Consumers and Mobile Financial Services

March 2012

Board of Governors of the Federal Reserve System

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Preface

The survey and report were prepared by the Consumer Research Section of the Federal Reserve Board's Division of Consumer and Community Affairs (DCCA).

DCCA directs consumer-related functions performed by the Board and the Federal Reserve Banks, including conducting research on financial services policies practices and their implications for consumer financial stability, community development, and neighborhood stabilization. For more information about DCCA, visit the Federal Reserve Board website at www.federalreserve.gov.

DCCA staff members Matthew B. Gross, Jeanne M. Hogarth, and Maximilian D. Schmeiser prepared this article.

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Executive Summary

Mobile devices have increasingly become tools that consumers use for banking, payments, budgeting, and shopping. This report presents findings from an online survey, conducted in December 2011 and January 2012, examining the use of mobile technology to access financial services and make financial decisions.

Key findings of the survey include

- **Mobile phones and mobile Internet access are in widespread use**
  - —87 percent of the U.S. population has a mobile phone
  - —44 percent of mobile phones are smartphones (Internet-enabled)
  - —84 percent of smartphone users have accessed the Internet on their phone in the past week
- **The ubiquity of mobile phones is changing the way consumers access financial services**
  - —21 percent of mobile phone owners have used mobile banking in the past 12 months
  - —11 percent of those not currently using mobile banking think that they will probably use it within the next 12 months
  - —The most common use of mobile banking is to check account balances or recent transactions (90 percent of mobile banking users)
  - —Transferring money between accounts is the second most common use of mobile banking (42 percent of mobile banking users)
- **Mobile phones are also changing the way consumers make payments**
  - —12 percent of mobile phone owners have made a mobile payment in the past 12 months
  - —The most common use of mobile payments was to make an online bill payment (47 percent of mobile payment users)
  - —21 percent of mobile payment users transferred money directly to another person's bank, credit card, or Paypal account
- **Perceptions of limited usefulness and concerns about security are holding back the adoption of mobile financial services**
  - —The primary reason why mobile phone users had not yet adopted mobile banking was that they felt their banking needs were being met without the use of mobile banking (58 percent)
  - —Concerns about the security of the technology were the primary reason given for not using mobile payments (42 percent) and the second most common reason given for not using mobile banking (48 percent)
  - —More than a third of mobile phone users who do not use mobile payments either don't see any benefit from using mobile payments or find it easier to pay with another method
- **The "underbanked" make significant use of mobile financial services**
  - —The underbanked make comparatively heavy use of both mobile banking and mobile payments, with 29 percent having used mobile banking and 17 percent having used mobile payments in the past 12 months
  - —62 percent of the underbanked who use mobile payments have used it to pay bills
  - —10 percent of the completely unbanked report using mobile banking in the past 12 months, and 12 percent have made a mobile payment

Introduction

Mobile phones have clearly become ubiquitous and a standard aspect of daily life for many American consumers in the last decade. Ongoing innovations in mobile finance show some potential to change the way consumers conduct financial transactions by offering consumers new services. Yet, many people remain skeptical of the benefit of mobile financial services and the level of security provided along with such services.

To further understanding of these developments and consumers' usage of and attitudes towards mobile financial services, the Board conducted a consumer survey in late 2011 and early 2012.

Trends in the Utilization of Mobile Banking and Payments

A number of new services allow consumers to obtain financial account information and conduct transactions with their financial institution ("mobile banking") and others allow consumers to make payments, transfer money, or pay for goods and services ("mobile payments").

As the market share of Internet-enabled smartphones continues to grow, the utilization of mobile banking and mobile payment technologies also increases.[1] As of March 2011, nearly one out of every five Americans with both a bank account and a mobile phone has used their phone to view account balances, receive account alerts, and conduct banking with their financial institution in the past 90 days.[2]

Although mobile payments have been adopted more slowly by consumers in the U.S. than in many other countries, these services may become more popular over the coming years as the technology evolves and if the services become more widely accepted as a form of payment. In September 2011, for example, Google launched the Google Wallet service, which allows consumers to use smartphones equipped with a near field communication (NFC) chip to make "tap payments" at any retailer accepting MasterCard PayPass. Besides Google, many other firms—including mobile phone carriers, credit card issuers, and payment networks—are investing in mobile wallet technology. As the number of phones equipped with NFC increases, mobile payments may also increase.

Consumers respond to timely financial incentives and emotional appeals. Recent survey data show that some consumers view mobile payments as time-saving and convenient while providing them with increased access to, and control of, their finances. Despite these positive mobile finance attributes and perceptions, consumers also remain concerned about the cost and the security risks inherent in mobile financial transactions.[3]

Potential Utilization for "Underbanked" and "Unbanked" Consumers

Mobile phone use is high among younger generations, minorities, and those with low levels of income—groups that are prone to be unbanked or underbanked. Mobile banking and mobile payments have the potential to expand financial access to the unbanked and underbanked by reducing transaction costs and increasing the accessibility of financial products and services.

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[1] The Pew Research Center reports that 35 percent of American adults owned a smartphone as of May 2011. Pew Internet study, 2011, *35% of American Adults Own a Smartphone* (http://pewinternet.org/~/media//Files/Reports/2011/PIP_Smartphones.pdf).

[2] In its July 2011 report on smartphone banking security (based on a March 2011 survey), Javelin Strategy and Research finds that 19 percent of U.S. consumers are using mobile banking. Javelin, 2011, "Smartphone Banking Security: Mobile Banking Utilization Stalls on Consumer Fears."

[3] Javelin, 2011, *Smartphone Banking Security: Mobile Banking Utilization Stalls on Consumer Fears*.

A significant number of Americans do not have a bank account of any kind, and many make regular use of alternative financial services such as payday loans, check cashers, rent-to-own services, money orders, or pawn shops. A 2009 study by the Federal Deposit Insurance Corporation (FDIC) found that 8 percent of Americans had no checking or savings account, and thus were defined as unbanked.[4] An additional 18 percent had a bank account but had used an alternative financial service at least once per year and so were classified as underbanked.

While there remains a digital divide in computer Internet access across the socioeconomic spectrum, this divide does not hold true for mobile phone access. The 2011 Pew Internet study showed that 83 percent of American adults have a mobile phone, and 35 percent have a smartphone that can access the Internet. Moreover, adoption of mobile phones is actually higher among minorities, as 89 percent of non-Hispanic blacks and 86 percent of Hispanics own a mobile phone.

Indeed, minorities are also more likely to own a smartphone than non-Hispanic whites, with 44 percent of both non-Hispanic blacks and Hispanics owning a smartphone compared with 30 percent of non-Hispanic whites. While mobile phone and smartphone adoption is less prevalent at lower levels of income, approximately 75 percent of U.S. adults in households earning less than $20,000 per year have a mobile phone of some type, and 20 percent have a smartphone.[5]

Younger Age Groups: Mobile Phone and Mobile Banking Adoption

Unsurprisingly, mobile phone adoption is highest for younger age groups: only 5 percent of individuals ages 18 to 24 do not have a mobile phone, and 49 percent have a smartphone. In contrast, 44 percent of those ages 65 and over do not have a mobile phone, and only 11 percent have a smartphone.[6]

Furthermore, and perhaps more surprisingly, a recent survey by the Center for Financial Services Innovation (CFSI) shows that individuals under the age of 25 are increasingly underbanked—some as a matter of choice—and appear comfortable with alternative financial services.[7] Given the prevalence of mobile phone usage among young individuals, minorities, and low-income families—groups most likely to be unbanked or underbanked—there is potential for mobile financial services to help integrate these individuals into the financial mainstream.

Survey Background

In consultation with a mobile financial services advisory group made up of key Federal Reserve System staff with relevant consumer research backgrounds, the Consumer Research Section in the Federal Reserve Board's Division of Consumer and Community Affairs designed a survey instrument to examine consumers' usage of and attitudes towards mobile phones and mobile financial services.

The survey was administered by Knowledge Networks, an online consumer research company, on behalf of the Board. The survey was conducted using a sample of adults ages 18 and over from KnowledgePanel®, a proprietary, probability-based web panel of more than 50,000 individuals from randomly sampled households; the sample was designed to be representative of the U.S. population. After pretesting, the data collection for the survey began on December 22, 2011 and concluded on January 9, 2012. The 2,290 respondents completed the survey in approximately 15 minutes (median time).

The number of respondents sampled and participating in the survey, and the survey completion rates, are presented in **table 1**. A total of 3,382 e-mail solicitations to participate in the survey were sent out to the KnowledgePanel, and 2,290 individuals completed the survey fully (a "cooperation rate" yield of 68 percent). To enhance the cooperation rate, Knowledge

Table 1. Key survey response statistics: Main interview

Number sampled for main survey	Qualified completes	Cooperation rate
3,382	2,290	68%

[4] Federal Deposit Insurance Corporation, *2009 Survey of Unbanked and Underbanked Households* (www.fdic.gov/householdsurvey/full_report.pdf).

[5] Pew Internet study, 2011, *35% of American Adults Own a Smartphone* (http://pewinternet.org/~/media//Files/Reports/2011/PIP_Smartphones.pdf).

[6] Ibid.

[7] Center for Financial Services Innovation (CFSI), 2010, *Financial First Encounters: An Examination of the Fractured Financial Landscape Facing Youth Today* (http://cfsinnovation.com/sites/default/files/first_encounters_white_paper_12_16_0.pdf).

Networks sent e-mail reminders to non-responders on days three and six of the field period.

The responses to all the survey questions are presented in Appendix 2 in the order in which they were asked of respondents. A table of summary statistics for the respondent demographics is also included as table B.87. Beginning at table B.88, cross-tabulations are presented of consumers' use of online banking, telephone banking, mobile banking, and mobile payments by age, race, gender, education, and income.

The following sections of this report summarize key findings from the Knowledge Networks survey of consumers, with a focus on how consumers are using mobile phones to conduct their banking, make payments, enhance information gathering while shopping, and manage their finances. All data were weighted to yield estimates for the U.S. population. Only questions pertaining to these topics are discussed in the report; however, the complete survey questionnaire and the results of the entire survey are summarized in Appendix 1 and Appendix 2.

How Are Consumers Interacting with Financial Institutions?

Survey respondents were asked a set of screening questions that covered whether or not they had a bank account, access to the Internet, and ownership of mobile phones or smartphones. Survey responses indicate that the majority of American consumers use some form of technology to interact with their financial institution.

As shown in **figure 1**, of those consumers with regular Internet access and a bank account, 68 percent used online banking in the past 12 months. Telephone banking is the second most commonly used method of accessing financial services, with 33 percent of banked consumers reporting that they used it in the past 12 months. Mobile banking and mobile payments are the least common methods of accessing financial services, as just over a fifth of respondents with mobile phones and a bank account report using mobile banking and only 11 percent report using mobile payments in the past 12 months.

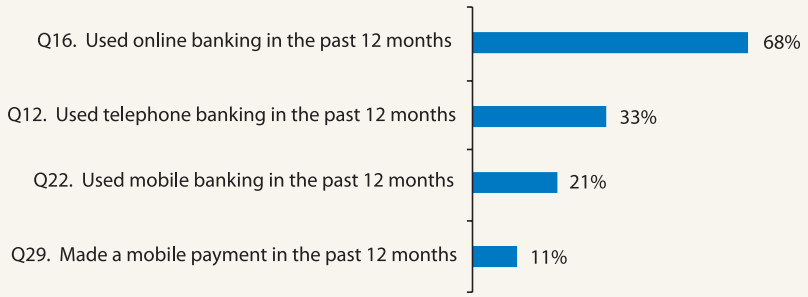
However, as discussed in the following section, mobile banking access appears to be gaining traction with consumers and is likely to overtake telephone banking access in the next couple of years (as measured by consumers' expectations regarding their future use of the technology).

Online Banking

Three out of ten respondents (30 percent) who use online banking are between ages 30 and 44, while 20 percent of the online banking users are age 60 and older (see tables B.88, B.91, B.94, B.97, and B.100 in Appendix 2). Online banking users are predominantly non-Hispanic whites (73 percent), while Hispanics and non-Hispanic blacks comprise about 12 percent and 8 percent of the online banking community, respectively.

Online banking users are split evenly among men and women. Use of online banking is generally unrelated to household income, with the share of online banking users by income category corresponding to their share of the population. Exceptions occurred at the tails of the income distribution, with those individuals earning less than $25,000 per year being significantly less likely to use online banking than their share of the population would suggest, while those individuals earning more than $100,000 per year being significantly more likely to use online banking than their share of the population would suggest. Level of education and use of online banking have a linear relationship, with online banking use increasing as education level increases: individuals with a

Figure 1. Usage of different means of accessing banking services



Note: The denominator varies across services due to question screening.

bachelor's degree or higher account for 39 percent of online banking users relative to 30 percent of individuals with a bank account.

Current Use of Mobile Banking and Payments

Mobile Banking

The Federal Reserve survey defines mobile banking as "using a mobile phone to access your bank account, credit card account, or other financial account. Mobile banking can be done either by accessing your bank's web page through the web browser on your mobile phone, via text messaging, or by using an application downloaded to your mobile phone."

A significant number of mobile phone users have already adopted mobile banking. Nearly 21 percent of mobile phone users in the survey report that they used mobile banking in the past 12 months.[8] Moreover, among those consumers who do not currently use mobile banking, 11 percent report that they will "definitely" or "probably" use mobile banking in the next 12 months. An additional 17 percent of those who report that they are unlikely to use mobile banking in the next 12 months report that they will "definitely" or "probably" adopt mobile banking at some point. Adding all these respondents together would imply peak adoption of 42 percent of all mobile phone owners.[9] As smartphone users are more likely to adopt mobile banking than non-smartphone users, increasing smartphone adoption should further fuel mobile banking adoption.

Use of mobile banking appears to be highly correlated with age (**table 2**), as individuals between ages 18 and 29 account for approximately 44 percent of mobile banking users, relative to 22 percent of mobile phone users. Conversely, individuals age 60 and over account for only 6 percent of all mobile banking users, while at the same time they represent 24 percent of all mobile phone users.

Non-Hispanic black and Hispanic users show a disproportionately high rate of adoption of mobile banking (**table 3**), at 16 percent and 17 percent of all mobile banking users relative to 11 percent and 13 percent of mobile phone users, respectively. Meanwhile, mobile banking users are split evenly between males and females, and use of mobile banking is generally unrelated to household income (**table 4**), with

Table 2. Use of mobile banking in the past 12 months by age
Percent, except as noted

Age categories	Yes	No	Total
18–29	43.5	16.8	22.4
30–44	35.7	24.7	27
45–59	14.7	30.2	26.9
60+	6.1	28.4	23.7
Number of respondents	**372**	**1,626**	**1,998**

Note: This is table B.89 in Appendix 2.

Table 3. Use of mobile banking in the past 12 months by race
Percent, except as noted

Race/ethnicity	Yes	No	Total
White, Non-Hispanic	60.3	71.5	69.2
Black, Non-Hispanic	16.2	10	11.3
Other, Non-Hispanic	5.2	5.8	5.6
Hispanic	17.1	11.6	12.8
2+ Races, Non-Hispanic	1.2	1.1	1.2
Number of respondents	**372**	**1,626**	**1,998**

Note: This is table B.92 in Appendix 2.

[8] There is a wide range of estimates of mobile banking adoption. comScore estimates that 13.9 percent of all mobile phone users had adopted mobile banking as of Q2 2011. Javelin estimated that 19 percent of mobile phone users had adopted mobile banking as of March 2011 (Smartphone Banking Security Report); however, the firm subsequently reports that mobile banking adoption jumped to 30 percent as of June 2011 (comScore, 2011, *Mobile Banking Financial Institution Scorecard*).

[9] The denominator for each of the questions on mobile banking adoption varies, thus the potential adoption rate is less than the sum of the percentages of respondents who indicate that they have or will adopt mobile banking. There are a total of 2,002 mobile phone users in our survey: 418 are current users of mobile banking, 182 report that they are likely to use mobile banking in the next 12 months, and 246 report that they will likely use mobile banking at some point in the future (for a total of 846 potential users, or 42 percent of all 2,002 mobile phone users).

Table 4. Use of mobile banking in the past 12 months by income group

Percent, except as noted

Income group	Yes	No	Total
Less than $25,000	12.8	19.9	18.4
$25,000–$39,999	19	16.6	17.1
$40,000–$74,999	27.5	26.5	26.7
$75,000–$99,999	12.9	14	13.8
$100,000 or greater	27.9	22.9	24
Number of respondents	**372**	**1,626**	**1,998**

Note: Table B.101 in Appendix 2.

the share of mobile banking users by income category corresponding to their share of the mobile phone user population. As with online banking, exceptions occurred at the tails of the income distribution, with those individuals earning less than $25,000 per year being significantly less likely to use mobile banking than their share of the mobile phone user population would suggest, while those individuals earning more than $100,000 per year being significantly more likely to use mobile banking than their share of the mobile phone user population would suggest. Mobile banking is highly correlated with education (**table 5**): 73 percent of all mobile banking users have at least some college education, but this education group represents only 60 percent of all mobile phone users.

Table 5. Use of mobile banking in the past 12 months by education group

Percent, except as noted

Education (categorical)	Yes	No	Total
Less than high school	5.5	12.1	10.7
High school	21.5	31.8	29.6
Some college	39	27.4	29.8
Bachelor's degree or higher	34	28.8	29.9
Number of respondents	**372**	**1,626**	**1,998**

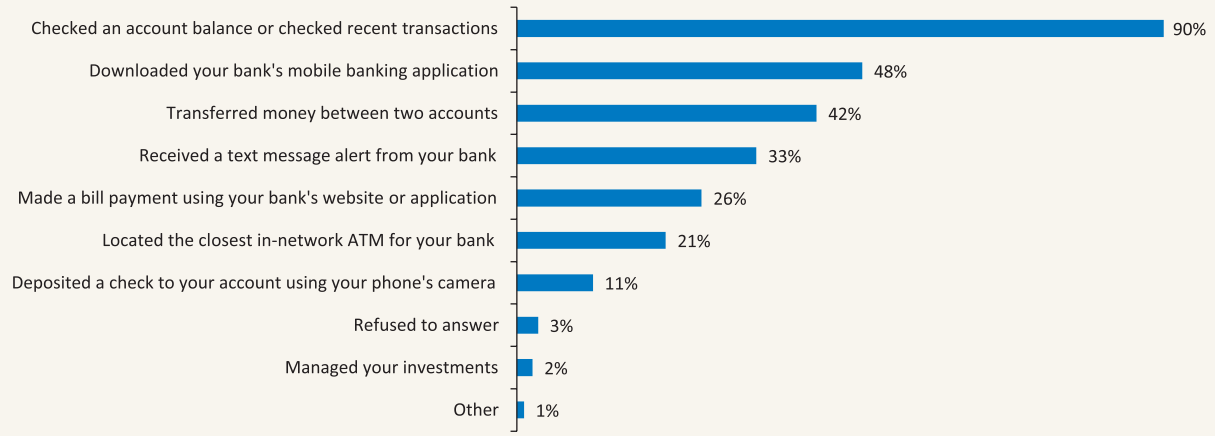
Note: Table B.98 in Appendix 2.

By far, checking financial account balances or transaction inquiries were the most common mobile banking activity, with 90 percent of mobile banking users having performed this function in the past 12 months (**figure 2**). Less prevalent activities were transferring money between accounts (42 percent) or receiving a text message alert from a bank (33 percent). Less frequently used mobile banking functions include making online bill payments from a bank account (26 percent), locating an in-network ATM (21 percent), and depositing a check by phone (11 percent). Lastly, mobile investment management is utilized by only 2 percent of mobile banking users. Many mobile banking users appear to be making use of their banks' mobile applications, as 48 percent have installed such an application on their phones.

Consumers report using mobile banking up to 60 times per month; however, the median number of mobile banking transactions is four or five times in a typical month.

Of the consumers who use mobile banking, many appear to be quite satisfied with their experiences, as

Figure 2. Using your mobile phone, have you done any of the following in the past 12 months?



Note: This was question 25 in the survey (see Appendix 1); number of respondents was 372.

62 percent report being "very satisfied" with their experiences, and another 32 percent report being "somewhat satisfied" with their experiences.

Among those consumers with mobile phones who do not currently use mobile banking, the top two reasons for not using the service are that they believe their banking needs are met without mobile banking (58 percent) and that they are concerned about security (48 percent) (**figure 3**). Less commonly cited reasons include a lack of trust in the technology to process transactions properly (22 percent), the high cost of data access on mobile phones (18 percent), and the small size of the mobile phone screen (17 percent).

Consumers who express concerns about the security of mobile banking are concerned with hackers gaining access to their phone remotely (54 percent), losing their phone or having it stolen (19 percent), and experiencing data interception by a third party (18 percent). If these concerns were addressed, many non-users would be willing to adopt mobile banking.

Moreover, the potential uses of mobile banking by those who have yet to adopt it largely mirror those of current users. The majority is interested in checking financial account balances or recent transactions (55 percent), while fewer are interested in receiving text message alerts from their bank (30 percent), transferring money between accounts (25 percent), or making bill payments (24 percent).

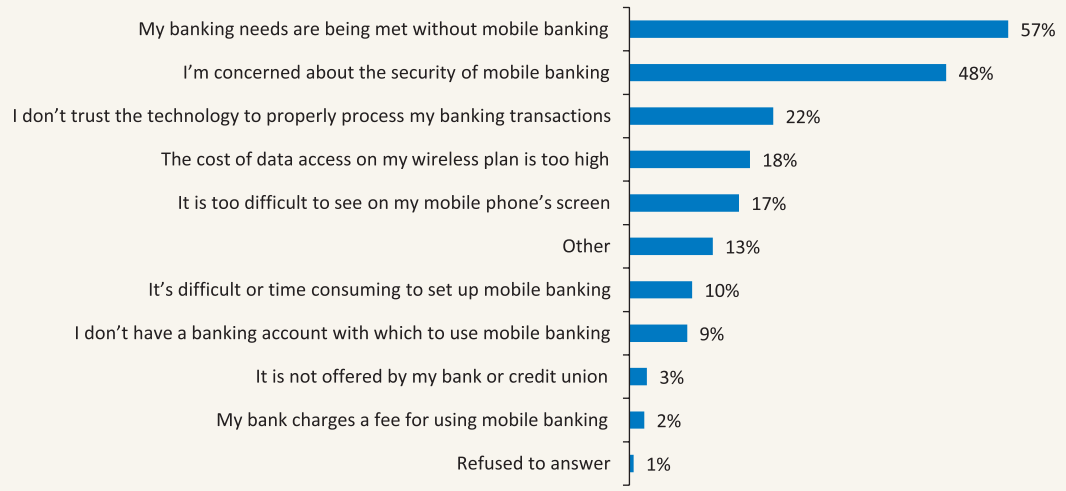
Mobile Payments

The Federal Reserve survey defined mobile payments as "purchases, bill payments, charitable donations, payments to another person, or any other payments made using a mobile phone. Mobile payments can be used by accessing a web page through the web browser on your mobile device, by sending a text message (SMS), or by using a downloadable application on your mobile device. The amount of the payment may be applied to your phone bill (for example, Red Cross text message donation), charged to your credit card, or withdrawn directly from your bank account."

Consumers were less likely to adopt mobile payments than mobile banking, with only 12 percent of mobile phone users reporting that they made a mobile payment in the past 12 months. Mobile payment users also perform a narrower set of transactions than mobile banking users, with the most common activity being payment of bills (47 percent), followed by making online purchases (36 percent) and transferring money directly to another person (21 percent). All other transactions (e.g., receiving a payment, texting to make a charitable donation) are used by less than 10 percent of those making mobile payments.

Mobile payments are disproportionately used by younger consumers (**table 6**). Individuals age 18 to 29 account for 37 percent of mobile payment users relative to 22 percent of all mobile phone users, while

Figure 3. What are the main reasons you have decided not to use mobile banking?



Note: This was question 36 in the survey (see Appendix 1); number of respondents was 1,626.

Table 6. Use of mobile payments in the past 12 months by age
Percent, except as noted

Age categories	Yes	No	Total
18–29	37.3	20.3	22.4
30–44	35.9	25.6	26.9
45–59	16.9	28.5	27
60+	10	25.7	23.7
Number of respondents	**213**	**1,780**	**1,993**

Note: This is table B.90 in Appendix 2.

individuals age 30 to 44 account for a further 36 percent of mobile payment users relative to 27 percent of all mobile phone users. Hispanic consumers are active users of mobile payments, accounting for approximately 21 percent of all mobile payment users relative to 13 percent of all mobile phone users (**table 7**). In contrast, non-Hispanic whites are proportionally less likely to use mobile payments, as they make up 58 percent of mobile payment users but are 69 percent of mobile phone users. Almost 13 percent of non-Hispanic blacks use mobile payments, which is comparable to their 11 percent share of the mobile phone user population. Females are slightly more likely to use mobile payments than males, accounting for 55 percent of all users (**table 8**). Income does not play a role in mobile payment use, as each income group represents roughly the same percentage as it does in the overall mobile phone user sample (**table 9**). Similarly, mobile payment use by education level is roughly proportionate to its representation in the mobile phone user population (**table 10**).

Consumers use a variety of methods to make mobile payments, but the most common method is to input a credit card, debit card, or prepaid card number into a mobile phone (66 percent). Other mobile payment techniques used by consumers include making payments directly from a bank account (45 percent); using Google Wallet, Paypal, or iTunes (22 percent); or adding a payment to a mobile phone bill (8 percent).

Table 7. Use of mobile payments in the past 12 months by race
Percent, except as noted

Race/ethnicity	Yes	No	Total
White, Non-Hispanic	58.3	70.8	69.3
Black, Non-Hispanic	12.9	10.9	11.2
Other, Non-Hispanic	7.1	5.4	5.6
Hispanic	20.9	11.6	12.8
2+ Races, Non-Hispanic	0.9	1.2	1.2
Number of respondents	**213**	**1,780**	**1,993**

Note: This is table B.93 in Appendix 2.

Table 8. Use of mobile payments in the past 12 months by gender
Percent, except as noted

Sex	Yes	No	Total
Female	55	52.7	53
Male	45	47.3	47
Number of respondents	**213**	**1,780**	**1,993**

Note: This is table B.96 in Appendix 2.

Consumers use mobile payment services less frequently than they do mobile banking services. The median number of mobile payments in a typical month is one. Although some respondents reported making as many as 24 mobile payments per month, fewer than 7 percent of respondents make more than five payments in a typical month.

As with mobile banking, users of mobile payments appear to be quite satisfied with their experiences:

Table 9. Use of mobile payments in the past 12 months by income group
Percent, except as noted

Income group	Yes	No	Total
Less than $25,000	19.1	18.5	18.5
$25,000–$39,999	20.6	16.7	17.2
$40,000–$74,999	23	27.2	26.7
$75,000–$99,999	11.7	14	13.7
$100,000 or greater	25.6	23.6	23.9
Number of respondents	**213**	**1,780**	**1,993**

Note: This is table B.102 in Appendix 2.

Table 10. Use of mobile payments in the past 12 months by education group
Percent, except as noted

Education (categorical)	Yes	No	Total
Less than high school	7.2	11.2	10.7
High school	27.9	29.9	29.7
Some college	37	28.7	29.7
Bachelor's degree or higher	27.9	30.1	29.9
Number of respondents	**213**	**1,780**	**1,993**

Note: This is table B.99 in Appendix 2.

55 percent report being "very satisfied" with their experiences and 33 percent report being "somewhat satisfied" with their experiences.

Although security is the dominant reason why individuals do not use mobile payments (42 percent), there are many consumers who do not see any value in mobile payments; 36 percent report that it is easier to pay with other methods, and 37 percent report that they do not see any benefit from using mobile payments (**figure 4**). Other reasons for not using include the lack of necessary features on a phone (31 percent) and a lack of trust in the technology to properly process payments (20 percent).

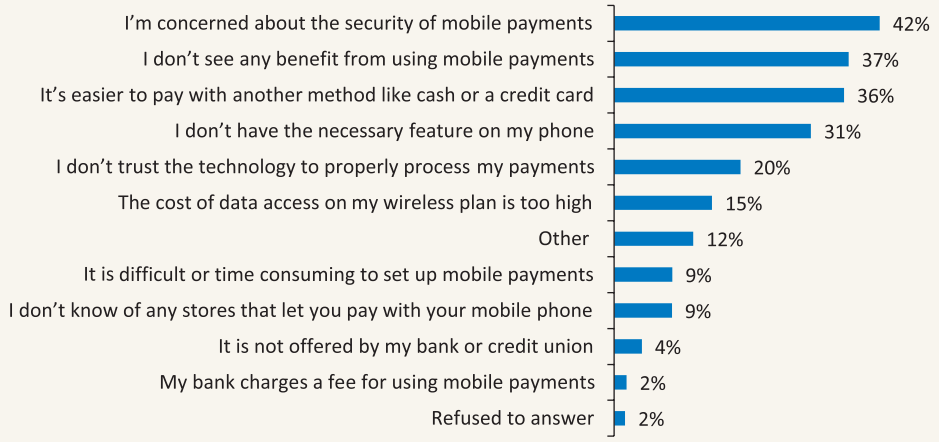
If the concerns of non-users of mobile payments were addressed, those consumers express that they would have an interest in using mobile payments for a variety of activities. In particular, 34 percent report that they would pay bills online using their phone, 28 percent would receive coupons on their phone, and 22 percent say they would receive location-based offers or buy goods and services online. Making person-to-person payments is listed by 17 percent of respondents as a preferred mobile payment activity; the same percentage expresses a similar sentiment for using a mobile phone as the payment mechanism at a cash register or to use a phone as a "virtual wallet." Consumers also express some interest in using mobile payments to transfer money to friends or relatives in other countries (7 percent).

Mobile Security

Two major impediments to consumers' adoption of mobile banking and mobile payment technologies are (1) concerns about security and (2) the possibility of hackers remotely accessing consumers' phones. Consumers' beliefs about whether mobile banking or mobile payment technologies are secure is correlated with their use of these technologies. Consumers who use mobile banking or mobile payments are more likely to report that it is a secure process than those who do not use mobile banking or mobile payments. For example, when consumers were asked to rate the security of text messages for mobile banking, those who are mobile banking users rate the service "very safe" (18 percent) or "somewhat safe" (42 percent). In contrast, 38 percent of non-users of mobile banking report that they "don't know" whether or not text messages for mobile banking are safe, while only 6 percent rate the service "very safe" and 27 percent rate it "somewhat safe."

The dichotomy between users and non-users of mobile banking is even more pronounced when asked about the overall security of mobile banking for protecting personal information. Two-fifths of non-users report that they do not know if it is secure, while 13 percent of this group rate mobile banking "very unsecure" and 23 percent rate the service "somewhat unsecure." Mobile banking users, however, rate mobile banking as "very safe" (18 percent) or "somewhat safe" (56 percent) in maintaining their personal information.

Figure 4. What are the main reasons why you have not used mobile payments?



Note: This was question 39 in the survey (see Appendix 1); number of respondents was 1,780.

Other Mobile Financial Services

There appears to be widespread interest among mobile phone users in expanding how they use mobile technology to access financial services, despite the Federal Reserve survey finding that only 21 percent of respondent mobile phone users have adopted mobile banking and only 12 percent of respondents have adopted mobile payments.

Consumers were asked to select the types of activity they would be interested in performing with their mobile phones assuming the function were made available to them (**figure 5**). Nearly one-half (48 percent) of consumers in the survey express an interest in using their phone to compare prices while shopping. Similarly, one-third indicate that they would like to use their mobile phones to receive location-based offers and promotions, and 31 percent indicate that they would like to receive and manage discount offers and coupons. Consumers also report that they would use their mobile phones to manage their personal finances, as 31 percent indicate that they would like to use their mobile phones to track their finances on a daily basis.

Consumers in the survey have a limited interest in using their mobile phone as a "mobile wallet": 25 percent indicate they would like to use their mobile phone to pay at the point of sale. Given the current mobile payment adoption rate of 12 percent, this would double the use of mobile payments. One fourth indicate they would use it as a membership card, and 21 percent indicate they would use it to organize and track gift cards, loyalty points, and reward points. In a related potential application of mobile technology, 23 percent of consumers indicate that they would like to use their mobile phones as a form of photo identification.

Shopping Behavior

The adoption of smartphones with barcode scanning software and Internet access has the potential to substantially alter consumer behavior in the retail environment. With this technology, consumers can quickly and easily compare prices across retailers

Figure 5. Would you like to use your mobile phone for any of the following purposes, assuming they were made available to you?

Note: This was question 46 in the survey (see Appendix 1); number of respondents was 2,002.

while in store or online, or locate an item that is out of stock.

Consumers can also browse product reviews or get product specifications with little effort. Thus, consumers may become better informed about the products they purchase and find lower prices; however, the ease with which these tasks can be performed might also encourage impulse buying.

Consumers already make significant use of the Internet to inform their major purchases. A majority of respondents (58 percent) indicate that they comparison-shop online, and the same percentage say they look at product reviews before making a large purchase while at a retail store. Even though security concerns may make consumers wary of mobile devices as the payment mechanism for point-of-sale purchases, the technology can enable shopping and comparisons of products and services. About one in eight (16 percent) mobile phone users report using their mobile phone for online shopping, and nearly one-fifth of consumers with mobile phones (19 percent) say that they use their mobile phone to comparison shop while at a retail store.

Despite the relative novelty of barcode scanning applications, the Federal Reserve survey found that 12 percent of mobile phone users report using a barcode scanning application for price comparisons. One in six (16 percent) mobile phone users report using their mobile phone to browse online shopping reviews while in the store.

Many consumers who use their mobile phone to comparison-shop report that they altered their decisions as a result: 65 percent who have comparison-shopped in a store report that they changed where they made a purchase after comparing prices, and 77 percent report that they changed what they purchased as a result of reading product reviews on their mobile phone while at a retail store.

Meanwhile, as a growing number of retailers develop their capabilities in the mobile space, opportunities will arise for the use of mobile advertisements and offers. Thirty-seven percent of consumers in the survey report signing up for coupons or special offers by e-mail from retail stores in the past 12 months, and 73 percent of these consumers report having made a purchase as a result of these promotions. Moreover, 28 percent of all consumers report signing up with an online coupon or offer site such as Groupon or Living Social.

Personal Financial Management and Budgeting

Some consumers appear to be actively managing their finances using their computer and some form of personal financial management (PFM) tool. For the purposes of this survey, the Federal Reserve defined a PFM tool as a "program or website used to track your household finances (e.g., Quicken, Mint.com, Excel, or a website provided by a bank)." Slightly more than one in five consumers (21 percent) report that they, or someone in their household, use a program or website to track their household finances. Most consumers who track their finances are long-time users—42 percent report using the program or website for more than five years. The median consumer uses PFM tools about five times a month (just about once a week).

Access on a mobile phone to information about financial accounts has the potential to shape consumers' financial decisions. For example, 67 percent of mobile banking users report using their mobile phone to check account balances or available credit before making a large purchase in the past 12 months. Of those who checked their balance or available credit, 59 percent report that they decided not to buy an item because of the amount of money in their bank account or the amount of available credit.

Furthermore, some mobile phones not only allow their users to access financial accounts but also serve as PFM tools. For example, 7 percent of mobile phone users report using their mobile phone to track purchases and expenses. Among this group, 38 percent use a mobile application for expense tracking, 10 percent use a spreadsheet, 47 percent use the web browser to access a website, 12 percent send text messages, and 21 percent take notes in a notepad or word processor.

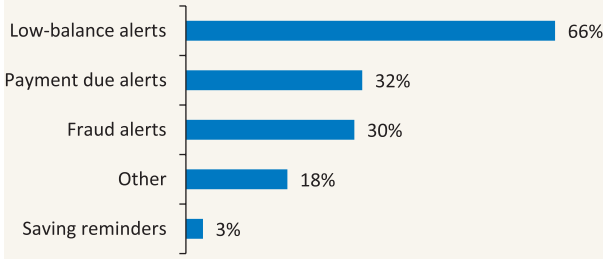
Consumers can take advantage of other financial management tools on their mobile phones, such as text alerts, to make smarter financial decisions. Alerts, reminders, and similar services provided by banks are meant to encourage positive consumer behaviors and, given the positive response to low-balance alerts, it seems that text message notices are an effective tool for encouraging consumers to engage in better financial behaviors.

One-third of mobile banking users indicate that they receive text message alerts from their bank and, out of this group, 66 percent receive "low-balance alerts" (figure 6). Nearly all report taking some action in response to getting a low-balance text alert from their bank: transferring money into the account with the low-balance (58 percent), reducing their spending (41 percent), or depositing additional money into the account (16 percent) (figure 7). Almost one-third of text message bankers (31 percent) indicate that they receive "payment due alerts," and 3 percent indicate that they receive "savings reminders."

Unbanked and Underbanked

As previously discussed, mobile technologies offer an opportunity to draw the unbanked and underbanked into the mainstream financial system by providing easily accessible and low-cost financial services.

Figure 6. What kind of text alerts do you receive?



Note: This was question 74 in the survey (see Appendix 1); number of respondents was 111.

Who Are the Unbanked and Underbanked?

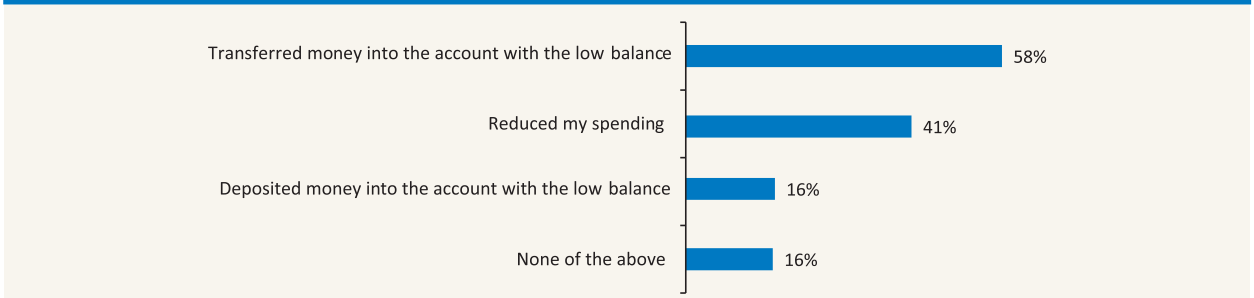
For purposes of this report, an underbanked consumer is defined as a respondent who has a checking, savings, or money market account, but who also uses an alternative financial service such as auto title lending, payday loans, a check-cashing service, or a payroll card. An unbanked consumer is defined as someone who does not currently have a checking, savings, or money market account (see box 1).

The proportion of respondents who report being unbanked or underbanked in this survey closely tracks that found in previous national studies. In this study, about 11 percent of the U.S. adult population is currently unbanked, compared with approximately 8 percent according to the 2009 Federal Deposit Insurance Corporation (FDIC) National Survey of Unbanked and Underbanked Households and 8 percent according to the Federal Reserve's 2007 Survey of Consumer Finances (SCF).[10]

Results indicate that a further 11 percent of the U.S. population is underbanked. This rate is well below the 18 percent underbanked rate found in the FDIC study; however, the definition of underbanked here is more narrow than the FDIC's definition, as the latter includes use of services such as money orders when classifying an individual as underbanked.

[10] Bucks, Brian K., Arthur B. Kennickell, Traci L. Mach and Kevin B. Moore, 2009, "Changes in U.S. Family Finances from 2004 to 2007: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin* (www.federalreserve.gov/pubs/bulletin/2009/pdf/scf09.pdf).

Figure 7. Thinking of the most recent low-balance alert you received by text message, which of the following actions did you take after receiving the alert?



Note: This was question 75 in the survey (see Appendix 1); number of respondents was 78.

Box 1. Alternatives to Traditional Banking and Financial Services

The survey included other questions on consumers' use of financial products, consumer financial behaviors, and consumer attitudes. Among those questions were ones on alternative financial services; results are reported here because of the general interest in these topics among consumer educators and community development professionals.

Over the past several decades, new financial products and services have arisen to meet the needs of consumers who may not have had their financial needs met by mainstream financial institutions, or who wanted an alternative to mainstream financial institutions.

The spreading availability and use of payday lenders, check cashers, and prepaid debit cards are prime examples of this trend.

These products and services charge fees and effective interest rates that, in some cases, can impose a significant burden on the finances of consumers and can be detrimental to consumers' long-term financial well-being.

Payday lenders typically charge consumers fees ranging from 15 to 20 percent of the loan amount for a two-week loan, which translates into an Annual Percentage Rate (APR) ranging from 390 percent to 520 percent.[1]

[1] Avery, Robert B. and Katherine A. Samolyk, 2011, *Payday Loans versus Pawn Shops: The Effects of Loan Fee Limits on Household Use*, Working Paper (www.frbsf.org/community/conferences/2011ResearchConference/docs/2-avery-paper.pdf).

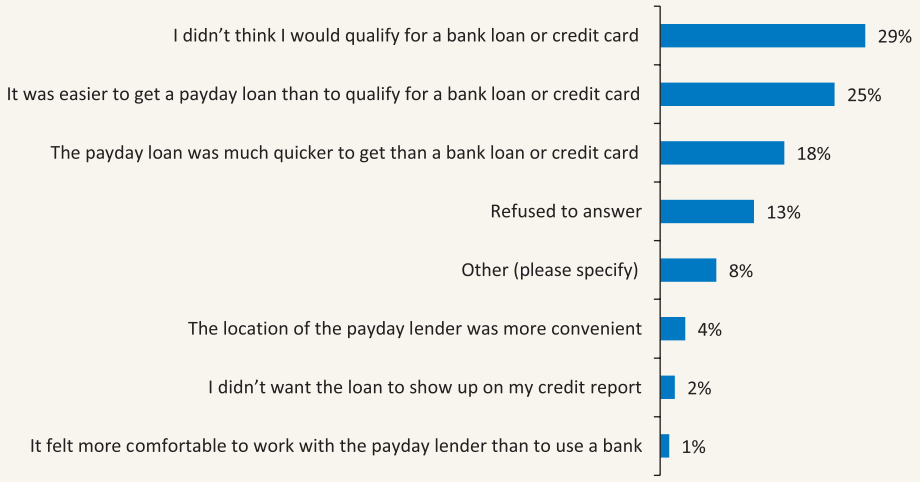
Among the various alternative financial products and services, use of prepaid cards is the most common in our sample—more than half (55 percent) of the respondents report using some type of prepaid card. About one out of seven respondents (15 percent) use a general purpose prepaid card, 5 percent have a government provided prepaid card, and 2 percent have a payroll card.

Why Consumers Use Payday Lenders

Eleven percent of respondents in our sample report that they or their partner/spouse have used a payday loan, but only 5 percent report having done so in the past 12 months. As shown in **figure A**, the main reasons for using payday loans or advances are perceptions that the borrower would not qualify for a bank loan or credit card (29 percent), that payday loans are easier to get than a bank loan or credit card (25 percent), and that payday loans are quicker to receive than other loans (18 percent). Few respondents indicate that the reason for using the payday lender is convenience (4 percent) or level of comfort with banks (1 percent).

Besides payday lenders and prepaid cards, the use of the other types of alternative financial services was quite rare in our sample. Only 4 percent of the overall sample reports having used a check-cashing service, auto title loan, or layaway loan in the past 12 months.

Figure A. What was the main reason for using a payday loan or payday advance service rather than a bank loan or credit card?



Note: This was question 6 in the survey (see Appendix 1); number of respondents was 223.

Why Are Consumers Unbanked and Underbanked?

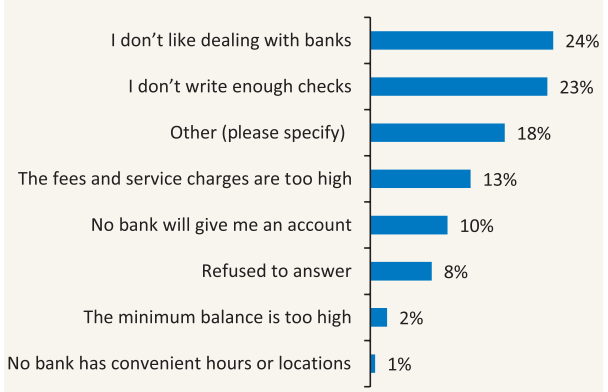
From this survey, the reasons reported for being unbanked largely mirror those found in the 2007 SCF. The most commonly cited reason is a general dislike of dealing with banks (24 percent) (**figure 8**). Meanwhile, 23 percent report that they do not write enough checks to justify owning an account, and 13 percent indicate that the fees and service charges on an account are too high. A further 10 percent of the unbanked report that banks would not allow them to open an account.

This order of response frequency for why consumers remain unbanked tracks that found in the 2007 SCF, and the magnitudes are nearly identical. For example, 25 percent of unbanked respondents to the SCF report that they do not have a checking account because they do not like dealing with banks, and 19 percent report that they don't write enough checks to make it worthwhile.

Mobile Device Use by the Unbanked and Underbanked

Although 11 percent of all individuals are unbanked, they are not necessarily "unphoned." Among individuals who are unbanked, 64 percent have access to a mobile phone and 18 percent have access to a smartphone. More remarkably, 91 percent of the underbanked have a mobile phone and 57 percent have a smartphone—rates far above those for the overall population.

Figure 8. Please choose the reason why you do not have a checking, savings, or money market account from the following list:



Note: This was question 3 in the survey (see Appendix 1); number of respondents was 200.

The Unbanked and Mobile Banking

The utilization of mobile banking among the unbanked is low, with only 10 percent reporting its use in the past 12 months. Although the concept of an unbanked mobile banking user seems counterintuitive, 32 percent of unbanked individuals do, nevertheless, report using a debit card or check card in the past 12 months. Recall that our definition of mobile banking used here includes "using a mobile phone to access your bank account, credit card account, or *other financial account* [emphasis added]." Respondents may be referring to another financial account, such as a payroll card or prepaid card, often marketed as a "debit" card.

Additionally, 19 percent of the unbanked report using a general purpose prepaid card in the past 12 months, and 9 percent report using a major credit card in the past 12 months. Mobile payment adoption among the unbanked is 12 percent, which is approximately the same as in the overall population. Given the sample size of the survey, the number of individuals who are unbanked and use mobile financial services is fewer than 20, which prevents detailed analysis of their behavior.

The Underbanked and Mobile Financial Services

The underbanked population makes substantial use of mobile financial services. Almost 29 percent of the underbanked with mobile phones report using mobile banking in the past 12 months, while 17 percent report using mobile payments.

As with all other consumers, the primary use for mobile banking among the underbanked is to check account balances, with 89 percent utilizing this service. Overall, the underbanked use mobile banking for the same purposes as the general population, with only slightly lower rates for making bill payments (20 percent relative to 26 percent) and significantly higher rates for transferring money between their accounts (55 percent relative to 42 percent).

Although the underbanked are more likely than the general population to use mobile payments, the services that they use largely mirror those of the general

population with one notable exception: the underbanked are substantially more likely to make bill payments using their mobile phones. Specifically, 62 percent of underbanked mobile payments users report paying bills, with their mobile phone in the past 12 months compared with 47 percent of the overall population of mobile phone users.

Conclusion

The evolution of mobile technology has the potential to empower consumers and expand access to financial services for previously underserved populations. The prevalence of mobile phone access among minorities, low-income individuals, and younger generations creates the possibility of using mobile technology to expand financial inclusion to previously underserved populations.

The disproportionate use of mobile bill payment by the underbanked found in our survey is one example of how this technology can improve financial access for these groups. Mobile banking is poised for significant growth in adoption in the near future, with usage likely increasing to one in three mobile phone users by early 2013. Similarly, a significant fraction of mobile phone users appears to be interested in using phones to make mobile payments.

Consumers' perception that mobile banking and mobile payments are unsecure is currently one of the primary impediments to adoption. If consumers' perception of security issues changes—whether due to actual or perceived improvements—adoption rates may significantly increase.

Appendix 1: Survey of Consumers' Financial Decisionmaking Using New Technologies—Questionnaire

Below is an exact reproduction of the survey instrument. The bracketed text are programming instructions that (1) indicate whether or not a question is single choice [SP] or multiple choice [MP] and (2) represent any skip pattern used to reach that question and which questions should be grouped together on a page. The respondents only saw the questions and response options; they did not see the program code.

[DISPLAY]

The Federal Reserve Board is interested in learning more about how people manage their finances, shop, and make payments. We are especially interested in how people use mobile phones and other technology when making financial decisions.

To begin, we are going to ask a few questions about the types of financial products and services that you use.

Banking Section

[SP]

1. Do you or does your spouse/partner currently have a checking, savings, or money market account?
   a. Yes
   b. No

[SP]

[IF Q1 = B]

2. Have you or your spouse/partner ever had a checking, savings, or money market account?
   a. Yes
   b. No

[SP]

[IF Q1 = B; shown on the same screen as Q2**]**

3. Please choose the **most important reason** why you don't have a checking, savings, or money market account from the following list:

a. I don't write enough checks to make it worthwhile
b. The minimum balance is too high
c. I don't like dealing with banks
d. The fees and service charges are too high
e. No bank has convenient hours or locations
f. No bank will give me an account g.
g. Other (Please specify):**[TXT]**_____

[SP]

4. A payday loan (also called a paycheck advance or deposit advance) is a small, short-term loan that is intended to cover your expenses until your next payday. Firms that offer these loans generally charge fees for every $100 borrowed (for example, $15 or more). Have you or your spouse/partner ever used payday loans, paycheck advance, or deposit advance services?
   a. Yes
   b. No

[NUMBER BOX, RANGE: 0-999, IF Q4= A]

5. How many times in the last 12 months did you or your spouse/partner use payday loan or payday advance services? In answering this question, please count a rollover of a payday loan as a new loan and also count using one payday loan to pay off another as separate loans.

   _____ time(s) in the past 12 months

[SP, **IF Q4 = A; shown on the same screen as Q5**]

6. What was the main reason for using a payday loan or payday advance services rather than a bank loan or credit card?
   a. The location of the payday lender was more convenient
   b. The payday loan was much quicker to get than a bank loan or credit card
   c. It was easier to get a payday loan than to qualify for a bank loan or credit card
   d. It felt more comfortable to work with the payday lender than to use a bank
   e. I didn't want the loan to show up on my credit report
   f. I didn't think I would qualify for a bank loan or credit card
   g. Other (Please specify):**[TXT]**_____

[DISPLAY]

A prepaid card is a card where funds are loaded or added to a card and then you access those funds with the card number or by swiping the card. It works like a debit card except that it is not connected to your bank account. A prepaid card is NOT a credit card.

There are four kinds of prepaid cards you may have seen before:

1) Gift cards are prepaid cards that you can only use at specific stores. Examples of these include department store cards and coffee shop cards.

2) General purpose prepaid cards are like gift cards except you can use them at many places. For example, a general purpose prepaid card can be used at grocery stores, clothing stores, gas stations, and so forth. These cards usually have a Visa or MasterCard logo on them.

3) Payroll cards are cards used by employers instead of a paycheck or direct deposit. These cards can be used to make purchases at many stores, and to make online payments and ATM withdrawals. They usually have a Visa or MasterCard logo on them.

4) Government issued prepaid cards are given to people who receive government benefits. Examples of these cards include Direct Express and Electronic Benefit Transfer (EBT) cards. These cards can be used to make purchases or payments, but may have restrictions on what you can purchase and where you can use them. In the rest of the survey, you can click on the text of these four kinds of prepaid cards (in blue) to see their definitions.

In the rest of the survey, you can click on the text of these four kinds of prepaid cards (in blue) to see their definitions.

[PROGRAM INSTRUCTION]

DEFINITIONS. MAKE ALL INSTANCES FOR GIFT CARD, GENERAL PURPOSE PREPAID CARD, PAYROLL CARD, AND GOVERNMENT CARD **IN THE SURVEY CLICKABLE. DISPLAY A CORRESPONDING DEFINITION.** LET THE "CLICKABLE" TEXT AS A SIMPLE POPUP WINDOW THAT POPS UP IN A SMALLER SEPARATE WINDOW EVERY TIME **R** CLICK ON THE PHRASE.

Gift card. Gift cards are prepaid cards that you can only use at specific stores. Examples of these include department store cards and coffee shop cards.

General purpose prepaid card. General purpose prepaid cards are like gift cards except you can use them at many places. For example, a general purpose prepaid card can be used at grocery stores, clothing stores, gas stations, and so forth. These cards usually have a Visa or MasterCard logo on them.

Payroll card. Payroll cards are cards used by employers instead of a paycheck or direct deposit. These cards can be used to make purchases at many stores, and to make online payments and ATM withdrawals. They usually have a Visa or MasterCard logo on them.

Government issued prepaid card. Government issued prepaid cards are given to people who receive government benefits. Examples of these cards include Direct Express and Electronic Benefit Transfer (EBT) cards. These cards can be used to make purchases or payments, but may have restrictions on what you can purchase and where you can use them.

[MP]

7. Do you have any of the following types of prepaid cards
   a. Gift card
   b. General purpose prepaid card
   c. Payroll card
   d. Government card
   e. None of the above**[Exclusive]**

[SP, **IF Q7=A OR Q7=B OR Q7=C**]

8. Some general purpose and merchant specific prepaid cards can be reloaded with extra dollar value by the card holder. Are any of your prepaid cards reloadable?
   a. Yes
   b. No
   c. Don't know

[SP, **IF Q8 = A**]

9. In the past 12 months, did you add money to reload any of your prepaid cards?
   a. Yes
   b. No

[SP, **IF Q9 = A**]

10. Think about the prepaid card that you reload most often. When was the last time that you personally reloaded that prepaid card?
    a. In the past 7 days
    b. In the past 30 days
    c. In the past 90 days
    d. In the past 12 months
    e. More than 12 months ago
    f. Never

[MP]

11. Which of the following financial products or services have you used in the past 12 months?
    a. Debit card or check card
    b. Paper check
    c. Major credit card (VISA, MasterCard, American Express, Discover)
    d. Store-branded credit card good only at the store that issued the card
    e. General purpose prepaid card

f. Auto title loan

g. Check cashing services

h. Payday loans

i. Layaway plan

j. I use none of the products listed above **[Exclusive]**

[SP, **IF Q1 = A**]

12. **Telephone banking** is when you access your account by calling a phone number that your bank has provided. You interact with the system using either voice commands, your phone's numeric keypad, or speaking with a live customer service representative. It does not include accessing your bank using the internet or applications on your mobile phone.

    Have you used telephone banking in the past 12 months, either with a landline phone or your mobile phone?

    a. Yes

    b. No

[MP, **IF Q12 = A**]

13. Which of the following transactions have you done using telephone banking in the past 12 months?

    a. Checked account balances or transactions

    b. Transferred money between accounts

    c. Paid bills

    d. Asked a customer service question

    e. Deposited money

    f. Applied for a credit card or loan

    g. Other

[DISPLAY]

In this section we'll ask a few questions about your use of the internet. Right now we are just interested in your use of the internet on a computer (desktop, laptop, or tablet). Later on we will ask about use of the internet on mobile phones.

[SP]

14. Do you currently have regular access to the internet, either at home or outside your home (i.e. school, work, public library, etc)?

    a. Yes

    b. No

[SP, **IF Q14 = A**]

15. Where do you use the internet the most often?

a. At home
b. At work
c. At school
d. At a library
e. At someone else's home
f. At an internet café or store with Wi-Fi
g. Other

[SP, **IF Q14 = A AND Q1 = A**]

16. **Online banking** involves checking your account balance and recent transactions, transferring money, paying bills, or conducting other related transactions with your bank or credit card company using the internet.

    Have you used online banking on a desktop, laptop or tablet computer in the past 12 months?

    a. Yes
    b. No

[MP, **IF Q16 = A**]

17. Which of the following transactions have you done using online banking on a desktop, laptop or tablet computer in the past 12 months?

    a. Checked account balances or transactions
    b. Transferred money between accounts
    c. Paid bills
    d. Asked a customer service question
    e. Deposited money
    f. Applied for a credit card or loan
    g. Managed investments (i.e. bought and sold stock or mutual funds)
    h. Other

Screener Question on Mobile Phone Usage

[DISPLAY]

In this section we would like to ask you about your use of mobile phones (cell phones). You may be able to use your mobile phone to check bank account balances, transfer funds, pay bills, or carry out other financial transactions. Mobile phones are also being used to make payments to stores, for parking, or to another person. Mobile phones can help you shop by comparing prices or looking up product reviews while you are in the store.

[SP, PROMPT, TERMINATE IF SKIPPED]

18. Do you own or have regular access to a mobile phone (cell phone)?
    a. Yes ➧ **[MOBILE = "YES"]**
    b. No ➧ **[MOBILE = "NO"]**

DOV: MOBILE

1: "YES"

2: "NO"

[SP]

[MOBILE = "YES"]

19. 19. A smartphone is a mobile phone with features that may enable it to access the web, send e-mails, and interact with computers. Smartphones include the iPhone, BlackBerrys, as well as Android and Windows Mobile powered devices.

    Is your mobile phone a smart phone?

    a. Yes
    b. No

[SP]

[IF Q19 = A]

20. Which type of smart phone do you have?
    a. Android
    b. Blackberry
    c. iPhone
    d. Windows Mobile
    e. Other
    f. Don't know

[SP]

[**IF Q19 = A;** shown on the same screen as Q20]

21. When was the last time that you used the internet on your mobile phone?
    a. In the past 7 days
    b. In the past 30 days
    c. In the past 90 days
    d. In the past 12 months
    e. More than 12 months ago
    f. Never

Mobile Banking Users

[MOBILE = "YES"]

[DISPLAY]

Mobile banking uses a mobile phone to access your bank account, credit card account, or other financial account. This can be done either by accessing your bank's web page through the web browser on your mobile phone, via text messaging, or by using an application downloaded to your mobile phone.

[SP]

22. Have you used mobile banking in the past 12 months?
    a. Yes
    b. No

[SP]

[IF Q22 = B]

23. Do you plan to use mobile banking in the next 12 months?
    a. Definitely will use
    b. Probably will use
    c. Probably will not use
    d. Definitely will not use

[SP]

[IF Q23 = C OR Q23 = D]

24. Do you think you will ever use mobile banking?
    a. Definitely will use
    b. Probably will use
    c. Probably will not use
    d. Definitely will not use

[MP]

[IF Q22 = A]

25. Using your mobile phone, have you done any of the following in the past 12 months?
    a. Downloaded your bank's mobile banking application on your mobile phone
    b. Checked an account balance or checked recent transactions

c. Made a bill payment using your bank's online banking website or banking application

d. Received a text message alert from your bank

e. Transferred money between two accounts

f. Deposited a check to your account using your phone's camera

g. Located the closest in-network ATM for your bank

h. Managed your investments (i.e. bought and sold stock or mutual funds)

i. Other banking-related activities (Please specify):**[TXT]**_____

[IF Q22 = A; NUMBER BOX; RANGE: 0-999; shown on the same screen as Q25]

26. In a typical month, how many times do you personally use mobile banking? If never please enter "0". _____ times

[SP]

[IF Q22 = A; shown on the same screen as Q25]

27. Overall, how satisfied are you with your mobile banking experiences?

a. Very satisfied

b. Somewhat satisfied

c. Somewhat dissatisfied

d. Very dissatisfied

[MP, ONLY TWO CHOICES PERMITTED, IF MORE THAN TWO, PROMPT "PLEASE SELECT ONLY TWO CHOICES."]

[IF Q27 = C OR Q27 = D]

28. What are the top two reasons you are dissatisfied with your mobile banking experiences?

a. I am concerned about my personal information being disclosed or have had personal information disclosed as a result of mobile banking

b. Applications and/or websites for mobile banking are too complicated to use

c. I have had problems getting the websites or applications to work properly

d. Banking on my mobile phone takes too long

e. It is too difficult to see on my mobile phone's screen

f. The transactions I want to execute are not available

g. Other (Please specify):**[TXT]**_____

Mobile Payments Users

[MOBILE = "YES"]

[DISPLAY]

Mobile payments are purchases, bill payments, charitable donations, payments to another person, or any other payments made using a mobile phone. You can do this either by accessing a web page through the web browser on your mobile device, by sending a text message (SMS), or by using a downloadable application on your mobile device. The amount of the payment may be applied to your phone bill (for example Red Cross text message donation), charged to your credit card, or withdrawn directly from your bank account.

[SP]

29. Have you made a mobile payment in the past 12 months?
    a. Yes
    b. No

[MP]

[IF Q29 = A]

30. Using your mobile phone, have you done any of the following in the past 12 months?
    a. Transferred money directly to another person's bank, credit card or Paypal account (i.e. friend, relative)
    b. Received money from another person using my mobile phone
    c. Waved or tapped my mobile phone at the cash register to pay for a purchase
    d. Paid bills online (excluding payments made directly from your bank website or application)
    e. Made a charitable donation by text message
    f. Transferred money to friends or family in another country
    g. Used my mobile phone as a "virtual wallet" to replace the cards I previously carried in my wallet
    h. Made online purchases
    i. None of the above **[Exclusive]**

[MP]

[IF Q30 = A to H]

31. Do you make your mobile payments using a credit card number, your bank account, adding the charge to your phone bill, or through a service such as Paypal, Google Wallet, or iTunes, which indirectly charges your credit card or bank account? (Select all that apply)

a. Credit card, debit card or prepaid card number

b. Bank account

c. Charged to your phone bill

d. Paypal, Google Wallet, iTunes, etc.

e. Other (Please specify):**[TXT]**_____

[MP]

[IF Q29 = A]

32. Have you used any of the following methods to make or receive mobile payments in the past 12 months?

    a. Used a text message to make or receive a mobile payment

    b. Waved or tapped my mobile phone at the cash register or other payment sensor

    c. Scanned a barcode using your mobile phone to make a mobile payment

    d. Used your mobile phone's web browser to make or receive a mobile payment

    e. Used a downloadable app to make or receive a mobile payment

    f. None of the above **[Exclusive]**

[IF Q29 = A; NUMBER BOX; RANGE: 0-99; shown on the same screen as Q32]

33. In a typical month, how many times do you use your mobile phone to make payments? If never please enter "0". _____times

[SP]

[IF Q29 = A; shown on the same screen as Q32]

34. Overall, how satisfied are you with your mobile payment experiences?

    a. Very satisfied

    b. Somewhat satisfied

    c. Somewhat dissatisfied

    d. Very dissatisfied

[MP, ONLY TWO CHOICES PERMITTED, IF MORE THAN TWO, PROMPT "PLEASE SELECT ONLY TWO CHOICES."]

[IF Q34 = C OR Q34 = D]

35. What are the top two reasons you are dissatisfied with your mobile payment experiences? (Select only two choices)

    a. I am concerned about my personal information being disclosed or have had personal information disclosed as a result of making mobile payments

b. I find that applications and/or websites for mobile payments are too complicated to use

c. I have had problems getting the websites or applications to work properly

d. It is too difficult to see on my mobile phone's screen

e. Making mobile payments takes too long

f. Making mobile payments is much more complicated than using another payment method

g. Merchants don't generally accept mobile payments

h. The transactions I want to execute are not available

i. Other (Please specify):**[TXT]**_____

Non-Mobile Banking Users

[IF Q22 = B]

[DISPLAY]

We would like to ask you about some of your reasons for not using mobile banking

[MP]

[IF Q22 = B]

36. You indicated that you do not currently use mobile banking. What are the main reasons why you have decided not to use mobile banking?

    a. I'm concerned about the security of mobile banking

    b. My banking needs are being met without mobile banking

    c. The cost of data access on my wireless plan is too high

    d. It is too difficult to see on my mobile phone's screen

    e. It is not offered by my bank or credit union

    f. My bank charges a fee for using mobile banking

    g. I don't trust the technology to properly process my banking transactions

    h. I don't have a banking account with which to use mobile banking

    i. It's difficult or time consuming to set up mobile banking

    j. Other (Please specify):**[TXT]**_____

[SP]

[IF Q36 = A]

37. You mentioned that security was one of your top concerns with mobile banking. What security aspects are you most concerned with?

a. Hackers gaining access to my phone remotely

b. Someone intercepting my calls or data

c. Losing my phone or having my phone stolen

d. Malware or viruses being installed on my phone

e. Other (Please specify):**[TXT]**_____

[MP]

[IF Q22 = B]

38. Assuming that any concerns you have about mobile banking were addressed, which of the following activities would you be interested in doing with your mobile phone?

a. Download your bank's mobile banking application on your mobile phone

b. Check an account balance or check recent transactions

c. Make a bill payment using your bank's online banking website or banking application

d. Receive text message alerts from your bank

e. Transfer money between two accounts

f. Other banking-related activities (Please specify):**[TXT]**_____

Non-Mobile Payments Users

[IF Q29 = B]

[DISPLAY; shown on the same page as 39**]**

We would like to ask you about some of your reasons for not using mobile payments

[MP]

[IF Q29 = B]

39. You indicated that you do not use mobile payments. What are the main reasons why you have decided not to use mobile payments?

a. I'm concerned about the security of mobile payments

b. It's easier to pay with another method like cash or a credit card

c. I don't see any benefit from using mobile payments

d. I don't know of any stores that let you pay with your mobile phone

e. I don't have the necessary feature on my phone

f. The cost of data access on my wireless plan is too high

g. It is not offered by my bank or credit union

h. My bank charges a fee for using mobile payments

i. I don't trust the technology to properly process my payments

j. It's difficult or time consuming to set up mobile payments

k. Other (Please specify):**[TXT]**_____

[SP]

[IF Q39 = A]

40. You mentioned that security was one of your top concerns with mobile payments. What security aspect are you most concerned with?

    a. Hackers gaining access to my phone remotely

    b. Someone intercepting my payment information or other data

    c. Losing my phone or having my phone stolen

    d. Malware or viruses being installed on my phone

    e. Other (Please specify):**[TXT]**_____

[MP]

[IF Q29 = B]

41. Assuming that the reason(s) why you do not currently use mobile payments was addressed, which of the following activities would you be interested in doing with your mobile phone?

    a. Making payments directly to another person (i.e. friend, relative)

    b. Waving or tapping my mobile phone at the cash register to pay for a purchase

    c. Paying bills online

    d. Transferring money to friends or family in another country

    e. Using your mobile phone as a "virtual wallet" to replace all the cards you currently carry in your wallet

    f. Buying goods or services online

    g. Receiving/using coupons on your phone

    h. Receiving specials and discount offers based on your location

    i. Other payment-related activities (Please specify):**[TXT]**_____

[SP]

[IF Q1 = B]

Mobile Financial Services Security Questions

[MOBILE = "YES" FOR QUESTIONS 42 THROUGH 47]

[DISPLAY, SHOW IT ON THE SAME SCREEN WITH Q42 TO Q45]

Please rate the level of security of each of the following four methods for mobile banking from Very Safe to Very Unsafe.

[SP]

42. SMS (text messaging)
    a. Very safe
    b. Somewhat safe
    c. Somewhat unsafe
    d. Very unsafe
    e. Don't know

[SP]

43. Mobile browser similar to the way you access the internet on your PC
    a. Very safe
    b. Somewhat safe
    c. Somewhat unsafe
    d. Very unsafe
    e. Don't know

[SP]

44. Application downloaded from your phone's mobile app store
    a. Very safe
    b. Somewhat safe
    c. Somewhat unsafe
    d. Very unsafe
    e. Don't know

[SP]

45. How would you currently rate the overall security of mobile banking for protecting your personal information?
    a. Very safe
    b. Somewhat safe
    c. Somewhat unsafe
    d. Very unsafe

e. Don't know

[MP]

46. Would you like to use your mobile phone for any of the following purposes, assuming they were made available to you?

    a. Buy things at the point of sale
    b. Track your finances on a daily basis
    c. Organize and track gift cards, loyalty and reward points
    d. Compare prices when shopping
    e. As a ticket for buses, trains, or subways
    f. As a key to enter your house
    g. Purchase tickets to events
    h. As a membership card (such as museums, gym, etc.)
    i. To receive and manage discount offers and coupons
    j. To receive offers and promotions based on where you are (i.e. You walk into a store and a coupon appears on your mobile phone for a product sold there)
    k. As a form of photo identification

[SP]

47. Banks can offer a service whereby checks to be deposited are photographed using your camera phone and the image is sent over the mobile Internet during a mobile banking session so that the bank can deposit the funds into your account without you having to present the physical check. The bank then sends a notification acknowledging receipt of the deposit.

    If your bank offered this service, how likely would you be to use it?

    a. I already use it
    b. Very likely
    c. Somewhat likely
    d. Somewhat unlikely
    e. Very unlikely

Shopping Behavior Questions

[ASKED OF EVERYONE]

[DISPLAY]

In this section we would like to ask you about your shopping habits.

[SP]

[IF Q14 = A]

48. Before going to a retail store to make a large purchase, do you generally compare prices online?
    a. Yes
    b. No

[SP]

[IF Q14 = A; shown on the same screen as Q48]

49. Before going to a retail store to make a large purchase, do you generally look at product reviews online?
    a. Yes
    b. No

[SP]

[IF MOBILE = "YES"]

50. Online shopping is when you go to a merchant's website through your web browser or an application and make a purchase. Have you ever used your mobile phone for online shopping?
    a. Yes
    b. No

[SP]

[IF MOBILE = "YES"; shown on the same screen as Q50]

51. Have you ever used your mobile phone to comparison shop over the internet while at a retail store?
    a. Yes
    b. No

[SP]

[IF MOBILE = "YES"; shown on the same screen as Q50]

52. Have you ever used a barcode scanning application on your mobile phone while shopping at a retail store to find the best price for an item?
    a. Yes
    b. No

[SP]

[IF Q51 = A OR Q52 = A]

53. Has using your mobile phone to compare prices while you were shopping at a retail store ever changed where you made your purchase?
    a. Yes
    b. No

[SP]

[IF MOBILE = "YES"]

54. Have you ever used your mobile phone to browse product reviews while shopping at a retail store?
    a. Yes
    b. No

[SP]

[IF Q54 = A]

55. Has reading product reviews on your mobile phone while shopping at a retail store ever changed which item you ended up purchasing?
    a. Yes
    b. No

[SP]

[IF Q22 = A]

56. In the past 12 months, have you used your mobile phone to check your account balance or available credit before making a large purchase?
    a. Yes
    b. No

[SP]

[IF Q56 = A]

57. Thinking of the most recent time that you used your mobile phone to check your account balance or available credit before making a large purchase did you decide not to buy that particular item because of the amount of money left in your account or the amount of your available credit?
    a. Yes
    b. No

[SP]

[ASKED OF EVERYONE]

58. Have you signed up to receive coupons or special offers by e-mail from retail stores in the past 12 months?

a. Yes

b. No

[SP]

[IF Q58 = A]

59. Have you made a purchase as a result of receiving one of these coupons or special offers?

    a. Yes

    b. No

[SP]

[ASKED OF EVERYONE]

60. Have you ever signed up to receive coupons/offers from a website such as Groupon or Living Social?

    a. Yes

    b. No

[SP]

[IF Q60 = A]

61. Have you ever used a coupon from a website such as Groupon or Living Social?

    a. Yes

    b. No

Payments Choice

[MOBILE = "YES"]

[DISPLAY]

In this section we would like to ask about your thoughts on some of the new mobile financial service technologies.

[SP]

[MOBILE = "YES"]

62. New **mobile** "contactless" payments are becoming available from some banks, credit card companies, and transit operators. These let consumers "tap" or wave their mobile phone at a terminal instead of swiping a card.

    If you were offered the option of using this service, how likely would you be to use it?

a. I already use it
b. Very likely
c. Somewhat likely
d. Somewhat unlikely
e. Very unlikely

[SP]

[MOBILE = "YES"; shown on the same screen as Q62]

63. How likely do you think it is that mobile contactless payments will become a major form of payment in the next five years?
    a. Very likely
    b. Somewhat likely
    c. Somewhat unlikely
    d. Very unlikely
    e. Don't know

Financial Management (Saving, Budgeting) Questions

[ASKED OF EVERYONE]

[DISPLAY, SHOW IT ON THE SAME SCREEN WITH Q64 TO Q67]

In order to help us to understand your role in the financial activities of your household, please rank how much responsibility you have for the following four financial tasks

[SP]

64. Maintaining the household budget and managing household income
    a. None or almost none
    b. Some
    c. Shared equally with other household members
    d. Most
    e. All or almost all

[SP]

65. Paying monthly bills (rent or mortgage, utilities, cell phone, etc.)
    a. None or almost none
    b. Some
    c. Shared equally with other household members

d. Most

e. All or almost all

[SP]

66. Shopping for household goods and groceries

a. None or almost none

b. Some

c. Shared equally with other household members

d. Most

e. All or almost all

[SP]

67. Making decisions about saving and investments (whether to save, how much to save, where to invest)

a. None or almost none

b. Some

c. Shared equally with other household members

d. Most

e. All or almost all

[SP]

68. Do you or anyone in your household use a program or website to track your household finances (for example, Quicken, Mint.com, Excel, or a website provided by your bank)?

a. Yes

b. No

[SP, IF Q68= A]

69. How long have you been using this program or website to manage your household finances?

a. Less than a year

b. One to two years

c. Three to five years

d. More than five years

[IF Q68= A; NUMBER BOX; RANGE: 0-999; shown on the same screen as Q69]

70. In a typical month, how often do you or another household member use this program or website? (If never please enter "0") _____times

[SP, IF MOBILE= "YES"]

71. Do you use your mobile phone to track purchases and expenses?
    a. Yes
    b. No

[MP, IF Q71= A]

72. What method(s) do you use to track purchases and expenses on your mobile phone?
    a. A mobile application for expense tracking
    b. A spreadsheet
    c. Online (using the web browser to access a website)
    d. Send text messages
    e. Take notes in a notepad or word processor

[IF Q71= A; NUMBER BOX; RANGE: 0-999; shown on the same screen as Q72]

73. In a typical month, how often do you use your mobile phone to track purchases and expenses? (If never please enter "0") _____times

[MP, IF Q25= D]

74. You previously mentioned that you receive text alerts from your bank. What kind of text alerts do you receive?
    a. Low-balance alerts
    b. Payment due alerts
    c. Saving reminders
    d. Fraud alerts
    e. Other (Please specify): **[TXT]**_____

[MP, IF Q74= A]

75. Thinking of the most recent low-balance alert you received by text message, which of the following actions did you take after receiving the alert?
    a. Transferred money into the account with the low-balance
    b. Deposited money into the account with the low-balance
    c. Reduced my spending
    d. None of the above **[Exclusive]**

[SP, IF Q74= B]

76. Has receiving payment due alerts improved your ability to pay your bills on time?
    a. Yes, by a lot
    b. Yes, by a little

c. No

Financial Literacy Questions

[ASKED OF EVERYONE]

[SP]

77. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
    a. More than today
    b. Exactly the same
    c. Less than today

[SP; shown on the same screen as Q77]

78. Considering a long time period (for example, 10 or 20 years), which asset normally gives the highest return?
    a. Savings accounts
    b. U.S. Government bonds
    c. Stocks

[SP; shown on the same screen as Q77]

79. If an investor who only owns two stocks right now decides to instead spread their money among many different assets (i.e. more stocks, add bonds, add real estate), their risk of losing money on their entire portfolio will:
    a. Increase
    b. Decrease
    c. Stay the same

[SP]

80. If you were to invest $1000 in a stock mutual fund for a year, it would be possible to have less than $1000 when you withdraw your money.
    a. True
    b. False

[SP; shown on the same screen as Q80]

81. Suppose you owe $1,000 on a loan and the interest rate you are charged is 10% per year compounded annually. If you didn't make any payments on this loan, at this interest rate, how many years would it take for the amount you owe to double?
    a. Less than 2 years

b. Between 2 and 5 years

c. 5 to 9 years

d. 10 years or more

[MP]

82. Imagine that your car breaks down and requires $400 worth of repairs in order to drive again. **Based on your current financial situation,** how would you pay for this expense? If you would use more than one method to cover this expense please select all that apply.

a. Put it on my credit card

b. With the money currently in my checking account

c. By taking money out of my savings

d. Using money from a bank loan, line of credit, or overdraft

e. By borrowing from a friend or family member

f. Using a payday loan or deposit advance

g. By pawning something

h. Other (Please specify): **[TXT]**_____

Risk Aversion Questions

[ASKED OF EVERYONE]

[SP]

83. Which of the following statements comes closest to describing the amount of financial risk that you are willing to take when you save or make investments?

a. Take substantial financial risks expecting to earn substantial returns

b. Take above average financial risks expecting to earn above average returns

c. Take average financial risks expecting to earn average returns

d. Not willing to take any financial risks

[SP]

84. Suppose that you are the only income earner in the family, and you have a good job guaranteed to give you your current income every year for life. You are given the opportunity to take a new and equally good job, with a 50–50 chance that it will double your income and a 50–50 chance that it will cut your income by one-third (33 percent). Would you take the new job?

a. Yes

b. No

[SP]

[IF Q84 = A]

85. Now suppose that the chances were 50–50 that it would double your income and 50–50 that it would cut your income by half (50 percent). Would you still take the new job?

    a. Yes

    b. No

[SP]

[IF Q84 = B]

86. Now suppose that the chances were 50–50 that it would double your income and 50–50 that it would cut your income by one-fifth (20 percent). Would you now take the new job?

    a. Yes

    b. No

Appendix 2: Consumer Responses to Survey Questionnaire

Table B.1. Do you or does your spouse/partner currently have a checking, savings, or money market account?
Percent, except as noted

Q1	
Yes	88.7
No	10.8
Refused to answer	0.5
Number of respondents	**2,290**

Table B.2. Have you or your spouse/partner ever had a checking, savings, or money market account?
Percent, except as noted

Q2	
Yes	36.9
No	58.9
Refused to answer	4.2
Number of respondents	**200**

Table B.3. Please choose the most important reason why you don't have a checking, savings, or money market account from the following list.
Percent, except as noted

Q3	
I don't write enough checks to make it worthwhile	23.5
The minimum balance is too high	2.2
I don't like dealing with banks	24.2
The fees and service charges are too high	13.3
No bank has convenient hours or locations	0.6
No bank will give me an account	10.2
Other	17.8
Refused to answer	8.1
Number of respondents	**200**

Table B.4. Have you or your spouse/partner ever used payday loans, paycheck advance, or deposit advance services?
Percent, except as noted

Q4	
Yes	11.2
No	88.1
Refused to answer	0.8
Number of respondents	**2,290**

Table B.5. How many times in the last 12 months did you or your spouse/partner use payday loan or payday advance services? In answering this question, please count a rollover of a payday loan as a new loan and also count using one payday loan to pay off another as separate loans.
Percent, except as noted

Q5	
0	44.9
1	13.8
2	11.6
3	6.3
4	3.9
5	5.3
6	3.1
7	0.3
8	0.9
9	0.1
10	2.6
12	2.1
16	0.5
20	0.5
24	0.3
40	0.6
Refused to answer	3.1
Number of respondents	**223**

Table B.6. What was the main reason for using a payday loan or payday advance service rather than a bank loan or credit card?
Percent, except as noted

Q6	
The location of the payday lender was more convenient	3.6
The payday loan was much quicker to get than a bank loan or credit card	17.7
It was easier to get a payday loan than to qualify for a bank loan or credit card	24.9
It felt more comfortable to work with the payday lender than to use a bank	1.2
I didn't want the loan to show up on my credit report	2.1
I didn't think I would qualify for a bank loan or credit card	29.2
Other	8
Refused to answer	13.4
Number of respondents	**223**

Table B.7. Do you have any of the following types of prepaid cards?
Percent, except as noted

Q7	
Gift card	48
General purpose prepaid card	14.5
Payroll card	1.7
Government card	4.8
None of the above	45.4
Refused to answer	0.4
Number of respondents	**2,290**

Table B.8. Some general purpose and merchant specific prepaid cards can be reloaded with extra dollar value by the cardholder. Are any of your prepaid cards reloadable?
Percent, except as noted

Q8	
Yes	44.7
No	30.4
Don't know	24.5
Refused to answer	0.4
Number of respondents	**1,228**

Table B.9. In the past 12 months, did you add money to reload any of your prepaid cards?
Percent, except as noted

Q9	
Yes	40.3
No	59.7
Number of respondents	**498**

Table B.10. Think about the prepaid card that you reload most often. When was the last time that you personally reloaded that prepaid card?
Percent, except as noted

Q10	
In the past 7 days	21.2
In the past 30 days	41.1
In the past 90 days	20
In the past 12 months	17.1
More than 12 months ago	0.6
Never	0.1
Number of respondents	**207**

Table B.11. Which of the following financial products or services have you used in the past 12 months?
Percent, except as noted

Q11	
Debit card or check	69
Paper check	66.7
Major credit card	60.2
Store-branded credit card good only at the store that issued the card	30.2
General purpose prepaid card	18.6
Auto title loan	3.5
Check cashing service	4.1
Payday loan	3.3
Layaway plan	3.8
None of the above	7.2
Refused to answer	0.6
Number of respondents	**2,290**

Table B.12. Have you used telephone banking in the past 12 months, either with a landline phone or your mobile phone?
Percent, except as noted

Q12	
Yes	33.3
No	66.3
Refused to answer	0.4
Number of respondents	**2,079**

Table B.13. Which of the following transactions have you performed using telephone banking in the past 12 months?
Percent, except as noted

Q13	
Checked account balances or transactions	78.1
Transferred money between accounts	31.3
Paid bills	29.8
Asked a customer service question	44
Deposited money	4.8
Applied for a credit card or loan	2.4
Other	2.7
Refused to answer	0.3
Number of respondents	**653**

Table B.14. Do you currently have regular access to the Internet, either at home or outside your home (i.e., school, work, public library)?
Percent, except as noted

Q14	
Yes	95.4
No	4.3
Refused to answer	0.4
Number of respondents	**2,290**

Table B.15. Where do you use the Internet the most often?
Percent, except as noted

Q15	
At home	80.8
At work	14.8
At school	0.8
At a library	1.7
At someone else's home	1
At an Internet café or store with Wi-Fi	0.3
Other	0.3
Refused to answer	0.2
Number of respondents	**2,189**

Table B.16. Have you used online banking on a desktop, laptop, or tablet computer in the past 12 months?
Percent, except as noted

Q16	
Yes	67.7
No	31.9
Refused to answer	0.5
Number of respondents	**2,011**

Table B.17. Which of the following transactions have you done using online banking on a desktop, laptop, or tablet computer in the past 12 months?
Percent, except as noted

Q17	
Checked account balances or transactions	95.8
Transferred money between accounts	67.6
Paid bills	73.1
Asked a customer service question	11.8
Deposited money	11.9
Applied for a credit card or loan	8
Managed investments (i.e., bought and sold stock or mutual funds)	8.8
Other	0.8
Refused to answer	0.4
Number of respondents	**1,358**

Table B.18. Do you own or have regular access to a mobile phone (cell phone)?
Percent, except as noted

Q18	
Yes	87.1
No	12.9
Number of respondents	**2,290**

Table B.19. Is your mobile phone a smartphone?
Percent, except as noted

Q19	
Yes	43.9
No	55.9
Refused to answer	0.2
Number of respondents	**2,002**

Table B.20. Which type of smartphone do you have?
Percent, except as noted

Q20	
Android	43.4
BlackBerry	13.1
iPhone	30.1
Windows Mobile	1.2
Other	7.7
Don't know	3.9
Refused to answer	0.5
Number of respondents	**836**

Table B.21. When was the last time that you used the Internet on your mobile phone?
Percent, except as noted

Q21	
In the past 7 days	83.6
In the past 30 days	5.5
In the past 90 days	2.4
In the past 12 months	1.6
More than 12 months ago	0.3
Never	6.5
Refused to answer	0.1
Number of respondents	**836**

Table B.22. Have you used mobile banking in the past 12 months?
Percent, except as noted

Q22	
Yes	20.9
No	78.9
Refused to answer	0.2
Number of respondents	**2,002**

Table B.23. Do you plan to use mobile banking in the next 12 months?
Percent, except as noted Percent, except as noted

Q23	
Definitely will use	0.8
Probably will use	10.4
Probably will not use	39.6
Definitely will not use	48.6
Refused to answer	0.5
Number of respondents	**1,626**

Table B.24. Do you think you will ever use mobile banking?
Percent, except as noted

Q24	
Definitely will use	0.6
Probably will use	16.4
Probably will not use	45.4
Definitely will not use	36.9
Refused to answer	0.8
Number of respondents	**1,449**

Table B.25. Using your mobile phone, have you done any of the following in the past 12 months?
Percent, except as noted

Q25	
Downloaded your bank's mobile banking application on your mobile phone	48.1
Checked an account balance or checked recent transactions	90.1
Made a bill payment using your bank's online banking website or banking application	25.7
Received a text message alert from your bank	33.4
Transferred money between two accounts	41.7
Deposited a check to your account using your phone's camera	10.6
Located the closest in-network ATM for your bank	20.7
Managed your investments (i.e., bought and sold stock or mutual funds)	2.2
Other banking-related activities	1
Refused to answer	3
Number of respondents	**372**

Table B.26. In a typical month, how many times do you personally use mobile banking?
Percent, except as noted

Q26	
0	6
1	11.7
2	12.6
3	10.7
4	8.8
5	9.7
6	3.6
7	2.1
8	2.4
9	0.5
10	9.5
12	0.6
15	4.3
16	0.8
20	9.5
25	0.8
30	3.1
50	0.3
60	0.6
Refused to answer	2.4
Number of respondents	**372**

Table B.27. Overall, how satisfied are you with your mobile banking experiences?
Percent, except as noted

Q27	
Very satisfied	61.7
Somewhat satisfied	32.3
Somewhat dissatisfied	2.1
Very dissatisfied	1.1
Refused to answer	2.9
Number of respondents	**372**

Table B.28. What are the top two reasons you are dissatisfied with your mobile banking experience?
Frequency, except as noted

Q28	
I am concerned about my personal information being disclosed	5
I have had problems getting the websites or applications to work properly	4
Banking on my mobile phone takes too long	6
It is too difficult to see on my mobile phone's screen	3
The transactions I want to execute are not available	3
Other	7
Number of respondents	**14**

Table B.29. Have you made a mobile payment in the past 12 months?
Percent, except as noted

Q29	
Yes	12.3
No	87.3
Refused to answer	0.4
Number of respondents	**2,002**

Table B.30. Using your mobile phone, have you done any of the following in the past 12 months?
Percent, except as noted

Q30	
Transferred money directly to another person's bank, credit card, or paypal account	20.5
Received money from another person using my mobile phone	7.9
Waved or tapped my mobile phone at the cash register to pay for a purchase	2.4
Paid bills online (excluding payments made directly from your bank website or application	47.1
Made a charitable donation via text message	5.1
Transferred money to friends or family in another country	0.2
Used my mobile phone as a "virtual wallet" to replace the cards I previously carried in my wallet	0.2
Made online purchases	36
None of the above	23
Refused to answer	0.4
Number of respondents	**213**

Table B.31. Do you make your mobile payments using a credit card number, your bank account, adding the charge to your phone bill, or through a service such as Paypal, Google Wallet, or iTunes, that indirectly charges your credit card or bank account?
Percent, except as noted

Q31	
Credit card, debit card, or prepaid card	66.4
Bank account	45.4
Charged to your phone bill	8.4
Paypal, Google Wallet, iTunes, etc.	21.9
Other	3.9
Number of respondents	**161**

Table B.32. Have you used any of the following methods to make or receive mobile payments in the past 12 months?
Percent, except as noted

Q32	
Used a text message to make or receive a mobile payment	16.2
Waved or tapped my mobile phone at the cash register or other payment sensor	1.3
Scanned a barcode using your mobile phone to make a mobile payment	1
Used your mobile phone's web browser to make or receive a mobile payment	23
Used a downloadable app to make or receive a mobile payment	21
None of the above	45
Refused to answer	5.4
Number of respondents	**213**

Table B.33. In a typical month, how many times do you use your mobile phone to make payments?
Percent, except as noted

Q33	
0	25
1	34.4
2	12.7
3	6.6
4	4.8
5	4.4
6	1.9
7	0.1
8	0.3
9	1.3
10	1.5
12	0.1
14	0.2
15	0.4
24	0.6
Refused to answer	5.7
Number of respondents	**213**

Table B.34. Overall, how satisfied are you with your mobile payment experiences?
Percent, except as noted

Q34	
Very satisfied	55.2
Somewhat satisfied	32.6
Somewhat dissatisfied	1.5
Very dissatisfied	3.3
Refused to answer	7.4
Number of respondents	**213**

Table B.35. What are the top two reasons you are dissatisfied with your mobile payment experiences?
Frequency, except as noted

Q35	
I am concerned about my personal information being disclosed or have had personal information disclosed	10
I find that applications and/or websites for mobile payments are too complicated to use	2
I have had problems getting the websites or applications to work properly	4
Making mobile payments takes too long	1
Making mobile payments is much more complicated than using another payment method	6
It is too difficult to see on my mobile phone's screen	2
Merchants don't generally accept mobile payments	2
Other	1
Number of respondents	**14**

Table B.36. You indicated that you do not use mobile banking. What are the main reasons why you have decided not to use mobile banking?
Percent, except as noted

Q36	
I am concerned about the security of mobile banking	48
My banking needs are being met without mobile banking	57.5
The cost of data access on my wireless plan is too high	18.3
It is too difficult to see on my mobile phone's screen	16.6
It is not offered by my bank or credit union	2.7
My bank charges a fee for using mobile banking	2.2
I don't trust the technology to properly process my banking transactions	21.8
I don't have a banking account with which to use mobile banking	8.8
It is difficult or time consuming to set up mobile banking	9.5
Other	12.6
Refused to answer	0.6
Number of respondents	**1626**

Table B.37. You mentioned that security was one of your top concerns with mobile banking. What security aspects are you most concerned with?
Percent, except as noted

Q37	
Hackers gaining access to my phone remotely	54.3
Someone intercepting my calls or data	18.1
Losing my phone or having my phone stolen	19.3
Malware or viruses being installed on my phone	4.8
Other	3.3
Refused to answer	0.2
Number of respondents	**798**

Table B.38. Assuming that any concerns you have about mobile banking were addressed, which of the following activities would you be interested in performing with your mobile phone?
Percent, except as noted

Q38	
Download your bank's mobile banking application on your mobile phone	16.6
Check an account balance or check recent transactions	55.4
Make a bill payment using your bank's online banking website or banking application	23.7
Receive text message alerts from your bank	30.2
Transfer money between two accounts	24.5
Other banking-related activities	9
Refused to answer	12.6
Number of respondents	**1,626**

Table B.39. You indicated that you do not use mobile payments. What are the main reasons you have decided not to use mobile payments?
Percent, except as noted

Q39	
I am concerned about the security of mobile payments	41.5
It is easier to pay with another method like cash or a credit card	36
I don't see any benefit from using mobile payments	36.7
I don't know of any stores that let you pay with your mobile phone	9
I don't have the necessary feature on my phone	30.8
The cost of data access on my wireless plan is too high	15.3
It is not offered by my bank or credit union	4.3
My bank charges a fee for using mobile payments	1.9
I don't trust the technology to properly process my payments	19.7
It is difficult or time consuming to set up mobile payments	9.1
Other	12.4
Refused to answer	1.7
Number of respondents	**1,780**

Table B.40. You mentioned that security was one of your top concerns with mobile payments. What security aspect are you most concerned with?
Percent, except as noted

Q40	
Hackers gaining access to my phone remotely	45.6
Someone intercepting my payment information or other data	32.8
Losing my phone or having my phone stolen	16.6
Malware or viruses being installed on my phone	2.7
Other	1.7
Refused to answer	0.6
Number of respondents	**745**

Table B.41. Assuming that the reason(s) you do not currently use mobile payments was addressed, which of the following activities would you be interested in performing with your mobile phone?
Percent, except as noted

Q41	
Making payments directly to another person	17.1
Waving or tapping my mobile phone at the cash register to pay for a purchase	17.2
Paying bills online	34.4
Transferring money to friends or family in another country	7
Using your mobile phone as a "virtual wallet" to replace all the cards you currently carry in your wallet	16.6
Buying goods or services online	21.9
Receiving/using coupons on your phone	27.7
Receiving specials and discount offers based on your location	21.6
Other payment-related activities	12
Refused to answer	15.2
Number of respondents	**1,780**

Table B.42. Please rate the security of SMS (text messaging).
Percent, except as noted

Q42	
Very safe	8.3
Somewhat safe	30.1
Somewhat unsafe	16.4
Very unsafe	10.8
Don't know	33.1
Refused to answer	1.2
Number of respondents	**2,002**

Table B.43. Please rate the security of mobile browsers similar to the way you access the Internet on your PC.
Percent, except as noted

Q43	
Very safe	5.6
Somewhat safe	36
Somewhat unsafe	18.8
Very unsafe	7.6
Don't know	30.2
Refused to answer	2
Number of respondents	**2,002**

Table B.44. Please rate the security of an application downloaded from your phone's mobile app store.
Percent, except as noted

Q44	
Very safe	7.4
Somewhat safe	32.9
Somewhat unsafe	15.1
Very unsafe	6.8
Don't know	36.1
Refused to answer	1.8
Number of respondents	**2,002**

Table B.45. How would you currently rate the overall security of mobile banking for protection?
Percent, except as noted

Q45	
Very safe	5.1
Somewhat safe	27.8
Somewhat unsafe	20.7
Very unsafe	11.2
Don't know	33.9
Refused to answer	1.4
Number of respondents	**2,002**

Table B.46. Would you like to use your mobile phone for any of the following purposes, assuming they were made available to you?
Percent, except as noted

Q46	
Buy things at the point of sale	25.2
Track your finances on a daily basis	31.1
Organize and track gift cards, loyalty and reward points	21.4
Compare prices when shopping	47.9
As a ticket for buses, trains, or subways	18.7
As a key to enter your house	18.4
Purchase tickets to events	22.9
As a membership card (e.g., museums, gym, etc.)	24.2
To receive and manage discount offers and coupons	30.5
To receive offers and promotions based on where you are	33
As a form of photo identification	23.4
Refused to answer	18
Number of respondents	**2,002**

Table B.47. Banks can offer a service whereby checks to be deposited are photographed using your camera phone and the image is sent over the mobile Internet during a mobile banking session so that the bank can deposit the funds into your account without you having to present the physical check. The bank then sends a notification acknowledging receipt of the deposit. If your bank offered this service, how likely would you be to use it?
Percent, except as noted

Q47	
I already use it	3.9
Very likely	13.7
Somewhat likely	24.1
Somewhat unlikely	20.8
Very unlikely	36.4
Refused to answer	1.1
Number of respondents	**2,002**

Table B.48. Before going to a retail store to make a large purchase, do you generally compare prices online?
Percent, except as noted

Q48	
Yes	58.4
No	41.1
Refused to answer	0.4
Number of respondents	**2,189**

Table B.49. Before going to a retail store to make a large purchase, do you generally look at product reviews online?
Percent, except as noted

Q49	
Yes	57.6
No	41.6
Refused to answer	0.7
Number of respondents	**2,189**

Table B.50. Online shopping is when you go to a merchant's website through your web browser or an application and make a purchase. Have you ever used your mobile phone for online shopping?
Percent, except as noted

Q50	
Yes	16.4
No	82.3
Refused to answer	1.4
Number of respondents	**2,002**

Table B.51. Have you ever used your mobile phone to comparison-shop over the Internet while at a retail store?
Percent, except as noted

Q51	
Yes	19.4
No	79.4
Refused to answer	1.2
Number of respondents	**2,002**

Table B.52. Have you ever used a barcode scanning application on your mobile phone while shopping at a retail store to find the best price for an item?
Percent, except as noted

Q52	
Yes	12.3
No	86.7
Refused to answer	0.9
Number of respondents	**2,002**

Table B.53. Has using your mobile phone to compare prices while you were shopping at a retail store ever changed where you made your purchase?
Percent, except as noted

Q53	
Yes	65.6
No	34.4
Number of respondents	**393**

Table B.54. Have you ever used your mobile phone to browse product reviews while shopping at a retail store?
Percent, except as noted

Q54	
Yes	16
No	83.2
Refused to answer	0.7
Number of respondents	**2,002**

Table B.55. Has reading product reviews on your mobile phone while shopping at a retail store ever changed which item you ended up purchasing?
Percent, except as noted

Q55	
Yes	76.9
No	22.5
Refused to answer	0.6
Number of respondents	**289**

Table B.56. In the past 12 months, have you used your mobile phone to check your account balance or available credit before making a large purchase?
Percent, except as noted

Q56	
Yes	67.2
No	32.1
Refused to answer	0.7
Number of respondents	**372**

Table B.57. Thinking of the most recent time that you used your mobile phone to check your account balance or available credit before making a large purchase, did you decide not to buy that particular item because of the amount of money left in your account or the amount of your available credit?
Percent, except as noted

Q57	
Yes	59.2
No	40.5
Refused to answer	0.3
Number of respondents	**242**

Table B.58. Have you signed up to receive coupons or special offers by e-mail from retail stores in the past 12 months?
Percent, except as noted

Q58	
Yes	37.9
No	60.7
Refused to answer	1.4
Number of respondents	**2,290**

Table B.59. Have you made a purchase as a result of receiving one of these coupons or special offers?
Percent, except as noted

Q59	
Yes	73.4
No	25.8
Refused to answer	0.8
Number of respondents	**881**

Table B.60. Have you ever signed up to receive coupons/offers from a website such as Groupon or Living Social?
Percent, except as noted

Q60	
Yes	28.2
No	70.5
Refused to answer	1.2
Number of respondents	**2,290**

Table B.61. Have you ever used a coupon from a website such as Groupon or Living Social?
Percent, except as noted

Q61	
Yes	56.7
No	43.3
Number of respondents	**657**

Table B.62. New mobile contactless payments are becoming available from some banks, credit card companies, and transit operators. These let consumers tap or wave their mobile phone at a terminal instead of swiping a card. If you were offered the option of using this service, how likely would you be to use it?

Percent, except as noted

Q62	
I already use it	1
Very likely	9.9
Somewhat likely	23.1
Somewhat unlikely	22.4
Very unlikely	42.3
Refused to answer	1.3
Number of respondents	**2,002**

Table B.63. How likely do you think it is that mobile contactless payments will become a major form of payment in the next five years?

Percent, except as noted

Q63	
Very likely	16.7
Somewhat likely	33.3
Somewhat unlikely	15.5
Very unlikely	11.5
Don't know	21.8
Refused to answer	1.1
Number of respondents	**2,002**

Table B.64. How much responsibility do you have for maintaining the household budget and managing household income?

Percent, except as noted

Q64	
None or almost none	11.6
Some	10.9
Shared equally with other household members	26.9
Most	13
All or almost all	36.3
Refused to answer	1.3
Number of respondents	**2,290**

Table B.65. How much responsibility do you have for paying monthly bills (e.g., rent or mortgage, utilities, cell phone)?

Percent, except as noted

Q65	
None or almost none	15.2
Some	11.5
Shared equally with other household members	18.9
Most	10.8
All or almost all	42.1
Refused to answer	1.6
Number of respondents	**2,290**

Table B.66. How much responsibility do you have for shopping for household goods and groceries?

Percent, except as noted

Q66	
None or almost none	9.2
Some	16.3
Shared equally with other household members	24.8
Most	13.3
All or almost all	34.8
Refused to answer	1.7
Number of respondents	**2,290**

Table B.67. How much responsibility do you have for making decisions about savings and investments?

Percent, except as noted

Q67	
None or almost none	12.1
Some	9.9
Shared equally with other household members	35.4
Most	11.7
All or almost all	30
Refused to answer	0.9
Number of respondents	**2,290**

Table B.68. Do you or anyone in your household use a program or website to track household finances (for example, Quicken, Mint.com, Excel, or a website provided by your bank)?

Percent, except as noted

Q68	
Yes	21.3
No	78.1
Refused to answer	0.6
Number of respondents	**2,290**

Table B.69. How long have you been using this program or website to manage your household finances?
Percent, except as noted

Q69	
Less than a year	15.6
One to two years	17.9
Three to five years	22.9
More than five years	42.7
Refused to answer	0.8
Number of respondents	**514**

Table B.70. In a typical month, how often do you or another household member use this program or website?
Percent, except as noted

Q70	
0	3.3
1	12.6
2	10.4
3	7.1
4	11.5
5	6.3
6	2.9
7	0.6
8	3.1
10	6.5
12	1.8
14	0.4
15	4.8
20	6.4
21	0.1
24	0.2
25	5.8
26	0.5
27	0.2
30	7.7
31	0.2
35	0.5
40	0.3
45	0.1
50	0.9
60	0.3
Refused to answer	5.4
Number of respondents	**514**

Table B.71. Do you use your mobile phone to track purchases and expenses?
Percent, except as noted

Q71	
Yes	7.3
No	91.7
Refused to answer	1
Number of respondents	**2,002**

Table B.72. What method(s) do you use to track purchases and expenses on your mobile phone?
Percent, except as noted

Q72	
A mobile application for expense tracking	38.3
A spreadsheet	10.1
Online (using the web browser to access a website)	47.6
Send text messages	12.1
Take notes in a notepad or word processor	21.1
Refused to answer	3.4
Number of respondents	**115**

Table B.73. In a typical month, how often do you use your mobile phone to track purchases and expenses?
Percent, except as noted

Q73	
0	2.9
1	2.7
2	16.6
3	10.4
4	5.4
5	15.4
6	0.8
7	0.3
8	0.5
10	5.8
12	0.4
13	0.1
14	0.4
15	8.8
20	7.5
25	2.8
30	4.2
40	2.1
50	0.3
123	0.2
Refused to answer	12.6
Number of respondents	**115**

Table B.74. You previously mentioned that you receive text alerts from your bank. What kind of text alerts do you receive?
Percent, except as noted

Q74	
Low-balance alerts	66.4
Payment due alerts	31.7
Saving reminders	3.1
Fraud alerts	30.3
Other	18.2
Number of respondents	**111**

Table B.75. Thinking of the most recent low-balance alert you received by text message, which of the following actions did you take after receiving the alert?
Percent, except as noted

Q75	
Transferred money into the account with the low balance	57.6
Deposited money into the account with the low balance	16.2
Reduced my spending	41.1
None of the above	15.9
Number of respondents	**78**

Table B.76. Has receiving payment due alerts improved your ability to pay your bills on time?
Percent, except as noted

Q76	
Yes, by a lot	37.4
Yes, by a little	40.4
No	22.2
Number of respondents	**41**

Table B.77. Imagine that the interest rate on your savings account was 1 percent per year and inflation was 2 percent per year. After one year, how much would you be able to buy with the money in this account?
Percent, except as noted

Q77	
More than today	5.6
Exactly the same	20.9
Less than today	70.4
Refused to answer	3
Number of respondents	**2,290**

Table B.78. Considering a long time period (for example, 10 or 20 years), which asset normally gives the highest return?
Percent, except as noted

Q78	
Savings accounts	15.3
U.S. Government bonds	25
Stocks	55.8
Refused to answer	3.9
Number of respondents	**2,290**

Table B.79. If an investor who only owns two stocks right now decides to instead spread their money among many different assets (i.e., more stocks, add bonds, add real estate), their risk of losing money on their entire portfolio will do what?
Percent, except as noted

Q79	
Increase	21
Decrease	52.4
Stay the same	22.5
Refused to answer	4.1
Number of respondents	**2,290**

Table B.80. If you were to invest $1,000 in a stock mutual fund for a year, it would be possible to have less than $1,000 when you withdraw your money.
Percent, except as noted

Q80	
True	76
False	20.3
Refused to answer	3.6
Number of respondents	**2,290**

Table B.81. Suppose you owe $1,000 on a loan and the interest rate you are charged is 10 percent per year compounded annually. If you didn't make any payments on this loan, at this interest rate, how many years would it take for the amount you owe to double?
Percent, except as noted

Q81	
Less than two years	11.7
Between two and five years	23.8
Five to nine years	34.2
Ten years or more	25.8
Refused to answer	4.5
Number of respondents	**2,290**

Table B.82. Imagine that your car breaks down and requires $400 worth of repairs in order to drive again. Based on your current financial situation, how would you pay for this expense? If you would use more than one method to cover this expense, please select all that apply.

Percent, except as noted

Q82	
Put it on my credit card	36.4
With the money currently in my checking account	40.8
By taking money out of my savings	21.5
Using money from a bank loan, line of credit, or overdraft	3.4
By borrowing from a friend or family member	17.5
Using a payday loan or deposit advance	2.9
By pawning something	6
Other	5.7
Refused to answer	2.9
Number of respondents	**2,290**

Table B.83. Which of the following statements comes closest to describing the amount of financial risk that you are willing to take when you save or make investments?

Percent, except as noted

Q83	
Take substantial financial risks expecting to earn substantial returns	3.3
Take above average financial risks expecting to earn above average returns	14.6
Take average financial risks expecting to earn average returns	36.9
Not willing to take any financial risks	42.5
Refused to answer	2.6
Number of respondents	**2,290**

Table B.84. Suppose that you are the only income earner in the family, and you have a good job guaranteed to give you your current income every year for life. You are given the opportunity to take a new and equally good job, with a 50–50 chance that it will double your income and a 50–50 chance that it will cut your income by one-third (33 percent). Would you take the new job?

Percent, except as noted

Q84	
Yes	24.1
No	73
Refused to answer	2.9
Number of respondents	**2,290**

Table B.85. Now suppose that the chances were 50–50 that it would double your income and 50–50 that it would cut your income by half (50 percent). Would you still take the new job?

Percent, except as noted

Q85	
Yes	36.2
No	63.1
Refused to answer	0.7
Number of respondents	**547**

Table B.86. Now suppose that the chances were 50–50 that it would double your income and 50–50 that it would cut your income by one-fifth (20 percent). Would you now take the new job?

Percent, except as noted

Q86	
Yes	22.5
No	76.8
Refused to answer	0.7
Number of respondents	**1,687**

Table B.87. Summary Statistics for Demographics

	Mean	Standard Deviation
Age	46.6209	16.9178
Male	0.4841	0.4999
Female	0.5159	0.4999
Ages 18–29	0.2139	0.4101
Ages 30–44	0.2599	0.4387
Ages 45–60	0.2755	0.4469
Ages over 60	0.2507	0.4335
Less than high school	0.1267	0.3327
High school degree	0.3035	0.4599
Some college	0.2875	0.4527
Bachelor's degree or higher	0.2822	0.4502
White, non-Hispanic	0.6795	0.4668
Black, non-Hispanic	0.1158	0.3200
Other and two or more races, non-Hispanic	0.0679	0.2516
Hispanic	0.1369	0.3438
Less than $25,000	0.2154	0.4112
$25000–$39,999	0.1734	0.3787
$40,000–$74,999	0.2623	0.4400
$75,000–$99,999	0.1293	0.3356
Greater than $100,000	0.2195	0.4140
Married	0.5279	0.4993
Unmarried, widowed, divorced, or living with partner	0.4721	0.4993
Northeast	0.1842	0.3877
Midwest	0.2174	0.4126
South	0.3659	0.4818
West	0.2324	0.4225
Employed	0.5559	0.4970
Unemployed but in labor force	0.0970	0.2961
Not in labor force: retired, disability or other	0.3470	0.4761
Observations	2,290	

Table B.88. Use of online banking on a desktop, laptop, or tablet computer in the past 12 months by age
Percent, except as noted

Age categories	Yes	No	Total
18–29	24.6	10.6	20.1
30–44	30.4	16.8	26
45–59	24.7	32.5	27.2
60+	20.3	40.1	26.7
Number of respondents	**1,358**	**644**	**2,002**

Table B.89. Use of mobile banking in the past 12 months by age
Percent, except as noted

Age categories	Yes	No	Total
18–29	43.5	16.8	22.4
30–44	35.7	24.7	27
45–59	14.7	30.2	26.9
60+	6.1	28.4	23.7
Number of respondents	**372**	**1,626**	**1,998**

Table B.90. Use of mobile payments in the past 12 months by age
Percent, except as noted

Age categories	Yes	No	Total
18–29	37.3	20.3	22.4
30–44	35.9	25.6	26.9
45–59	16.9	28.5	27
60+	10	25.7	23.7
Number of respondents	**213**	**1,780**	**1,993**

Table B.91. Use of online banking on a desktop, laptop, or tablet computer in the past 12 months by race
Percent, except as noted

Race/ethnicity	Yes	No	Total
White, Non-Hispanic	73.3	68.8	71.8
Black, Non-Hispanic	7.6	13.4	9.4
Other, Non-Hispanic	5.7	4.8	5.4
Hispanic	12.4	12.2	12.3
2+ Races, Non-Hispanic	1.1	0.7	1
Number of respondents	**1,358**	**644**	**2,002**

Table B.92. Use of mobile banking in the past 12 months by race
Percent, except as noted

Race/ethnicity	Yes	No	Total
White, Non-Hispanic	60.3	71.5	69.2
Black, Non-Hispanic	16.2	10	11.3
Other, Non-Hispanic	5.2	5.8	5.6
Hispanic	17.1	11.6	12.8
2+ Races, Non-Hispanic	1.2	1.1	1.2
Number of respondents	**372**	**1,626**	**1,998**

Table B.93. Use of mobile payments in the past 12 months by race
Percent, except as noted

Race/ethnicity	Yes	No	Total
White, Non-Hispanic	58.3	70.8	69.3
Black, Non-Hispanic	12.9	10.9	11.2
Other, Non-Hispanic	7.1	5.4	5.6
Hispanic	20.9	11.6	12.8
2+ Races, Non-Hispanic	0.9	1.2	1.2
Number of respondents	**213**	**1,780**	**1,993**

Table B.94. Use of online banking on a desktop, laptop, or tablet computer in the past 12 months by gender
Percent, except as noted

Gender	Yes	No	Total
Female	51.9	52.3	52.1
Male	48.1	47.7	47.9
Number of respondents	**1,358**	**644**	**2,002**

Table B.95. Use of mobile banking in the past 12 months by gender
Percent, except as noted

Gender	Yes	No	Total
Female	53.4	52.9	53
Male	46.6	47.1	47
Number of respondents	**372**	**1,626**	**1,998**

Table B.96. Use of mobile payments in the past 12 months by gender
Percent, except as noted

Gender	Yes	No	Total
Female	55	52.7	53
Male	45	47.3	47
Number of respondents	**213**	**1,780**	**1,993**

Table B.97. Use of online banking on a desktop, laptop, or tablet computer in the past 12 months by education group

Percent, except as noted

Education	Yes	No	Total
Less than high school	5.2	16.7	8.9
High school	23.1	41.3	29
Some college	32.9	25.1	30.4
Bachelor's degree or higher	38.8	16.9	31.8
Number of respondents	**1,358**	**644**	**2,002**

Table B.98. Use of mobile banking in the past 12 months by education group

Percent, except as noted

Education	Yes	No	Total
Less than high school	5.5	12.1	10.7
High school	21.5	31.8	29.6
Some college	39	27.4	29.8
Bachelor's degree or higher	34	28.8	29.9
Number of respondents	**372**	**1,626**	**1,998**

Table B.99. Use of mobile payments in the past 12 months by education group

Percent, except as noted

Education	Yes	No	Total
Less than high school	7.2	11.2	10.7
High school	27.9	29.9	29.7
Some college	37	28.7	29.7
Bachelor's degree or higher	27.9	30.1	29.9
Number of respondents	**213**	**1,780**	**1,993**

Table B.100. Use of online banking on a desktop, laptop, or tablet computer in the past 12 months by income group

Percent, except as noted

Income group	Yes	No	Total
Less than $25,000	10.1	27.1	15.6
$25,000–$39,999	17.2	19.3	17.9
$40,000–$74,999	28.5	27.1	28.1
$75,000–$99,999	15.9	11	14.4
$100,000 or greater	28.2	15.5	24.2
Number of respondents	**1,358**	**644**	**2,002**

Table B.101. Use of mobile banking in the past 12 months by income group

Percent, except as noted

Income group	Yes	No	Total
Less than $25,000	12.8	19.9	18.4
$25,000–$39,999	19	16.6	17.1
$40,000–$74,999	27.5	26.5	26.7
$75,000–$99,999	12.9	14	13.8
$100,000 or greater	27.9	22.9	24
Number of respondents	**372**	**1,626**	**1,998**

Table B.102. Use of mobile payments in the past 12 months by income group

Percent, except as noted

Income group	Yes	No	Total
Less than $25,000	19.1	18.5	18.5
$25,000–$39,999	20.6	16.7	17.2
$40,000–$74,999	23	27.2	26.7
$75,000–$99,999	11.7	14	13.7
$100,000 or greater	25.6	23.6	23.9
Number of respondents	**213**	**1,780**	**1,993**

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