

# UnderStandingAmericaStudy

UAS 77: HURRICANE MATTHEW AND THE DIARY OF CONSUMER PAYMENT  
CHOICE



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Fielded December 16, 2016 - January 9, 2017

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# 1 INTRODUCTION

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This UAS panel survey, titled "UAS77: Hurricane Matthew and the Diary of Consumer Payment Choice" was a follow up survey for participants in FEMA codes affected by Hurricane Matthew who participated in the Diary of Consumer Payment Choice in October 2016. The Federal Reserve Bank of Boston was interested in how a natural disaster effects spending habits or payment choice. They have asked about natural disasters occurring at the same times as their spending surveys in prior years. This survey is no longer in the field. Respondents were paid \$3 to complete the survey. Respondents were selected by the Federal Reserve Bank of Boston. Due to the small size of the sample, no weights are provided.

## 1.1 Topics

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This survey contains questions (among others) on the following topics: Consumer Behavior. A complete survey topic categorization for the UAS can be found [here](#).

## 1.2 Experiments

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This survey includes experiment(s) of the following type(s): Auxiliary Randomization. Please refer to explanatory comments in the Routing section for detailed information. A complete survey experiment categorization for the UAS can be found [here](#).

## 1.3 Citation

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Each publication, press release or other document that cites results from this survey must include an acknowledgment of UAS as the data source and a disclaimer such as, 'The project described in this paper relies on data from survey(s) administered by the Understanding America Study, which is maintained by the Center for Economic and Social Research (CESR) at the University of Southern California. The content of this paper is solely the responsibility of the authors and does not necessarily represent the official views of USC or UAS.' For any questions or more information about the UAS, contact Tania Gutsche, Project and Panel Manager, Center for Economic and Social Research, University of Southern California, at [tgutsche@usc.edu](mailto:tgutsche@usc.edu).

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## 2 SURVEY RESPONSE AND DATA

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### 2.1 Sample selection and response rate

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The sample selection for this survey was:

All active respondents who completed the Boston Federal Bank Diary 2016 AND are living in Florida, Georgia, North Carolina, South Carolina, or Virginia.

As such, this survey was made available to 458 UAS participants. Of those 458 participants, 436 completed the survey and are counted as respondents. Of those who are not counted as respondents, 0 started the survey without completing and 22 did not start the survey. The overall response rate was 95.2%.

Note: We are unable to provide sample weights for a small number of UAS members (see the Sample weighting section below for details). If they completed the survey, these members are included in the data set with a weight of zero, but accounted for in the computation of total sample size and survey response rate.%.

The detailed survey response rate is as follows:

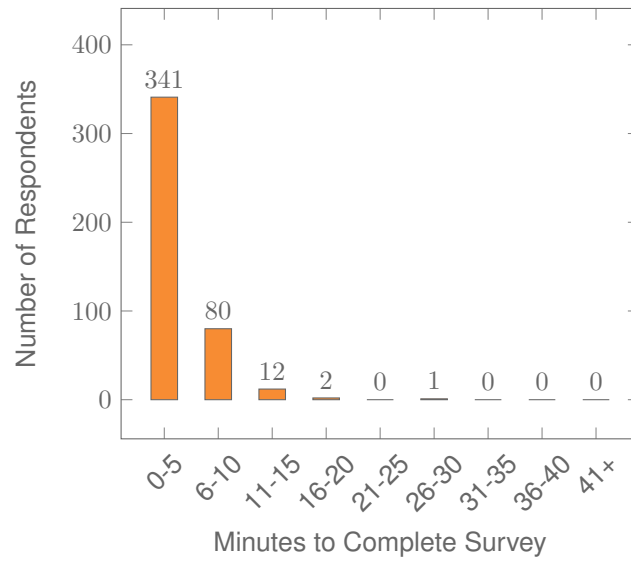
UAS77 - Response Overview	
Size of selected sample	458
Completed the survey	436
Started but did not complete the survey	0
Did not start the survey	22
Response rate	95.2%

### 2.2 Timings

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The survey took respondents an average of 5 minutes, and the full distribution of survey response times is available in the figure below. Times per question are available upon request.

Distribution of Respondents' Survey Response Times



## 2.3 Weighting

Weights are not (yet) available for this survey. Please contact UAS staff with any questions.

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### 3 STANDARD VARIABLES

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Each Understanding America Study data contains a series of standard variables, consisting of individual, household and sample identifiers, language indicator, time stamps and a rating by the respondent of how much he or she liked the survey:

- **uasid**: the identifier of the respondent. This identifier is assigned to a respondent at recruitment and stays with the respondent throughout each and every survey he/she participates in. When analyzing data from multiple surveys, the 'uasid' can be used to merge data sets.
- **uashhid**: the household identifier of the respondent. Every member is assigned a household identifier, stored in the variable 'uashhid'. For the primary respondent this identifier equals his or her 'uasid'. All other eligible members of the primary respondent's household (everyone who is 18 or older in the household) who become UAS respondents receive the 'uasid' of the primary respondent as their household identifier. The identifier 'uashhid' remains constant over time for all respondents. Thus it is always possible to find the original UAS household of an UAS panel member (even after they, for example, have moved out to form another household).
- **survhhid**: uniquely identifies the household a UAS panel member belongs to in a given survey. For instance, if the primary respondent and his/her spouse are both UAS members at the time of a given survey, they both receive the same 'survhhid' identifier for that survey. If they subsequently split, they receive two different 'survhhid' in subsequent surveys. They, however, always share the same 'uashhid'. The identifier 'survhhid' is set to missing (.) if no other household members are UAS panel members at the time of the survey. Since individuals can answer the same survey at different points in time (which can be relatively far apart if the survey is kept in the field for a prolonged time), it may be possible that, within the same data set, household members have different 'survhhid' reflecting different household compositions at the time they answered the survey. For instance, suppose that the primary respondent and his/her spouse are both UAS members. If the primary respondent answers the survey when he/she is living with the spouse, but the spouse answers the survey when the couple has split, they receive different 'survhhid'. Hence, the variable 'survhhid' identifies household membership of UAS panel members, at the time the respondent answers the survey. Note: in the My Household survey 'survhhid' is set to unknown (.u) for respondents who last participated in the My Household survey prior to January 21, 2015.
- **uasmembers**: is the number of other household members who are also UAS panel members at the time of the survey. Since individuals can answer the same survey at different points in time (which can be relatively far apart if the survey is kept in the field for a prolonged time), it may be possible that, within the same data set, the primary respondent of a household has a value of '0', whereas the second UAS household respondent has a value of '1'. Therefore 'uasmembers' should be interpreted as the

number of household and UAS panel members at the time the respondent answers the survey. Note: in the My Household survey 'uasmembers' is set to unknown (.u) for respondents who last participated in the My Household survey prior to January 21, 2015.

- **sampleframe**: indicates the sampling frame from which the household of the respondent was recruited. All UAS recruitment is done through address based sampling (ABS) in which samples are acquired based on postal records. Currently, the variable 'sampleframe' takes on four values reflecting four distinct sample frames used by the UAS over the year (in future data sets the number of sample frames used for recruitment may increase if additional specific populations are targeted in future recruitment batches):

1. U.S. National Territory: recruited through ABS within the entire U.S.
2. Areas high concentration Nat Ame: recruited through ABS in areas with a high concentration of Native Americans in the zip-code. Within these batches, individuals who are not Native Americans are not invited to join the UAS.
3. Los Angeles County: recruited through ABS within Los Angeles County.
4. California: recruited through ABS within California.

Note: prior to March 6, 2024 this variable was called sampletype and had the following value labels for the above list in UAS data sets:

1. Nationally Representative Sample: recruited through ABS within the entire U.S.
2. Native Americans: recruited through ABS in areas with a high concentration of Native Americans. Within these batches, individuals who are not Native Americans are not invited to join the UAS.
3. LA County: recruited through ABS within Los Angeles County.
4. California: recruited through ABS within California.

- **batch**: indicates the batch from which the respondent was recruited. Currently, this variable takes the following values (in future data sets the number of batches may increase as new recruitment batches are added to the UAS):

1. Prob Sample, ASDE 2014/01
2. Prob Sample, ASDE 2014/01
3. Prob Sample, ASDE 2014/01
4. Non-Prob Sample, 2015/05
5. Prob Sample, MSG 2015/07
6. Prob Sample, MSG 2016/01
7. Prob Sample, MSG 2016/01
8. Prob Sample, MSG 2016/01
9. Prob Sample, MSG 2016/02

10. Prob Sample, MSG 2016/03
11. Prob Sample, MSG 2016/04
12. Prob Sample, MSG 2016/05
13. Prob Sample, MSG 2016/08
14. Prob Sample, MSG 2017/03
15. Prob Sample, MSG 2017/11
16. Prob Sample, MSG 2018/02
17. Prob Sample, MSG 2018/08
18. Prob Sample, MSG 2019/04
19. Prob Sample, MSG 2019/05
20. Prob Sample, MSG 2019/11
21. Prob Sample, MSG 2020/08
22. Prob Sample, MSG 2020/10
23. Prob Sample, MSG 2021/02
24. Prob Sample, MSG 2021/08
25. Prob Sample, MSG 2021/08
26. Prob Sample, MSG 2022/02
27. Prob Sample, MSG 2022/02
28. Prob Sample, MSG 2022/08
29. Prob Sample, MSG 2022/11
30. Prob Sample, MSG 2022/11
31. Prob Sample, MSG 2023/01
32. Prob Sample, MSG 2023/06
33. Non-Prob Sample, MSG 2023/09
34. Prob Sample, MSG 2023/10

Note: prior to March 6, 2024 this variable had the following value labels for the above list in UAS data sets:

1. ASDE 2014/01 Nat.Rep.
2. ASDE 2014/01 Native Am.
3. ASDE 2014/11 Native Am.
4. LA County 2015/05 List Sample
5. MSG 2015/07 Nat.Rep.
6. MSG 2016/01 Nat.Rep. Batch 2
7. MSG 2016/01 Nat.Rep. Batch 3



8. MSG 2016/01 Nat.Rep. Batch 4
9. MSG 2016/02 Nat.Rep. Batch 5
10. MSG 2016/03 Nat.Rep. Batch 6
11. MSG 2016/04 Nat.Rep. Batch 7
12. MSG 2016/05 Nat.Rep. Batch 8
13. MSG 2016/08 LA County Batch 2
14. MSG 2017/03 LA County Batch 3
15. MSG 2017/11 California Batch 1
16. MSG 2018/02 California Batch 2
17. MSG 2018/08 Nat.Rep. Batch 9
18. MSG 2019/04 LA County Batch 4
19. MSG 2019/05 LA County Batch 5
20. MSG 2019/11 Nat. Rep. Batch 10
21. MSG 2020/08 Nat. Rep. Batch 11
22. MSG 2020/10 Nat. Rep. Batch 12
23. MSG 2021/02 Nat. Rep. Batch 13
24. MSG 2021/08 Nat. Rep. Batch 15
25. MSG 2021/08 Nat. Rep. Batch 16
26. MSG 2022/02 Nat. Rep. Batch 17 (priority)
27. MSG 2022/02 Nat. Rep. Batch 17 (regular)
28. MSG 2022/08 Nat. Rep. Batch 18
29. MSG 2022/11 LA County Batch 6
30. MSG 2022/11 Nat. Rep. Batch 20
31. MSG 2023/01 Nat. Rep. Batch 21
32. MSG 2023/06 Nat. Rep. Batch 22
33. MSG 2023-09 Native Am. Batch 3
34. MSG 2023-10 Nat. Rep. Batch 23

- **primary\_respondent:** indicates if the respondent was the first person within the household (i.e. to become a member or whether s/he was added as a subsequent member. A household in this regard is broadly defined as anyone living together with the primary respondent. That is, a household comprises individuals who live together, e.g. as part of a family relationship (like a spouse/child/parent) or in context of some other relationship (like a roommate or tenant).
- **hardware:** indicates whether the respondent ever received hardware or not. Note: this variable should not be used to determine whether a respondent received hardware at a given point in time and/or whether s/he used the hardware to participate in a survey. Rather, it indicates whether hardware was ever provided:

1. None
  2. Tablet (includes Internet)
- **language**: the language in which the survey was conducted. This variable takes a value of 1 for English and a value of 2 for Spanish.
  - **start\_date (start\_year, start\_month, start\_day, start\_hour, start\_min, start\_sec)**: indicates the time at which the respondent started the survey.
  - **end\_date (end\_year, end\_month, end\_day, end\_hour, end\_min, end\_sec)**: indicates the time at which the respondent completed the survey.
  - **cs\_001**: indicates how interesting the respondent found the survey.

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## 4 BACKGROUND DEMOGRAPHICS

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Every UAS survey data set includes demographic variables, which provide background information about the respondent and his/her household. Demographic information such as age, ethnicity, education, marital status, work status, state of residence, family structure is elicited every quarter through the “My Household” survey. The demographic variables provided with each survey are taken from the most recent ‘MyHousehold’ survey answered by the respondent. If at the time of a survey, the information in “My Household” is more than three months old, a respondent is required to check and update his or her information before being able to take the survey.

The following variables are available in each survey data set:

- **gender**: the gender of the respondent.
- **dateofbirth\_year**: the year of birth of the respondent.
- **age**: the age of the respondent at the start of the survey.
- **agerange**: if the respondent’s age cannot be calculate due to missing information, ‘agerange’ indicates the approximate age. Should a value for both the ‘age’ and ‘agerange’ be present, then ‘age’ takes precedence over ‘agerange’.
- **citizenus**: indicates whether the respondent is a U.S. citizen.
- **bornus**: indicates whether the respondent was born in the U.S.
- **stateborn**: indicates the state in which the respondent was born. This is set to missing (.) if the respondent was not born in the U.S.
- **countryborn**: indicates the country in which the respondent was born. This is set to missing (.) if the respondent was born in the U.S.
- **countryborn\_other**: indicates the country of birth if that country is not on the drop down list of countries shown to the respondent’.
- **statereside**: the state in which the respondent is living.
- **immigration\_status**: indicates whether the respondent is an immigrant. It takes one of the following values: 0 Non-immigrant, 1 First generation immigrant (immigrant who migrated to the U.S), 2 Second generation immigrant (U.S.-born children of at least one foreign-born parent), 3 Third generation immigrant (U.S.-born children of at least one U.S.-born parent, where at least one grandparent is foreign-born), or 4 Unknown immigrant status.
- **maritalstatus**: the marital status of the respondent.
- **livewithpartner**: indicates whether the respondent lives with a partner.

- **education**: the highest level of education attained by the respondent.
- **hisplatin**: indicates whether the respondent identifies him or herself as being Hispanic or Latino. This variable is asked separately from race.
- **hisplatinogroup**: indicates which Hispanic or Latino group a respondent identifies him or herself with. This is set to missing (.) if the respondent does not identify him or herself as being Hispanic or Latino.
- **white**: indicates whether the respondent identifies him or herself as white (Caucasian).
- **black**: indicates whether the respondent identifies him or herself as black (African-American).
- **nativeamer**: indicates whether the respondent identifies him or herself as Native American (American Indian or Alaska Native).
- **asian**: indicates whether the respondent identifies him or herself as Asian (Asian-American).
- **pacific**: indicates whether the respondent identifies him or herself as Native Hawaiian or Other Pacific Islander.
- **race**: indicates the race of the respondent as singular (e.g., '1 White' or '2 Black') or as mixed (in case the respondent identifies with two or more races). The value '6 Mixed' that the respondent answered 'Yes' to at least two of the single race categories. This variable is generated based on the values of the different race variables (white, black, nativeamer, asian, pacific). This composite measure is not conditional on hisplatin, so an individual may identify as Hispanic or Latino, and also as a member of one or more racial groups.
- **working**: indicates whether the respondent is working for pay.
- **sick\_leave**: indicates whether the respondent is not working because sick or on leave.
- **unemp\_layoff**: indicates whether the respondent is unemployed or on lay off.
- **unemp\_look**: indicates whether the respondent is unemployed and looking for a job.
- **retired**: indicates whether the respondent is retired.
- **disabled**: indicates whether the respondent has a disability.
- **If\_other**: specifies other labor force status.
- **laborstatus**: indicates the labor force status of the respondent as singular (e.g., '1 Working for pay' or '2 On sick or other leave') or as mixed (in case the respondent selects two or more labor statuses). The value '8 Mixed' indicates that the respondent answered 'Yes' to at least two of the single labor force status variables. This variable is generated based on the values of the different labor status variables (working, sick\_leave, unempl\_layoff, unempl\_look, retired, disabled, If\_other).

- **employmenttype**: indicates the employment type of the respondent (employed by the government, by a private company, a nonprofit organization, or self-employed). This is set to missing (.) if the respondent is not currently working or currently on sick or other leave.
- **workfullpart**: indicates whether the respondent works full or part-time. This is set to missing (.) if the respondent is not currently working or currently on sick or other leave.
- **hourswork**: indicates the number of hours the respondent works per week. This is set to missing (.) if the respondent is not currently working or currently on sick or other leave.
- **hhincome**: is the total combined income of all members of the respondent's household (living in their household) during the past 12 months.
- **anyhhmember**: indicates whether there were any members in the respondent's household at the time he/she answered the survey as reported by the respondent.
- **hhmembernumber**: indicates the number of household members in the respondent's household at the time of the survey as reported by the respondent. It may be that 'anyhhmember' is 'Yes', but 'hhmembernumber' is missing if the respondent did not provide the number of household members at the time of the survey.
- **hhmemberin\_#**: indicates whether a household member is currently in the household as reported by the respondent. Household members are never removed from the stored household roster and their information is always included in survey data sets. The order of the roster is the same order in which household members were specified by the respondent in the 'MyHousehold' survey. The order is identified by the suffix \_# (e.g., \_1 indicates the first household member, \_2 the second household member, etc.).

As an example, if the first household member is in the household at the time of the survey, 'hhmemberin\_1' is set to '1 HH Member 1 is in the HH'; if he/she has moved out, 'hhmemberin\_1' is set to '0 HH member 1 is no longer in the HH'. Since information of other household members (stored in the variables listed below) is always included in survey data sets, information about 'hhmemberin\_1' is available whether this person is still in the household or has moved out.

- **hhmembergen\_#**: indicates the gender of another household member as reported by the respondent.
- **hhmemberage\_#**: indicates the age of another household member. The age is derived from the month and year of birth of the household member as reported by the respondent.
- **hhmemberrel\_#**: indicates the relationship of the respondent to the other household member as reported by the respondent.

- **hhmemberuasid\_#**: is the 'uasid' of the other household member if this person is also a UAS panel member. It is set to missing (.) if this person is not a UAS panel member at the time of the survey. Since this identifier is directly reported by the respondent (chosen from a preloaded list), it may differ from the actual (correct) 'uasid' of the UAS member it refers to because of reporting error. Also, this variable should not be used to identify UAS members in a given household at the time of the survey. This is because the variables 'hhmemberuasid\_#' are taken from the most recent 'My Household' and changes in household composition involving UAS members may have occurred between the time of the respondent answered 'My Household' and the time the respondent answers the survey. To follow UAS members of a given household, it is advised to use the identifiers 'uashhid' and 'survhhid'.
- **lastmyhh\_date**: the date on which the demographics variables were collected through the 'My Household' survey.

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## 5 MISSING DATA CONVENTIONS

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Data files provide so-called clean data, that is, answers given to questions that are not applicable anymore at survey completion (for example because a respondent went back in the survey and skipped over a previously answered question) are treated as if the questions were never asked. In the data files all questions that were asked, but not answered by the respondent are marked with (.e). All questions never seen by the respondent (or any dirty data) are marked with (.a). The latter may mean that a respondent did not view the question because s/he skipped over it; or alternatively that s/he never reached that question due to a break off. If a respondent did not complete a survey, the variables representing survey end date and time are marked with (.c). Household member variables are marked with (.m) if the respondent has less household members (e.g. if the number of household members is 2, any variables for household member 3 and up are marked with (.m)).

UAS provides data in STATA and CSV format. Stata data sets come with include variable labels that are not available in the CSV files. Value labels are provided for single-response answer option. In STATA these labels will include the labels 'Not asked' and 'Not answered' for (.a) and (.e), and will show in tabulations such as 'tab q1, missing'. For multiple-response questions a binary variable is created for each answer option indicating whether the option was selected or not. A summary variable is also provided in string format reflecting which options were selected and in which order. For example, if a question asked about favorite animals with options cat, dog, and horse, then if a respondent selected horse and then cat, the binary variables for horse and cat will be set to yes, while the overall variable would have a string value of '3-1'. If no answer was given, all binary variables and the summary variable will be marked with '.e'.

Questions that are asked multiple times are often implemented as so-called array questions. Supposing the name of such question was Q1 and it was asked in 6 different instances, your data set would contain the variables Q1\_1\_ to Q1\_6\_. To illustrate, if a survey asked the names of all children, then child\_1\_ would contain the name of the first child the respondent named and so on.

More information about the UAS data in general can be found on the UAS Data Pages web site.

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## 6 ROUTING SYNTAX

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The survey with routing presented in the next section includes all of the questions that make up this survey, the question answers when choices were provided, and the question routing. The routing includes descriptions of when questions are grouped, conditional logic that determines when questions are presented to the respondent, randomization of questions and answers, and fills of answers from one question to another.

If you are unfamiliar with conditional logic statements, they are typically formatted so that **if** the respondent fulfills some condition (e.g. they have a cellphone or a checking account), **then** they are presented with some other question or the value of some variable is changed. If the respondent does not fulfill the condition (e.g. they are not a cellphone adopter or they do not have a checking account), something **else** happens such as skipping the next question or changing the variable to some other value. Some of the logic involved in the randomization of questions or answers being presented to the respondent is quite complex, and in these instances there is documentation to clarify the process being represented by the routing.

Because logic syntax standards vary, here is a brief introduction to our syntax standards. The syntax used in the conditional statements is as follows: '=' is equal to, '<' is less than, '>' is greater than, and '!= ' is used for does not equal. When a variable is set to some number N, the statement looks like 'variable := N'.

The formatting of the questions and routing are designed to make it easier to interpret what is occurring at any given point in the survey. Question ID is the bold text at the top of a question block, followed by the question text and the answer selections. When a question or variable has associated data, the name links to the appropriate data page, so you can easily get directly to the data. Text color is used to indicate the routing: **red** is conditional logic, **gold** is question grouping, **green** is looping, and **orange** is used to document randomization and other complex conditional logic processes. The routing is written for a computer to parse rather than a human to read, so when the routing diverges significantly from what is displayed to the respondent, a screenshot of what the respondent saw is included.

The name of the randomization variables are defined in proximity to where they are put into play, and like the question ID the names of the randomization variables can be used to link directly to the associated data page.



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## 7 SURVEY WITH ROUTING

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Start of section **Preload**

*/\* The dates references in this survey are based on the diary dates assigned to the survey participants in a separate survey. \*/*

```
startdate := getUas62Startdate()  
FLDay1 := date('l, F j', strtotime(startdate));  
FLDay3 := date('l, F j', strtotime(startdate . ' +2 days'));
```

End of section **Preload**

Start of section **Hurricane**

**intro\_gen** (Section Hurricane)

You are receiving this survey because parts of your state were affected by Hurricane Matthew and you participated in the **Diary of Consumer Payment Choice**. If you, your family and friends, or your community were affected, we extend our sympathy and best wishes. We would also like to thank you for participating in this research. Understanding how natural disasters affect payments decisions is important to improving preparation and quality of response in the future.

To help you remember, Hurricane Matthew made landfall on **Saturday, October 8, 2016**, but winds and rain from the storm began affecting parts of the U.S. as early as **Thursday, October 6**, and ended **Monday, October 10**.

The following questions ask about certain effects that Hurricane Matthew may have had on your behavior, including that reported in the Diary of Consumer Payment Choice (DCPC) that you took from **Date of diary day 1** to **Date of diary day 3**.

*/\* Number of days passed between the start of Hurricane Matthew and the date on which the respondent participated in this survey. \*/*

```
days_passed := getDaysPassed()
```

### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**intro\_pr** (Section Hurricane)

First, we'd like to ask you a few questions about how Hurricane Matthew affected your primary residence, your vehicles, or any other property you may rent or own.

**pr001\_intro** (Section Hurricane)

As a result of Hurricane Matthew, did any of the following happen to you?

**SUBGROUP OF QUESTIONS**

**pr001\_a** (Lost electricity, heat or gas in section Hurricane)

Lost electricity, heat or gas

1 Yes

2 No

**pr001\_b** (Primary residence was physically damaged in section Hurricane)

Primary residence was physically damaged

1 Yes

2 No

**pr001\_c** (Vehicle(s) was physically damaged in section Hurricane)

Vehicle(s) was physically damaged

1 Yes

2 No

**pr001\_d** (Other property was physically damaged in section Hurricane)

Had other property damage worth more than \$1,000

1 Yes

2 No

**END OF SUBGROUP**

**END OF GROUP**

**IF pr001\_b = YES THEN**

**pr003** (amount of destruction primary residence in section Hurricane)

How much destruction occurred to your primary residence?

1 Minor cosmetics

2 Substantive repairs

3 Major damage but repairable

4 Need to completely rebuild the house

**IF pr003 = 3 OR pr003 = 4 THEN**

**pr004** (plan to continue to live at primary residence in section Hurricane)

Do you plan to continue to live at the address of your primary residence?

1 Yes

2 No

**END OF IF**

**END OF IF**

IF pr001\_d = YES THEN

**pr002** (what damaged in section Hurricane)

Please describe the property the property damage worth more than \$1,000:

STRING

END OF IF

#### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**intro\_bh** (Section Hurricane)

We'd also like to know how Hurricane Matthew affected your daily life and behavior.

**bh001\_intro** (Section Hurricane)

As a result of Hurricane Matthew, did any of the following happen to you?

#### SUBGROUP OF QUESTIONS

**bh001\_a** (Evacuated your primary residence in section Hurricane)

Evacuated your primary residence

1 Yes

2 No

**bh001\_b** (Required or encouraged to stay inside your home in section Hurricane)

Required or encouraged to stay inside your home

1 Yes

2 No

**bh001\_c** (Volunteered in the preparation or recovery efforts in section Hurricane)

Volunteered in the preparation or recovery efforts

1 Yes

2 No

**bh001\_d** (Waited in long lines for gas in section Hurricane)

Waited in long lines for gas

1 Yes

2 No

**bh001\_e** (Had friends, relatives, etc. stay with you in section Hurricane)

Had friends, relatives, etc. stay with you

1 Yes

2 No

**bh001\_f** (Had other significant life disruptions in section Hurricane)

Had other significant life disruptions

1 Yes

| 2 No

END OF SUBGROUP

END OF GROUP

IF (bh001.f = YES) THEN

**bh006** (what life disruptions in section Hurricane)

Please describe the life disruptions caused by Hurricane Matthew:

STRING

END OF IF

IF (bh001.a = YES) THEN

**bh003** (returned to live in your primary residence in section Hurricane)

Have you returned to live in your primary residence?

1 Yes

2 No

IF (bh003 = YES) THEN

**bh004** (how long gone from primary residence in section Hurricane)

How long were you evacuated or gone from your primary residence?

RANGE 0..()

ELSE

END OF IF

END OF IF

IF (bh001.b = YES) THEN

**bh007** (how long required or suggested to stay inside home in section Hurricane)

How long were you required or suggested to stay inside your home?

RANGE 0..()

END OF IF

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**bh002.intro** (Section Hurricane)

As a result of Hurricane Matthew, did any of the following happen to you?

SUBGROUP OF QUESTIONS

**bh002.a** (work cancelled in section Hurricane)

If you work outside the home, was your work cancelled?

1 Yes

2 No

3 Not applicable

**bh002\_b** (if live with a spouse or partner, was work cancelled in section Hurricane)

If you live with a spouse or partner, was their work cancelled?

1 Yes

2 No

3 Not applicable

**bh002\_c** (if work outside the home, was work cancelled in section Hurricane)

If you attend school, was your school cancelled?

1 Yes

2 No

3 Not applicable

**bh002\_d** (if have school-aged children, was their school cancelled in section Hurricane)

If you have school-aged children, was their school cancelled?

1 Yes

2 No

3 Not applicable

END OF SUBGROUP

END OF GROUP

IF bh002\_a = YES THEN

**bh008** (how long work cancelled in section Hurricane)

How long was your work cancelled?

RANGE 0..()

END OF IF

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**intro\_cash** (Section Hurricane)

To help prepare for the emergency response to future disasters, please answer some questions about your need to get cash before Hurricane Matthew. Because the Hurricane occurred a while ago, you may want to consult your banking records to refresh your memory.

**cb001** (got extra cash in section Hurricane)

Did you get or receive extra cash to prepare for Hurricane Matthew in the week before it affected your area?

1 Yes

2 No

## END OF GROUP

amntcashwith := 0

IF (cb001 = YES) THEN

LOOP FROM 1 TO 25

IF cnt = 1 OR cb002\_more(cnt-1) = 1 THEN

### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**cb002\_intro** (Section Hurricane)

Please tell us how you got cash between **October 1st** and **October 10th** to prepare for Hurricane Matthew. Please include cash that was partly or entirely related to Hurricane Matthew.

*Complete one entire row for each time you got or received cash*

### SUBGROUP OF QUESTIONS

**cb002\_a** (date cash transaction in section Hurricane)

- 1 October 1
- 2 October 2
- 3 October 3
- 4 October 4
- 5 October 5
- 6 October 6
- 7 October 7
- 8 October 8
- 9 October 9
- 10 October 10

**cb002\_b** (amount cash transaction in section Hurricane)  
NUMBER (NO DECIMALS ALLOWED)

**cb002\_c** (location cash transaction in section Hurricane)

- 1 ATM
- 2 Cash back at a retail store
- 3 Bank teller
- 4 Family or friend
- 5 Check cashing store
- 6 Employer
- 7 Cash refund from returning goods
- 8 Payday lender

9 Other location

**cb002\_d** (source cash transaction in section Hurricane)

- 1 Checking account
- 2 Savings or other bank account
- 3 Salary/wages/tips
- 4 Cashing a check
- 5 Credit card cash advance
- 6 Prepaid card cash withdrawal
- 7 Another person
- 8 Other source

**cb002\_e** (charged fee cash transaction in section Hurricane)

- 1 Yes
- 2 No

*Figure 1: Example of listing*

## UnderStandingAmericaStudy

Please tell us how you got cash between **October 1st** and **October 10th** to prepare for Hurricane Matthew. Please include cash that was partly or entirely related to Hurricane Matthew.

- Complete one entire row for each time you got or received cash

Date	Amount	Location (where you got the cash)	Source of funds	Were you charged a fee?
Select ▾	\$ <input type="text"/> .00	Select ▾	Select ▾	Select ▾

<< Back   Next >>

☒ ☐

END OF SUBGROUP

END OF GROUP

Fill code of question FLCashRow(cnt) executed  
amntcashwith := amntcashwith + cb002\_b(cnt)

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**cb002\_overview** (Section Hurricane)

*Figure 2: Example of listing overview*

## UnderstandingAmericaStudy

You have reported the following cash withdrawals so far:

Date	Amount	Location	Source	Charged fee
October 2	\$500.00	Cash back at a retail store	Salary/wages/tips	No
October 3	\$120.00	Family or friend	Cashing a check	Yes

Did you get or receive any more cash between **October 1st** and **October 10th**?

☐ Yes  
☐ No

<< Back   Next >>

**cb002\_more** (more cash transactions in section Hurricane)

Did you get or receive any more cash between **October 1st** and **October 10th**?

1 Yes

2 No

END OF GROUP

ELSE

I

END OF IF

END OF LOOP

**cb003** (how much cash taken in section Hurricane)

Out of the \$(total cash taken out()) that you got or received before Hurricane Matthew, about how much was for any reason related to Hurricane Matthew?

RANGE 0..(total cash taken out())

/\* The answer options in cb004 are randomly displayed (with the exception of the 'Other' option, which is always shown last). The order is captured in the cb004\_order variables. For example, if cb004\_order\_1 is equal to 5, then the first option shown is 'In case I have to evacuate my residence'. \*/



IF cb004.order(1) = EMPTY THEN

cb004.order := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4, 5 →5))  
cb004.order(6) := 6

END OF IF

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**cb004** (reasons extra cash in section Hurricane)

Please tell us the reasons you got this extra cash for Hurricane Matthew:

*Check all that apply.*

- 1 As a precaution in case other methods of payment would not work during or after the hurricane.
- 2 Because it might be harder to get cash during or after the hurricane.
- 3 To buy goods or services to prepare for the hurricane.
- 4 Because I may not have access to banks or banking services during or after the hurricane.
- 5 In case I have to evacuate my residence.
- 6 Other, please specify:

**cb004.other** (other reasons got extra cash in section Hurricane)

STRING

END OF GROUP

END OF IF

**gov001** (receive any assistance in section Hurricane)

Did you receive assistance of any kind due to the effects of Hurricane Matthew?

*Check all that apply*

- 1 Yes, I got goods and services
- 2 Yes, I got money as financial assistance
- 3 No, I did not receive any assistance

IF 2 IN gov001 THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**gov002** (from whom receive any assistance in section Hurricane)

From whom did you get the assistance payments (money) due to the effects of Hurricane Matthew?

*Check all that apply*

- 1 Government (local, state, or federal)

- 2 Friends or family
- 3 Non-profit or other non-government relief (Red Cross, Salvation Army, etc.)
- 4 Other, please specify:

**gov002.other** (other receive any assistance in section Hurricane)  
STRING

#### END OF GROUP

**gov003** (how much assistance in section Hurricane)  
About how much was the total dollar amount of money you received for assistance due to the effects of Hurricane Matthew?

*Do NOT include value of goods or services received.*  
NUMBER (NO DECIMALS ALLOWED)

*/\* The answer options in gov004 are randomly displayed (with the exception of the 'Other' option, which is always shown last). The order is captured in the gov004\_order variables. For example, if gov004\_order\_1 is equal to 5, then the first option shown is 'Prepaid card'. \*/*

**IF gov004\_order(1) = EMPTY THEN**

gov004\_order := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4, 5 →5))  
gov004\_order(6) := 6

**END OF IF**

#### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**gov004** (how received payment in section Hurricane)  
How did you receive most of the payment for the disaster assistance?  
1 Cash  
2 Check  
3 Deposit into your checking account(s)  
4 Deposit into a non-bank deposit account (e.g. PayPal, etc.)  
5 Prepaid card  
6 Other, please specify:

**gov004.other** (other form payment in section Hurricane)  
STRING

#### END OF GROUP

**gov005** (how satisfied with payment instrument in section Hurricane)  
How satisfied are you with the payment instrument used to pay you for disaster assis-

tance?

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied

IF (gov005 = 4 OR gov005 = 5) THEN

gov007 (why dissatisfied in section Hurricane)

Please tell us about why you were dissatisfied with the payment instrument used to pay you for disaster assistance:

STRING

END OF IF

END OF IF

#### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

gov006 (in future preferred instrument in section Hurricane)

In the future, if you are to receive disaster assistance from the government, which way would you most prefer to receive the money?

- 1 Cash
- 2 Check
- 3 Deposit into your checking account(s)
- 4 Deposit into a non-bank deposit account (e.g. PayPal, etc.)
- 5 Prepaid card
- 6 Other, please specify:

gov006.other (other preferred instrument in section Hurricane)

STRING

END OF GROUP

intro\_dp (Section Hurricane)

It would be helpful to understand how Hurricane Matthew may have affected your payment behavior on the dates you participated in the **Diary of Consumer Payment Choice**:

#### Date of diary day 1 to Date of diary day 3

This section will show the payments you recorded for those days and ask you about how they may have been affected.

We respect your privacy and thank you for your help. Your responses will remain confidential and will be used for research purposes only. Researchers will not have access to any identifying information.

dummy := getDiaryPayments()

IF numberofpayments > 0 THEN

LOOP FROM 1 TO NUMBEROFPAYMENTS

| Fill code of question FLPaymentRows(cnt) executed

END OF LOOP

dp001 (any impact in section Hurricane)

*Figure 3: Example of recorded payments*

## UnderstandingAmericaStudy

Here is a list of payments you recorded in your diary for the dates of Friday, September 30 to Sunday, October 2.

Date of payment	Amount spent	Payment method	Payment recipient
2017/10/06	\$5.76	Cash	Retail store or online retailer; restaurants and gas stations
2017/10/06	\$15.37	Credit card	Retail store or online retailer; restaurants and gas stations
2017/10/06	\$6.42	Cash	Retail store or online retailer; restaurants and gas stations
2017/10/06	\$1.61	Credit card	Other
2017/10/07	\$83.10	Credit card	Retail store or online retailer; restaurants and gas stations
2017/10/07	\$5.01	Cash	Retail store or online retailer; restaurants and gas stations

Thinking back on your list of payments, did Hurricane Matthew affect them in any of the following ways?

- The dollar value of one or more of these payments was affected.
- The date or timing of one or more of these payments was affected.
- The payment method used to make one or more of these payments was affected.

☒ Yes  
☐ No

<< Back   Next >>

1 Yes

2 No

IF (dp001 = YES) THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**dp002\_intro** (any impact in section Hurricane)

Here is a list of payments recorded in your diary. For each one, please indicate whether the entire payment was made because of Hurricane Matthew.

*Please choose one response for each payment.*

LOOP FROM 1 TO NUMBEROFPAYMENTS

**dp002\_a** (made entirely because of hurricane in section Hurricane)

1 Yes

2 No

END OF LOOP

*Figure 4: Example*

## UnderStandingAmericaStudy

Here is a list of payments recorded in your diary. For each one, please indicate whether the entire payment was made because of Hurricane Matthew.

- Please choose one response for each payment.

Payment information recorded in diary				I made this <b>entire payment only</b> because of Hurricane Matthew	
Date of payment	Amount Spent	Payment Method	Payment recipient	Yes	No
2017/10/06	\$5.76	Cash	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$15.37	Credit card	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$6.42	Cash	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$1.61	Credit card	Other	<input type="radio"/>	<input type="radio"/>
2017/10/07	\$83.10	Credit card	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>
2017/10/07	\$5.01	Cash	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>

<< Back

Next >>

END OF GROUP

LOOP FROM 1 TO NUMBEROFPAYMENTS

```

IF dp002_a(cnt) != 1 THEN
  dp003_indicator := 1
END OF IF

END OF LOOP

IF dp003_indicator = 1 THEN
  GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

  dp003_intro (any impact in section Hurricane)
  Thanks for answering. Now, we'd like to ask you about the payment amounts in
  more detail. For each payment, please indicate how the dollar amount of your
  payment was affected by Hurricane Matthew.

  Please choose one response for each payment.

  LOOP FROM 1 TO NUMBEROFPAYMENTS

    IF dp002_a(cnt) != 1 THEN

      dp003_a (impact on amount in section Hurricane)
      1 The dollar value of this payment is larger because of Hurricane Matthew.
      2 The dollar value of this payment is smaller because of Hurricane Matthew
      3 Hurricane Matthew did not affect the dollar value of this payment.

    END OF IF

  END OF LOOP

```

*Figure 5: Example*

## UnderStandingAmericaStudy

Thanks for answering. Now, we'd like to ask you about the payment amounts in more detail. For each payment, please indicate how the **dollar amount** of your payment was affected by Hurricane Matthew.

- Please choose one response for each payment.

Payment information recorded in diary				The dollar value of this payment is <b>larger</b> because of Hurricane Matthew	The dollar value of this payment is <b>smaller</b> because of Hurricane Matthew	Hurricane Matthew did not affect the dollar value of this payment
Date of payment	Amount Spent	Payment Method	Payment Recipient			
2017/10/06	\$5.76	Cash	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$15.37	Credit card	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$6.42	Cash	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$1.61	Credit card	Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/07	\$83.10	Credit card	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/07	\$5.01	Cash	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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### END OF GROUP

### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**dp004\_intro** (any impact in section Hurricane)

For each payment, please indicate how the **timing** of your payment was affected by Hurricane Matthew.

*Please choose one response for each payment.*

### LOOP FROM 1 TO NUMBEROFPAYMENTS

**IF dp002\_a(cnt) != 1 THEN**

**dp004\_a** (impact on timing in section Hurricane)

1 I made this payment sooner because of Hurricane Matthew.

2 I made this payment later because of Hurricane Matthew

3 Hurricane Matthew did not affect the timing of this payment.

END OF IF

END OF LOOP

Figure 6: Example

## UnderstandingAmericaStudy

For each payment, please indicate how the **timing** of your payment was affected by Hurricane Matthew.

- Please choose one response for each payment.

Payment information recorded in diary				I made this payment <b>sooner</b> because of Hurricane Matthew	I made this payment <b>later</b> because of Hurricane Matthew	Hurricane Matthew did not affect the timing of this payment
Date of payment	Amount Spent	Payment Method	Payment Recipient			
2017/10/06	\$5.76	Cash	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$15.37	Credit card	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$6.42	Cash	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$1.61	Credit card	Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/07	\$83.10	Credit card	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2017/10/07	\$5.01	Cash	Retail store or online retailer; restaurants and gas stations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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END OF GROUP

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**dp005\_intro** (any impact in section Hurricane)

For each payment, please indicate if and how your **choice of payment method** was affected by Hurricane Matthew.

*Please choose one response for each payment.*

LOOP FROM 1 TO NUMBEROFPAYMENTS



IF dp002\_a(cnt) != 1 THEN

dp005\_a (impact on payment method in section Hurricane)

- 1 I used a different payment method than usual because of Hurricane Matthew
- 2 My choice did not change

END OF IF

END OF LOOP

Figure 7: Example

## UnderstandingAmericaStudy

For each payment, please indicate if and how your **choice of payment method** was affected by Hurricane Matthew.

- Please choose one response for each payment.

Payment information recorded in diary				I used a different payment method than usual because of Hurricane Matthew	My choice did not change
Date of payment	Amount Spent	Payment Method	Payment Recipient		
2017/10/06	\$5.76	Cash	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$15.37	Credit card	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$6.42	Cash	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>
2017/10/06	\$1.61	Credit card	Other	<input type="radio"/>	<input type="radio"/>
2017/10/07	\$83.10	Credit card	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>
2017/10/07	\$5.01	Cash	Retail store or online retailer, restaurants and gas stations	<input type="radio"/>	<input type="radio"/>

<< Back   Next >>

END OF GROUP

END OF IF

END OF IF

END OF IF

dummy := getCashPayments()

IF numberofwithdrawals > 0 THEN

## GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**dp006\_intro** (any impact in section Hurricane)

Here is a list of cash withdrawals recorded in your diary. For each one, please indicate if and how it was affected by Hurricane Matthew.

*Please choose one response for each cash withdrawal.*

## LOOP FROM 1 TO NUMBEROFWITHDRAWALS

**dp006\_a** (impact on cash withdrawal in section Hurricane)

- 1 I made this withdrawal entirely because of Hurricane Matthew
- 2 I withdrew **more** than I would have because of Hurricane Matthew
- 3 I withdrew **less** than I would have because of Hurricane Matthew
- 4 This withdrawal was not affected by Hurricane Matthew

## END OF LOOP

*Figure 8: Example*

## UnderstandingAmericaStudy

Here is a list of cash withdrawals recorded in your diary. For each one, please indicate if and how it was affected by Hurricane Matthew.

- Please choose one response for each cash withdrawal.

Cash withdrawal recorded in diary		I made this withdrawal entirely because of Hurricane Matthew	I withdrew <b>more</b> than I would have because of Hurricane Matthew	I withdrew <b>less</b> than I would have because of Hurricane Matthew	This withdrawal was not affected by Hurricane Matthew
Date of cash withdrawal	Amount Spent				
2017/10/07	\$60.00	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<< Back Next >>

## END OF GROUP

## END OF IF

## GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**dp007** (cancelled diary payments in section Hurricane)

To the best of your recollection, were there **payments** that you would have likely made during your diary period if it weren't for Hurricane Matthew? *Examples include cancelled shopping trips, medical appointments, or purchases that you make on typical days.*

1 Yes, please specify:

2 No

**dp007.other** (cancelled diary payments in section Hurricane)

STRING

END OF GROUP

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**dp008** (cancelled diary withdrawals in section Hurricane)

To the best of your recollection, were there **cash withdrawals** that you would have likely made or wanted to make during your diary period if it weren't for Hurricane Matthew?

1 Yes, please specify:

2 No

**dp008.other** (cancelled diary withdrawals in section Hurricane)

STRING

END OF GROUP

**fq001** (any other information in section Hurricane)

Please tell us anything else you'd like us to know about how Hurricane Matthew affected your diary experience or payment activity. If you don't have anything to add, please just leave the box empty.

STRING

**outro** (Section Hurricane)

Thank you for completing this survey. Your responses are confidential and will be used for research purposes only.

End of section **Hurricane**

Start of section **Closing**

**CS\_001** (HOW PLEASANT INTERVIEW in section Closing)

Could you tell us how interesting or uninteresting you found the questions in this survey?

1 Very interesting

2 Interesting

3 Neither interesting nor uninteresting

4 Uninteresting

5 Very uninteresting

**CS\_003** (comments in section Closing)

Do you have any other comments on the survey? Please type these in the box below.(If you have no comments, please click next to complete this survey.)

STRING

End of section **Closing**

/\* Please note that although question CS\_003 is listed in the routing, the answers are not included in the microdata in the event identifiable information is captured. Cleaned responses are available by request. \*/