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Are Americans Embracing Mobile Payments?

Survey of consumer experiences finds greater trust in credit, debit cards

Overview

Americans typically make purchases with cash, credit cards, or debit cards, but many are also conducting financial transactions using web browsers, text messaging, or apps on phones and tablets. Mobile transactions have been made possible by consumers' widespread adoption of smartphones and increasing preference for online commerce. Previous research by The Pew Charitable Trusts found that age is the best predictor of mobile payment use, with younger Americans driving the growth of these transactions, motivated in part by rewards or loyalty programs offered by mobile app providers. However, Pew's study also found that across generations, consumers remain skeptical of this financial technology, have persistent concerns about security, and are more likely to trust traditional methods, such as debit and credit cards.

In part because of this lack of confidence—and the established history of positive experiences with traditional cards—mobile payment adoption has not met industry projections, even as e-commerce in general has seen strong growth in recent decades. Another possible factor is that mobile payments rely on the same underlying financial systems as traditional methods, which as some industry analysts have noted, means they are not yet able to offer consumers a meaningfully faster or more seamless transaction experience. Some analysts predict that over the next few years, mobile payment growth will continue to flatten domestically and internationally for all but a small group of committed users.[1]

To help shed light on consumer preferences and concerns, Pew conducted a nationally representative survey that captured Americans' opinions of and experiences with an array of payment methods, including mobile payments; credit, debit, and prepaid cards; checks and money orders; and cash. The researchers broadly divided the findings between respondents who had used a mobile payment in the past year and those who had not.[2] (See Appendix A.) The key findings are:

- **Consumers avoid mobile payments because of concerns about loss of funds.** Nearly 30 percent of respondents reported that they opted not to use mobile payments on at least some occasions for that reason. Nevertheless, 84 percent of respondents who had made a mobile payment in the past year also did so in the past month.
- **Consumers trust protections on debit and credit cards more than those on mobile payments.** Respondents were more likely to say mobile payments are "poorly protected" (38 percent) than prepaid (28 percent), debit (22 percent), or credit cards (9 percent). This perception held even for mobile payments that involved a credit card and were therefore subject to the same financial safeguards as other transactions conducted with those cards: Just 35 percent of consumers said a mobile payment that uses a credit card was well protected, compared with 61 percent for a credit card on its own.
- **15 percent of consumers experienced an issue with a payment method (mobile or traditional) in the past year.** Problems included overpayment, disputes with a merchant, and fraudulent transactions. Nearly all these consumers knew whom to contact to resolve their issue, were satisfied with the outcome, and got their money back.
- **Consumers report that mobile payment issues are comparatively difficult to resolve.** Only 2 percent of mobile payment users experienced an issue with a mobile transaction in the past year. However, they were twice as likely as debit, credit, or prepaid card users (39 percent vs 20 percent) to report that disputes were difficult to resolve and more than four times as likely (23 percent vs 5 percent) to not know whom to contact.

The researchers supplemented the survey findings with an analysis of 12 mobile payment company disclosures. The review examined firms' practices and policies for storing, using, and protecting consumer funds and handling disputes. Together, the survey and disclosure analysis offer a snapshot of how consumers decide which payment method to use, what kinds of problems they encounter, and how they resolve those issues—with an emphasis on comparing mobile payments with other electronic methods. This exploration, in turn, can help illuminate people's reservations about mobile payments and the barriers to broader adoption.

Key Terms

Mobile payment: Online and point-of-sale purchases, bill payments, and money transfers conducted via a web browser, app, or text message from a consumer's smartphone (which for purposes of this analysis includes any internet-enabled phone). Funds for these transactions typically come from a credit or debit card, bank account, or, less commonly, a prepaid or gift card linked to the phone or app or from money stored directly on the device.

Mobile payment apps: Software applications that allow consumers to send and receive money or pay for goods and services using their smartphones. Additionally, most major smartphone operating systems are equipped with a mobile wallet, which allows users to store payment information and make payments.

Prepaid cards: Payment vehicles that work like debit cards but are not attached to the customer's bank account. They can be loaded with money when purchased in person or over the internet and reloaded using direct deposit, transfers from a bank account, or at certain retail locations.[3]

Payment issue: Transactions that resulted in the temporary or permanent loss of a customer's funds. These may include fraudulent transactions, in which someone stole or accessed information from any payment device without permission for the purpose of making purchases or removing funds from the account; or payment errors, which might include being charged twice for the same item or service, not receiving a good or service that was paid for, or being charged the wrong amount.[4]

Traditional payment: Transactions made using cash; a credit, debit, or prepaid card; or a check or money order.

Traditional cards: Credit, debit, or prepaid cards.

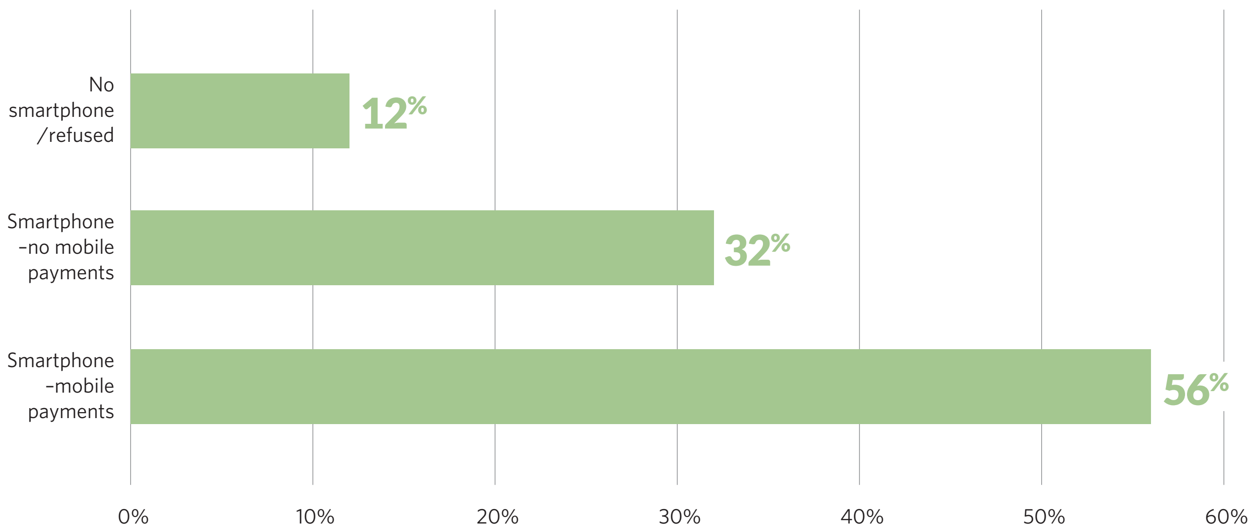
Mobile payments rely on traditional financial infrastructure for transaction processing and consumer protection

In a given month, most Americans use a range of traditional methods to make payments: credit cards (70 percent), debit cards (61 percent), prepaid cards (12 percent), cash (78 percent), and checks and money orders (37 percent). By contrast, 56 percent (roughly 143 million adults) made at least one mobile payment in the past year.[5] (See Figure 1.)

Figure 1

More Than Half of U.S. Adults Conducted a Transaction on a Smartphone in the Past Year

Percentage of respondents by device ownership and mobile payment usage



Notes: Results are based on 1,178 survey participants who made a payment in the past year. Respondents were asked, "Is your cellphone a smartphone, meaning that it has internet access?" and "Earlier you indicated that you have a smartphone, so the next few questions will refer to the use of mobile payments apps. These allow consumers to pay for things, and/or send and receive money, by using a smartphone. These payments may or may not be tied to your bank account. Examples include Uber, Venmo, Apple Pay, or Starbucks but do not include using the bank's mobile app itself. Below is a list of some things that people might do with smartphones. Select 'yes' for each item where you have used your smartphone in the past 12 months. Have you made an online or in-app purchase on your smartphone in the past 12 months? Have you paid bills through a mobile web browser or app (not your bank's mobile app) on your smartphone in the past 12 months? Have you paid for a product or service (in person) on your smartphone in the past 12 months? Have you sent money to another person through an app (not your bank's mobile app) on your smartphone in the past 12 months? Have you received money from another person through an app (not your bank's mobile app) on your smartphone in the past 12 months? Have you paid for parking or transportation such as a car, bus, train, or flight on your smartphone in the past 12 months? Have you paid for lodging or housing on your smartphone in the past 12 months?"

Source: Pew's mobile payment survey, 2018

However, despite the apparent differences between mobile and traditional payments—most notably the use of a smartphone versus a computer or a point-of-sale register—the infrastructure that underpins these transactions is largely the same. In particular, mobile and traditional payments use the same underlying financial systems through which funds are guaranteed and requested—such as Visa and Mastercard networks, which enable credit card payments, and the Automated Clearing House, which facilitates direct transfers between depository accounts.

In addition, mobile and traditional payments often have the same consumer protections. More than 80 percent of mobile payment users said they connect a bank account or credit or debit card to the mobile app they use most often,[6] and another 6 percent connect a prepaid card. In those instances, the payment is subject to all the protections against fraud and loss of funds that would apply if the account had been used alone.[7] For example, when someone links a credit card to a mobile app, the full slate of credit card consumer protections applies. Further, for funds stored directly on an app, such as a mobile wallet or person-to-person payment app, a recently enacted rule for prepaid cards also provides protections against unauthorized charges and ensures that consumers have the right to dispute such transactions.[8] (See Figure 2 and Appendix B.)

Figure 2

Regardless of Whether a Card Is Used on Its Own or Via a Mobile Payment, the Financial Protections From the Card Company Remain the Same

Federal rules provide similar protections regardless of payment method

Note: See Appendix B.

One exception to the application of traditional protections, however, is funds stored in an app for use at a single merchant. These mobile payment tools continue to be treated in the same manner as gift cards, which are not covered by the prepaid rule. In these cases, funds can be lost if the smartphone is stolen or compromised.

Consumers prefer traditional payment methods over mobile

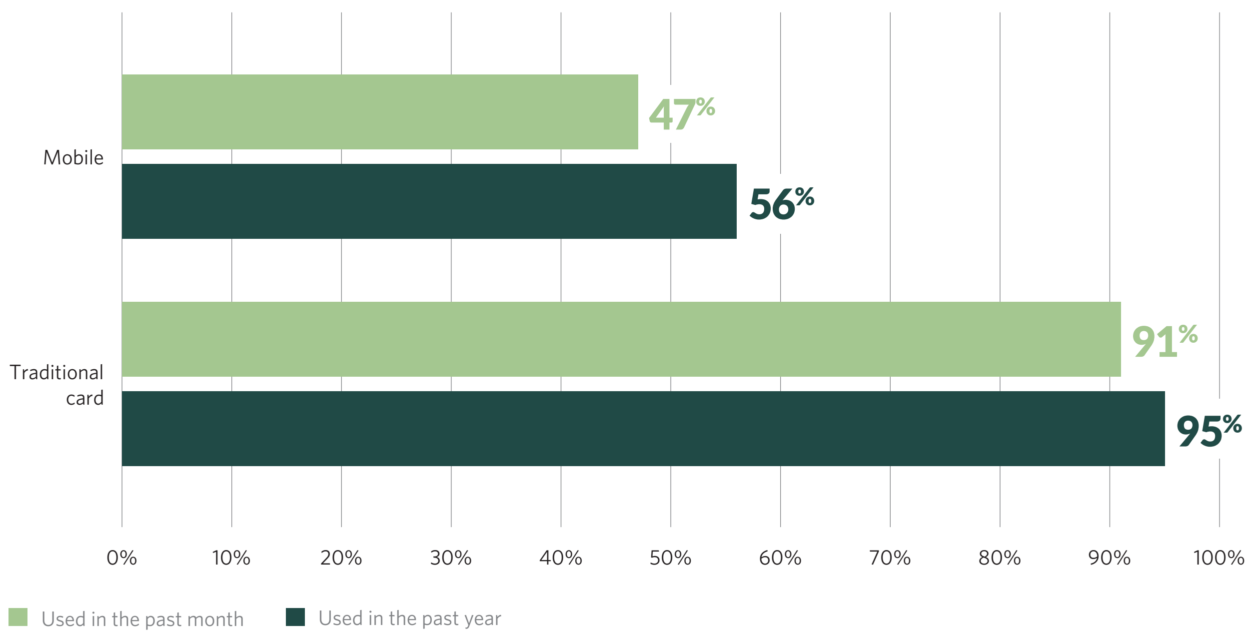
E-commerce has increased from just 1 percent of retail sales two decades ago to 10 percent in 2019, growing three times faster than the broader market. However, this rapid expansion has not translated to mobile transactions.[9] Although 88 percent of Americans who conducted a financial transaction had a smartphone capable of making a mobile payment in 2018, mobile payment adoption has lagged industry projections, and consumers still tend to opt for traditional cards not linked to a mobile platform.

Among survey respondents, 95 percent reported using at least one traditional card in the past year, compared with 56 percent who reported using a mobile payment. (See Figure 3.) Further, consumers who used mobile payments did so to supplement, not replace, other options and were more likely to use a wider array of payment types than those who did not make transactions using their phones. Sixty-five percent of mobile payment users had used three or more payment types in the past month, compared with 45 percent of traditional payment users.

Figure 3

Traditional Card Users Outnumber Mobile Payment Users Almost 2-to-1

Percentage of respondents who used a payment type by frequency



Notes: Results are based on 1,178 survey respondents who made a payment in the past year. Respondents were asked, "Have you used any of the following payment types to make purchases in the past month?" and "Have you used any of these payment types to make purchases within the past 12 months?"

Source: Pew's mobile payment survey, 2018

Mobile payments users have some distinct demographic characteristics: They are younger and more educated, have higher earnings, and are more likely to have a checking account than those who prefer traditional payment methods. Among these factors, however, previous Pew research found that age is the main driver of mobile payment use.[10] The current survey reinforces that finding: 74 percent of respondents who used mobile payments were members of Generation X or younger (born after 1964) while 62 percent of traditional payers were Baby Boomers or older (born from 1946 to 1964).[11]

Consumers are reluctant to use mobile payments for various reasons

Many Americans have been hesitant to adopt mobile payments. In public discourse and private discussions with Pew, some representatives from the payments industry suggest that this is in part because traditional methods simply work well enough to meet consumers' needs while offering robust consumer protections. For example, paying with the use of a smartphone at a point of sale is not materially easier than using a credit card. Also, products and services are not received faster nor are transferred funds available sooner with a mobile payment, compared with traditional cards or accounts. As one principal payments analyst from 451 Research noted, "Mobile wallets today are basically just your payment card. There may be some convenience to storing cards on your smartphone for certain occasions, but I don't think it's a value proposition that appeals to shoppers of all types and varieties."[12] Overall, both options provide a similar customer experience, so for many consumers, the case for using a mobile payment rather than a familiar traditional method is relatively weak, and therefore other concerns may be driving consumer choice.

A Look at Mobile App Disclosures

Pew analyzed disclosures from 12 mobile payment apps and identified three key takeaways:

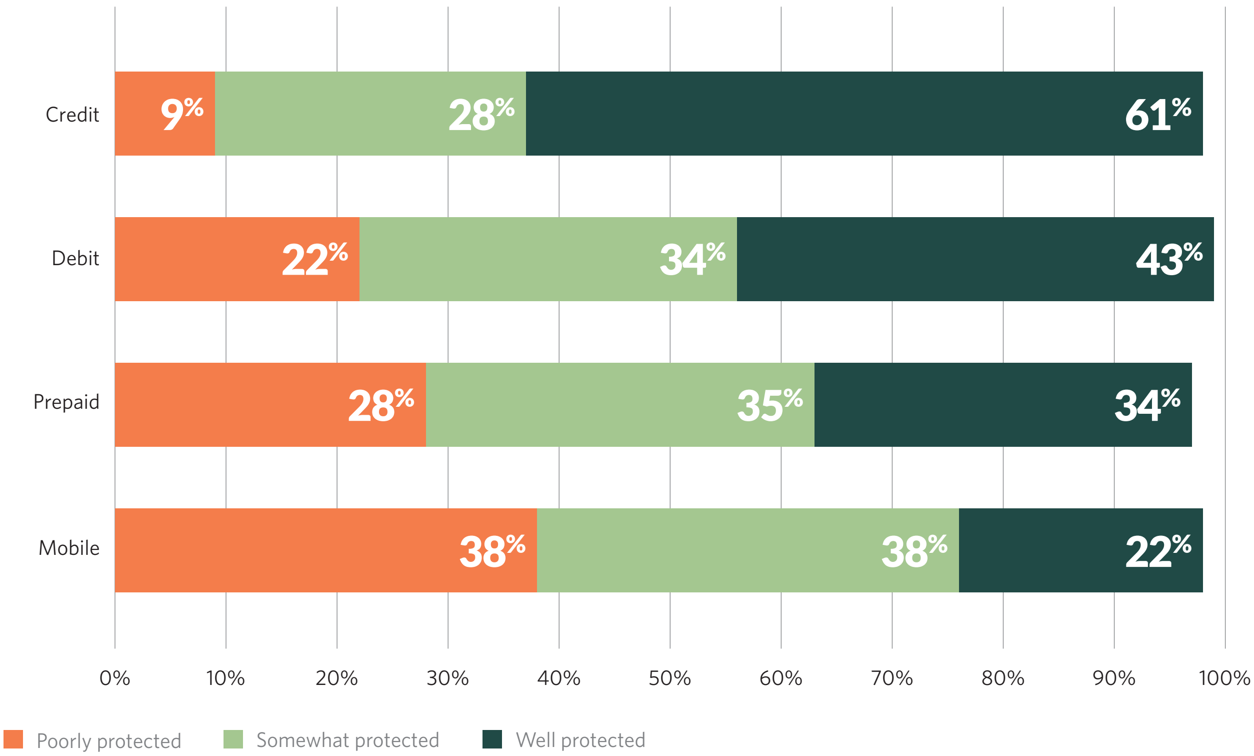
- Most offer the ability to transfer money from a bank account, debit card, credit card, or prepaid card, and those funds are protected by safeguards that limit consumer liability.[13]
- They generally limit a mobile payment company's liability in the case of a customer dispute with a merchant, security breach, or other harm and often attempt to shift responsibility for consumer losses to mobile carriers, phone manufacturers, or other parties, which frequently are not explicitly named in the disclosure.
- Providers do little to inform consumers about their options in the event of a loss of funds—for example, if money stored on an app is stolen—and some even prevent consumers from storing or saving account agreements that might contain such information.

Some research suggests that consumer resistance to mobile payment applications stems from doubts about the security of transactions on phones. Market researchers, payment providers, and analysts have found that safeguarding access to private personal and financial information is a top priority for consumers and can present a barrier to mobile payment adoption, despite industry and government efforts to protect these transactions.[14] Likewise, previous Pew research has found that many consumers have concerns about the security of mobile payments and are more likely to trust traditional methods.[15]

These reservations are also evident in Pew's current survey even among the most enthusiastic mobile payment users: When asked to rank protections on mobile payments, nearly 30 percent of Gen X and younger consumers rated them as carrying no protection against financial loss, compared with 50 percent among Baby Boomers and older Americans.

To further explore these concerns, the survey asked participants to rank the protections provided for debit, credit, and prepaid cards, and mobile transactions. Respondents generally said that credit and debit cards are well protected—61 percent and 43 percent, respectively—and a third felt the same about prepaid cards (34 percent). But only 22 percent of respondents ranked mobile payments as well protected. (See Figure 4.)

Figure 4
Consumers Say Traditional Payments Are Safer Than Mobile
Percentage of respondents by payment type



Notes: Results are based on 1,178 survey participants who made a payment in the past year. Respondents were asked, "In the next few questions, we'll ask you about protections on different payment types. To start, please tell us how well you think each of the following options protects the user from payment issues. Rank each on a scale from 1 to 5 with 1 being no protection and 5 being perfectly protected." Rankings of 1-2 were categorized as "poorly protected," 3 as "somewhat protected," and 4-5 as "well protected." Data do not add to 100 percent because "refused" responses were omitted.

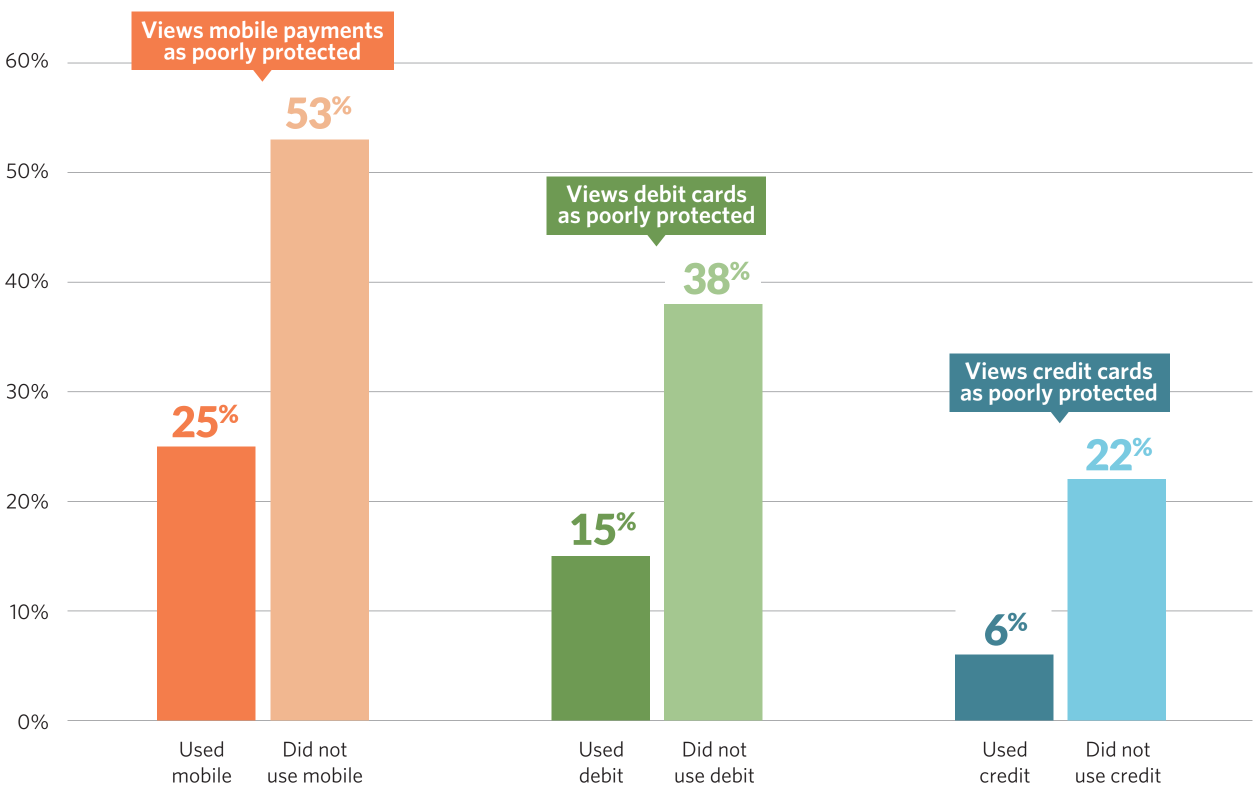
Source: Pew's mobile payment survey, 2018

It is unsurprising that consumers would rate safeguards on payment types they use regularly more highly than those on other methods. However, the difference is most pronounced between mobile and traditional payment users: Mobile payment users were more than twice as likely as those who prefer traditional methods to say mobile transactions are well protected. Yet, across all respondents, including those who made a mobile payment in the past year, this option was still viewed as less safe than debit and credit cards: A quarter of mobile users and over half of nonusers said that mobile payments were poorly protected against loss of funds.[16] (See Figure 5.)

Figure 5

More Consumers View Mobile Payments as Poorly Protected Compared with Other Methods

Percentage of respondents by payment user type



Notes: Results are based on 1,178 survey participants who have made a payment in the past year. Respondents were asked, "Have you used any of the following payment types to make purchases in the past month?" and "Have you used any of these payment types to make purchases within the past 12 months?" and "In the next few questions, we'll ask you about protections on different payment types. To start, please tell us how well you think each of the following options protects the user from payment issues. Rank each on a scale from 1 to 5, with 1 being no protection and 5 being perfectly protected." Rankings of 1-2 were categorized as "poorly protected," 3 as "somewhat protected," and 4-5 as "well protected."

Source: Pew's mobile payment survey, 2018

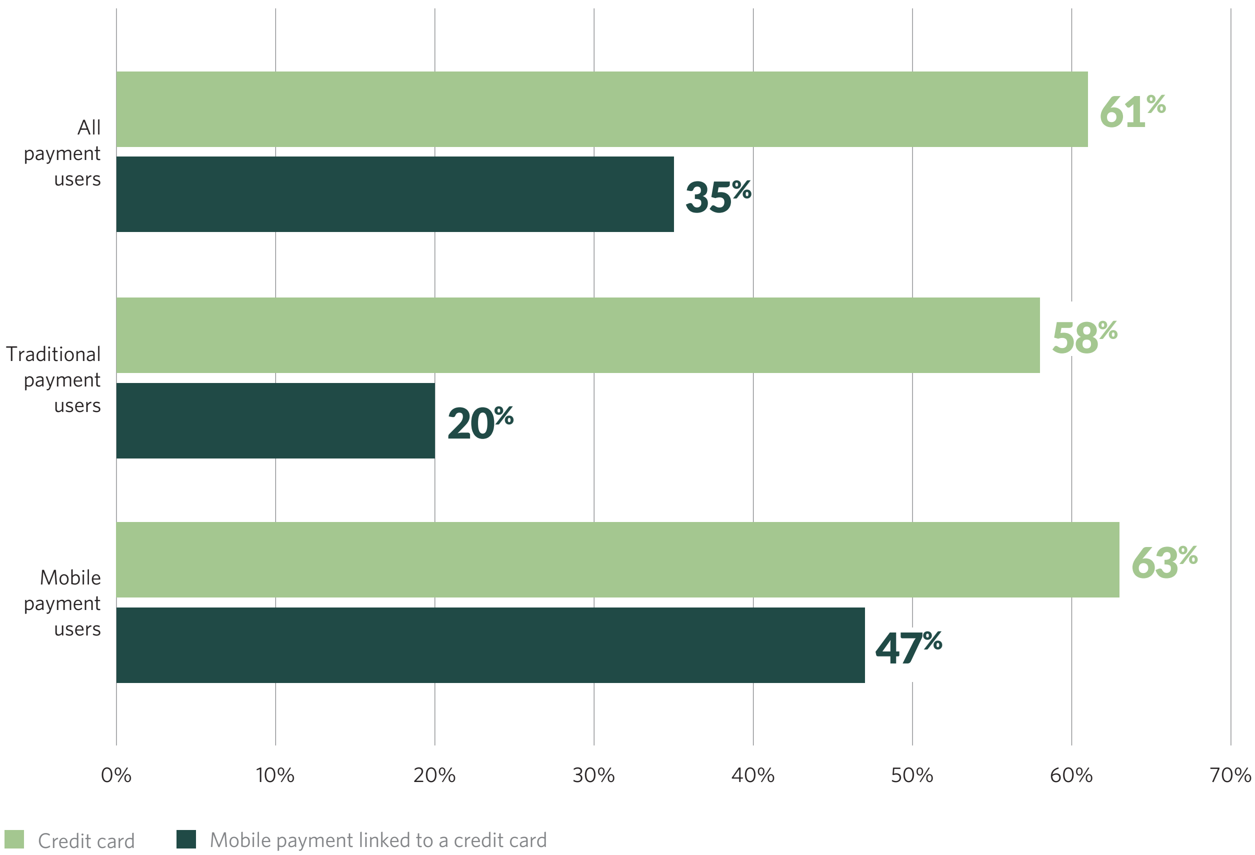
Previous research identified several ways in which mobile payments regulations create legal ambiguity and potential confusion for consumers.[17] This concern was reflected in survey participants' sentiments about the relative security of different payment methods. When asked to rank protections on credit cards, respondents were nearly twice as likely to say that credit cards were well protected compared with mobile payments linked to credit cards.

This sentiment was particularly strong among those who use only traditional payments: 20 percent ranked a mobile payment linked to a credit card as well protected. But even mobile payment users were less likely to rank a mobile payment linked to a credit card as well protected (47 percent) than a credit card on its own (63 percent), revealing that, despite their experience with mobile payments, they remain concerned about financial security. (See Figure 6.)

Figure 6

Consumers Are Wary of Mobile Payments, Even Those Linked to a Credit Card

Percentage of respondents who said payment type is 'well protected'



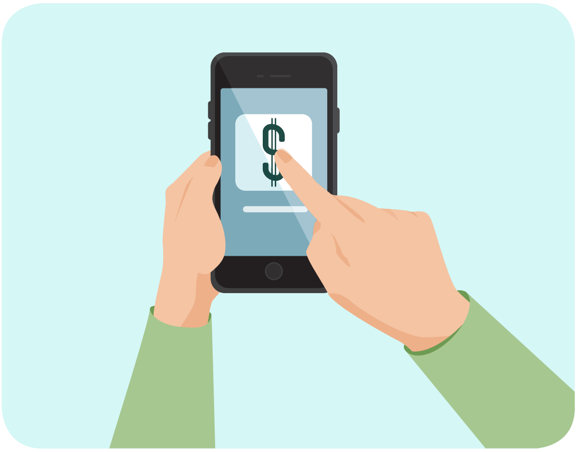
Notes: Results are based on 1,178 survey participants who made a payment in the past year. Respondents were asked, "In the next few questions, we'll ask you about protections on different payment types. To start, please tell us how well you think each of the following options protects the user from payment issues. Rank each on a scale from 1 to 5, with 1 being no protection and 5 being perfectly protected." "For mobile payments specifically, please tell us how well you think each option would protect the user from payment issues. Rank each on a scale from 1 to 5, with 1 being no protection and 5 being perfectly protected." Rankings of 1-2 were categorized as "poorly protected," 3 as "somewhat protected," and 4-5 as "well protected."

Source: Pew's mobile payment survey, 2018

Figure 7

Source of Funds Determines Mobile Payment Financial Protection

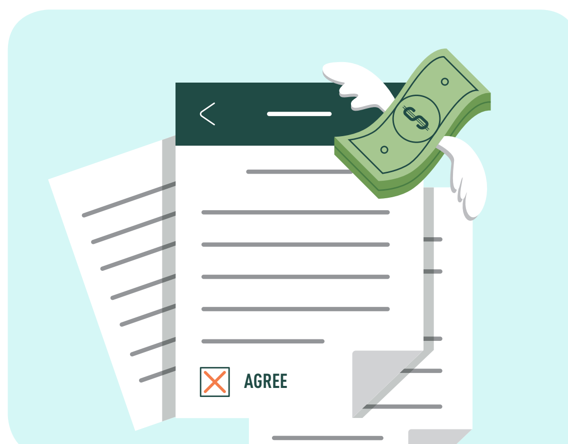
Protections on payment types by transaction type



You routinely use a mobile app to make purchases and transfers, and you have linked your debit card to the app. You also have a balance (referred to as "stored value") on the app that can be used only for purchases with the app's company (like a gift card).

You receive a notification from the app service confirming the purchase of a new 4K TV. But you didn't buy that.

Resolution 1: Debit card
Federal regulations give you 60 days from the time you receive your account statement to dispute a debit card transaction with the issuing bank. If you notify your financial institution of the error within that time, you bear zero liability for the transaction.



Resolution 2: Stored value on mobile app
Because the stored value account is regulated like a gift card (with no recourse against loss of funds), you are subject to the app's terms and conditions, and nonbank financial technology companies are not obligated to limit your liability.

Fears about loss of funds drive people away from mobile payments

Many respondents indicated that they sometimes avoid a particular payment type to prevent loss of funds. Having several payment options from which to choose enables them to weigh the benefits and risks of using a given method, depending on the transaction. In some cases, respondents chose not to use certain options at all. Overall, 29 percent of consumers said they sometimes or always avoid mobile payments for fear of loss of funds, most commonly related to mistrust or a high level of discomfort with either their phone or the merchant. (See “Consumers’ Views of Mobile Payment Security Reflect Diverse Concerns.”)

Unsurprisingly, avoidance of mobile payments correlates with respondents’ views of security: Those who rated mobile payments as poorly protected tended to avoid them more often than those who viewed their safeguards favorably (43 percent vs. 15 percent). Debit cards are eschewed at similar rates to mobile payments (53 percent and 19 percent, respectively), and respondents often said that they opted not to use debit cards in unfamiliar or unsecured situations because direct access to a bank account could expose their personal funds.

These findings do not mean that consumers with concerns about the security of a credit, debit, or mobile payment never use it, but they do indicate that people are choosing other methods in certain circumstances. Even though nearly 30 percent of mobile payment users sometimes avoid them, few discontinue using them altogether: 84 percent of those who used a mobile payment in the past 12 months also used one in the past month.

> “Mobile wallets today are basically just your payment card. There may be some convenience to storing cards on your smartphone for certain occasions, but I don’t think it’s a value proposition that appeals to shoppers of all types and varieties.”
>
> Noted by a principal payments analyst from 451 Research

Consumers' Views of Mobile Payment Security Reflect Diverse Concerns

The survey asked respondents, "In what situations do you avoid using mobile payments?" Overall, most respondents expressed concerns about the trustworthiness of apps in general, although many also had doubts about the security provided by certain retailers, their location or surroundings when they make transactions, and the internet in general.

Distrust of mobile apps

"Unfamiliar apps or ones not connected to trusted merchants."

"All situations. That method is not safe to use."

"Fear of hacking. Will not use."

"Anytime there are other safe options available."

Distrust of merchants

"When I am unsure of the legitimacy of the seller."

"Vendors I'm not familiar with."

"With a company I do not know or trust yet."

"If I don't trust the store/vendor to charge me the correct amount, or if I had problems with the way a vendor has processed charges in the past."

Distrust of situations

"In public."

"When I am not sure that the place where I am using it is secure."

"Sometimes when I have a feeling that my personal info might get stolen."

"I typically only make financial transactions at home on my secure network via a tablet or computer, not typically my phone. I do use a [coffee shop] app to order online and pay with via my phone."

Distrust of the internet

"It may be convenient to some people, but I don't trust the security of sending money through Wi-Fi on my smartphone."

"When the site does not appear to have a secure connection."

"Online purchases."

"On websites I don't trust."

1 in 7 Americans had a payment issue in the past year

Overall, 15 percent of consumers who have used any payment method reported having an issue in the past 12 months—such as a lost or stolen card or being overcharged by a merchant—and, of those, 71 percent said it involved an instrument that they use at least weekly. Notably, only 2 percent of mobile payment users cited an issue with that method. However, this low incidence could also be due in part to relatively low transaction volume, because only 8 percent of payments used a mobile phone in 2018.[18]

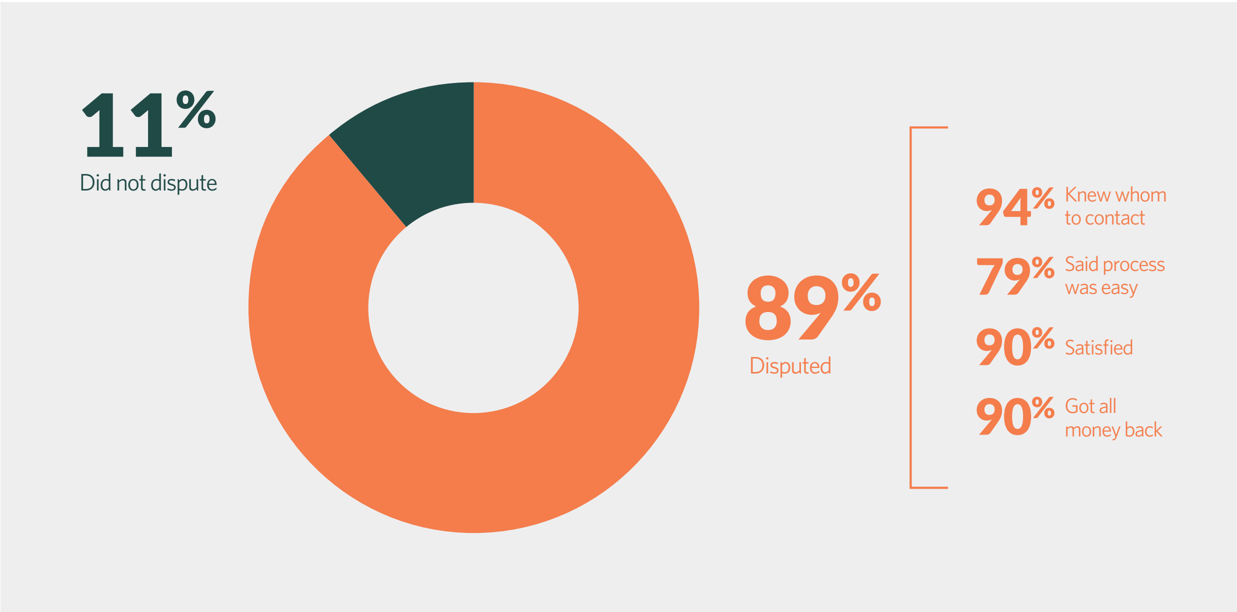
Consumers usually dispute issues and receive a satisfactory resolution

Among consumers who reported having a payment issue with any method in the past year, 89 percent chose to dispute the most recent incident. Of those, 94 percent felt that they knew whom to contact to resolve the problem, 79 percent said the dispute experience was easy, 90 percent said the problem was resolved to their satisfaction, and 90 percent got all their money back. (See Figure 8.) Despite these generally positive outcomes, respondents who found the dispute process difficult were more likely than those who found it easy to say that they avoid certain payments for fear of loss of funds (85 percent and 61 percent, respectively) and to express distrust for the payment company (30 percent and 3 percent, respectively).

Figure 8

Most Payment Disputes Are Resolved Positively

Percentage of respondents with dispute issues and outcomes



Notes: Results are based on 271 survey participants who reported having an issue and chose to dispute it. Respondents were asked, "In the next couple of questions, we'd like to ask you about any 'payment issues' that you may have experienced on any of your electronic payment sources (excluding cash transactions) that resulted in the temporary or permanent loss of your funds. These may include: fraudulent transactions, in which someone stole or accessed information from any of your payment types or cards without your permission for the purpose of making purchases to the account or removing funds from it; or payment errors, which might include being charged twice for the same item or service, not receiving a good or service you paid for, or being charged the wrong amount. In the past 12 months, have you had a payment issue (either fraudulent transactions or payment errors)?" and "For the next few questions, please think about your most recent payment issue with your [debit card/ credit card/ prepaid card/ mobile payment app/ or check or money order] when giving your answer. When you noticed this most recent issue, did you try to dispute it?" and "Did you feel like you knew whom to contact to dispute the problem?" and "Were you able to resolve the problem to your satisfaction?" and "Were you able to get all of your money back, most of your money back, some of your money back, none of your money back?"

Source: Pew's mobile payment survey, 2018

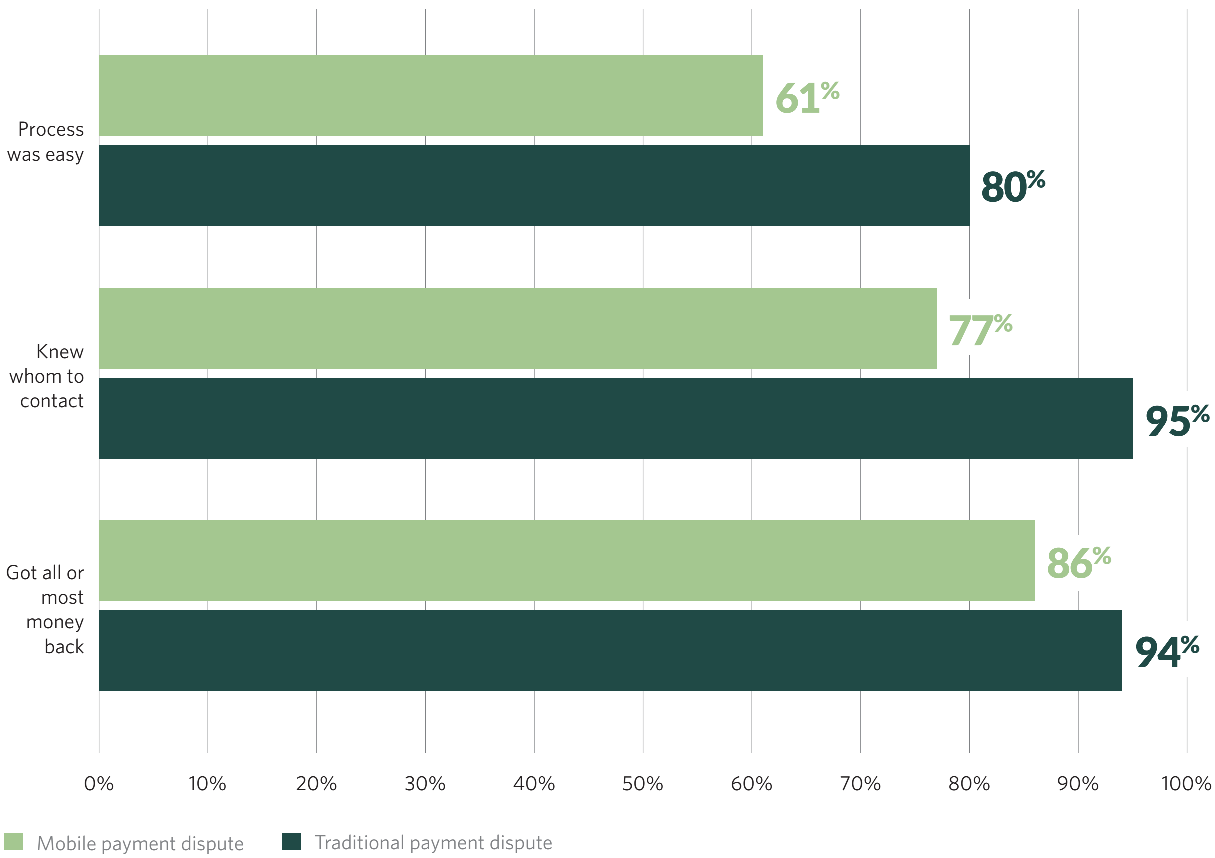
Mobile payment issues are infrequent but can lead to less favorable outcomes than other methods

The low rate of consumer-reported issues with mobile payments indicates that this method is generally working well. However, mobile payment disputes can be more challenging to resolve than those involving solely credit, debit, and prepaid cards. Mobile payment users who had a dispute were less likely than users of traditional payment methods to know whom to contact (77 percent vs. 95 percent) and to say the process was easy (61 percent vs. 80 percent). Similarly, although outcomes for mobile payment disputes were positive overall, they were relatively less so than traditional payment disputes: 86 percent of mobile payment users who disputed a transaction recovered all or most of their money compared with 94 percent of traditional payment users. (See Figure 9.)

Figure 9

Consumers Had Less Positive Experiences When Disputes Involved Mobile Payments

Percentage of respondents by type of dispute



Notes: Results are based on 271 survey participants who reported having an issue and chose to dispute it. Respondents were asked, "When you noticed this most recent issue, did you try to dispute it?" and "Thinking about this dispute experience, how easy or difficult was it?" and "Did you feel like you knew whom to contact to dispute the problem?" and "Were you able to get all of your money back, most of your money back, some of your money back, none of your money back?" Ease of dispute, knowledge of whom to contact, and amount of money received back all varied by dispute type at the 95 percent confidence interval.

Source: Pew's mobile payment survey, 2018

These challenges may have their roots in the complex and often ambiguous regulatory environment in which mobile payments operate and in the lack of clarity provided by mobile payment firms. Previous Pew research showed that the laws and regulations governing mobile payment transactions are numerous and confusing,[19] and Pew's recent analysis of mobile app disclosures found that they are often long, difficult to read, and impossible to save. The disclosures also generally shift liability for consumer harms from the service providers to other parties, such as the mobile carrier or the firm responsible for the underlying payment method—a credit card company, for example. These problems are further complicated by a lack of consistency in dispute procedures among mobile apps. Their processes can differ substantially, unlike those for credit cards, for instance, which share a standard across cards and providers. (See "A Look at Mobile App Disclosures" for further details.)

Pew's analysis also found that mobile payment providers frequently place more responsibility for dispute resolution on consumers than traditional electronic payment companies do. For example, mobile payment app terms of use typically require that customers always use confidential password protection on their phones and state that the company is not responsible for losses resulting from the unauthorized use of those credentials by someone else. By contrast, as long as customers properly protect their ATM personal identification numbers, federal Regulation E limits their liability for unauthorized debit card transactions and requires financial institutions to provide a temporary credit for lost funds within 10 days while the disputed charges are investigated.[20]

For person-to-person money transfers, customers who accidentally send money stored on mobile apps to the wrong individuals may have to contact the recipients directly to work out the issue. Further, although the Consumer Financial Protection Bureau's prepaid rule also provides significant protections against unauthorized transactions for stored mobile balances, senders may not be able to prove that transfers were unauthorized because they initiated and confirmed the transactions. This ambiguity can make disputes more difficult to resolve and the senders less likely to recover their funds than if they had used a traditional payment method to make the transfers. By comparison, if a consumer has a problem with an unauthorized debit card transaction, Regulation E (see Appendix B) places the responsibility on the consumer's financial institution to solve the problem, giving the customer a clear path to resolution.

Conclusion

The ways in which consumers pay for goods and services have shifted dramatically in the past decade. Online transaction volume continues to grow, and the payments market is rapidly changing, offering Americans new and expanded options, such as streamlined ordering and checkout. Mobile payments have become part of the mainstream consumer finance market, but consumers nevertheless continue to use traditional payments with greater confidence and frequency. Their hesitancy about mobile transactions is largely due to fear of loss of funds and because the advantages do not yet seem to outweigh the perceived risks.

Appendix A: Methodology

Pew conducted two separate pieces of research for this report:

1. A nationally representative survey of consumer experiences with various payment tools.
2. An analysis of the terms and conditions for a sample of mobile payment apps that consumers use to make retail purchases and transfer funds.

The GfK Group conducted the mobile payment survey on behalf of Pew using a nationally representative random sample of 1,203 American adults. The survey was conducted in English and Spanish and captured details about people's perceptions of and experiences with various payment types: cash; debit, credit, and prepaid cards; checks and money orders; and mobile payments. The online probability sample was conducted from Feb. 23 to March 20, 2018, and included a sample of 1,013 adults over 18 years of age and an oversample of 190 consumers who had made a payment in the past year. This brief excludes 25 respondents who did not answer "yes" when asked whether they had used any of the studied payment methods in the past year. The final sample consisted of 1,178 participants. The sampling margin of error is plus or minus 3.1 percentage points. (See the methodology and toplines for more details.)

Disclosure analysis

Pew supplemented the survey research with an analysis of disclosures from 12 mobile payment providers to better understand these companies' policies regarding disputes, the extent to which those policies may negatively affect consumers, and the way in which information is conveyed to consumers. The companies selected are leaders in retail, social media, technology, and payment provider markets.

Pew obtained the mobile payment disclosures by downloading the app, making an email request, or visiting the provider's website. The data collection was limited to documents related to the mobile payment platforms for the specified business operations; other business lines were not considered.

Appendix B: Mobile payment regulations

Table B.1

Federal Rules Providing Recourse Against Loss of Funds by Method of Payment

Method of payment	Federal protection rules	Store	Online	Mobile
Cash	None			
Gift card	None			
Stored value account usable for single merchant	None			
Prepaid card	Prepaid rule	✓	✓	✓
Stored value account usable for multiple unaffiliated merchants	Prepaid rule	✓	✓	✓
Debit card	Regulation E	✓	✓	✓
Credit card	Regulation Z	✓	✓	✓

Notes: Regulation E limits a "consumer's liability for unauthorized electronic fund transfers, such as those arising from loss or theft of an access device (like a debit card), to $50, but is often $0; if the consumer fails to notify the depository institution in a timely fashion, the amount may be $500 or unlimited." The Consumer Financial Protection Bureau's prepaid rule extends Regulation E coverage to prepaid accounts if they have been registered. Regulation Z provides robust protection for various types of consumer credit, including open-ended credit products such as credit cards, against liability for unauthorized use of the account, as well as several other possible harms.

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Endnotes

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2 This survey is restricted to those who made a transaction in the past year, which is most of the population. This study uses the term "smartphones" to refer to all internet-enabled mobile devices, although the data also include people who use less sophisticated phones. Throughout this brief, "mobile payments" refers to transactions conducted via smartphone apps unless otherwise noted, because legal requirements and protections are the same whether a customer uses a provider's website or app. The analysis excluded 25 of the initial 1,203 survey respondents because they did not answer "yes" when asked if they used cash, checks, money orders, credit cards, debit cards, prepaid cards, or mobile payments in the past year.

3 Prepaid cards, such as a gift cards, that are only for purchases from specific companies are excluded from this analysis.

4 Pew's mobile payment survey, 2018.

5 The Census Bureau estimated the U.S. population at 327,167,434 as of July 1, 2018, with 77.6 percent being adults 18 or older. U.S. Census Bureau, Quickfacts, 2010-2018, last modified June 20, 2019, https://www.census.gov/quickfacts/fact/table/US/PST045218. Pew's survey found that 56.29 percent of adults (142,910,138 people) have used mobile payments in the past year. Some respondents who made payments in the past year did not complete the survey accurately, so this finding probably underreports payment activity.

6 R. Replogle (executive vice president and cash product manager, Federal Reserve System's Cash Product Office), interview, June 10, 2019. Pew's finding that consumers primarily use credit and debit cards to fund mobile payment transactions is consistent with the Federal Reserve's analysis.

7 12 CFR Part 1026 (Regulation Z) § 1026.13 Billing Error Resolution, Before the Consumer Financial Protection Bureau, https://www.consumerfinance.gov/policy-compliance/rulemaking/regulations/1026/13/; Consumer Financial Protection Bureau, 12 CFR Part 1005 (Regulation E) § 1005.11, Procedures for Resolving Errors, https://www.consumerfinance.gov/policy-compliance/rulemaking/regulations/1005/11/.

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9 U.S. Department of Commerce, "Retail E-Commerce Sales for the Fourth Quarter 1999 Reach $5.3 Billion, Census Bureau Reports," news release, March 2, 2000, https://www.census.gov/mrts/www/data/pdf/99Q4.pdf; U.S. Department of Commerce, "Quarterly Retail E-Commerce Sales 3rd Quarter 2018," news release, Aug. 17, 2018, https://www2.census.gov/retail/releases/historical/ecomm/18q3.pdf. According to the U.S. Department of Commerce, just 1 percent of retail sales occurred online in 2000. In 2019, however, e-commerce is growing faster than the broader retail market, and consumers do 10 percent of their shopping online. E-commerce sales totaled $25.8 billion in 2000, roughly 0.8 percent of total retail sales, and $513.6 billion in 2018, or 9.7 percent of total retail sales.

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13 Consumer Financial Protection Bureau, "New Protections for Prepaid Accounts: The CFPB's New Rule on Prepaid Accounts Creates Comprehensive Consumer Protections for Prepaid Accounts," https://www.consumerfinance.gov/prepaid-rule/; Rules Concerning Prepaid Accounts Under the Electronic Fund Transfer Act (Regulation E) and the Truth in Lending Act (Regulation Z) 83 FR 6364 (2019), https://www.federalregister.gov/documents/2018/02/13/2018-01305/rules-concerning-prepaid-accounts-under-the-electronic-fund-transfer-act-regulation-e-and-the-truth. The CFPB's prepaid rule was implemented April 1, 2019, so it was not in effect when Pew's survey was fielded.

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15 The Pew Charitable Trusts, "Who Uses Mobile Payments?," 7; The Pew Charitable Trusts, "What Do Consumers Without Bank Accounts Think About Mobile Payments?," 13.

16 Board of Governors of the Federal Reserve System, "The Federal Reserve Payments Study—2018 Annual Supplement" (2018), https://www.federalreserve.gov/paymentsystems/2018-December-The-Federal-Reserve-Payments-Study.htm. Federal Reserve data show that debit cards, which carry strong protections, have the highest transaction volume. Credit cards are the preferred payment method for people who have both debit and credit cards; most respondents who said they avoid using debit cards reported doing so to protect against losses and avoid putting their own money at risk.

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