

# 2016–17 Surveys of Consumer Payment Choice Data User’s Guide

## 1 Introduction

One of the major goals of the Survey of Consumer Payment Choice (SCPC) is to provide publicly available, consumer-level longitudinal data to support research on consumer payments and to provide aggregate data on trends in U.S. consumer payments.

The questionnaires and public datasets for the 2016 and 2017 SCPCs are available for download on the Atlanta Fed website<sup>1</sup>. The data are provided in Stata, SAS, and CSV formats. The Atlanta Fed assumes that data users are familiar with a statistical analysis software package such as Stata, SAS, or R. The Atlanta Fed does not provide any software assistance.

This document is a data user’s guide for the SCPC survey data. Anyone interested in conducting research based on SCPC data will find it helpful to become familiar with this document. See the *2016–17 Survey of Consumer Payment Choice: Technical Appendix* for details on questionnaire changes, data collection, sampling methodology, and hypothesis test results.

A broad overview of the 2016–17 SCPC, including a summary of the survey and tables of survey results, can be found in the *The 2016–17 Survey of Consumer Payment Choice* results paper on the Atlanta Fed website.

All questions regarding the use of the data can be directed to:

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<sup>1</sup><https://www.frbatlanta.org/banking-and-payments/consumer-payments/survey-of-consumer-payment-choice>

## 2 SCPC variable overview

There are three broad categories of SCPC variables. Below we provide general information about each.

**UAS My Household Questionnaire variables** represent a small fraction of variables that come from the UAS My Household survey (MH). The MH survey is used to gather demographic data about each respondent. UAS members take the MH survey quarterly, and their most recent responses to the MH survey are included in these SCPC datasets. Visit the UAS website for more information about the UAS MH survey<sup>2</sup>.

**Survey variables** are the actual results from the SCPC survey questions. Survey variables have variable names such as `pa001_a` or `pu004_b`. To see the exact question text, respondent instructions, response option wording, and structure of the questions on the screen, it is recommended to search the survey questionnaires themselves. The questionnaires are available on the Atlanta Fed website<sup>3</sup>. Two important considerations of the survey variables are:

- *Randomization of response option orders*: To avoid potential biases arising from the order of response options presented to respondents, the survey instrument randomizes response options for some questions. The questionnaire clearly indicates if response options were randomized. The unrandomized variables have the same variable names as the original survey variables. The raw data from the unrandomized variables and the SAS macros that unrandomize the responses will be made available upon request.
- *Responses for different time frequencies*: Respondents are given the option of reporting payment use and cash management in terms of a typical week, month, or year. This dataset includes variables where responses have been standardized to a monthly frequency, and another variable with the suffix `_wmy_type` which tells the data user if the original response was in a weekly, monthly or yearly frequency. These created, “frequency converted” variables have the same name as the original responses, but without a numeric suffix. For instance, the variable `pu006a_a` refers to the number of cash payments for retail goods in a typical month, after frequency conversion. The set of three original variables that produce `pu006a_a` are `pu006a_a1` (respondent used the weekly box to report these transactions), `pu006a_a2` (monthly) and `pu006a_a3` (yearly). Finally, a character variable called `pu006a_a_wmy_type` has a value of “weekly”, “monthly”, or “yearly” depending on how the respondent ini-

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<sup>2</sup>[Click here](#) to see the standard variables included in the UAS MH questionnaire.

<sup>3</sup><https://www.frbatlanta.org/banking-and-payments/consumer-payments/survey-of-consumer-payment-choice>

tially answered the question. The SAS macros for the frequency conversions can be made available upon request. The Atlanta Fed recommends that data analysts use the created frequency converted variables in their analysis and research.

**Created variables** are created by Atlanta Fed staff to populate the SCPC results tables and to aid in data analysis. Most of these variables have descriptive names based on a combination of mnemonics. For example, the variable `cc_typ` consists of two mnemonics: `cc` stands for “credit card”, and `typ` stands for “number of transactions in a typical month”. More insight into variable name mnemonics is provided in Section 2.2.

## 2.1 Survey variables

### 2.1.1 Respondent identifier

|                       |                              |
|-----------------------|------------------------------|
| <code>prim_key</code> | Unique respondent identifier |
|-----------------------|------------------------------|

The variable `prim_key` is a 9 digit character variable of the form `yymmxxxxx`, where `yy` is the two-digit year (16 for 2016, 17 for 2017, etc.) in which the respondent joined the UAS panel, `mm` is the month the respondent joined the UAS panel (01 for January, 02 for February, etc.), and `xxxxx` is a random five digit number. The `prim_key` for a UAS member is the same across all UAS surveys. This allows data users to merge other UAS survey datasets onto the SCPC dataset.

This variable is the equivalent of the variable `uasid` in other UAS surveys. The name `prim_key` is used to maintain backwards compatibility with the code used to process the SCPC data. For more information about `uasid`, visit [this UAS data website](#). The variable `uasid` and other variables described on the UAS website allow the data user to determine if other members of the same household are UAS members.

### 2.1.2 Survey weight

|                       |  |
|-----------------------|--|
| <code>r_weight</code> | Individual-level post-stratification weights - from a raking procedure |
|-----------------------|--|

For information about how the survey weights are calculated, please see the *2016–17 SCPC Technical Appendix*.

## 2.2 Created variables

Most created variable names are a combination of 2 or more mnemonics, combined using underscores. Typically, the first mnemonic refers to payment instrument, type of account, or a method of payment. The second or last mnemonic often indicates the concept being communicated, such as its characteristic, adoption, or typical use. This section describes the most common mnemonics.

### 2.2.1 Payment instruments

|                |   |
|----------------|---|
| cash           | Cash  |
| chk            | Check   |
| chk1, chkacct1 | Primary checking account  |
| chk2, chkacct2 | Secondary checking account  |
| chkacctboth    | Both primary and secondary checking accounts                        |
| dc             | Debit card  |
| cc             | Credit card   |
| svc            | Stored-value card/prepaid card                                      |
| banp           | Bank account number payment   |
| obbp           | Online banking bill payment   |
| mon            | Money order   |
| tc             | Traveler's check  |
| income         | Direct deduction from income (used in automatic bill payments only) |

Payment instruments are grouped as follows:

|       |  |
|-------|--|
| paper | Cash, check, money order, traveler's checks                |
| card  | Credit cards, debit cards, prepaid cards                   |
| elect | Bank account number payments, online banking bill payments |
| pi    | All payment instruments                                    |

### 2.2.2 Transaction types

|             |   |
|-------------|---|
| <b>abp</b>  | Automatic bill payment                  |
| <b>obp</b>  | Online bill payment                     |
| <b>ipbp</b> | In-person bill payment (or via mail)    |
| <b>op</b>   | Online (non-bill) payments              |
| <b>rp</b>   | Retail payments (made in-person)        |
| <b>serv</b> | Services and other payments (in-person) |
| <b>p2p</b>  | Person-to-person payment                |

Transaction types are grouped as follows:

|               |   |
|---------------|---|
| <b>bp</b>     | Bill payment i.e. sum of <b>abp</b> , <b>obp</b> , <b>ipbp</b>                        |
| <b>op</b>     | Online (non-bill) payments  |
| <b>posp2p</b> | All in-person (non-bill) payments, i.e. sum of <b>rp</b> , <b>serv</b> and <b>p2p</b> |

### 2.2.3 Assessment of payment characteristics

|                    |                        |
|--------------------|------------------------|
| <b>security</b>    | Security               |
| <b>setup</b>       | Getting and setting up |
| <b>acceptance</b>  | Acceptance for payment |
| <b>cost</b>        | Cost                   |
| <b>records</b>     | Payment records        |
| <b>convenience</b> | Convenience            |

### 2.2.4 Payment adoption

|                |   |
|----------------|---|
| <b>adopt</b>   | Respondent is currently an adopter (Y/N)  |
| <b>ever</b>    | Respondent was an adopter in the past but does not currently have or own the item in question (Y/N) |
| <b>discard</b> | Respondent was an adopter, not anymore (Y/N)  |
| <b>num</b>     | Number of payment instruments (equals 0 for non-adopters)   |

### 2.2.5 Payment use

For each payment instrument and seven transaction types, respondents are asked to report their payment use behavior—how frequently they use a payment instrument for a specific transaction type. Therefore, at the most disaggregated level, a payment use variable name consists of three mnemonic components: the payment instrument (Section 2.2.1), followed by the transaction type (Section 2.2.2), and ending with a suffix that indicates the type of payment use information (incidence of use, frequency of use, and share of all transactions made):

|     |   |
|-----|---|
| typ | Number of transactions in a typical month   |
| t_m | Respondent makes the corresponding type of payment at least once in a typical month (Y/N) |
| t_y | Respondent makes the corresponding type of payment at least once in a typical year (Y/N)  |
| sh  | Number of transactions in a typical month, as proportion of all payments                  |

It is important to note that not all combinations of payment instruments and transaction types exist. This is because they were assumed not to be possible at the time of the survey. The following table illustrates combinations that do exist in the data and the corresponding combinations of mnemonic prefixes:

|        | bp                                  |          |           | op      | posp2p  |           |          |
|--------|-------------------------------------|----------|-----------|---------|---------|-----------|----------|
|        | abp                                 | obp      | ipbp      | op      | rp      | serv      | p2p      |
| cash   |                                     |          | cash_ipbp |         | cash_rp | cash_serv | cash_p2p |
| chk    |                                     |          | chk_ipbp  | chk_op  | chk_rp  | chk_serv  | chk_p2p  |
| mon    |                                     |          | mon_ipbp  | mon_op  | mon_rp  | mon_serv  | mon_p2p  |
| tc     | tc_ (not asked by transaction type) |          |           |         |         |           |          |
| dc     | dc_abp                              | dc_obp   | dc_ipbp   | dc_op   | dc_rp   | dc_serv   | dc_p2p   |
| cc     | cc_abp                              | cc_obp   | cc_ipbp   | cc_op   | cc_rp   | cc_serv   | cc_p2p   |
| svc    |                                     |          | svc_ipbp  | svc_op  | svc_rp  | svc_serv  |          |
| obbp   | obbp_abp                            | obbp_obp |           |         |         |           | obbp_p2p |
| banp   | banp_abp                            | banp_obp |           | banp_op |         |           | banp_p2p |
| income | income_abp                          |          |           |         |         |           |          |

The variable `tot_pay_typ` is defined for each respondent as the sum of all payments made in a

typical month. The share variables “\_sh” express the original “typ” variable as a proportion of `tot_pay_typ` for that respondent. The tables in the 2016–17 SCPC results paper describing payment shares are not computed using these individually defined variables. Instead, each share denotes the total number of transactions falling under that category as a proportion of all reported transactions, aggregated over all respondents. This differs slightly from taking means of the \_sh variables defined in this document: it weights respondents who have a large number of transactions more heavily than respondents who have a smaller number of transactions.

### **2.2.6 Variables defined conditional on adoption**

Some tables in the 2016–17 SCPC results paper include statistics that are calculated conditional on the adoption of a bank account, a certain payment instrument, or other payment technology. Separate variables were created to facilitate this calculation for the tables; these variables either end with the suffix “\_adoptonly” or contain the term “oadopt”, indicating the conditional coding of the underlying variable. Such variables contain missing values (rather than zeros) for non-adopters of the respective account/instrument/technology.

### **2.2.7 Flags for variables that were cleaned for outliers**

The SCPC has many continuous variables. These variables come from survey questions where the respondent is allowed to enter a number into a box. For instance, we ask the respondent to tell us how many credit card payments they make for retail goods in a typical week, month, or year. Continuous variables in the SCPC are cleaned for outliers and edited based on algorithms described in the *2016–17 SCPC Technical Appendix*. To indicate an edited variable, the prefix “f\_” is added to the front of a variable name. A flag value of 0 indicates that the particular observation was not edited. A flag value greater than 0 means the observation was edited.

### **2.2.8 Excluding large value holdings**

For many variables that describe dollar amounts of cash, an additional variable is created with the suffix “\_p98”. The suffix indicates that the dollar values above the 98th percentile have been set to “missing”.

### **2.2.9 All consumers**

The suffix “\_allcons” stands for “all consumers”. Variables with this suffix represent all consumers, not just adopters, for the concept indicated by the variable name.