	na	na	na	na	na

* *Non-online* refers to retail goods payments, payments for services, and person-to-person payments.

Notes: 1–4, 14, 15.

Table 24

Share of Consumers Using Payment Instrument, by Type of Bill Payment

Monthly	Automatic			Online			By mail or in person		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Any instrument	**51.7**	**53.8**	**-2.0**	**65.5**	**66.0**	**-0.5**	**78.0**	**78.2**	**-0.2**
Paper instruments	**na**	**na**	**na**	**na**	**na**	**na**	**71.3**	**72.0**	**-0.7**
Cash..	na	na	na	na	na	na	33.4	31.3	2.1
Check..	na	na	na	na	na	na	52.3	55.5	-3.2
Money order..................................	na	na	na	na	na	na	9.1	7.4	1.7
Travelers check.............................	na	na	na	na	na	na	na	na	na
Payment cards	**35.1**	**36.7**	**-1.6**	**45.5**	**45.2**	**0.2**	**42.3**	**41.8**	**0.5**
Debit...	20.2	20.1	0.0	32.1	30.5	1.6	26.9	25.7	1.2
Credit or charge card....................	21.7	23.8	-2.1	21.6	23.3	-1.7	20.3	22.0	-1.7
Prepaid...	na	na	na	na	na	na	4.6	4.4	0.3
Prepaid (4 categories).................	na	na	na	na	na	na	na	na	na
Electronic payments	**42.1**	**44.8**	**-2.7**	**49.0**	**50.3**	**-1.4**	**na**	**na**	**na**
Online banking bill payment...........	19.2	20.6	-1.4	26.1	28.4	-2.3	na	na	na
Bank account number payment........	33.3	34.5	-1.1	33.6	33.5	0.1	na	na	na
Other means of payment									
Direct deduction from income.........	13.5	14.2	-0.7	na	na	na	na	na	na

Annual	Automatic			Online			By mail or in person		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Any instrument	**52.2**	**54.3**	**-2.1**	**69.0**	**69.4**	**-0.4**	**83.5**	**83.9**	**-0.4**
Paper instruments	**na**	**na**	**na**	**na**	**na**	**na**	**79.3**	**80.2**	**-0.9**
Cash..	na	na	na	na	na	na	38.3	36.1	2.3
Check..	na	na	na	na	na	na	61.4	65.5	-4.1
Money order..................................	na	na	na	na	na	na	11.9	10.0	1.9
Travelers check.............................	na	na	na	na	na	na	na	na	na
Payment cards	**36.7**	**38.2**	**-1.5**	**49.8**	**49.4**	**0.4**	**47.2**	**46.4**	**0.8**
Debit...	21.2	21.6	-0.4	34.7	33.2	1.5	30.0	28.8	1.1
Credit or charge card....................	23.9	25.8	-1.9	26.6	28.3	-1.8	25.4	26.8	-1.4
Prepaid...	na	na	na	na	na	na	6.8	6.7	0.1
Prepaid (4 categories).................	na	na	na	na	na	na	na	na	na
Electronic payments	**43.2**	**45.8**	**-2.5**	**52.9**	**54.6**	**-1.7**	**na**	**na**	**na**
Online banking bill payment...........	20.0	21.6	-1.5	27.7	30.3	-2.6	na	na	na
Bank account number payment........	35.8	37.0	-1.3	38.8	39.4	-0.5	na	na	na
Other means of payment									
Direct deduction from income.........	14.4	15.1	-0.7	na	na	na	na	na	na

Notes: 1–4, 14, 15.

Table 25

Share of Consumers Using Payment Instrument, by Type of Nonbill, In-Person Transactions

Monthly	Retail			Services and other			Person to person		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Any instrument	**89.2**	**88.2**	**1.0**	**85.2**	**84.8**	**0.4**	**51.5**	**53.9**	**-2.4**
Paper instruments	**75.9**	**75.2**	**0.7**	**70.5**	**70.0**	**0.5**	**46.1**	**48.9**	**-2.8**
Cash..	73.4	72.7	0.7	65.3	63.6	1.7	38.7	40.5	-1.9
Check...	22.2	23.9	-1.8	23.1	25.6	-2.4	15.2	17.3	-2.1
Money order...............................	2.8	2.4	0.4	2.2	2.1	0.1	2.2	1.8	0.4
Travelers check..........................	na	na	na	na	na	na	na	na	na
Payment cards	**77.0**	**77.6**	**-0.6**	**69.6**	**70.5**	**-1.0**	**8.4**	**8.6**	**-0.2**
Debit..	54.4	53.8	0.7	46.5	45.8	0.7	6.3	6.4	-0.2
Credit or charge card.................	43.1	46.0	-2.9	38.2	40.4	-2.1	3.6	3.8	-0.2
Prepaid......................................	7.7	6.9	0.9	5.3	5.4	-0.1	na	na	na
Prepaid (4 categories).............	na	na	na	na	na	na	na	na	na
Electronic payments	**na**	**na**	**na**	**na**	**na**	**na**	**11.4**	**12.5**	**-1.1**
Online banking bill payment....	na	na	na	na	na	na	6.1	7.1	-1.0
Bank account number payment.	na	na	na	na	na	na	7.2	7.8	-0.6
Other means of payment									
Direct deduction from income.	na	na	na	na	na	na	na	na	na

Annual	Retail			Services and other			Person to person		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Any instrument	**90.2**	**89.3**	**1.0**	**87.4**	**87.1**	**0.3**	**64.8**	**67.3**	**-2.5**
Paper instruments	**79.9**	**79.6**	**0.3**	**76.0**	**76.0**	**-0.1**	**60.5**	**63.4**	**-3.0**
Cash..	77.4	76.8	0.6	71.3	70.7	0.6	53.3	55.4	-2.1
Check...	29.7	32.8	-3.1	31.6	34.9	-3.3	28.8	32.5	-3.7
Money order...............................	4.1	3.5	0.6	3.3	2.8	0.4	3.0	2.6	0.4
Travelers check..........................	na	na	na	na	na	na	na	na	na
Payment cards	**79.0**	**79.6**	**-0.6**	**73.9**	**75.1**	**-1.2**	**13.0**	**13.6**	**-0.5**
Debit..	57.5	57.2	0.3	50.3	49.7	0.6	9.5	9.9	-0.4
Credit or charge card.................	47.6	50.7	-3.1	44.9	47.8	-3.0	6.6	6.8	-0.1
Prepaid......................................	11.7	11.3	0.4	8.1	8.3	-0.2	na	na	na
Prepaid (4 categories).............	na	na	na	na	na	na	na	na	na
Electronic payments	**na**	**na**	**na**	**na**	**na**	**na**	**16.9**	**18.0**	**-1.0**
Online banking bill payment....	na	na	na	na	na	na	8.1	9.5	-1.4
Bank account number payment.	na	na	na	na	na	na	12.2	12.9	-0.7
Other means of payment									
Direct deduction from income.	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**

Notes: 1–4, 14, 15.

Table 26a

Number of Consumer Payments in a Typical Month, by Type of Asset or Liability

Number per consumer	Mean		
	Full	**Long.**	**Diff**
Total payments	**67.3**	**68.9**	**-1.5**
Assets	**53.5**	**54.0**	**-0.5**
Money (M1)*	**52.0**	**52.6**	**-0.6**
Cash (currency)..	19.0	18.4	0.6
Travelers check...	na	na	na
Demand deposit accounts, consumer	**32.5**	**33.6**	**-1.1**
Checks			
Personal..	5.8	6.5	-0.8
Certified..	na	na	na
Debit card...	20.7	20.6	0.1
Online banking bill payment.....................................	2.9	3.2	-0.3
Bank account number payment.................................	3.1	3.3	-0.2
Other deposit accounts...			
Cashier's check..	na	na	na
Other (unknown/unspecified)	**1.5**	**1.4**	**0.1**
Direct deduction from income...................................	0.5	0.5	0.0
Money order...	0.5	0.5	0.0
Prepaid...	1.0	0.8	0.1
Prepaid, per adopter†...	1.9	1.6	0.2
Liabilities	**13.9**	**14.9**	**-1.0**
Credit or charge card..	13.9	14.9	-1.0
Credit..	na	na	na
Charge...	na	na	na
Text/SMS mobile payment..	na	na	na

* For official definition of M1, see Federal Reserve Statistical Release H.6.

† 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: 1–4.

Table 26b

Percentage Share of Consumer Payments in a Typical Month, by Type of Asset or Liability

Percent share	Share (%)		
	Full	**Long.**	**Diff**
Total payments	**100**	**100**	**0.0**
Assets	**79.4**	**78.4**	**1.0**
Money (M1)*	**77.2**	**76.4**	**0.9**
Cash (currency)...	28.2	26.8	1.5
Travelers check...	na	na	na
Demand deposit accounts, consumer	**48.3**	**48.8**	**-0.6**
Checks			
Personal..	8.6	9.5	**-0.9**
Certified..	na	na	na
Debit card..	30.8	29.9	0.9
Online banking bill payment..................................	4.4	4.7	-0.3
Bank account number payment..............................	4.5	4.7	-0.2
Other deposit accounts...			
Cashier's check..	na	na	na
Other (unknown/unspecified)	**2.2**	**2.0**	**0.2**
Direct deduction from income................................	0.7	0.8	0.0
Money order..	0.7	0.8	0.0
Prepaid...	1.4	1.2	0.2
Prepaid, per adopter†..	1.4	1.2	0.2
Liabilities	**20.6**	**21.6**	**-1.0**
Credit or charge card..	20.6	21.6	-1.0
Credit...	na	na	na
Charge..	na	na	na
Text/SMS mobile payment.....................................	na	na	na

* For official definition of M1, see Federal Reserve Statistical Release H.6.

† 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: 1–4, 14.

Table 27

Consumer Payments in a Typical Month, by Payment Instrument

Number per consumer	Mean		
	Full panel	**Longitudinal panel**	**Difference**
Total payments	**67.3**	**68.9**	**-1.5**
Paper instruments	**25.3**	**25.5**	**-0.2**
Cash..	19.0	18.4	0.6
Check...	5.8	6.5	-0.8
Money order..	0.5	0.5	0.0
Travelers check...	na	na	na
Payment cards	**35.6**	**36.4**	**-0.8**
Debit..	20.7	20.6	0.1
Credit or charge card..	13.9	14.9	-1.0
Prepaid..	1.0	0.8	0.1
Prepaid (4 categories).......................................	na	na	na
Prepaid, per adopter*...	1.9	1.6	0.2
Prepaid (4 categories), per adopter*....................	na	na	na
Electronic payments	**6.0**	**6.5**	**-0.5**
Online banking bill payment..................................	2.9	3.2	-0.3
Bank account number payment...............................	3.1	3.3	-0.2
Other means of payment			
Direct deduction from income................................	0.5	0.5	0.0

Percentage share	Share (%)		
	Full panel	**Longitudinal panel**	**Difference**
Total payments	**100**	**100**	**0.0**
Paper instruments	**37.5**	**37.0**	**0.5**
Cash..	28.2	26.8	1.5
Check...	8.6	9.5	-0.9
Money order..	0.7	0.8	0.0
Travelers check...	na	na	na
Payment cards	**52.8**	**52.8**	**0.0**
Debit..	30.8	29.9	0.9
Credit or charge card..	20.6	21.6	-1.0
Prepaid..	1.4	1.2	0.2
Prepaid (4 categories).......................................	na	na	na
Prepaid, per adopter*...	1.4	1.2	0.2
Prepaid (4 categories), per adopter*....................	na	na	na
Electronic payments	**8.9**	**9.4**	**-0.5**
Online banking bill payment..................................	4.4	4.7	-0.3
Demographics...	4.5	4.7	-0.2
Other means of payment			
Direct deduction from income................................	0.7	0.8	0.0

* 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 a payment instrument, not all consumers.

Notes: 1–4, 14, 15.

Table 28

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

Number per consumer	Mean		
	Full panel	**Longitudinal panel**	**Difference**
Total	**67.3**	**68.9**	**-1.5**
Online or electronic	16.6	17.8	-1.2
By mail, in person, or by phone...................................	50.7	51.1	-0.4
Bill payments	**20.7**	**22.0**	**-1.2**
Automatic...	5.8	6.1	-0.3
Direct deduction from income................................	0.5	0.5	0.0
Other automatic...	5.3	5.6	-0.3
Online...	6.3	6.7	-0.4
By mail, in person, or by phone................................	8.7	9.2	-0.5
Non-bill payments	**46.6**	**46.9**	**-0.3**
Retail and services	43.3	43.6	-0.3
Online or electronic...	3.7	4.1	-0.4
By mail, in person, or by phone...............................	39.6	39.5	0.1
Retail goods..	24.2	24.1	0.1
Services...	15.4	15.4	0.1
Person to person	3.3	3.3	-0.1
Online or electronic...	0.8	0.9	0.0
By mail, in person, or by phone...............................	2.4	2.5	0.0

Percentage share	Shares(%)		
	Full panel	**Longitudinal panel**	**Difference**
Total	**100**	**100**	**0.0**
Online or electronic	24.7	25.8	-1.1
By mail, in person, or by phone...................................	75.3	74.2	1.1
Bill payments	**30.8**	**31.9**	**-1.1**
Automatic...	8.6	8.9	-0.3
Direct deduction from income................................	0.7	0.8	0.0
Other automatic...	7.8	8.1	-0.3
Online...	9.3	9.7	-0.4
By mail, in person, or by phone................................	12.9	13.3	-0.4
Non-bill Payments	**69.2**	**68.1**	**1.1**
Retail and services	64.3	63.3	1.1
Online or electronic...	5.5	6.0	-0.5
By mail, in person, or by phone...............................	58.8	57.3	1.5
Retail goods..	35.9	35.0	0.9
Services...	22.9	22.3	0.6
Person to person	4.9	4.8	0.0
Online or electronic...	1.2	1.3	0.0
By mail, in person, or by phone...............................	3.6	3.6	0.0

Notes: 1–4.

Table 29

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

Number per consumer	Bill payments			Nonbill payments					
				Online			Non-online*		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Paper instruments	**5.2**	**5.4**	**-0.2**	**0.8**	**0.9**	**-0.1**	**19.3**	**19.2**	**0.1**
Cash..	2.3	2.2	0.1	na	na	na	16.7	16.2	0.5
Check..	2.6	2.9	-0.3	0.7	0.8	-0.1	2.5	2.8	-0.4
Money order..............................	0.2	0.2	0.0	0.1	0.1	0.0	0.2	0.2	0.0
Travelers check.........................	na	na	na	na	na	na	na	na	na
Payment cards	**10.0**	**10.5**	**-0.6**	**2.4**	**2.7**	**-0.2**	**23.2**	**23.2**	**0.0**
Debit..	6.1	6.2	-0.1	1.2	1.3	0.0	13.3	13.1	0.2
Credit or charge card.................	3.7	4.2	-0.5	1.1	1.3	-0.2	9.1	9.4	-0.3
Prepaid......................................	0.1	0.1	0.0	0.1	0.1	0.0	0.7	0.6	0.1
Prepaid (4 categories)...............	na	na	na	na	na	na	na	na	na
Electronic payments	**5.1**	**5.5**	**-0.4**	**0.5**	**0.5**	**0.0**	**0.4**	**0.4**	**0.0**
Online banking bill payment....................	2.7	3.0	-0.2	na	na	na	0.2	0.3	0.0
Bank account number payment................	2.4	2.6	-0.2	0.5	0.5	0.0	0.2	0.2	0.0
Other methods of payment									
Direct deduction from income.................	0.5	0.5	0.0	na	na	na	na	na	na

Percentage share	Bill payments			Nonbill payments					
				Online			Non-online		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Paper instruments	**7.7**	**7.8**	**-0.1**	**1.2**	**1.3**	**-0.2**	**28.7**	**27.9**	**0.8**
Cash..	3.5	3.3	0.2	na	na	na	24.7	23.5	1.3
Check..	3.9	4.2	-0.3	1.0	1.2	-0.2	3.7	4.1	-0.4
Money order..............................	0.3	0.3	0.0	0.1	0.1	0.0	0.3	0.3	0.0
Travelers check.........................	na	na	na	na	na	na	na	na	na
Payment cards	**14.8**	**15.3**	**-0.5**	**3.6**	**3.9**	**-0.3**	**34.4**	**33.6**	**0.8**
Debit..	9.1	9.0	0.1	1.8	1.9	0.0	19.8	19.1	0.7
Credit or charge card.................	5.5	6.1	-0.6	1.6	1.9	-0.2	13.5	13.7	-0.2
Prepaid......................................	0.2	0.2	0.0	0.2	0.2	0.0	1.1	0.9	0.2
Prepaid (4 categories)...............	na	na	na	na	na	na	na	na	na
Electronic payments	**7.6**	**8.0**	**-0.4**	**0.7**	**0.7**	**0.0**	**0.6**	**0.6**	**0.0**
Online banking bill payment....................	4.0	4.3	-0.3	na	na	na	0.3	0.4	0.0
Bank account number payment................	3.6	3.7	-0.2	0.7	0.7	0.0	0.3	0.3	0.0
Other methods of payment									
Direct deduction from income.................	0.7	0.8	0.0	na	na	na	na	na	na

Non-online refers to retail goods payments, payments for services, and person-to-person payments.

Demographics

Table 30

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

Number per consumer	Automatic			Online			By mail, in person, or by phone		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Paper instruments	**na**	**na**	**na**	**na**	**na**	**na**	**5.2**	**5.4**	**-0.2**
Cash	na	na	na	na	na	na	2.3	2.2	0.1
Check	na	na	na	na	na	na	2.6	2.9	-0.3
Money order	na	na	na	na	na	na	0.2	0.2	0.0
Travelers check	na	na	na	na	na	na	na	na	na
Payment cards	**3.1**	**3.2**	**-0.1**	**3.4**	**3.5**	**-0.1**	**3.5**	**3.8**	**-0.3**
Debit	1.8	1.7	0.1	2.3	2.3	0.0	2.1	2.2	-0.1
Credit or charge card	1.3	1.5	-0.2	1.1	1.2	-0.1	1.3	1.5	-0.2
Prepaid	na	na	na	na	na	na	0.1	0.1	0.0
Prepaid (4 categories)	na	na	na	na	na	na	na	na	na
Electronic payments	**2.2**	**2.4**	**-0.1**	**2.9**	**3.2**	**-0.3**	**na**	**na**	**na**
Online banking bill payment	1.1	1.1	0.0	1.7	1.8	-0.2	na	na	na
Bank account number payment	1.2	1.3	-0.1	1.2	1.3	-0.1	na	na	na
Other means of payment									
Direct deduction from income	0.5	0.5	0.0	na	na	na	na	na	na

Percentage share	Automatic			Online			By mail, in person, or by phone		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Paper instruments	**na**	**na**	**na**	**na**	**na**	**na**	**7.7**	**7.8**	**-0.1**
Cash	na	na	na	na	na	na	3.5	3.3	0.2
Check	na	na	na	na	na	na	3.9	4.2	-0.3
Money order	na	na	na	na	na	na	0.3	0.3	0.0
Travelers check	na	na	na	na	na	na	na	na	na
Payment cards	**4.6**	**4.7**	**-0.1**	**5.0**	**5.1**	**-0.1**	**5.2**	**5.5**	**-0.3**
Debit	2.7	2.5	0.2	3.4	3.4	0.0	3.1	3.2	-0.1
Credit or charge card	1.9	2.2	-0.3	1.6	1.7	-0.1	1.9	2.1	-0.2
Prepaid	na	na	na	na	na	na	0.2	0.2	0.0
Prepaid (4 categories)	na	na	na	na	na	na	na	na	na
						na			
Electronic payments	**3.3**	**3.4**	**-0.1**	**4.3**	**4.6**	**-0.3**	**na**	**na**	**na**
Online banking bill payment	1.6	1.6	0.0	2.5	2.7	-0.2	na	na	na
Bank account number payment	1.7	1.8	-0.1	1.9	1.9	-0.1	na	na	na
Other means of payment									
Direct deduction from income	0.7	0.8	0.0	na	na	na	na	na	na

Notes: 1–4, 14, 15.

Table 31

Use of Payment Instruments in a Typical Month, by Type of Nonbill, In-Person Transactions

Number per consumer	Retail			Services and other			Person to person		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Paper instruments	**10.1**	**10.0**	**0.1**	**6.8**	**6.8**	**0.0**	**2.4**	**2.5**	**0.0**
Cash..	8.9	8.7	0.3	5.8	5.6	0.2	2.0	1.9	0.0
Check...	1.1	1.2	-0.2	1.0	1.1	-0.1	0.4	0.5	-0.1
Money order..	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0
Travelers check.....................................	na	na	na	na	na	na	na	na	na
Payment cards	**14.1**	**14.1**	**0.0**	**8.6**	**8.6**	**0.0**	**0.4**	**0.4**	**0.0**
Debit..	8.2	8.2	0.1	4.8	4.7	0.1	0.3	0.3	0.0
Credit or charge card............................	5.4	5.6	-0.2	3.6	3.7	-0.1	0.1	0.1	0.0
Prepaid...	0.5	0.4	0.1	0.2	0.3	0.0	na	na	na
Prepaid (4 categories)......................	na	na	na	na	na	na	na	na	na
Electronic payments	**na**	**na**	**na**	**na**	**na**	na	**0.4**	**0.4**	**0.0**
Online banking bill payment.................	na	na	na	na	na	na	0.2	0.3	0.0
Bank account number payment.............	na	na	na	na	na	na	0.2	0.2	0.0
Other means of payment									
Direct deduction from income..............	na	na	na	na	na	na	na	na	na

Percentage share	Retail			Services and other			Person to person		
	Full	Long.	Diff	Full	Long.	Diff	Full	Long.	Diff
Paper instruments	**15.0**	**14.5**	**0.5**	**10.1**	**9.8**	**0.3**	**3.6**	**3.6**	**0.0**
Cash..	13.3	12.6	0.7	8.6	8.1	0.4	2.9	2.8	0.1
Check...	1.6	1.8	-0.2	1.5	1.6	-0.2	0.6	0.7	-0.1
Money order..	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0
Travelers check.....................................	na	na	na	na	na	na	na	na	na
Payment cards	**20.9**	**20.5**	**0.4**	**12.8**	**12.5**	**0.3**	**0.6**	**0.6**	**0.0**
Debit..	12.2	11.8	0.4	7.1	6.8	0.4	0.5	0.5	0.0
Credit or charge card............................	8.0	8.2	-0.2	5.3	5.3	0.0	0.2	0.2	0.0
Prepaid...	0.7	0.5	0.2	0.4	0.4	0.0	na	na	na
Prepaid (4 categories)......................	na	na	na	na	na	na	na	na	na
Electronic payments	**na**	**na**	**na**	**na**	**na**	**na**	**0.6**	**0.6**	**0.0**
Online banking bill payment.................	na	na	na	na	na	na	0.3	0.4	0.0
Bank account number payment.............	na	na	na	na	na	na	0.3	0.3	0.0
Other means of payment									
Direct deduction from income..............	na	na	na	na	na	na	na	na	na

Notes: 1–4, 14, 15.

Table 32

Payment Instruments Used in a Typical Period, by Type of Instrument and Transaction
Mean number per consumer

Typical month	Full	Long.	Diff
All payments (9 instruments available)	**3.7**	**3.8**	**0.0**
Paper instruments...	1.6	1.6	0.0
Payment cards..	1.3	1.3	0.0
Electronic payments...	0.9	0.9	0.0
Bill payments (8 instruments available)†	**2.6**	**2.7**	**0.0**
Paper instruments...	0.9	0.9	0.0
Payment cards..	0.9	0.9	0.0
Electronic payments...	0.8	0.8	0.0
Online payments (6 instruments available)‡	**0.9**	**0.9**	**0.0**
Paper instruments...	0.2	0.2	0.0
Payment cards..	0.5	0.5	0.0
Electronic payments...	0.2	0.2	0.0
In-person payments (8 instruments available)**	**2.5**	**2.6**	**0.0**
Paper instruments...	1.3	1.3	0.0
Payment cards..	1.2	1.2	0.0
Electronic payments...	0.1	0.1	0.0

Typical year	Full	Long.	Diff
All payments (9 instruments available)	**4.0**	**4.1**	**-0.1**
Paper instruments...	1.7	1.7	0.0
Payment cards..	1.4	1.4	0.0
Electronic payments...	0.9	1.0	0.0
Bill payments (8 instruments available)†	**3.0**	**3.0**	**0.0**
Paper instruments...	1.1	1.1	0.0
Payment cards..	1.0	1.0	0.0
Electronic payments...	0.9	0.9	0.0
Online payments (6 instruments available)‡	**1.3**	**1.3**	**0.0**
Paper instruments...	0.3	0.3	0.0
Payment cards..	0.7	0.7	0.0
Electronic payments...	0.2	0.2	0.0
In-person payments (8 instruments available)**	**2.9**	**2.9**	**-0.1**
Paper instruments...	1.4	1.4	0.0
Payment cards..	1.3	1.3	0.0
Electronic payments...	0.2	0.2	0.0

† Travelers checks are not presented to the respondent as an option for payment instrument for bill payments.

‡ Cash, travelers check, and OBBP are not presented to the respondent as an option for payment instruments for online payments.

** OBBP is not presented to the respondent as a payment instrument for in-person payments.

Notes: 1–4, 6.

Table 33

Loss, Theft, or Fraudulent Use of Payment Instrument
Percentage of consumers or adopters and mean dollar value

Percentage of consumers	Full	Long.	Diff
Incidence in past 12 months	**15.1**	**15.6**	**-0.5**
Cash..	9.0	9.1	-0.2
Checks...	1.0	1.0	0.0
Credit card...	3.9	4.1	-0.2
Debit card..	5.7	6.1	-0.5

Percentage of adopters	Full	Long.	Diff
Incidence in past 12 months	**15.2**	**15.8**	**-0.5**
Cash..	9.0	9.1	-0.2
Checks...	1.2	1.2	0.0
Credit card...	5.6	5.7	-0.1
Debit card..	7.3	7.8	-0.6

Mean dollar value*	Full	Long.	Diff
Amount lost or stolen			
Cash..	312	411	-99
Amount of fraudulent charges†			
Checks...	s	s	s
Credit card...	515	653	-138
Debit card..	224	202	22
Amount liable for fraudulent charges			
Checks...	s	s	s
Credit card...	127	s	s
Debit card..	70	s	s
Percentage of consumers reporting zero liability for fraudulent charges			
Checks...	s	s	s
Credit card...	90.5	s	s
Debit card..	83.9	s	s

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

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

Notes: 1–5, 17.

Table 34

Importance Rankings of Characteristics of Payment Instruments
Percentage of consumers

Full panel	Most important	2nd most	3rd most	4th most	5th most	Least important
Characteristics						
Acceptance for payment..	21.5	20.6	17.4	17.3	13.2	10.0
Acquisition and setup..	8.2	8.6	9.9	13.8	19.0	40.5
Convenience..	29.0	20.1	19.1	12.4	12.7	6.7
Cost..	23.8	20.1	17.0	16.6	12.9	9.5
Payment records..	14.2	17.7	18.0	19.5	19.1	11.5
Security..	49.6	21.1	13.9	8.9	4.2	2.4

Longitudinal panel	Most important	2nd most	3rd most	4th most	5th most	Least important
Characteristics						
Acceptance for payment..	21.8	20.5	18.6	16.6	13.0	9.5
Acquisition and setup..	8.5	9.7	9.0	13.2	20.1	39.5
Convenience..	28.1	19.6	20.7	12.6	12.4	6.5
Cost..	22.3	21.7	18.2	15.4	12.9	9.5
Payment records..	14.5	19.5	17.5	19.4	18.0	11.1
Security..	51.4	20.2	13.3	9.4	3.5	2.2

Difference	Most important	2nd most	3rd most	4th most	5th most	Least important
Characteristics						
Acceptance for payment..	-0.3	0.0	-1.2	0.7	0.2	0.5
Acquisition and setup..	-0.3	-1.1	0.9	0.7	-1.2	0.9
Convenience..	0.9	0.5	-1.6	-0.3	0.3	0.2
Cost..	1.5	-1.6	-1.2	1.2	0.0	0.0
Payment records..	-0.3	-1.8	0.5	0.0	1.2	0.4
Security..	-1.8	0.8	0.6	-0.5	0.6	0.2

Notes: 1, 4.

Table 35a

Assessments of Payment Instruments: Acceptance for Payment

Percentage of consumers

	Rarely accepted	Occasionally accepted	Often accepted	Usually accepted	Almost always accepted
Cash					
Full panel......................................	2.1	1.5	5.8	13.5	77.0
Longitudinal panel.......................	1.9	1.7	6.6	14.0	75.8
Difference....................................	0.3	-0.2	-0.7	-0.5	1.2
Check					
Full panel......................................	4.7	16.9	27.8	33.1	17.5
Longitudinal panel.......................	3.5	16.1	27.4	35.0	17.9
Difference....................................	1.2	0.7	0.4	-1.9	-0.4
Debit card					
Full panel......................................	1.7	1.6	8.9	28.2	59.7
Longitudinal panel.......................	1.4	1.1	9.7	29.7	58.0
Difference....................................	0.3	0.4	-0.8	-1.5	1.6
Credit card					
Full panel......................................	1.8	1.5	5.7	25.4	65.6
Longitudinal panel.......................	1.2	0.8	6.5	26.1	65.3
Difference....................................	0.6	0.7	-0.9	-0.8	0.3
Prepaid card					
Full panel......................................	3.7	7.1	21.4	31.6	36.2
Longitudinal panel.......................	3.8	6.2	21.3	32.4	36.3
Difference....................................	-0.2	0.9	0.1	-0.8	-0.1
Bank account number payment					
Full panel......................................	26.3	24.8	20.2	15.6	13.2
Longitudinal panel.......................	25.5	25.7	18.9	16.5	13.4
Difference....................................	0.8	-0.9	1.3	-0.9	-0.2
Online banking bill payment					
Full panel......................................	7.9	10.8	23.4	28.6	29.3
Longitudinal panel.......................	6.7	11.2	24.7	29.8	27.6
Difference....................................	1.2	-0.4	-1.3	-1.2	1.7

Notes: 1, 4.

Table 35b

Assessments of Payment Instruments: Acquisition and Setup
Percentage of consumers

	Very hard to get or set up	Hard to get or set up	Neither hard nor easy	Easy to get or set up	Very easy to get or set up
Cash					
Full panel.....................................	1.9	3.4	15.4	18.0	61.1
Longitudinal panel......................	1.6	3.1	16.7	17.9	60.6
Difference...................................	0.3	0.3	-1.2	0.1	0.5
Check					
Full panel.....................................	3.0	8.9	25.7	36.1	26.4
Longitudinal panel......................	2.4	8.7	25.5	37.0	26.3
Difference...................................	0.5	0.2	0.2	-0.9	0.1
Debit card					
Full panel.....................................	1.5	4.6	20.6	36.6	36.7
Longitudinal panel......................	1.1	5.0	20.7	38.4	34.8
Difference...................................	0.4	-0.4	-0.2	-1.8	1.9
Credit card					
Full panel.....................................	5.5	10.3	21.4	33.8	28.9
Longitudinal panel......................	4.0	11.3	21.1	35.3	28.3
Difference...................................	1.6	-0.9	0.3	-1.5	0.6
Prepaid card					
Full panel.....................................	5.0	12.8	33.0	27.6	21.6
Longitudinal panel......................	4.5	13.8	32.3	27.9	21.4
Difference...................................	0.5	-1.1	0.7	-0.4	0.3
Bank account number payment					
Full panel.....................................	4.7	14.6	32.4	29.8	18.6
Longitudinal panel......................	3.8	14.2	31.8	31.9	18.3
Difference...................................	0.9	0.4	0.6	-2.1	0.2
Online banking bill payment					
Full panel.....................................	3.9	14.3	25.2	33.9	22.7
Longitudinal panel......................	2.8	13.2	26.2	36.3	21.6
Difference...................................	1.0	1.1	-0.9	-2.4	1.2

Notes: 1, 4.

Table 35c

Assessments of Payment Instruments: Convenience
Percentage of consumers

	Very Inconvenient	Inconvenient	Neither inconvenient nor convenient	Convenient	Very Convenient
Cash					
Full panel....................................	3.9	7.5	12.1	24.2	52.3
Longitudinal panel.......................	3.6	8.5	12.3	25.7	49.8
Difference...................................	0.3	-1.0	-0.2	-1.5	2.5
Check					
Full panel....................................	9.1	20.5	25.4	30.1	14.8
Longitudinal panel.......................	8.3	20.6	26.1	31.0	14.1
Difference...................................	0.9	-0.1	-0.6	-0.8	0.7
Debit card					
Full panel....................................	2.4	2.9	8.9	26.7	59.0
Longitudinal panel.......................	2.0	3.2	9.1	29.2	56.5
Difference...................................	0.4	-0.3	-0.2	-2.5	2.6
Credit card					
Full panel....................................	3.8	2.2	9.8	25.8	58.4
Longitudinal panel.......................	2.6	2.3	8.7	29.2	57.3
Difference...................................	1.2	-0.1	1.1	-3.3	1.1
Prepaid card					
Full panel....................................	9.0	12.9	28.6	23.4	26.1
Longitudinal panel.......................	8.6	13.9	28.3	24.5	24.8
Difference...................................	0.3	-0.9	0.3	-1.0	1.3
Bank account number payment					
Full panel....................................	12.8	20.7	29.5	21.6	15.4
Longitudinal panel.......................	11.9	20.9	30.1	24.0	13.2
Difference...................................	1.0	-0.2	-0.6	-2.4	2.2
Online banking bill payment					
Full panel....................................	5.3	6.4	18.7	29.1	40.5
Longitudinal panel.......................	4.0	6.0	18.8	29.8	41.4
Difference...................................	1.3	0.4	0.0	-0.8	-0.9

Notes: 1, 4.

Table 35d

Assessments of Payment Instruments: Cost
Percentage of consumers

	Very high cost	High cost	Neither high nor low cost	Low cost	Very low cost
Cash					
Full panel....................................	1.2	1.6	17.7	10.0	69.5
Longitudinal panel.......................	1.1	1.3	17.4	10.0	70.3
Difference...................................	0.1	0.3	0.3	0.0	-0.8
Check					
Full panel....................................	2.3	7.9	22.8	37.1	29.9
Longitudinal panel.......................	1.7	8.3	23.0	38.2	28.8
Difference...................................	0.6	-0.5	-0.2	-1.1	1.1
Debit card					
Full panel....................................	2.0	7.4	22.8	26.1	41.7
Longitudinal panel.......................	1.4	6.9	22.2	27.9	41.6
Difference...................................	0.5	0.6	0.6	-1.8	0.1
Credit card					
Full panel....................................	18.2	27.7	18.6	17.3	18.3
Longitudinal panel.......................	18.3	28.4	18.5	17.8	17.1
Difference...................................	-0.1	-0.7	0.1	-0.5	1.2
Prepaid card					
Full panel....................................	6.2	17.0	35.1	20.9	20.8
Longitudinal panel.......................	5.5	16.7	34.4	22.8	20.6
Difference...................................	0.7	0.3	0.7	-1.9	0.2
Bank account number payment					
Full panel....................................	3.1	4.5	30.7	24.6	37.2
Longitudinal panel.......................	2.8	3.9	29.6	26.7	37.0
Difference...................................	0.3	0.6	1.1	-2.2	0.2
Online banking bill payment					
Full panel....................................	2.1	3.7	25.2	23.2	45.8
Longitudinal panel.......................	1.9	3.5	23.0	24.4	47.2
Difference...................................	0.2	0.1	2.2	-1.2	-1.4

Notes: 1, 4.

Table 35e

Assessments of Payment Instruments: Payment Records

Percentage of consumers

	Very poor records	Poor records	Neither good nor poor	Good records	Very good records
Cash					
Full panel.....................................	35.9	22.8	18.0	11.2	12.2
Longitudinal panel.......................	37.8	24.9	17.9	10.8	8.7
Difference....................................	-2.0	-2.1	0.1	0.4	3.5
Check					
Full panel.....................................	1.9	3.9	14.3	40.7	39.1
Longitudinal panel.......................	1.7	3.6	13.3	43.7	37.7
Difference....................................	0.2	0.4	1.0	-3.0	1.5
Debit card					
Full panel.....................................	2.1	3.5	14.3	33.5	46.6
Longitudinal panel.......................	1.9	4.0	14.3	36.0	43.8
Difference....................................	0.2	-0.5	0.0	-2.5	2.8
Credit card					
Full panel.....................................	2.5	2.3	10.3	32.1	52.8
Longitudinal panel.......................	1.8	2.7	10.4	34.1	51.1
Difference....................................	0.7	-0.4	0.0	-2.0	1.7
Prepaid card					
Full panel.....................................	17.9	21.4	34.9	13.7	12.0
Longitudinal panel.......................	17.9	23.0	34.6	14.1	10.4
Difference....................................	0.0	-1.6	0.3	-0.4	1.6
Bank account number payment					
Full panel.....................................	3.6	4.8	19.2	31.9	40.5
Longitudinal panel.......................	3.5	5.1	19.2	34.2	38.1
Difference....................................	0.1	-0.2	0.0	-2.3	2.4
Online banking bill payment					
Full panel.....................................	2.7	2.5	15.4	30.4	49.0
Longitudinal panel.......................	2.2	2.6	15.8	31.5	47.8
Difference....................................	0.4	-0.2	-0.3	-1.1	1.2

Notes: 1, 4.

Table 35f

Assessments of Payment Instruments: Security

Percentage of consumers

	Very risky	Risky	Neither risky nor secure	Secure	Very secure
Cash					
Full panel....................................	33.5	15.3	13.0	12.5	25.7
Longitudinal panel......................	34.0	15.3	14.3	11.6	24.8
Difference...................................	-0.5	-0.1	-1.3	0.9	0.9
Check					
Full panel....................................	9.0	26.6	25.1	28.8	10.5
Longitudinal panel......................	7.9	27.8	25.1	29.4	9.7
Difference...................................	1.1	-1.2	-0.1	-0.6	0.8
Debit card					
Full panel....................................	9.8	22.5	18.0	35.8	13.8
Longitudinal panel......................	8.8	23.5	18.5	37.0	12.3
Difference...................................	1.0	-0.9	-0.5	-1.1	1.6
Credit card					
Full panel....................................	10.4	19.8	16.7	35.7	17.5
Longitudinal panel......................	9.3	20.4	16.3	37.7	16.3
Difference...................................	1.1	-0.6	0.4	-2.1	1.1
Prepaid card					
Full panel....................................	19.1	21.4	26.9	19.5	13.1
Longitudinal panel......................	18.6	21.5	27.2	20.3	12.4
Difference...................................	0.5	-0.1	-0.3	-0.8	0.7
Bank account number payment					
Full panel....................................	22.1	25.8	16.8	23.7	11.6
Longitudinal panel......................	21.1	25.8	18.5	24.2	10.4
Difference...................................	0.9	0.1	-1.7	-0.5	1.2
Online banking bill payment					
Full panel....................................	10.9	19.5	18.8	32.9	17.8
Longitudinal panel......................	8.9	20.1	19.6	34.6	16.8
Difference...................................	2.0	-0.6	-0.7	-1.7	1.0

Notes: 1, 4.

Table 35g

Assessments of Payment Locations: Security
Percentage of consumers

	Survey year	Very risky	Risky	Neither risky nor secure	Secure	Very secure
In person	Full...................	1.0	2.0	8.8	27.8	60.4
	Long.................	0.6	2.0	9.7	28.0	59.8
	Difference.........	0.4	0.0	-0.9	-0.1	0.6
Online	Full...................	na	na	na	na	na
	Long.................	na	na	na	na	na
	Difference.........	na	na	na	na	na
Mail	Full...................	3.5	19.9	31.8	35.1	9.7
	Long.................	3.2	18.7	31.3	37.4	9.4
	Difference.........	0.4	1.2	0.4	-2.3	0.3
Landline phone	Full...................	4.6	18.4	30.6	33.8	12.6
	Long.................	3.8	18.2	30.8	34.2	13.0
	Difference.........	0.8	0.3	-0.2	-0.4	-0.4
Laptop internet access	Full...................	5.7	20.7	21.2	40.5	11.9
	Long.................	4.3	20.7	22.5	42.0	10.5
	Difference.........	1.4	0.0	-1.4	-1.4	1.5
Laptop voice calling	Full...................	11.6	35.2	31.8	17.1	4.3
	Long.................	9.6	35.9	32.8	17.1	4.5
	Difference.........	2.0	-0.7	-1.0	0.0	-0.3
Mobile phone	Full...................	na	na	na	na	na
	Long.................	na	na	na	na	na
	Difference.........	na	na	na	na	na
Mobile phone internet access	Full...................	11.4	33.2	28.1	22.4	4.9
	Long.................	10.5	33.8	29.2	21.8	4.8
	Difference.........	0.9	-0.6	-1.1	0.7	0.2
Mobile phone voice calling	Full...................	11.1	32.4	28.8	21.8	5.9
	Long.................	11.2	32.3	29.1	22.1	5.4
	Difference.........	-0.1	0.1	-0.3	-0.3	0.6
Mobile phone texting	Full...................	18.8	40.1	25.7	12.2	3.2
	Long.................	18.9	39.6	25.9	12.8	2.8
	Difference.........	-0.1	0.5	-0.2	-0.5	0.4
Tablet internet access	Full...................	8.4	27.8	30.6	27.0	6.1
	Long.................	7.0	27.8	31.8	27.3	6.1
	Difference.........	1.4	0.1	-1.2	-0.3	0.1
Tablet voice calling	Full...................	15.3	37.2	31.2	13.3	3.0
	Long.................	14.6	36.1	32.8	13.8	2.7
	Difference.........	0.7	1.1	-1.6	-0.5	0.3

Notes: 1, 2, 4.

Table 35h

Assessment of Debit Authorization Mode
Percentage of consumers

Security	Very risky	Risky	Neither risky nor secure	Secure	Very secure
PIN debit card					
Full panel...	5.1	13.0	12.7	42.9	26.3
Longitudinal panel...........................	4.7	13.8	14.0	43.5	24.1
Difference...	0.5	-0.8	-1.3	-0.6	2.2
Signature debit card					
Full panel...	4.1	16.7	24.7	38.5	16.0
Longitudinal panel...........................	3.6	16.8	26.7	37.5	15.4
Difference...	0.4	-0.1	-2.0	1.0	0.7
No PIN and no signature debit card					
Full panel...	38.6	36.2	14.8	6.5	3.8
Longitudinal panel...........................	38.9	36.5	15.0	6.2	3.3
Difference...	-0.3	-0.3	-0.2	0.3	0.5
Using a debit card online					
Full panel...	20.0	36.3	20.6	18.3	4.8
Longitudinal panel...........................	19.5	37.2	21.7	17.5	4.1
Difference...	0.4	-0.9	-1.1	0.8	0.7

Notes: 1, 2, 4.

Table 35i

Preferred Way of Authorizing Debit Card Payments
Percentage of consumers

	Full	Long.	Difference
PIN..	55.1	53.6	1.5
Signature..	21.9	23.5	-1.6
Either one is fine/I'm indifferent...	23.1	22.9	0.2
Neither one/ I prefer not to enter a PIN or give my signature..................	na	na	na

Notes: 1, 2, 4.

Table 36

Demographics: Gender, Age, Race, Ethnicity, and Education

Percentage of consumers, except where noted*

	Full	Long.	Diff
U.S. Population age 18 + older (millions)	**234.4**	**234.4**	—
Number of survey respondents	**2,065**	**2,065**	—
Gender			
Male..	48.1	48.1	0.0
Female..	51.9	51.9	0.0
Age			
18–24..	7.9	6.2	1.8
25–34..	22.3	24.5	-2.2
35–44..	16.1	15.5	0.6
45–54..	19.0	19.1	-0.1
55–64..	16.4	16.4	0.0
65 and older...	18.3	18.3	0.0
Race			
White..	75.7	73.6	2.1
Black..	12.6	14.6	-2.0
Asian..	2.2	2.8	-0.6
Other..	9.5	9.0	0.5
Ethnicity			
Hispanic or Latino...	17.6	14.3	3.3
Education			
No high school diploma..	7.8	7.1	0.8
High school...	34.4	35.1	-0.8
Some college..	28.8	28.8	0.0
College..	16.8	16.5	0.3
Post-graduate study..	12.1	12.5	-0.3

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

Notes: 1, 4.

Table 37

Income and Labor Force Status

Percentage of consumers*

	Full	Long.	Diff
Household income			
Less than $25,000..	23.7	22.9	0.8
$25,000–$49,999...	24.5	25.2	-0.7
$50,000–$74,999...	18.4	18.7	-0.3
$75,000–$99,999...	13.4	13.2	0.2
$100,000–$124,999...	9.1	8.8	0.2
$125,000 or more...	10.9	11.1	-0.2
$125,000–$199,999..	8.0	8.1	-0.1
$200,000 or more...	2.9	3.0	-0.2
Respondent income			
Highest in household...	51.0	51.4	-0.5
About equal with highest...	12.8	13.3	-0.5
2nd highest..	24.2	25.5	-1.3
3rd highest or lower...	12.1	9.8	2.3
Labor force status			
Working now..	59.4	60.6	-1.2
Unemployed and looking for work†..	9.9	9.3	0.7
Temporarily laid off, on sick or other leave............................	1.2	0.8	0.4
Disabled..	7.9	7.8	0.1
Retired...	18.5	19.2	-0.7
Homemaker..	9.1	10.1	-0.9
Other...	3.5	2.9	0.5

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

† The number for unemployment differs from the official BLS numbers because of differences between the ALP and the BLS in the methodologies for collecting the data and computing the unemployment rate.

Notes: 1, 4.

Table 38

Consumers' Financial Responsibility in the Household
Percentage of consumers

	Full	Long.	Diff
Budgeting			
All	na	na	na
Most	na	na	na
Shared equally	na	na	na
Some	na	na	na
None	na	na	na
Bill payment			
All	51.2	52.9	-1.7
Most	7.5	7.6	-0.2
Shared equally	15.3	15.0	0.4
Some	9.9	9.4	0.5
None	16.0	15.1	1.0
Shopping			
All	40.0	38.6	1.3
Most	14.2	14.7	-0.5
Shared equally	21.9	22.8	-0.9
Some	15.2	15.3	-0.1
None	8.7	8.5	0.2
Asset management			
All	na	na	na
Most	na	na	na
Shared equally	na	na	na
Some	na	na	na
None	na	na	na
Saving and investing			
All	35.9	35.2	0.7
Most	12.2	13.5	-1.4
Shared equally	30.0	30.7	-0.7
Some	9.5	10.0	-0.5
None	12.4	10.5	1.9
Other			
All	37.3	36.8	0.5
Most	12.9	14.6	-1.8
Shared equally	29.4	30.2	-0.8
Some	9.7	9.9	-0.2
None	10.8	8.5	2.4

Notes: 1, 2, 4.

Table 39

Selected Assets and Liabilities
Percentage of consumers, except as noted

	Full	Long.	Diff
Home ownership			
Home ownership rate	61.3	65.3	-4.0
			0.0
Credit card debt			
Carried unpaid balance at any time during the past 12 months	36.9	38.9	-2.0
Mean credit card balance unpaid, previous month (dollars)			
Per credit card adopter..	3,588	3,931	-342.7
Per adopter with unpaid balance..	6,699	7,292	-592.5
Median credit card balance unpaid, previous month (dollars)			
Per credit card adopter..	46	84	-38.2
Per adopter with unpaid balance..	2,910	3,114	-204.3
Change in unpaid balance since a year ago			
Much lower..	15.7	14.2	1.6
Lower..	24.9	24.0	0.9
About the same...	29.5	29.4	0.1
Higher...	17.9	20.7	-2.9
Much higher...	11.9	11.7	0.2
Paid interest rate, card with largest balance			
0%...	10.5	10.8	-0.4
0.01–5.00..	5.3	5.5	-0.2
5.01–10.00..	19.6	20.1	-0.5
10.01–15.00..	23.1	24.0	-0.9
15.01–20.00..	19.9	19.1	0.8
20.01–25.00..	10.7	9.8	0.9
25.01–30.00..	4.4	4.3	0.1
30.01–35.00..	0.1	0.2	-0.1
More than 35%...	0.1	0.1	0.0
I don't know..	6.4	6.0	0.4

Notes: 1, 2, 4.