

November 2015

Mobile financial services

A summary of comments from the public on opportunities, challenges, and risks for the underserved.

Table of contents

Table of contents.....	1
Executive summary.....	3
1. About this report.....	10
2. Scope of mobile financial services for the underserved.....	12
2.1 Mobile and the underserved.....	12
2.2 Defining MFS and its use.....	16
2.3 MFS is a channel, not a separate product	37
3. Opportunities	40
3.1 Industry: Costly but scalable options	40
3.2 Consumers: Saving money and time	46
3.3 Outreach efforts to connect underserved consumers to mobile	49
4. Challenges and risks.....	53
4.1 Security	54
4.2 Privacy.....	58
4.3 Digital financial literacy and access.....	65
4.4 Financial loss	69
4.5 Loss of other channels – person-to- person contact and customer service	72

5. Education and empowerment – ideas for the future	76
5.1 Suggested areas for further information and research	77
6. Conclusion	82

Executive summary

The Consumer Financial Protection Bureau (Bureau or CFPB), established under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act), has as part of its mission to empower consumers to take more control over their economic lives. Part of the Bureau's charge is to promote financial education, research developments in markets for consumer financial services and products, and provide information, guidance, and technical assistance regarding the offering and provision of consumer financial products or services to traditionally underserved consumers and communities.

A major development in the consumer financial services market over the past few years has been the increasing use and proliferation of mobile technology to access financial services and manage personal finances. Consumers are using mobile financial services (MFS) – financial services and products accessed through mobile phones and other devices – more and more to access accounts, pay bills, deposit funds and manage their financial lives. The increasing use is not surprising given that 87-90 percent of the adult population in the United States has a mobile phone and approximately 62-64 percent of consumers own smartphones.¹ For example, for those with bank accounts, the rate of mobile banking use went from 22 percent in 2011 to 39 percent in 2014; 52 percent of those with smartphones reported using mobile banking in 2014.²

¹ FEDERAL RESERVE SYSTEM, CONSUMERS AND MOBILE FINANCIAL SERVICES 2015 1-2 (MARCH 2015) [hereinafter FRB 2015 MOBILE SURVEY]; Pew Research Center, *Mobile Technology Fact Sheet* (2014) available at <http://www.pewinternet.org/fact-sheets/mobile-technology-fact-sheet/> (last visited May 25, 2015)[hereinafter *Pew Mobile Technology Fact Sheet 2014*]; Pew Research Center, *U.S. Smartphone Use in 2015* 13 (April 2015)[hereinafter *Pew Smartphone Use 2015*].

² FRB 2015 MOBILE SURVEY, *supra* note 1, at 6, 10.

The Bureau's Office of Financial Empowerment issued a [Request for Information](#) in June of 2014³ to help the Bureau understand better the potential for mobile financial services to help underserved consumers – including low-income, unbanked, underbanked and economically vulnerable consumers – access products and services that help them achieve their financial goals. The focus of the RFI was not mobile proximity (or “point of sale”) payments except in so far as those products may be marketed to or used by underserved consumers. In response to the Request for Information, we received comments from individuals, financial services providers, financial institutions, regulators, trade associations, research and consulting firms, academics, nonprofits, and consumer advocacy organizations. While several trade associations submitted comments, we received few comments directly from financial institutions and providers themselves.

The following are some of the key takeaways from the comments related to mobile financial services and the underserved. This report is not intended to identify areas in which the Bureau may or will take regulatory, supervisory, or enforcement action. Some of the commenters' views on these topics are included where relevant to the particular topic of the discussion.

Increasing smartphone use presents opportunities for expanded use of MFS for the underserved

The rate of growth in smartphone use among underserved households and individuals is growing and significant. For example, 44 percent of unbanked individuals⁴ and 50 percent of adults living in households earning less than \$30,000 per year have smartphones.⁵ For many, their smartphones or devices are the primary way they access the internet.⁶ Increased smartphone use appears to be correlated with increasing use of MFS among the banked as well

³ <http://www.gpo.gov/fdsys/pkg/FR-2014-06-12/pdf/2014-13552.pdf>

⁴ FRB 2015 MOBILE SURVEY, *supra* note 1, at 1-2.

⁵ *Pew Smartphone Use in 2015*, *supra* note 1, at 2, 13.

⁶ According to Pew, 13 percent of those in households earning less than \$30,000 annually are “smartphone-dependent,” defined as having neither traditional broadband service at home, nor easily available alternatives for going online other than their cell phone. *Pew Smartphone Use in 2015*, *supra* note 1, at 2, 13.

as the un- and underbanked.⁷ For certain demographic groups and subpopulations, however, there is considerable variation. For example, commenters provided evidence that Hispanic adults have a higher rate of smartphone ownership and mobile banking and mobile payments usage than the general population.⁸ Rural residents on the other hand, appear to have lower rates of smartphone ownership and mobile financial services activity.⁹

Focus on products first, channel second

Comments indicated while mobile may be a useful channel through which to access products for underserved consumers, it is critical that financial services providers focus first on ensuring the underlying products and services meet consumer demand in ways that advance consumer goals.

Faster payments could help industry and consumers

Some of the commenters said that faster payments would help accelerate use of Remote Deposit Capture (depositing checks remotely with the camera on the phone) and other mobile financial services that were identified by commenters as potentially helping consumers save time and money, which could make higher priced alternative financial services such as high fee check cashing services less attractive to underserved consumers. Commenters stated that underserved consumers tend to use alternative financial services over bank services because they want immediate access to funds or they may not qualify for bank accounts.¹⁰ Though industry comments supported faster payments, many acknowledged that delays are often not caused by the speed of the various payment systems, but caused by the need to address potential fraud

⁷ See discussion *infra* at pp. 16-37.

⁸ See discussion *infra* at pp. 19-20, 33-34. In this report, when describing or summarizing study results, the terms used to identify race, ethnicity or other demographic characteristics of populations are those used by the publishers of the reports or other information sources. These terms or demographic characterizations are not necessarily those used by or endorsed by the CFPB.

⁹ See FRB 2015 MOBILE SURVEY, *supra* note 1, at 7-8.

¹⁰ American Bankers Association (ABA) #45, at 6; Consumers Union, #30, at 6; Center for Financial Services Innovation (CFSI), #6, at 9 (overall desire of low-income consumers for immediate access to funds).

issues (such as double deposits – discussed more fully at pages 22-25), and that technological or other solutions to fraud risks would be welcomed.

Mobile financial services need to be paired with in-person services

There was general consensus among the commenters that for mobile financial services to effectively reach underserved consumers, the mobile channel must be paired with consultative or assistance services, at least in the short-term. Some commenters expressed concerns that the void left by branch closures in low-income neighborhoods could not be filled by mobile financial services alone. The value of MFS to underserved consumers, comments suggest, can be realized with the assistance of one-on-one or other in-person facilitation. One commenter gave as an example hybrid services, such as small kiosks with personnel, where personal assistance is linked to mobile. However, comments indicated that these options are not yet widely available or familiar to the underserved population.

Mobile financial services can save consumers money and time

For consumers, the ability to access financial services anytime, anywhere can save time and money. Comments suggest that some underserved consumers are saving more as they use mobile financial services frequently to check balances, deposit checks remotely and use tools to manage their money. Accessing financial information and managing finances in real time is valuable to these consumers. Comments suggested more research is needed on the impact of using mobile financial services on consumers' financial lives.

Two capabilities that commenters identified as holding much potential for reaching the underserved in ways that could produce savings for both providers and consumers were mobile/online account opening and mRDC (mobile Remote Deposit Capture). Since customers typically continue conducting their financial services using the channel they initially used to acquire an account, comments suggested that enhanced lower-cost mobile/online account opening capabilities could incentivize more financial providers to target underserved consumers. Commenters agreed that if fraud risks could be mitigated in the context of mRDC, the potential to lower the cost for the providers and help underserved consumers access lower cost ways to cash checks could be significant.

Two specific types of products were also highlighted by commenters – virtual prepaid products and those that facilitate cash-based electronic transactions – as potentially serving some of the financial services needs of underserved consumers. Prepaid products in general are used

disproportionately more by unbanked and lower-income households than banked, higher income households; comments indicated a significant increase in use of virtual prepaid products – that is, prepaid products accessed via computer or on a mobile device (without a physical plastic card). Comments also suggested that underserved consumers can benefit from products designed to help consumers using cash access digital platforms. An example is services that enable consumers to initiate a transaction online and complete it with cash at a retail establishment.

Industry comments were split over whether and how much the mobile channel can reduce their costs

Banks and some credit unions pointed to the “additive” nature of mobile financial services and the additional costs to develop and maintain the channel, including significant technical and other customer service support. Several comments related that this is especially true for smaller financial institutions that may find it very difficult to support new technology and systems to support the technology. Some nonbank providers who commented seemed to lean more in the direction of mobile being a cost savings channel. Some comments reported that using the mobile channel has helped providers reduce costs for products targeting the underserved.

Privacy and security concerns – real or perceived – pose barriers and risk

Comments indicated that real and perceived privacy and security concerns remain a significant barrier to adoption of MFS. Commenters cited concerns about access to and security of financial account and personal information, security of transaction-specific information, online/mobile fraud and scams, and security related to the devices used for MFS, including loss or theft. Consumers managing limited resources are also less able to absorb financial losses or interruptions that may result from security-related problems.

More transparency, protections and consumer control may be needed around use of consumer data

Comments across the stakeholder spectrum highlighted as unique to mobile financial services the amount and type of data collected, used and shared. Consumers are often required to provide this data, commenters pointed out, in exchange for accessing the services, products or information. Several commenters discussed the benefits of data for linking consumers to products and services at lower cost and reducing fraud. Some of these commenters pointed to the risks associated with personal, location, financial and other data all connected to the

consumer through the device. The potential risks identified in comments include disparate impacts in marketing, underwriting and other decision-making processes; and the potential for “virtual segregated neighborhoods” that would continue to limit access to affordable and safe products for underserved consumers.

Several comments pointed to the numerous entities involved in the opaque mobile financial services ecosystem. Some suggested a need to clarify, or develop new, protections to ensure transparency, and oversight and accountability of those entities that provide information that is used to market to or make decisions about consumers. Some commenters urged clearer privacy policies and opt-in processes for consumers as well as accountability by all entities in the mobile payment chain.

Digital access and digital financial literacy need to be improved for mobile to be an effective channel for underserved consumers

Commenters discussed challenges related to accessing digital channels as well as the need for digital financial literacy. Comments pointed out that while many think smartphones and devices are a growing necessity, the cost of devices and data plans, as well as lack of service in some geographic areas, can leave many behind. Many commenters highlighted the need for efforts to enhance digital financial literacy in addition to broader digital and technological literacy. Comments identified key challenges for underserved consumers including those with disabilities and older adults, around language access, screen size and adaptability, and lack of comfort with using mobile technology.

Comments noted that mobile financial services will not help underserved consumers who don’t know about them or don’t know how to use them safely and effectively. Education, outreach and marketing are always needed to attract underserved consumers but it appears even more critical with mobile, where the most difficult link for industry to make with consumers may be the link to the technology itself. Comments identified efforts focused on 1) enhancing affordable access to the technology and 2) educating consumers and intermediaries about the safe and effective use of the technology for accessing financial services, products and personal financial management tools as key to making MFS a way to reach more underserved consumers and help those consumers achieve their financial goals.

Policymaking should be widely informed

Comments varied as to whether and to what extent additional consumer protections are needed in the area of mobile financial services. There was general consensus, however, that there are a wide array of stakeholders, including the CFPB, other financial regulatory agencies, the Federal Communications Commission (FCC), the Federal Trade Commission (FTC), state regulatory bodies, other regulatory organizations and others. Comments suggested that any regulator acting in this area should act with certainty but should not choose technological winners and losers as the mobile financial services landscape is continuing to evolve.

Some commenters encouraged the CFPB and other agencies to continue to work to better understand both the risks, including those associated with data collection and use, and the entities involved in the mobile financial services ecosystem.

1. About this report

A major development in the consumer financial services market over the past few years has been the increasing use and proliferation of mobile technology to access financial services and manage personal finances. For example, in 2013, 74,000 new customers a day began using mobile banking services.¹¹ Using a mobile device to access accounts and pay bills can reduce cost and increase convenience for consumers. By enabling consumers to track spending and manage personal finances on their devices through mobile applications or text messages, mobile technology may help consumers achieve their financial goals. For economically vulnerable consumers, mobile financial services accompanied by appropriate consumer protections can enhance access to safer, more affordable products and services in ways that can improve their economic lives.

In order to learn more about opportunities, challenges and risks associated with the mobile financial services market, especially for underserved consumers (i.e. unbanked and low-income consumers) and other economically vulnerable consumers¹² – the Bureau’s Office of Financial Empowerment issued a [Request for Information](#) on June 11, 2014. The RFI used the term “mobile financial services” (MFS) to cover mobile banking services and mobile financial management services. The RFI was not intended to address mobile point-of -sale (“POS”) payments, except with respect to mobile payment products that are targeted specifically at underserved consumers.

¹¹ Javelin Strategy and Research, *Mobile Banking, Tablet and Smartphone Forecast 2013-2018: Smart Device Adoption Drives Mobile Banking Boom in 2013*, March 2014 (95 million U.S. adults used mobile banking – a gain of 27 million mobile bankers over 2012, or 74,000 per day) available at <https://www.javelinstrategy.com/brochure/318/>

¹² The term “underserved” for purposes of this report includes low-income, underbanked, unbanked, economically vulnerable, and traditionally underserved consumers as well as consumers with thin or no credit file.

The purpose of the RFI was to inform the Bureau's consumer financial education and empowerment strategies related to developments in these areas. We received more than 50 comments from individuals, financial services providers, financial institutions, regulators, trade associations, research and consulting firms, academics, nonprofits, and consumer advocacy organizations. While several trade associations submitted comments, we received few comments from individual financial institutions and providers.

The purpose of this report is to describe the responses by the commenters to help inform the discussion around 1) identifying the scope and types of mobile financial services available with a focus on the underserved; 2) opportunities mobile technology provides for enhancing access to financial services and improving financial lives of underserved consumers; 3) challenges, barriers and risks to accessing financial products and services via mobile technology; and 4) recommendations for how the CFPB might educate and empower consumers in using mobile technology for financial services.

Nothing in this report is intended to identify areas in which the Bureau may or will take regulatory, supervisory, or enforcement action. Some of the commenters' views on these topics are included where relevant to the particular topic of the discussion.

2. Scope of mobile financial services for the underserved

The market for and scope of mobile financial services (MFS) is expanding as the use of mobile phones, smartphones, and other digital devices increases and the services and products designed for mobile evolve rapidly. The use of mobile financial services has risen significantly throughout the general population but, with some exceptions, has yet to see the same adoption by underserved consumers, despite the fact that many rely on smartphones as their primary or only access to the internet. However, according to several commenters, once connected, many underserved consumers are more likely than others to use mobile to access those services.

2.1 Mobile and the underserved

There are many efforts, including by financial providers and community organizations, to reach underserved populations to help either bring them into the traditional banking system or enhance their access to safe and affordable financial services from nonbank providers. Mobile financial services are one potential way to help to achieve these goals.

Mobile phone use among underserved populations is significant, and for many in this population is the primary way to access the internet. The MFS survey by the Federal Reserve Board, *Consumers and Mobile Financial Services 2015* [hereinafter *FRB 2015 Mobile Survey*], conducted in 2014, shows 90 percent of underbanked consumers had access to mobile phones

and 68 percent had access to smartphones.¹³ Unbanked consumers' access to mobile phones (67 percent) and smartphones (44 percent) was also significant.¹⁴ The percentage of unbanked consumers with access to smartphones rose from 35 to 44 percent between 2013 and 2014.¹⁵

Other estimates provided in the comments suggest even higher levels of smartphone use among the unbanked individuals. According to Javelin Research and Strategy's (Javelin) research, 55 percent of unbanked consumers own smartphones.¹⁶

Among the lower income population generally, mobile phone use is high – Pew Research Center (Pew) 84 percent of adults living in households earning less than \$30,000 per year have a cell phone;¹⁷ and 50 percent have a smartphone (compared to 64 percent ownership of a smartphone for all American adults).¹⁸

With regard to minorities, Pew found 71 percent of Hispanic adults and 70 percent of non-Hispanic black adults had a smartphone, compared to 61 percent of non-Hispanic white adults.¹⁹ The Federal Reserve Board's recent survey on mobile financial services also found adoption of smartphone use higher among Hispanic consumers (82 percent are mobile phone users) than

¹³ FRB 2015 MOBILE SURVEY, *supra* note 1, at 1-2.

¹⁴ *Id.*

¹⁵ See FEDERAL RESERVE SYSTEM, CONSUMERS AND MOBILE FINANCIAL SERVICES 2014 1-2 (MARCH 2014) [hereinafter FRB 2014 MOBILE SURVEY](The 2014 report of the survey conducted in 2013 found 69 percent of unbanked consumers had access to a mobile phone, approximately half of which were smartphones, so approximately 35 percent of those surveyed had smartphones)

¹⁶ Javelin, #49, at 3.

¹⁷ *Pew Mobile Technology Fact Sheet*, *supra* note 1.

¹⁸ *Pew Smartphone Use in 2015*, *supra* note 1, at 13. The FRB 2015 MOBILE SURVEY found 74 percent of adults living in households with less than \$25,000 have a mobile phone and 53 percent have a smartphone.

¹⁹ *Id.*

among non-Hispanic white consumers (68 percent) but found a lower percentage of smartphone use among non-Hispanic black consumers (66 percent).²⁰

Pew found that 52 percent of adults in rural areas own smartphones.²¹ Not surprisingly, young adults have a high rate of smartphone adoption – 85 percent of individuals between the ages of 18-29 have smartphones.²²

Reliance on smartphones to access the internet is significant among younger adults, low-income households and people of color. The Pew Research Center found 19 percent of Americans rely to some extent on smartphones for internet access²³ but identified consumers in three categories as “smartphone-dependent”, meaning they had neither broadband access at home nor an easily available alternative way to access the internet except through their phone:

- *Younger adults – 15% of Americans ages 18-29 are heavily dependent on a smartphone for online access.*
- *Those with low household incomes and levels of educational attainment – Some 13% of Americans with an annual household income of less than \$30,000 per year are smartphone-dependent. Just 1% of Americans from households earning more than \$75,000 per year rely on their smartphones to a similar degree for online access.*
- *Non-whites – 12% of African Americans and 13% of Latinos are smartphone-dependent, compared with 4% of whites.*

Pew Research Center, *Smartphone Use in 2015*²⁴

²⁰ FRB 2015 MOBILE SURVEY, *supra* note 1, at 4-5.

²¹ *Pew Smartphone Use in 2015*, *supra* note 1, at 13.

²² *Id.*

²³ *Id.* at 2.

²⁴ *Id.* at 17.

Netspend, a prepaid card program manager that identified its customer base as low- to moderate-income consumers, reported in its comments that almost 85 percent of its cardholders reported owning a smartphone.²⁵ Netspend stated that in focus groups its customers said that they “maximize their limited incomes by consolidating their phone and Internet service to a single source - typically by relying on mobile phone and data plan in lieu of home phone and home Internet. With cell phone upgrade plans, such consumers can frequently be early adopters of new technology.”²⁶ This is not surprising given that less than half of consumers (43 percent) with annual household incomes below \$25,000 have access to broadband internet at home.²⁷

Though not specific to mobile, Javelin found that 17 percent of underserved consumers switched financial institutions, compared with 10 percent of all consumers, in the 12 months preceding the date of submission of their comments in September 2014.²⁸ Javelin suggested that these consumers “are open to transferring to new financial service providers.”²⁹ Another commenter reported that 65 percent of banked customers surveyed indicated mobile banking services played an important or extremely important role in their choice to switch financial institutions.³⁰ As financial institutions and providers want to build a loyal customer base, how and whether mobile maintains that loyalty will affect the way in which companies provide financial services. One banking trade association commenter stated that “[t]he prevalence of

²⁵ Netspend, #52, at 3.

²⁶ *Id.*

²⁷ National Consumer Law Center (NCLC), #35, at 16 *citing* White House Office of Science and Technology Policy, National Economic Council, Four Years of Broadband Growth at 8-9 (June 2013), *available at* http://www.whitehouse.gov/sites/default/files/broadband_report_final.pdf.

²⁸ Javelin #49, at 5.

²⁹ *Id.* According to a report in April published by Mercator, approximately 31 percent of young adults and 28 percent of other mobile banking users surveyed in 2014 reported a financial institution switch during the past two years, compared to 20 percent who reported doing so in 2013. Mercator Advisory Group, Mobile and Tablet Banking: P2P Is Driving Growth April 2015, Press Release, *available at* https://www.mercatoradvisorygroup.com/Press_Releases/Mobile_and_Tablet_Banking_P2P_Is_Driving_Growth/.

³⁰ Consumer Bankers Ass’n (CBA), #10, at 4 (citing research by AlixPartners).

mobile phones among such persons [unbanked and underbanked] suggests a particularly egalitarian vehicle for bringing access to mainstream bank products and services.”³¹ In its comments, Javelin also suggested, “[u]nderserved Americans are fueling demand for new, improved methods to monitor and manage their finances – and they won’t necessarily turn to or be satisfied with traditional banking products, services, or providers.”³²

2.2 Defining MFS and its use

Several of the comments raised the need to define and clarify the meaning of “mobile financial services” to avoid confusion and to ensure that public policy discussions take place in the context of commonly understood terms and scope.

For example, the U.S. Chamber of Commerce (Chamber) pointed out potential confusion around whether the term depends on the device, the size of the screen, the network connection used, the location of the user or some other factor.³³ As a result, the Chamber noted, the following questions remain unanswered in the context of defining MFS:

- *Whether the term “mobile financial services” exclusively covers financial services accessed through cell phones and smart phones, or whether it covers accessing financial services with other devices, such as tablets, phablets, wearables, devices embedded in cars, laptops, or laptop/tablet hybrids;*
- *Whether accessing financial services through any device that connects through a mobile network meets the definition of the term “mobile financial services,” whereas accessing those same financial services with the same device, but on a WiFi network would not meet the definition; or*

³¹ American Bankers Ass’n (ABA), #45, at 1.

³² Javelin #49, at 5.

³³ U.S. Chamber #42, at 3-8.

- *Whether the mobile nature of the user defines the term “mobile financial services,” irrespective of the type of device or the nature of the network.*

U.S. Chamber of Commerce, #42, at 5-6.

These questions point out the complex nature of the discussion around mobile financial services and the need for clarity when engaged in these issues.³⁴ This may be relevant for future disclosure or other requirements that may be designed to address a particular channel.

A related but different perspective of the broader market was provided by U.S. Public Interest Research Group and the Center for Digital Democracy, which pointed out that the “online industry views the mobile platform as an integral part of a holistic ‘marketing and media ecosystem’” where the “provision and marketing of financial services on mobile devices are integrated into a broader set of industry practices on all digital media.”³⁵ These commenters urged the inclusion of issues related to marketing and data of mobile financial services in a broader discussion.

The comments included references to myriad products and technology that pertain to mobile financial services. The number and technical nature of the terms suggest a potential value in developing common nomenclature around products, technology, channels, and type of use to help guide consumers, regulators and industry.

2.2.1 Mobile Banking

Mobile banking refers to a system or a channel that allows customers of a financial institution to conduct financial transactions through a mobile device such as a mobile phone or tablet. Some mobile banking can be done via SMS (short message service), or texting, through the mobile phone. Other types of mobile banking require access to internet through the financial

³⁴ For example, the ABA, #45, at 3 urged that “[i]n considering the potential for “mobile phones” to expand opportunities for the unbanked and underbanked it is important to look beyond just mobile phones and recognize in the discussion other easily and commonly transported devices that continue to evolve in terms of capabilities, features, ease of use, size and transportability.”

³⁵ U.S. Public Interest Research Group (US PIRG) and Center for Digital Democracy (CDD), #19, at 3 [hereinafter PIRG and CDD].

institution's website or an app provided through the financial institution or others, e.g., links to accounts through money management or account aggregation applications or services.

Mobile banking is on the rise and in demand - it has steadily gained momentum and is preferred, according to a study conducted for American Banker Association in 2014, by 10 percent of bank customers, up from 8 percent in 2013.³⁶ The FRB 2015 Mobile Survey found that 39 percent of those with bank accounts had used mobile banking in the previous 12 months, compared to 22 percent in 2011; for those with bank accounts who use smartphones, the rate is 52 percent.³⁷ Deloitte Services LP reported in its comment letter that according to a January 2014 survey by Deloitte Center for Financial Services, nearly 40 percent of surveyed bank customers would bypass branches and interact directly via mobile if offered additional types of mobile banking services.³⁸

The Credit Union National Association (CUNA), in its comments, reported that 23 percent of members from the largest credit unions have enrolled in mobile services.³⁹ One credit union reported that an average of 52 percent of its membership accessed their account via mobile device monthly.⁴⁰ In its comments, CUNA said generally larger credit unions are more likely to offer a broader range of mobile financial services, while smaller credit unions continue to evaluate whether it is cost effective to provide or expand their mobile services.⁴¹

Both the FRB 2015 Mobile Survey of individuals and the Federal Deposit Insurance Corporation's (FDIC) 2013 FDIC National Survey of Unbanked and Underbanked Households

³⁶ ABA, #45, at 2. The ABA stated that the study was conducted by Ipsos Public Affairs, an independent market research firm, for the ABA during August 7-12, 2014.

³⁷ FRB 2015 MOBILE SURVEY, *supra* note 1, at 9.

³⁸ Deloitte #44 at 2, n. 2, citing Mobile Financial Services Survey, Deloitte Center for Financial Services, January 2014. According to Deloitte, the online survey included 2,193 responses from a broad cross section of demographic groups. All respondents had a bank account and were at least 21 years old.

³⁹ Credit Union National Ass'n (CUNA), #24, at 1-2 (Nearly 60% of the more than 200 credit unions that responded to CUNA's 2014 Technology Spending survey currently offer mobile financial services)

⁴⁰ Randolph-Brooks Federal Credit Union (RBFCU), #27, at 2.

⁴¹ CUNA, #24, at 3.

[hereinafter FDIC 2013 Survey] found that underbanked consumers had a higher use of mobile banking as their primary means to access accounts than the overall population with a deposit account.⁴² For lower income customers, a 2014 survey done by the Deloitte Center for Financial Services found that use of mobile is significant - 56 percent of surveyed customers with incomes between \$25,000 and \$49,000 use smartphones to interact with a financial institution, which is not that different from higher income users (61 percent for customers with incomes above \$100,000).⁴³

The potential for managing one's money via mobile is great. The FDIC 2013 Survey indicated two of the three most common mobile banking activities reported for consumers in underbanked and fully banked households are monitoring of account balances or recent transactions (underbanked - 88.5 percent and fully banked - 85.7 percent) and bill payment (60 percent for both underbanked and fully banked consumers).⁴⁴ According to the FRB 2015 Mobile Survey, 63 percent of mobile banking users reported that they had checked their account balance before making a large purchase in the 12 months preceding the survey, and 53 percent of them decided not to purchase an item as a result of their account balance or credit limit.⁴⁵

Javelin also found underserved⁴⁶ consumers had higher rates of mobile banking (53 percent vs. 42 percent in 90 days previous to comment submission) and mobile bill pay than among all

⁴² FRB 2015 MOBILE SURVEY, *supra* note 1, at 5 found 48 percent of underbanked had used mobile banking in previous 12 months compared to 39 percent of all mobile phone owners with bank accounts; 32 percent of the underbanked reported making mobile payments in the previous 12 months; FDIC National Survey of Unbanked and Underbanked Households 10 (2013) found that among mobile banking users, underbanked households were considerably more likely (32.4 percent) than the fully banked (21.6 percent) to use mobile banking as their main banking method [hereinafter FDIC 2013 SURVEY].

⁴³ Deloitte, #44, at 5.

⁴⁴ FDIC 2013 SURVEY, *supra* note 42, at 61.

⁴⁵ FRB 2015 MOBILE SURVEY, *supra* note 1, at 25.

⁴⁶ Javelin, #49, at 5 defines underserved as consumers who lack a checking account or have used alternative financial services in past 12 months, which is different from definitions used by the Federal Reserve Board in its survey: unbanked (not having a bank account) and underbanked (having a bank account but also using an alternative financial service such as a money order, check cashing service, pawn shop loan, auto title loan, paycheck advance/deposit advance, or a payday loan) FRB 2015 MOBILE SURVEY, *supra* note 1, at 5 or the FDIC in its survey:

consumers (33 percent v. 22 percent).⁴⁷ On the other hand, the Alliance for Stabilizing our Communities (ASOC) reported that its Banking in Color: New Findings on Financial Access for low- and Moderate-Income Communities survey found though 59 percent of the respondents had internet access via phone, only 17 percent used it for mobile banking and only 11 percent of respondents reported they were comfortable with conducting financial transactions online or on their mobile phone, citing security most often as the concern when banking via the use of the smartphone.⁴⁸ This contrasts with comments from the Consumer Bankers Association, which reported a study by Alix Partners that showed non-Caucasian *banked* customers were more likely to use mobile banking than their Caucasian counterparts (52 percent for Hispanic customers, 41 percent for African American customers, and 38 percent for Asian customers, versus 28 percent for non-Hispanic Caucasian customers).⁴⁹

As suggested in comments, this use is significant but there is still untapped potential.⁵⁰ MFY Legal Services, which provides legal services to low-income and other vulnerable consumers in New York City, commented that mobile access, which would allow clients to check their account balances anywhere, could be a benefit as “they are more likely to avoid purchases that overdraw their accounts and lead to overdraft fees.”⁵¹ MFY Legal noted, however, that “simply because people have technology does not mean they know how to use it, or use it safely.”⁵²

According to financial industry members, because the acquisition channel is so important to developing an ongoing customer relationship, successful account opening strategies are very

underbanked households (having an account, but have also obtained financial services and products from non-bank, alternative financial services (AFS) providers in the prior 12 months) FDIC 2013 SURVEY, *supra* note 42, at 4.

⁴⁷ Javelin, #49, at 6.

⁴⁸ Alliance for Stabilizing our Communities (ASOC) #40 at 5, 7. ASOC is a collaboration between National CAPACD (Coalition of Asian and Pacific Americans for Community Development), the National Council of La Raza, and the National Urban League.

⁴⁹ CBA, #10, at App. 2.

⁵⁰ *See, e.g.*, FRB 2015 MOBILE SURVEY, *supra* note 1, at 5 (gradual rise in mobile payments by smartphone users suggests smartphone adoption substantially contributed to the increased use of mobile payments.)

⁵¹ MFY Legal Services, #17, at 2.

⁵² *Id.*

important for financial institutions. The Center for Financial Services Innovation (CFSI) commented that it identified two services that allow consumers to open an account directly from their mobile device.⁵³ A credit union reported that members can open accounts via mobile device.⁵⁴ Some comments raised the issue of KYC (know-your-customer) and AML (anti-money laundering) rules as barriers to mobile and online account opening. Comments noted that although innovative products may be designed to assist with account opening, it remains difficult to comply with the rules through an online channel, e.g., gathering the information to validate a customer's identity.⁵⁵ But one comment noted that "innovations including photo recognition of common forms of identification should improve this situation in the next several years."⁵⁶

Many respondents highlighted the potential of mobile Remote Deposit Capture (mRDC) to help underserved bank customers and attract unbanked consumers to the banking system.⁵⁷ Mobile Remote Deposit Capture (mRDC) allows consumers to take a photo of and deposit a check remotely via their mobile device. As one commenter noted: "To date, this has perhaps been the most transformational mobile development for the underserved because it overcomes the limitations of branch hours and locations."⁵⁸ It has the potential to save time and reduce costs for the 38 percent of the unbanked households that use nonbank check cashing services,⁵⁹ which the Center for American Progress (CAP) noted may charge as much as 2 to 5 percent of the

⁵³ CFSI, #6, at 4.

⁵⁴ RBFCU, #27 at 2.

⁵⁵ ABA, #45, at 17; One Financial, #33, at 6.

⁵⁶ One Financial, #33, at 6. *See also*, CFSI, #6, at 3 (There are software programs that enable financial institutions to use device features such as the camera, the GPS locator to execute know your customer protocols for account opening or loan applications.)

⁵⁷*See, e.g.*, ABA, #45, at 7-8; CBA, #10, at 5; CFED, #26, at 5. Susan Burhouse, Matthew Homer, Yazmin Osaki and Michael Bachman, FDIC, Assessing the Economic Inclusion Potential of Mobile Financial Services 24 (2014) [hereinafter FDIC Staff Paper] (as of 2013, 77 percent of the 25 largest banks offered mRDC, and about 25.7 percent of mobile banking users have used mRDC in the previous 12 months).

⁵⁸ Center for American Progress (CAP), #34, at 1-2.

⁵⁹ FDIC Staff Paper, *supra* note 57, at 25.

check value.⁶⁰ According to the FRB 2015 Mobile Survey, 51 percent of mobile banking users surveyed said that they had deposited a check electronically using their phone camera.⁶¹

Though the benefits may be significant, a number of comments raised issues that might make banks wary of offering mRDC to all customers, and might make mRDC not as appealing for all consumers. These included:

- **Fraud:** The ABA, in its comments, stated that “quick access to funds via RDC deposits presents fraud risks.”⁶² The ABA cited the risk that a check could be deposited more than once or might be forged or fake as one of the reasons for the lag between deposit and access.
- **Delay in access to funds:** The report, *Assessing the Economic Inclusion Potential of Mobile Financial Services* [hereinafter FDIC Staff paper], issued by staff of the FDIC in June 2014, noted that banks typically require consumers to wait a period of time before their remotely deposited funds become available for withdrawal.⁶³ Commenters stated that they think institutions hold checks deposited remotely because it is not clear to them whether Regulation CC funds availability rules apply, and because of the fraud risk inherent in RDC (described in the previous paragraph).⁶⁴ Research by Consumers Union confirmed reports from consumers about delay of funds issues with mRDC, finding that checks deposited via mRDC into accounts at one bank took 10 days to become available.⁶⁵ Consumers Union noted that the potential to attract customers away from higher priced check cashing services may be limited as “RDC may not satisfy the need/want of many of the unbanked – and underbanked – to have immediate access to

⁶⁰ CAP, #34, at 2.

⁶¹ FRB 2015 MOBILE SURVEY, *supra* note 1, at 12.

⁶² ABA, #45, at 14.

⁶³ FDIC Staff Paper, *supra* note 57, at 24.

⁶⁴ NCLC, #35, at 19; Consumers Union, #30, at 6.

⁶⁵ Consumers Union, #30, at 6. The comment refers to time “to clear,” but in context, it appears to refer to the time when funds become available to the depositor.

funds or cash.”⁶⁶ In contrast, the ABA suggested that “[e]fforts to improve the payment system to make it faster and more efficient will further reduce and perhaps eliminate the need for holds.”⁶⁷

- Different regulations apply: At least one comment noted that checks deposited via mRDC may be subject to different laws and regulations than checks deposited by traditional means.⁶⁸
- Errors from the quality of the image itself: One commenter noted that errors from the quality of the image captured by consumers may affect low-income consumers more than others because they may have cheaper, inferior phones and cameras.⁶⁹ If there is a blurred image, the amount of the check may be erroneously recorded. Comments noted that this could cause serious consequences such as overdraft and other fees that may result from such errors.⁷⁰
- Problems when the original check is not destroyed: If the original check is not destroyed, comments suggested, there is risk that it may be deposited again. If a check is deposited more than once there may be a double debit to the account of the customer who wrote the check and a payee who accidentally deposits a check more than once may think he has more money available than he does.⁷¹ This too might lead to insufficient funds or other types of fees.⁷²

⁶⁶ ABA, #45, at 8.

⁶⁷ *Id.* at 19.

⁶⁸ Mark Budnitz, Georgia State University School of Law (Budnitz) #48, at 1-3.

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

Comments reported that financial institutions often offer fee-based options to get faster access.⁷³ For example, according to comments from the Consumer Bankers Association, one bank charges its customers who deposit checks through mRDC - 50 cents for funds availability within two business days, \$3 for funds availability the same night, and 1 percent to 3 percent of the check amount for immediate funds access, with a \$5 minimum fee.⁷⁴ One comment suggested that if institutions develop mobile systems that enable consumers to deposit checks without paying a fee before the check has cleared, that may help move consumers away from higher priced check cashing services.⁷⁵

2.2.2 Personal financial management tools

Personal financial management (PFM) tools are available online not only via websites, but also via mobile applications. Some “alerts” and other tools use text messaging that can be received on a smartphone or other cell phone. (See Texting discussion below)

These tools provide a variety of services, such as aggregating account information, sending alerts and reminders about balances and bill payments, and tracking and reporting on spending habits. CFSI noted that of the 900 mobile applications it reviewed for personal financial management capabilities “there are relatively few apps that focus on savings goals or debt reduction.”⁷⁶ Intuit, however, claimed that users of its product, Mint.com, a money management software system that aggregates accounts and helps consumers establish individualized savings goals and set up alerts, are saving over \$1 billion per month towards their goals.⁷⁷

⁷³ CBA, #10, at 5; CFSI, #6, at 9.

⁷⁴ CBA, #10, at 5.

⁷⁵ NCLC, #35, at 23.

⁷⁶ CFSI, #6, at 2.

⁷⁷ Intuit, #21, at 12. According to a recent posting on Mint.com website, Mint has more than 20 million registered users. <http://blog.mint.com/news/the-time-is-now-mint-available-on-apple-watch041515/> accessed online May 27, 2015. The number of active users, however, would presumably be lower.

Commenters noted that when consumers can access more than one type of account via mobile they can make an informed decision about when and whether to switch from a debit to a credit method for their purchase.⁷⁸ Such features help in managing accounts and possibly avoiding fees. However, commenters raised issues about privacy and security in these situations as discussed at pp. 53-62.

Evidence suggests that underserved consumers use and value alerts as a key function of their mobile financial service. According to the FRB 2015 Mobile Survey, 57 percent of mobile banking users received an alert in the previous 12 months.⁷⁹ Javelin found that while 86 percent of all mobile bankers receive email alerts, 93 percent of underserved mobile bankers received alerts.⁸⁰ CFSI reported that consumers who use one MFS app that also offers users transaction accounts issued by a bank check their account three to five times per day.⁸¹

Netspend, which noted that it has 3.4 million active prepaid cards, commented that between 55-65 percent of its GPR cardholders and 40-45 percent of its payroll cardholders are enrolled in its alerts program, and 150,000 unique users use Netspend's smartphone apps per month.⁸² The company stated that its customers, many of whom maintain low average balances – typically less than \$100 on any given day - “closely and actively manage their accounts.”⁸³

CFED (Corporation for Enterprise Development) stated that while MFS has many potential benefits for low-income consumers, more product development and innovation is needed to meet some of their unique needs. For example, financial management software may not be able to accurately capture payments such as government benefits and tax credits, which “limits their

⁷⁸ Appleseed, #41, at 8; PayPal, #29, at 2.

⁷⁹ FRB 2015 MOBILE SURVEY, *supra* note 1, at 12.

⁸⁰ Javelin, #49, at 7.

⁸¹ CFSI, #6, at 3.

⁸² Netspend, #52, at 1-2.

⁸³ *Id.* at 2.

ability to help users review their finances to make decisions in real time and plan ahead with an understanding of what their resources will be in the future.”⁸⁴

One use of personal financial management tools is in the area of credit scores. Knowledge and understanding of credit scores can be very useful for consumers because improved credit scores are associated with greater access to a variety of credit products and lower cost credit. One commenter discussed a credit score/credit report card mobile app it provides to its customers and reported that its members in “very poor,” “poor,” and “fair” (according to the credit score it uses) who check the credit scores on its app on a regular basis showed higher credit scores than members with the same credit score ratings who check their credit scores less frequently.⁸⁵ As the market moves in the direction of providing free credit scores on credit card and other types of account statements provided by lenders to consumers, credit score mobile apps may have a broader positive impact for consumers with lower scores.

2.2.3 Text messaging

Commenters highlighted the importance of text messaging to low-income bank customers. They noted that many low-income consumers do not have smartphones; text messaging is one of the only ways for them to benefit from alerts and push notifications from financial services providers.⁸⁶ Texting was viewed as an important yet untapped function to enable consumers to set up alerts and track their accounts. One commenter suggested that providers could use texts to “nudge their more at-risk consumers ... into better financial behavior”⁸⁷ but noted that any tradeoffs with regard to fees charged would need to be explored.⁸⁸

⁸⁴ CFED, #26, at 3-4.

⁸⁵ Credit Karma, #32, at 4.

⁸⁶ Intuit, #21, at 19, recommended that CFPB consider the opportunities available to consumers through texting because it may “provide real-time information to consumers in a way that they are most likely to read.”

⁸⁷ PIRG and CDD, #19, at 9-10.

⁸⁸ *Id.*

One commenter noted that “text-based mobile financial services may also offer greater opportunities in serving the unbanked.”⁸⁹ According to comments from One Financial Holdings Group (One Financial), some providers noted measurable changes in consumer spending habits, “based purely on post-transaction, real-time text-messaging to increase awareness of spend and spend patterns.”⁹⁰

One commenter reported examples of nonprofits successfully using SMS as their primary engagement platform with their customers, adopting the target audience’s preferences to better reach them.⁹¹ ASOC reported that its local affiliates have begun to utilize texting to reinforce personal financial goals and action plans developed by the client through their financial coaching process and to provide ongoing encouragement as part of their financial capability program.⁹²

While many comments acknowledged the use of texting and its benefits,⁹³ some industry commenters objected that the Telephone Consumer Protection Act (TCPA) requires consumer permission before text messages are sent to a consumer.⁹⁴ The American Financial Services Association (AFSA) cited litigation risk and disclosure requirements (perceived as difficult to

⁸⁹ Deloitte, #44, at 19.

⁹⁰ One Financial Holdings Group, (One Financial), #33, at 5 (One Financial Holdings Group is a “laboratory for innovation in financial services focusing on the underserved, funded by a consortium of the most prominent early-stage financial services investors in the United States.” In its comments, it stated that one provider saw changes within one month of adoption).

⁹¹ Deloitte, #44, at 19.

⁹² ASOC, #40, at 7.

⁹³ See, e.g., CUNA, #24, at 3 (reported that half their credit unions offered SMS/text messaging).

⁹⁴ ABA, #45, at 16; American Financial Services Association (AFSA), #18, at 4. On July 10th, the Federal Communications Commission (FCC) issued a declaratory ruling reaffirming that the TCPA applies to text messages and that consumer consent therefore is generally required. FCC, TCPA Omnibus Declaratory Ruling and Order, FCC 15-72 (July 10, 2015)[hereinafter FCC Declaratory Ruling and Order].

meet because texts have character limits) as two challenges their members face when providing texting services.⁹⁵

Some industry commenters stated that the cost of TCPA compliance, uncertainty regarding whether certain activity complies with the TCPA, and the risk of liability are all factors that discourage banks from investing more in text messaging, “especially as text is viewed as an interim system as people move to smart phones.”⁹⁶ Deloitte Services LP, in its comments, also stated that the prospects for texting are limited “given the dramatic rate of change in technology and reduction in price, it may not make sense to invest heavily in text banking.”⁹⁷ The National Consumer Law Center (NCLC) shared its viewpoint that many providers may not be complying with Electronic Signatures in Global and National Commerce (ESIGN) Act,⁹⁸ which requires consumer consent in order to deliver certain communications electronically.⁹⁹

2.2.4 Mobile applications

Many financial products and services, including financial management services, are accessed through applications on mobile devices.

In its review of nearly 900 financial apps, a substantial proportion of which were personal financial management (PFM) apps, CFSI found most are available free of charge.¹⁰⁰ According to CFSI, some apps had been downloaded more than 10 million times, while others were

⁹⁵ AFSA, #18, at 4.

⁹⁶ ABA, #45, at 17. Though smartphones also have texting capability, data plans on smartphones allow consumer and providers to communicate in additional ways.

⁹⁷ Deloitte, #44, at 19.

⁹⁸ The Electronic Signatures in Global and National Commerce (ESIGN) Act 15 U.S.C. §7001 *et seq* addresses requirements for electronic records and signatures.

⁹⁹ NCLC, #35, at 15-18.

¹⁰⁰ CFSI, #6, at 2 (these were “popular financial apps independent of those related to bank and GPR accounts”).)

downloaded fewer than 10,000 times.¹⁰¹ But CFSI remarked that there is virtually no data on use patterns, length of engagement and retention, or on consumer financial outcomes as a result of using the apps.¹⁰² It is also not known how downloads correlate with actual use.

Some commenters cited problems with some money management and other apps that include a failure to disclose whether a fee applies to a particular transaction, a failure to provide required disclosures before the app is downloaded or alerts are activated, requiring consumers to visit the website to find out the terms and conditions, and a lack of uniform terminology among providers.¹⁰³ One commenter stated that consumers should have access to disclosures before they enroll in a service or download an app and suggested that consumers should see a simple box display with any fees before being asked to provide any personal information or download an app.¹⁰⁴

One commenter raised concerns about the impact of cell phone service providers moving away from providing unlimited data in mobile phone plans, suggesting that such a change may limit the ability of low-income consumers to comparison shop via mobile because such activity uses a lot of data.¹⁰⁵ Another commenter, however, suggested an increasing availability of prepaid phone plans and unlimited data plans at reduced prices as a positive trend.¹⁰⁶ In addition, for mobile users mobile apps are increasingly becoming the way some consumers access their

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ See Consumers Union, #30, at 2-4; Staff of the Bureau of Consumer Protection, Federal Trade Commission (FTC), #11, at 7-8. FTC cited staff recommendations from its report, FED. TRADE COMM'N, WHAT'S THE DEAL? A FTC STUDY ON MOBILE SHOPPING APP, (Aug. 2014), available at <http://www.ftc.gov/system/files/documents/reports/whats-deal-federal-trade-commission-study-mobile-shoppingapps-august-2014/140801mobileshoppingapps.pdf>, including that companies clearly describe how they collect, use and share consumer data so that consumers can make informed choices about the apps they use.

¹⁰⁴ Consumers Union, #30, at 2-4.

¹⁰⁵ NCLC, #35, at 23.

¹⁰⁶ One Financial, #33, at 3, 9.

deposit accounts.¹⁰⁷ Commenters noted concerns about the privacy and security of data shared with apps, one stating that account access apps are not all the same in functionality or in level of security or privacy protections.¹⁰⁸

2.2.5 Prepaid products

Prepaid products are typically loaded with funds by a consumer or by a third party, such as an employer. Consumers can use these products to make payments, store funds, get cash at ATMs, receive direct deposits and tax returns, and send funds to other consumers, among other things. Prepaid products are often purchased by consumers at retail stores or online. Prepaid products are amongst the fastest growing types of consumer financial payment products in the United States.¹⁰⁹ For example, according to one estimate the amount of money consumers loaded onto “general purpose reloadable” prepaid cards grew from less than \$1 billion in 2003 to nearly \$65 billion in 2012.¹¹⁰

One commenter noted that the increasing use of prepaid products, including via mobile devices, among unbanked and underbanked consumers demonstrates a willingness to use alternative products.¹¹¹ CFSI’s market size report for 2013 found a 30 percent increase in growth in volume between 2012 and 2013 (to \$84.3 billion) in GPR prepaid cards.¹¹² The FDIC 2013 Survey found

¹⁰⁷ See, e.g., FRB 2015 MOBILE SURVEY, *supra* note 1, at 12 (Mobile banking users appear to be using mobile applications to conduct their banking transactions, as 71 percent of mobile banking users have installed their bank’s application on their phones.)

¹⁰⁸ ASOC, #40, at 5; FTC, #11, at 7-8; Privacy Rights Clearinghouse, #31, at 2.

¹⁰⁹ See generally Prepaid Accounts Under the Electronic Fund Transfer Act (Regulation E) and the Truth in Lending Act (Regulation Z), 79 Fed. Reg. 77101 (Dec. 23, 2014).

¹¹⁰ *Id.* Citing to projections by the Mercator Advisory Group, which estimated that the amount loaded onto GPR cards grew from less than \$1 billion in 2003 to nearly \$65 billion in 2012.

¹¹¹ Javelin, #49, at 5. See also Association for Neighborhood and Housing Development, Inc. (ANHD), #12, at 3.

¹¹² Center for Financial Services Innovation (CFSI), 2013 Financially Underserved Market Size 6 (December 2013) available at <http://www.cfsinnovation.com/CMSPages/GetFile.aspx?guid=c032e4aa-039b-4723-8f2d-4fbf7fcoeb19> (CFSI in the market size report defined a GPR card as “An open-loop card which serves as an account where consumers can load, store and spend funds electronically.”).

that in 2013, the use of GPR cards was more common among lower income, unbanked and underbanked households.¹¹³ Specifically, it found that more than a quarter (27.1 percent) of unbanked households had used a prepaid account, compared with 19.6 percent of underbanked households and 8.8 percent of fully banked households.¹¹⁴ More than a quarter (28.3 percent) of unbanked consumers in households with incomes between \$30,000 and \$50,000 reported using prepaid cards whereas only 13.7 percent of those earning \$75,000 or over reported using them.¹¹⁵ The increased use of prepaid cards by unbanked and underbanked consumers was noted by Javelin in its comment letter, which reported that in the 12 months preceding its comment submission, 43 percent of underserved consumers had used prepaid cards for purchases, versus 28 percent of all consumers.¹¹⁶

Some prepaid products that target the lower-income market provide consumers with the ability to access a savings account or set-aside account, and some provide check writing services.¹¹⁷ Also, comments noted that some consumers who cannot get bank accounts because of blemished reports with specialty consumer reporting agencies that provide checking account screening services may find providers of prepaid, often accessed via mobile device, more willing to take them as customers.¹¹⁸

The Network Branded Prepaid Card Association (NBPCA) stated in its comment that its members had a “significant increase in the issuance of virtual prepaid card products which can be accessed through a mobile device.”¹¹⁹ They noted that the physical prepaid card had served as a replacement for the check and today “disbursement is increasingly being handled through

¹¹³ FDIC 2013 SURVEY, *supra* note 42, at 29.

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 33.

¹¹⁶ Javelin, #49, at 6.

¹¹⁷ *See generally* ELISA TAVILLA, FEDERAL RESERVE BANK OF BOSTON, HOW MOBILE SOLUTIONS HELP BRIDGE THE GAP: MOVING THE UNDERSERVED TO MAINSTREAM FINANCIAL SERVICES (DECEMBER 2013).

¹¹⁸ Consumers Union, #30, at 4-5.

¹¹⁹ Network Branded Prepaid Card Association (NBPCA), #13, at 3.

mobile applications and virtual prepaid products.”¹²⁰ One industry commenter reported that while it sees a mobile app usage rate of only 10 percent among active consumers of GPR prepaid cards, an increasing number of prepaid card program managers are providing customers with the ability to access and manage their finances via mobile application and there is a steady growth in usage by prepaid cardholders.¹²¹ The commenter noted that several card providers tend to market to lower-income consumers.¹²²

The ABA stated that “[m]obile banking features, when coupled with prepaid cards, show promise to attract the unbanked to bank products.”¹²³ It highlighted the prepaid product it has endorsed, which it said allows users to access their account via a mobile application, in discussing the potential benefits for potential unbanked customers of using prepaid and mobile together.¹²⁴

A consumer group noted that some prepaid cards are marketed more like an application than a card, with the expectation that consumers will manage their account via mobile or online.¹²⁵ It also suggested that protections may vary among debit and credit cards, which can be confusing for consumers when they are accessing those cards through one device.¹²⁶ The commenter suggested that there should be more uniformity and clarification of consumer financial protections as they apply to prepaid and other products that are accessed via mobile device.¹²⁷

¹²⁰ *Id.* Also, the ABA noted that a key feature of their prepaid card, which more than 170 member banks have issued over 200,000, was the ability of users to access account information online via a mobile app. (ABA, #45, at 20-21).

¹²¹ One Financial, #33, at 3-4.

¹²² *Id.* at 5.

¹²³ ABA, #45, at 8 (citing as support Elisa Tavilla, Federal Reserve Bank of Boston, How Mobile Solutions Help Bridge the Gap: Moving the Underserved to Mainstream Financial Services (December 2013))

¹²⁴ *Id.* at 19-20 (More than 170 ABA member banks have issued over 200,000 of the ABA endorsed prepaid cards).

¹²⁵ Consumers Union, #30, at 4.

¹²⁶ *Id.* at 4-5.

¹²⁷ *Id.* at 6-8.

2.2.6 Mobile payments

In this report, the term “mobile payments” refers to mobile point-of-sale (mPOS) payments made through a mobile device. Using mobile payment (m-payment), a consumer with a mobile device can pay for purchases in a retail store or restaurant through a point-of-sale terminal. Bank accounts, credit cards, debit cards, and prepaid cards can be accessed through the consumer’s device, often through a “digital wallet.” The most common models of retail contactless payments terminals require consumers to “tap-and-pay” by waving the mobile device across the terminal or to use a Quick Response (QR) or other readable code at the POS. If a terminal accepts near-field communication (NFC)-based payments,¹²⁸ communication allows for information to travel across to the terminal without the devices having to touch each other.

Loyalty cards, insurance member cards, coupons, boarding passes, tickets and many other types of information can also be added to the associated mobile wallet. Digital wallets offer varying levels of security. For example, some require biometrics for authentication purposes.¹²⁹ Some examples of digital wallets that facilitate m-payments include Android Pay and Apple Pay.¹³⁰

Appleseed, which works with immigrant communities, commented that “[i]nnovations in mobile payment services, the development of mobile wallets, and the introduction of personal money management tools and applications have effectively transformed how some individuals manage their money and may have ramifications for broad scale use by underserved communities, including immigrants.”¹³¹ Another commenter noted that experience in other

¹²⁸ Near field communication (NFC), according to NearFieldCommunication.org, is a technology that allows a device, known as a reader, interrogator, or active device, to create a radio frequency current that communicates with another NFC compatible device or a small NFC tag holding the information the reader wants. Passive devices, such as the NFC tag in smart posters, store information and communicate with the reader but do not actively read other devices. Peer-to-peer communication through two active devices is also a possibility with NFC. This allows both devices to send and receive information. <http://www.nearfieldcommunication.org/about-nfc.html>

¹²⁹ See Deloitte, #44, at 15; Gemalto, #37, at 4; Netspend, #52, at 7.

¹³⁰ Android Pay and Apple Pay are payment systems provided by Google and Apple that allow users to store various credit and debit card payment and other information, and make payments via their devices.

¹³¹ Appleseed, #41, at 2. (Appleseed is a nonprofit network of 17 public interest justice centers in the United States and Mexico)

countries suggests that mobile payments could facilitate financial access in this country as well.¹³²

The Federal Reserve Board's 2014 survey found, conditional on owning a mobile phone, minorities are more likely to adopt mobile payments (the Federal Reserve Board's definition of which includes bill payments).¹³³ The Federal Reserve Board found Hispanic consumers accounted for 32 percent of all mobile payment users relative to 22 percent of all mobile phone users.¹³⁴ For non-Hispanic black consumers, the rate was higher – 34 percent of those with mobile phones made mobile payments.¹³⁵

2.2.7 Mobile carrier billing

Mobile carrier billing enables consumers to charge goods or services directly to a mobile phone account. The consumer is billed through her mobile carrier and charges show up on her statement from the mobile carrier or telecommunications firm. The FTC commented that it is a payment method that “may be useful for consumers who do not have credit cards, or do not want to use them, especially for small transactions. In this way, carrier billing may be especially beneficial for unbanked and underbanked consumers.”¹³⁶ However, commenters identified important potential problems with mobile carrier billing for the underserved.¹³⁷ Reasons cited by commenters for caution include fraud, the potential lack of adequate error resolution procedures, and impact on credit reports and scores from unpaid bills in dispute.¹³⁸ The FTC

¹³² Deloitte, #44, at 20.

¹³³ FRB 2015 MOBILE SURVEY, *supra* note 1, at 14-18.

¹³⁴ *Id.* at 15.

¹³⁵ *Id.*

¹³⁶ FTC, #11, at 5; NCLC, #35, at 7; Consumers Union, #30, at 9-10.

¹³⁷ *Id.* at 1, 5-6; ABA, #45, at 22, NCLC, #35, at 7; Budnitz, #48, at 3-4.

¹³⁸ From its report from a workshop, FED. TRADE COMMISSION, MOBILE CRAMMING: AN FTC ROUNDTABLE (MAY 2013), the FTC recommended that: (1) mobile carriers give consumers the option to block all third-party charges on their phone accounts; (2) market participants take appropriate action so that advertisements for products or services

estimates that consumers have lost millions due to mobile cramming – the unlawful practice of placing unauthorized third-party charges on mobile phone accounts.¹³⁹

2.2.8 Mobile P2P

One area of fairly rapid adoption is mobile person-to-person money transfers (such transfers are sometimes included in “mobile payments”).¹⁴⁰ Consumers can send money directly to others through email or texts or mobile applications. This service is provided by banks, credit unions and through other product providers (e.g., PayPal, Square). Some comments discussed the potential benefits of person-to-person for providing a less expensive and more convenient option for consumers.¹⁴¹ Javelin stated that underserved consumers are highly open to mobile P2P payments as a replacement for cash transactions.¹⁴² According to its research, Javelin reported that in the 30 days preceding the submission of its comments, 28 percent of mobile underserved consumers conducted a mobile P2P transfer, twice the percentage of consumers overall.¹⁴³

charged to a mobile bill are not deceptive; (3) market participants obtain consumers’ express, informed consent to charges before they are billed to a mobile account, and maintain reliable records of such authorizations; (4) mobile carriers disclose all charges for third-party services clearly and conspicuously to consumers in a non-deceptive manner; and (5) carriers implement an effective dispute resolution process. FTC, #11, at 6.

¹³⁹ FTC, #11, at 5. The CFPB, in coordination with state attorneys general and the FCC, filed orders in federal courts against Sprint and Verizon which provide \$120 million in redress to wireless customers who were illegally billed hundreds of millions of dollars in unauthorized third-party charges. See <http://www.consumerfinance.gov/newsroom/cfpb-takes-action-to-obtain-120-million-in-redress-from-sprint-and-verizon-for-illegal-mobile-cramming/>

¹⁴⁰ See Business Insider, The Peer-to-Peer Payments Report: The Exploding Market For Smartphone Apps That Transfer Money (August 28, 2014) <http://www.businessinsider.com/explosive-growth-in-peer-to-peer-payment-apps-2014-8>

¹⁴¹ CBA, #10, at 6; Consumers Union, #30, at 10.

¹⁴² Javelin, #49, at 5.

¹⁴³ *Id.*

2.2.9 Accessing digital channels with cash

There are products that enable consumers who use cash to access digital channels through various means, including using in-person retail to accept cash and confirm transactions initiated through a digital channel. Low-income consumers carry out a significant portion of transactions with cash. According to a report published by the Cash Product Office of the Federal Reserve System, 55 percent of consumers with household incomes less than \$25,000 per year prefer cash over non-cash payment instruments.¹⁴⁴ The total value of low-income consumers' cash spending, at \$558 average per consumer per month, is much higher than any other income group's cash spending and this group uses cash much more frequently for bill payments than other groups of consumers.¹⁴⁵ Javelin reported that it found the underserved are more likely to use cash through online payment services (22 percent v 10 percent of all consumers).¹⁴⁶

Commenters noted that access to mobile bill-payment channels could present a safe, convenient and possibly cheaper alternative to cash for unbanked, low-income consumers who may use cash for transactions such as bill payments.¹⁴⁷ One provider, for example, commented that its service enables consumers to go online to initiate an electronic bill payment that is completed in cash at a nearby retail outlet.¹⁴⁸ A person who wanted to pay his or her rent the day before it is due, for example, could go online and submit the transaction, complete the transaction at a nearby retail partner of the provider, and have a receipt to show payment.¹⁴⁹ A consumer group

¹⁴⁴ BARBARA BENNETT, DOUGLAS CONOVER, SHAUN OBRIEN, AND ROSS ADVINCULA, FEDERAL RESERVE SYSTEM, CASH PRODUCT OFFICE, CASH CONTINUES TO PLAY A KEY ROLE IN CONSUMER SPENDING: EVIDENCE FROM THE DIARY OF CONSUMER PAYMENT CHOICE 9 (APRIL 2014)

¹⁴⁵ *Id.* at 11.

¹⁴⁶ Javelin, #49, at 6.

¹⁴⁷ See Assets and Opportunity Network (AON), # 28, at 5; CFED, #26, at 4; NBPCA, #13, at 6-7; NCLC, #35, at 27; One Financial, #33, at 6.

¹⁴⁸ Intuit, #21, at 1, 12.

¹⁴⁹ *Id.*

acknowledged the potential benefits of the such services but stated it had concerns that certain recourse and other protections may not available to customers of those services.¹⁵⁰

One industry commenter discussed cash reload networks that allow users of prepaid cards to load cash for a fee onto their prepaid cards, which can then be used to initiate card-not-present transactions with merchants over the phone, via internet, or through electronic bill pay of utilities.¹⁵¹ Its comments highlighted services such as self-serve kiosk-based solutions that allow users to directly transform cash into a variety of electronic payments, including remittances and bill payments.¹⁵²

2.3 MFS is a channel, not a separate product

While various mobile financial services may be described as “products,” many commenters pointed out that “mobile financial services” is not a discrete set of products and services but rather a channel through which consumers can access financial services and products through many devices. The ABA stated that the FDIC has defined it as such.¹⁵³ The ABA noted that “[mobile banking] is a channel, not a product, and does not address the primary reasons people do not use bank products.”¹⁵⁴ Both consumer and some industry groups cautioned that using the mobile channel should not be viewed as a replacement for accessing products and services via other, more traditional channels.

¹⁵⁰ NCLC, #35, 27-28.

¹⁵¹ One Financial, #33, at 6.

¹⁵² *Id.*

¹⁵³ ABA, #45, at 4, 10.

¹⁵⁴ *Id.* at 1.

2.3.1 Channels are secondary to ensuring access to appropriate products and services

Pointing to consumer benefits associated with having a bank account, several commenters suggested that mobile is secondary to the need for safe, affordable accounts. One commenter stated: “People with mainstream bank accounts tend to keep more of their earnings, fare better against financial shocks, and save more for the future. Conversely, lack of a bank account is directly related to poverty. Yet, traditional banking accounts remain out of reach for many people.”¹⁵⁵

In discussing whether mobile will facilitate access to financial products, the ABA stated that “the primary reasons people use nonbank credit products such as payday loans rather than a bank loan or credit card are that they do not think that they qualify for a bank loan or credit card product or find alternative loans quicker and more convenient to obtain.”¹⁵⁶ The ABA further commented that some consumers do not know or believe that banks make small loans, which may indicate a need for outreach and marketing to the underserved, through mobile or other means.¹⁵⁷ Though the ABA acknowledged that “mobile banking may assist some people in moving from alternative credit products to bank products,” it stated that mobile banking will not address the primary reasons people use alternative credit products.¹⁵⁸

Consumer and community advocates stressed the need to focus on an overarching goal of ensuring access to products that meet the needs of low-income consumers and communities. As one community group remarked:

However services are delivered, regulators must also look at the products banks offer and their impact on the community, including the availability of low-cost bank accounts without high and hidden fees, equal access for immigrants,

¹⁵⁵ ANHD, #12, at 5.

¹⁵⁶ ABA, #45, at 10 (citing FDIC Staff Paper, *supra* note 57 and FRB 2015 MOBILE FINANCIAL SERVICES, *supra* note 1).

¹⁵⁷ *Id.*

¹⁵⁸ *Id.* at 10.

outreach and flexibility to truly reach unbanked and under-banked people, and finally how those products are marketed and utilized. Basic banking products must be accessible, affordable, and appropriate to the needs of the communities in which they operate. Mobile banking has the potential to be one such product to increase access to banking.

ANHD, #12, at 2.

3. Opportunities

There was a general consensus among the commenters that mobile provides opportunities to enhance access to financial services and products. But not all commenters agreed that increasing mobile opportunities for customers will reduce provider costs associated with providing financial services and products. Some commenters suggested that the time and money savings have the potential to help low-income consumers achieve their financial goals.¹⁵⁹ To achieve such improvements, however, commenters acknowledged that consumers need to know how to use them and in ways that provide an overall net benefit to them.¹⁶⁰

3.1 Industry: Costly but scalable options

Some commenters identified as significant the cost to industry of developing the necessary infrastructure to support mobile financial services. In addition, commenters highlighted the resources needed to provide ongoing technical support for the mobile channel, including support for customers new to or unfamiliar with how to use mobile technology to access financial services and products.¹⁶¹ Some providers described mobile as an “additive” channel. As a result, some industry comments asserted that mobile does not necessarily reduce costs for

¹⁵⁹ See discussion *infra* at pp. 46-48.

¹⁶⁰ See discussion *infra* at pp. 49-52.

¹⁶¹ See ABA, #45, at 15-16; CBA, #10, at 10; CUNA, #24, at 1-3; Electronic Payments Core of Knowledge (EPCOR), #46, at 1.

financial services providers.¹⁶² In its comments, the ABA provided an estimate of the “additive” costs banks are charged monthly by vendors for various add-on account features:

- Mobile: \$1.86;
- Debit card: \$1.08;
- Internet banking: \$2.06;
- Bill pay: \$5.56;
- IP and statement rendering \$3.43; and
- Mailing costs \$.16¹⁶³

CUNA stated in its comments that credit unions incur significant costs to implement and integrate rapidly evolving different mobile services with their systems and “secure the mobile, online, and other channels. Additional costs could include fees for software licensing, third party providers, and legal review.”¹⁶⁴ CUNA acknowledged that as consumers continue to make greater use of mobile financial services, there is potential for cost savings on a per-transaction basis over time.¹⁶⁵

The ABA and CBA both took issue with the example in the RFI comparing the costs of an in-branch transaction to a mobile transaction.¹⁶⁶ ABA suggested that “[i]t is misleading to compare

¹⁶² See ABA, #45, at 15-16; CBA, #10, at 10; CUNA, #24, at 1-3; EPCOR, #46, at 1.

¹⁶³ ABA, #45, at 15 (the comment did not specify whether these costs were per transaction, per account or other basis).

¹⁶⁴ CUNA, #24, at 2.

¹⁶⁵ *Id.*

¹⁶⁶ In the RFI, the Bureau provided an example from the FDIC Staff Paper, *supra* note 57, at 29-30: “One industry estimate cited in the White Paper calculated the average cost of an in-branch transaction was \$4.25 whereas the average cost was \$0.10 for a mobile transaction.” RFI, at 5, available at http://files.consumerfinance.gov/f/201406_cfpb_request-for-information_mobile.pdf

mobile banking transaction costs with branch transactions.”¹⁶⁷ It noted that “the ease of use often increases the volume of transactions, offsetting cost-savings from the lower-cost channel. For example, customers use ATMs more frequently and withdraw less per transaction (\$118 on average) than they do with branches (\$715 on average).”¹⁶⁸

The CBA noted various benefits of mobile banking for unbanked and underbanked consumers but stated that “mobile banking imposes great expense on our members through research and development, innovation, vendor management, system maintenance, and cybersecurity measure [sic].”¹⁶⁹

One Financial expressed the view that MFS presents an opportunity to “realize significant reductions in customer acquisition and customer services costs,” which it described as historical barriers that prevent traditional or non-predatory financial institutions from servicing low-income consumers.¹⁷⁰ It noted that data from some prepaid providers “suggest cost-to-serve a low-income consumer through a prepaid channel with MFS is approximately 20 percent of the cost of using a traditional checking account and branch infrastructure.”¹⁷¹

In its comments, CFSI stated that one provider expects average customer acquisition costs to be one-third to one-tenth that of a traditional brick and mortar bank (citing typical checking account customer acquisition costs of \$200 to \$300).¹⁷² CFSI went on to state that this model “translates into direct benefits for the consumer: the provider is able to offer a free app and debit

¹⁶⁷ ABA, #45, at 16.

¹⁶⁸ *Id.* (citing FEDERAL RESERVE SYSTEM, THE 2013 FEDERAL RESERVE PAYMENTS STUDY 19 (DECEMBER 2013))

¹⁶⁹ CBA, #10, at 10.

¹⁷⁰ One Financial, #33, at 4.

¹⁷¹ *Id.* As PayPal, #29, at 2 noted, by making MFS faster (citing a study that found that certain types of contactless mobile payments can increase transaction speed by up to 15-30 seconds) it enhances convenience and flexibility, which could be critical for certain types of services, especially in the aggregate.

¹⁷² CFSI, #6, at 6. In its comments, the ABA, #45, at 15, cited an estimate by Celente, a unit of Marsh & McLennan Cos., of \$250-\$300 per year to maintain a bank account, as reported in the Wall Street Journal, Robin Sidel and Dan Fitzpatrick, “End is Seen to Free Checking” (June 16, 2010).

card with no monthly minimum balance or transaction fees while offsetting operating expenses entirely from interchange revenue.”¹⁷³

By allowing consumers to open an account directly on their phones, CFSI reported that one provider has also been able to save on customer acquisition costs.¹⁷⁴ Since consumers generally have their mobile phones with them at all times, CFSI opined, they can act on the advertising and messaging they receive to immediately open an account, rather than waiting to return home to their computers or having to visit a brick and mortar location.¹⁷⁵ As a consequence, according to CFSI, mobile account opening results in a higher revenue rate for each marketing dollar spent.¹⁷⁶

Sending customer notifications through mobile channels has also been an important cost-saving feature for the provider mentioned, according to CFSI.¹⁷⁷ Mobile push notifications are free and are efficient; unlike email, CFSI noted, push notifications have a nearly 100 percent open rate since they appear at the top of a user’s screen even when the program itself is not open.¹⁷⁸

Intuit, owner of Mint.com, stated that it assumes that savings from lower transaction costs for providing financial products and services through mobile channels “will inevitably be passed through to consumers.”¹⁷⁹ Deloitte said that “once the core infrastructure is in place, scaling is relatively inexpensive—the same trait that makes software startups able to reach millions.”¹⁸⁰

¹⁷³ CFSI, #6, at 6.

¹⁷⁴ *Id.* at 6-7.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.* at 6.

¹⁷⁷ *Id.* at 6-7.

¹⁷⁸ *Id.* at 6-7.

¹⁷⁹ *Id.* at 6.

¹⁸⁰ Deloitte, #44, at 8.

One commenter noted that it is not surprising that informational services, deposits and transfers, and inquiries hold the most potential for reducing costs.¹⁸¹

Electronic Payments Core of Knowledge (EPCOR), a trade association focused on payments education and support to its member financial institutions, reported that its members were “split on whether there is cost savings to financial institutions in offering mobile services, especially when factoring in higher amounts of fraud often present in this environment.”¹⁸² Some members reported savings related to fewer in-branch transactions, but others said it creates more work in the back office.¹⁸³ Also, members identified as expensive the implementation of remote deposit capture and mobile bill pay, as well as the existence of ongoing expenses such as upgrades to technology and security.¹⁸⁴

One Financial also stated that the ability of “innovators” to offer a “nationwide distribution channel at almost no cost” through MFS is limited by state Money Services Business (MSB) regulations.¹⁸⁵ One Financial said that bank partners were harder for it to find and suggested that may mean more costs and delay for third-party entities wanting to issue products to vulnerable population through bank partners.¹⁸⁶

3.1.1 Costs to maintain

Commenters noted that the move to mobile may mean fewer visits to the teller or calls about transactions. This does not alleviate customer service needs, commenters stated, but merely changes the nature of the calls to more technological inquiries. The National Association of Federal Credit Unions (NAFCU), for example, stated that once credit unions have mobile

¹⁸¹ *Id.*

¹⁸² EPCOR, #46, at 1.

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ One Financial, #33, at 7.

¹⁸⁶ *Id.*

applications designed or their websites are optimized for mobile use, “the overhead increases to provide those services and the technical support to troubleshoot those features for members.”¹⁸⁷ According to one credit union, “[m]obile financial services are effective at reducing the need for call center representatives to provide basic teller functions, but have increased the need for call center representatives who understand technical issues, are familiar with various mobile devices, and can help diagnose technical problems.”¹⁸⁸

Comments also included concerns about trying to support a large percentage of account holders and field increased call volume of questions or issues with applications given the various number of issues that could be causing the problem, such as the operating system itself.¹⁸⁹

EPCOR noted that most of its members report that it would prove cost-prohibitive to offer enhanced customer service times beyond normal business hours, and that a small institution is not likely to have staff available to address technical questions since the services are generally contracted through a third-party.¹⁹⁰ EPCOR said that this could prove a major impediment to the adoption of mobile services.¹⁹¹ The NBPCA suggested that over time, as MFS and applications are able to serve consumers more efficiently, there may be less need for customer service by telephone.¹⁹²

¹⁸⁷ National Association of Federal Credit Unions (NAFCU), #14, at 4.

¹⁸⁸ RBFCU, #27, at 3.

¹⁸⁹EPCOR, #46, at 3. *See also* CFSI, #6, at 9 (“The possible proliferation of multiple types of operating systems (beyond Android and iOS currently in use) could also place a burden on providers who will need to customize their apps for each system.”).

¹⁹⁰ EPCOR, #46, at 3.

¹⁹¹ *Id.*

¹⁹² NBPCA, #13, at 9.

3.2 Consumers: Saving money and time

Although commenters disagreed about whether adoption of mobile technology would raise industry costs, which might be passed on to consumers, most commenters agreed that in other respects MFS has great potential to lower costs for consumers. Commenters noted that mobile can provide access via a less expensive, “anytime, anywhere” means, for example, minimizing wait times and transportation costs.¹⁹³ They said that mobile can also help consumers avoid higher cost products by using a product such as mRDC rather than a check casher.¹⁹⁴ Commenters said that it can also help consumers avoid fees associated with lack of real-time information such as overdrafts on accounts that could have been avoided by checking balances or alerts.¹⁹⁵ Commenters also noted that the extent of savings for consumers also depends on whether provider cost savings are passed along by the financial services provider.¹⁹⁶

Comments varied about the charges and costs for MFS currently incurred by the consumer. For example, EPCOR reported that its members generally do not charge account holders for mobile services; a few indicated they charge for Remote Deposit Capture (RDC) services due to the reported expense of this service.¹⁹⁷ At least one consumer group stated that providers should be encouraged or required to offer multiple free ways to find out balances, such as by text message, so that consumers can find a convenient method that works for them.¹⁹⁸ The groups reasoned that because consumers so frequently access account information via mobile and such access enhances their money management and other goals, free access will enhance consumers’ ability to achieve their financial goals.

¹⁹³ Appleseed, #41, at 9; CFSI, #6, at 5, 6; Intuit, #21, at 6, 8, 10; NBPCA, #13, at 2, 9.

¹⁹⁴ CAP, #34, at 1-2. *See also* ABA, #45, at 7-8; CBA, #10, at 5; CFED, #26, at 5.

¹⁹⁵ CAP, #34, at 2; Consumers Union, #30, at 2.

¹⁹⁶ CUNA, #24, at 2; Deloitte, #44, at 6; Intuit, #21, at 6; RBFCU, #27, at 2-3.

¹⁹⁷ EPCOR, #46, at 1.

¹⁹⁸ NCLC, #35, at 16.

In terms of accessing financial services, one commenter pointed out that many higher fee, alternative financial services providers gain market share from lower-cost banks and credit unions due to their slightly extended hours of operation.¹⁹⁹ Commenters noted that prepaid provider NetSpend reports that 40 percent of prepaid account loads, or deposits, take place outside of traditional banking hours.²⁰⁰ Comments suggested that the mobile channel could enhance the ability of lower-cost providers to provide access to their services and products 24/7, potentially enhancing access to lower cost services for underserved consumers.²⁰¹ At least one commenter suggested, however, that low cost benefits of mobile products may be undermined by “fees, certain credit features, and other add-ons to the baseline cost” of the mobile products.²⁰²

The “real time” nature of mobile was discussed as a benefit in several ways. Several comments highlighted the ability to pay bills and access other services in real time via mobile, decreasing time and costs and possibly late fees.²⁰³ NetSpend reported that its customers, many of whom it reports are low to moderate income, like the ability to control and decide spending, and pay bills in real time.²⁰⁴ It noted that while online automatic withdrawals or bill pays may be attractive to people with regular and consistent paychecks, if income volatility is an issue then the ability to control transaction by transaction in real time may be an even more important feature of mobile.²⁰⁵

¹⁹⁹ One Financial, #33, at 2.

²⁰⁰ CAP, #34, at 2, n. 9 (citing Bailey Reutzel, *Prepaid Card Use Shows More Differences from Bank Habits*, AMERICAN BANKER, April 9, 2013, http://www.americanbanker.com/issues/178_68/prepaid-card-use-shows-more-differences-from-bank-habits-1058162-1.html); CBA, #10, at 4.

²⁰¹ CBA, #10, at 4; Intuit, #21, at 3-4; One Financial, #33, at 2.

²⁰² The Commonwealth of Massachusetts Office of the Attorney General (Mass AG), #20, at 6.

²⁰³ CBA, #10, at 5-6; Intuit, #21, at 4; NBPCA, #13, at 2.

²⁰⁴ Netspend, #52, at 2-3. In its comments, NetSpend stated that it is focused on providing the estimated 68 million underbanked U.S. consumers with innovative and affordable financial products tailored to their unique needs.

²⁰⁵ *Id.* at 5-6.

Commenters said that access to mobile financial services may encourage consumers to comparison shop. One commenter identified a product feature that provides notification of alternative products that may benefit individual users, such as cheaper financial products.²⁰⁶ Another comment highlighted that MFS enables “consumers who otherwise lack internet access to shop and pay for a wider array of goods and services, often with higher quality and better prices than are available locally.”²⁰⁷ Related to this point, one commenter noted that those consumers who may move from using cash to using MFS may also start to use mobile more to access other kinds of products and services.²⁰⁸

Real time and location services also can help people detect fraud by helping them monitor accounts and receive alerts from their providers.²⁰⁹ Location services can also help consumers identify services available nearby. For example, Deloitte suggested that, during tax season, an application could show a consumer the closest free or low-cost tax preparation centers or Volunteer Income Tax Assistance (VITA) sites.²¹⁰ Applications could also use geolocation to direct citizens to government resources on public benefits and explain the process or information required for processing.²¹¹

²⁰⁶ Intuit, #21, at 12 (citing a feature of Mint.com that provide information about alternative products.)

²⁰⁷ NCLC, #35, at 22.

²⁰⁸ AON, #28, at 5.

²⁰⁹ Intuit, #21, at 14; NBPCA, #13, at 2.

²¹⁰ Deloitte, #44, at 6.

²¹¹ *Id.*

3.3 Outreach efforts to connect underserved consumers to mobile

Commenters suggested that, based on the FDIC 2013 Survey findings and other information low-income and vulnerable consumers often seek the in-person experience of bank tellers, telephone customer service, storefront alternatives and working with trusted partners.²¹²

According to FDIC's 2013 survey on unbanked and underbanked, about one-third of customers primarily used bank tellers to access their accounts (nearly 80% had used a bank teller in the previous 12 months) and another third primarily used online as their means to access their accounts.²¹³ Underbanked people were less likely to use the online channel but were more likely to use mobile devices as the primary method.²¹⁴ Roughly half (54.7 percent) of households age 65 or older and 47.5 percent of households with annual income under \$15,000 primarily used bank tellers to access their accounts.²¹⁵

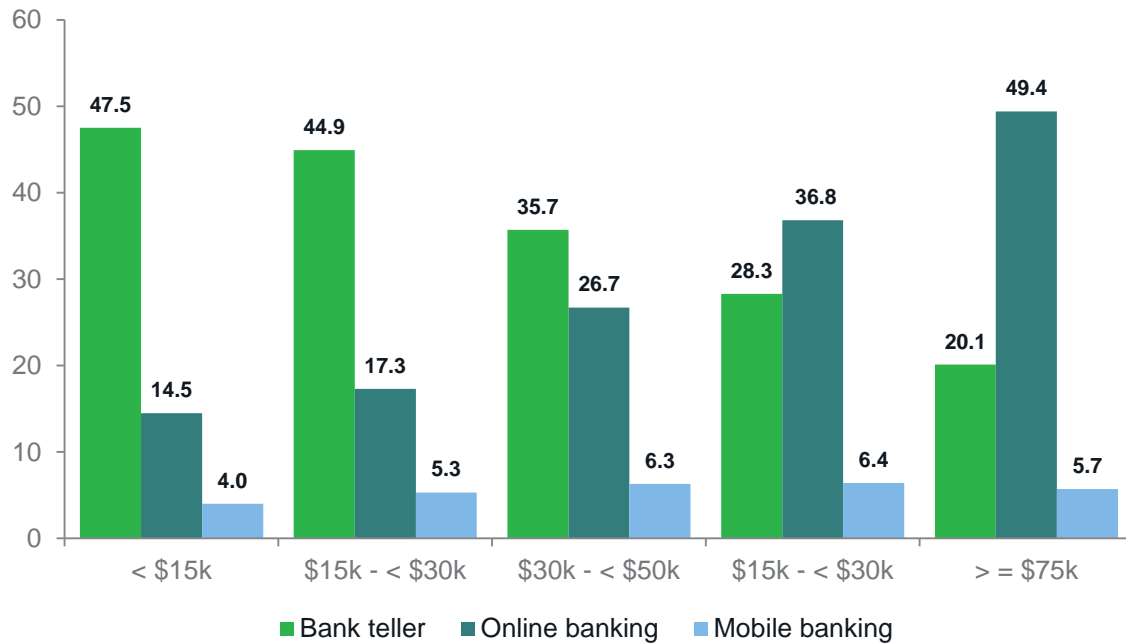
²¹² ANHD, #12, at 4; Americans for Financial Reform (AFR), #23, at 3; NCLC, #35, at 13-18, 29.

²¹³ FDIC 2013 SURVEY, *supra* note 42, at 53.

²¹⁴ *Id.*

²¹⁵ *Id.* at 8.

FIGURE 1: USE OF BANK TELLERS, ONLINE BANKING, AND MOBILE BANKING AS PRIMARY METHODS BY INCOME



2013 FDIC Survey of Unbanked and Underbanked Households, p. 56

Several comments cited a concern over the potential loss of bank branches and the impact on various segments of the underserved population who, for a variety of reasons, may need or want in-person guidance.²¹⁶ One commenter stated that “mobile services should be used to make branches more efficient and expand outreach to underserved areas, not shrink financial inclusion.”²¹⁷ Some commenters suggested that mobile and human assistance and other hybrid approaches may be very beneficial or needed to enhance access for this population.²¹⁸

Deloitte recommended that financial firms could improve outreach to underserved consumers by applying the strategy of adapting the audience’s preferred mode of communication to the

²¹⁶ See discussion *infra* pp. 72-75.

²¹⁷ NCLC, #35, at 30.

²¹⁸ *Id.* at 28; ASOC, #40, at 8; Javelin, #49, at 6; Mass AG, #20, at 9; One Financial, #33, at 5.

design and marketing of mobile financial services.²¹⁹ It also suggested that gaining a better understanding of the targeted population could help identify effective partnership or marketing campaign opportunities.²²⁰ It gave as examples partnering with a utility company or partnering with a trusted government agency to leverage infrastructure and reach large numbers of consumers.²²¹

EPCOR reported that its members use a variety of methods to market mobile financial services to underserved populations: radio and television ads; billboards; social media; online banking websites; training of all consumer-facing institution staff to discuss mobile options with consumer account holders; digital signs outside of branches; lobby displays; community events; and statement stuffers were the highest used methods.²²² They did not report the extent to which each of these efforts was successful.

Several commenters pointed out that for mobile to reach the underserved in a meaningful way, it must be coupled with appropriate products and marketing. For example, a few commenters suggested ideas such as that “the current banking industry should be incentivized, if not required, to offer free or low cost checking accounts to the income eligible underbanked.”²²³ One of the requirements suggested was that “the account must be advertised and promoted, available online, and understood and marketed by all branch staff so that any customer will have it readily available to them.”²²⁴

Some comments highlighted the need for increased education and outreach.²²⁵ Appleseed noted that its “Immigrant-Friendly Financial Services” characteristics as applied to mobile would

²¹⁹ Deloitte, #44, at 21.

²²⁰ *Id.* at 7.

²²¹ *Id.*

²²² EPCOR, #46, at 2.

²²³ Mass AG, #20, at 10; Appleseed, #41, at 6.

²²⁴ ANHD, #12, at 5.

²²⁵ *Id.* at 2; CUNA, #24, at 4-5; ASOC, #40, at 9; Appleseed, #41, at 11.

include efforts to increase financial education and ensure mobile financial services are used appropriately by consumers.²²⁶ The ABA stated that, “[m]obile banking does not make people smarter or supply individual financial acumen. Improving financial literacy remains a priority even in a mobile world.”²²⁷

In their comments, the Federation of Community Development Credit Unions (CDCUs) and CUNA highlighted a proposal to invest in the expansion of these mobile technologies in trusted community development financial institutions to help ensure that MFS is used to empower and address the financial needs of consumers in affordable and safe ways.²²⁸ Specifically, they proposed a national strategy to:

- Increase the delivery and reach of electronic services in trusted financial institutions, such as credit unions; and
- Support the training and education of the most economically vulnerable consumers to take advantage of online banking and mobile applications.²²⁹

²²⁶ Appleseed, #41, at 11.

²²⁷ ABA, #45, at 20.

²²⁸ CDCUs, #38, at 2.

²²⁹ *Id.*

4. Challenges and risks

Most commenters agreed that mobile provides opportunities for greater access to safe, low-cost and appropriate financial services for lower income and underserved consumers. Many commenters also stated that there are challenges and risks that prevent more widespread adoption of mobile.²³⁰ Not all agreed, however, about what those barriers and risks are and how best to overcome them.

The most significant barriers and risks mobile poses for low-income and economically vulnerable consumers identified by commenters are:

- perceived risk of financial loss from data security breaches and loss of devices;
- lack of digital financial literacy;
- lack of digital access due to cost or technological issues;
- interconnectedness of digital media, e.g., social media, with financial services;
- eliminating in-person support services;
- ubiquitous use of data for marketing and underwriting that may create “virtual segregated neighborhoods;” and
- potential for a multi-tiered system where non-mobile enabled consumers are left behind and nonbank customers are left with fewer protections.

²³⁰ See discussion *infra* pp. 54-75.

4.1 Security

Data security is not an issue that is particular or limited to mobile devices but many comments discussed security issues in the context of mobile financial services. There was widespread consensus among commenters that concern over security – real or perceived – is one of the most significant barriers to MFS adoption for consumers.²³¹

4.1.1 Data and transaction security

Data breaches and hacking: Many commenters discussed the risk and the increasing frequency of data breaches in general.²³² The Massachusetts Attorney General’s office stated in its comment letter, “the storage and transmittal of financial information on and through mobile devices presents unique security risks.”²³³ Comments discussed the risks the mobile channel presents including the amount of personal and financial information provided and accessed through the channel; the wide range and variability of operating systems and reliance on the customer to implement updates; and that more advanced security measures are not yet widely offered on more affordable smartphones.²³⁴ One commenter cautioned that “even if the number of attacks on mobile financial services is much lower than on online services, we must understand this will not last forever.”²³⁵

Identity theft: Several commenters identified identity theft as a risk, particularly because consumers are more likely to be in a public place when they access accounts through a mobile phone and they may not be aware of the risks when they transmit data using WiFi that is not

²³¹ ASOC, #40, at 3,5; Gemalto, #37, at 1; ABA, #45, at 14; EPCOR, #46, at 3 (“Mobile device authentication and consumer authentication measures need to advance to make mobile banking safe.”)

²³² Budnitz, #48, at 4; One Financial, #33, at 6 (“Consumers are legitimately concerned about identity theft and data breaches, as well as about broader spectrum surveillance.”)

²³³ Mass AG, #20, at 2. The Office reported that from January 1, 2008 through December 31, 2013, it received notice of over 5,330 data breaches, affecting approximately 4.75 million Massachusetts consumers across a multitude of technologies.

²³⁴ ABA, #45, at 14; EPCOR, #46, at 3; Mass AG, #20, at 1.

²³⁵ Gemalto, #37, at 8.

their own.²³⁶ The impact of identity theft is more significant for low-income consumers, a commenter pointed out, because they have “few funds to absorb any economic loss that results.”²³⁷

Transaction security issues: Commenters noted that while there may be risks generally of personally sensitive data being transmitted electronically, risks also arise on a per transaction basis. Making sure that a transaction is both secure (from the consumer’s perspective) and not fraudulent (from the provider’s perspective) is important to maintain trust in the e-commerce environment. Biometrics, innovative authentication measures, and tokenization were all raised by commenters as potential ways to help ensure that financial transactions remain safe.²³⁸

4.1.2 Security associated with the device

Theft of devices: Commenters noted that mobile devices can be easily lost, stolen, or damaged, and consumers may not be able to access information if it was deleted or if they changed phones or providers.²³⁹ A commenter noted that consumers may become crime targets when they use mobile devices.²⁴⁰ Consumers Union reported that based upon a nationally representative survey of adult Internet users, Consumer Reports® projected that 1.6 million American were victims of smartphone theft in 2012.²⁴¹ Consumers in cities appear especially vulnerable.²⁴²

²³⁶ MFY, #17, at 3.

²³⁷ Budnitz, #48, at 5.

²³⁸ See, e.g., Gemalto, #37, at 4.

²³⁹ *Id.*; CFPSI, #6, at 8; CBA, #10, at 8: “As many of us can unfortunately attest, the portable nature of mobile phones makes potential loss or theft an unavoidable reality.”

²⁴⁰ Consumers Union, #30, at 13.

²⁴¹ *Id.*

²⁴² *Id.* at 13-14. (Over fifty percent of the robberies committed in San Francisco during a certain period, for example, were of mobile devices; Consumers Union also noted that N.Y. Attorney General has characterized smartphone theft

Consumers Union reported that 36 percent of consumers surveyed do not have a passcode on their phone.²⁴³ In addition, few consumers understand that when they retire a phone, they have to overwrite the information or the phone has to be destroyed to get rid of the data – merely deleting it doesn't remove it permanently.²⁴⁴ EPCOR also noted that lost devices that are not passcode-protected and mobile malware represent significant threats to all mobile services.²⁴⁵

In its comments, Appleseed raised the concerns of both personal and financial security for immigrants and posed the question of how the shift to mobile may affect those concerns.²⁴⁶ Appleseed commented that vulnerable populations, such as immigrants, are more often the victims of street crimes and theft than other population subgroups.²⁴⁷

Difference in operating system security: Though all operating systems can experience security breaches, a few commenters pointed out the different levels of risk associated with iOS (Apple phones) versus Android systems. According to comments, the Android's open platform enables a greater number of users to access the platform, making it harder to monitor.²⁴⁸ Though Android and iPhone use across the general population is fairly equal, there is a contrast at the lower-income levels. According to Pew, in households with incomes under \$30,000, 13 percent have iPhones, and 28 percent have Android (compared with 40 percent iPhone

as a "growing public safety problem," citing article Lisa Ward, "NY AG asks smartphone makers to fight theft," *Silicon V. Bus. J* (May 14, 2013) 2013 WLNR 11882324)

²⁴³ *Id.* According to the FRB 2015 MOBILE SURVEY, the share of smartphone owners who password protect their phone increased to 69 percent in 2014 from 61 percent in 2013.

²⁴⁴ Consumers Union, #30 at 13.

²⁴⁵ EPCOR, #46, at 2.

²⁴⁶ Appleseed, #41, at 7.

²⁴⁷ *Id.*

²⁴⁸ See NAFCU, #14, at 2; Gemalto, #37, at 9 (citing to 2013 figures that showed 97 percent of the malware attacks targeted android platforms at <http://www.forbes.com/sites/gordonkelly/2014/03/24/report-97-of-mobile-malware-is-on-android-this-is-the-easy-way-you-stay-safe/>)

ownership rate in households with incomes above \$75,000).²⁴⁹ According to Javelin, 24 percent of the unbanked who own a smartphone are on the iOS system and 57 percent are on the Android system.²⁵⁰ In contrast, 44 percent of the phones owned by underbanked and fully banked consumers run on the iOS system.²⁵¹

Applications: The Privacy Rights Clearinghouse stated that the major app stores such as the Google Play store and Apple iTunes store may be “more likely to catch bad actors than other third-party app stores” but, it noted, an app doesn’t have to be malicious to contain security vulnerabilities.²⁵²

Denial of service attack: One commenter described the risk that consumers will not be able to access their institution because of a “distributed denial of service” attack.²⁵³ When these attacks occur, the commenter stated, consumers are not able to conduct timely financial transactions, which may result in late fee charges, or other consequences of late payment.²⁵⁴ The commenter suggested that current laws do not directly address protection for consumers harmed by these attacks.²⁵⁵

4.1.3 Enhancing security

Many pointed to the flip side of security concerns – positive characteristics such as the ability to track and manage accounts and to detect fraud. Comments pointed to real-time alerts of suspicious transactions and the ability to block or manage account access instantaneously from

²⁴⁹ Pew Research Center, *Smartphone Ownership 2013*, <http://www.pewinternet.org/2013/06/05/smartphone-ownership-2013/>.

²⁵⁰ Javelin, #49, at 3.

²⁵¹ *Id.*

²⁵² PRC, #31, at 2.

²⁵³ Budnitz, #48, at 6.

²⁵⁴ *Id.*

²⁵⁵ *Id.*

the phone as “a powerful new kind of defense against fraud and theft” for consumers.²⁵⁶ In addition, the ability to detect when phones and payment instruments are not co-located and to track the location of a device, commenters explained, can help deter fraud and theft.²⁵⁷ As some commented, however, consumers need to be comfortable with using their mobile devices safely for this to be effective.²⁵⁸ For example, Appleseed cautioned that recent innovations in mobile payments may require an even “higher level of comfort with technology and many consumers may find it easier to pay with another method.”²⁵⁹

4.2 Privacy

Many commenters pointed to a lack of privacy of consumers’ data as a risk of MFS. Comments reported that this risk often arises because consumers may not be aware of the extent and type of data collection practices and their consequences.²⁶⁰ Even if they are aware, one commenter pointed out, they may “have no opportunity or mechanism to avoid or mitigate them.”²⁶¹

Some commenters asserted that consumers have control over their privacy because they can choose to not turn on location-based services or choose to exchange data for real-time information or services they may want.²⁶² Others pointed out that the business model for MFS and mobile commerce in general has become service in exchange for data, with little to no

²⁵⁶ One Financial, #33, at 8. The FCC TCPA ruling discussed *supra* at n. 94 above exempted from the TCPA’s consent requirements financial institutions sending free-to-end-user messages relating to identity theft, fraud, data security breaches, and arranging for the receipt of pending money transfers, if financial institutions meet various conditions. See FCC Declaratory Ruling and Order, paragraphs 125-139.

²⁵⁷ *Id.*

²⁵⁸ MFY Legal, # 17, at 2; NCLC, #35, at 16.

²⁵⁹ Appleseed, #41, at 8. According to the FRB 2015 MOBILE SURVEY, *supra* note 1, at 18, among those surveyed who do not use mobile payments, 75 percent reported that is easier to pay with other methods.

²⁶⁰ AFR, #23, at 2; Mass AG, #20, at 3; Reinvestment Partners, #22, at 3.

²⁶¹ Mass AG, #20, at 3.

²⁶² *See, e.g.*, Intuit, #21, at 15.

choice for consumers.²⁶³ There is evidence that consumers are growing more concerned about their online information sharing. According to the Pew Mobile Technology Fact Sheet:

- *54% of app users have decided to not install a cell phone app once they discovered how much personal information they would need to share in order to use it*
- *30% of app users have uninstalled an app that was already on their cell phone because they learned it was collecting personal information that they didn't wish to share....*
- *19% of all cell owners have turned off the location tracking feature on their cell phone because they were concerned that other individuals or companies could access that information.*

Pew Research Center, *Privacy and Data Management on Mobile Devices* (2012)²⁶⁴

More recently, in a survey conducted by Pew on Americans' views on data collection and security, 90% of respondents said that controlling *what* information is collected about them is important— 65% think it is “very important” and 25% say it is “somewhat important.”²⁶⁵ Only 9 percent of respondents, however, believed that they had “a lot” of control over how much information is collected about them and how it is used.²⁶⁶ Though the survey was not limited to mobile services, the survey indicates “Americans hold a range of strong views about the importance of control over their personal information the importance of control over their personal information...”²⁶⁷

²⁶³ PIRG and CDD, #19, at 5, 7; PRC, #31, at 3.

²⁶⁴ Available at <http://www.pewinternet.org/2012/09/05/privacy-and-data-management-on-mobile-devices>

²⁶⁵ Pew Research Center, Mary Madden and Lee Rainie, *Americans' Views About Data Collection and Security* (May 20, 2015) available at <http://www.pewinternet.org/2015/05/20/americans-views-about-data-collection-and-security/>

²⁶⁶ *Id.*

²⁶⁷ *Id.*

The FTC pointed out the risks to privacy (and security) due to the high number of companies involved in the mobile payments system and the large volume of data collected.²⁶⁸ AgeCheq and PrivacyCheq, both companies that provide mechanisms designed to help consumers control access to their identification, suggested a streamlined disclosure design.²⁶⁹ Suggesting that consumers may be more comfortable with MFS if devices gave them more control over their identification, AgeCheq suggested that “[a] logical way to provide that ability would be for ... vendors of mobile devices to create a new pseudo identifier for “privacy” that would give the consumer full control over the identification of their device for privacy purposes.”²⁷⁰ The Privacy Rights Clearinghouse suggested that privacy protection must be built into products from the beginning, as the creation of detailed personal profiles, which it said may result in discriminatory practices, grows more pervasive.²⁷¹

Commenters noted that providing disclosures that are clear and sufficient for consumers to make informed decisions is difficult in the MFS environment. The Privacy Rights Clearinghouse offered that “it is completely unrealistic to expect a consumer who only has access to a mobile device with a small screen to read the privacy policies.”²⁷² Industry comments identified the small screen size as limiting providers’ ability to comply with disclosure requirements.²⁷³ Comments suggested that required disclosures should be adapted to mobile technology in ways that enhance understanding about the product such as its costs and fees.²⁷⁴

Data brokers and lead generators: Another issue related to data raised by comments involves data brokers and lead generators. According to one set of comments, credit card and other financial companies, auto dealers, for-profit schools, and many other businesses pay

²⁶⁸ FTC, #11, at 7.

²⁶⁹ AgeCheq, #9, at 1-2; PrivacyCheq, #8, at 1-2.

²⁷⁰ AgeCheq, #9, at 2.

²⁷¹ PRC, #31, at 4.

²⁷² *Id.*

²⁷³ ABA, # 45, at 16; AFSA, #18, at 2-3; NAFCU, #14, at 3.

²⁷⁴ CAP, #34, at 3; NCLC, #35, at 5.

online “lead generators” or data brokers to gain access to and information about “qualified potential customers.”²⁷⁵ The FTC stated that when data is sold to data brokers and other entities, “often outside the protections of specific privacy laws, questions arise regarding how this data may be used to either benefit or disadvantage low-income and underserved communities.”²⁷⁶

Some respondents perceived regulatory gaps related to these practices.²⁷⁷ One consumer group stated that a recent report from the World Privacy Forum “highlighted the fact that new types of predictive consumer scoring, fueled by thousands of pieces of information about consumers, are largely unregulated [by] either the FCRA or the Equal Credit Opportunity Act.”²⁷⁸ The group also referred to a survey it conducted on data brokers that it reported revealed “serious inaccuracies in some uses of big data.”²⁷⁹ Along with other recommendations, it suggested that “[A]t a minimum, providers must comply with the FCRA for any data that is assembled or evaluated by third parties and might be used for credit, insurance, employment or other FCRA purposes. In particular, data should be provided to and used by mobile providers and others only if they have a permissible purpose under the FCRA.”²⁸⁰

Industry comments suggested that existing laws such as FCRA and the Gramm-Leach-Bliley Act (GLBA) protect consumer information.²⁸¹ But some consumer groups opined that the GLBA prohibitions on sharing information only apply to financial institutions and their accounts, not

²⁷⁵ PIRG and CDD, #19, at 10 (terms were in quotes in comments).

²⁷⁶ FTC, #11, at 10. See also FED’L TRADE COMM’N, DATA BROKERS: A CALL FOR TRANSPARENCY AND ACCOUNTABILITY (MAY 2014), available at <http://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf> cited by the FTC and other commenters, e.g., PRC, #31, at 3.

²⁷⁷ NCLC, #35, at 11. See also, Appleseed, #41, at 16; FTC, #11, at 9-11; #PRC, #31, at 3-4.

²⁷⁸ NCLC, #35, at 11.

²⁷⁹ *Id.* n. 21 citing NCLC, “Big Data: A Big Disappointment for Scoring Consumer Credit Risk” (March 2014), available at <http://www.nclc.org/issues/big-data.html>.

²⁸⁰ *Id.* at 12. See also Mass AG, #20, at 4.

²⁸¹ CBA, #10, at 10.

to sharing by or accounts of other types of providers.²⁸² One commenter also noted that GLBA only prohibits sharing of account numbers for purposes of marketing, and some inappropriate sharing may fall outside that restriction.²⁸³ The commenter noted that there are other laws designed to restrict sensitive information from being shared, but mobile transactions may not be covered by these protections or they may not be sufficient to protect consumers.²⁸⁴

One consumer group called on the Bureau to “go beyond GLBA and FCRA data sharing provisions, and adopt additional protections for consumers.”²⁸⁵ Groups recommended that consumers should have to affirmatively opt in to data sharing or entities should not be permitted to share certain types of sensitive personal and financial information at all.²⁸⁶ US Public Interest Research Group (PIRG) and the Center for Digital Democracy (CDD) urged the Bureau to take more action to protect privacy, including building on a proposal for a Consumer Privacy Bill of Rights developed by President Obama’s Administration in 2012 and work already done by the FTC, and to develop rules that place consumers’ financial data more under their control.²⁸⁷

4.2.1 Data for marketing and other purposes

Consumer advocates cited a significant risk of MFS data being used to segment the market with potentially negative consequences for low-income consumers, people of color, and other

²⁸² See AFR, #23, at 2; NCLC, #35, at 3-4, 9-11.

²⁸³ NCLC, #35, at 10.

²⁸⁴ *Id.* For example, it cited the Telemarketing Sales Act (prohibits telemarketers from using pre-acquired account information to charge consumers’ credit or debit cards without their express informed consent) and the Restore Online Shoppers Confidence Act (prohibits the initial merchant from disclosing a consumer’s billing information to any “post-transaction third-party seller” for purposes of charging the consumer’s account).

²⁸⁵ AFR, #23, at 2.

²⁸⁶ *Id.*; NCLC, #35, at 1.

²⁸⁷ PIRG and CDD, #19, at 9.

traditionally underserved populations.²⁸⁸ These commenters noted various ways such segmentation could be done.²⁸⁹ Whether referred to as “digital dossiers” or “personal profiles,” commenters discussed concerns over the extent of locational-based data collection and targeting technologies, and other geo-technologies that permit highly granular geographic focused marketing practices.²⁹⁰ The commenters raised concerns that geographic-based targeting, combined with data profiling predictive analytics, can lead to potentially discriminatory practices, e.g., denial of credit to certain segments, which further sub-divide a neighborhood based on race, ethnicity, income, buying behaviors, and other factors.²⁹¹

One commenter noted that as the digital marketing ecosystem grows larger and more integrated, “the provision and marketing of financial services on mobile devices are integrated into a broader set of industry practices on all digital media. Increasingly, consumers are identified and tracked across all “screens,” which, due to our often-simultaneous use of multiple devices, enables far more effective commercial targeting.”²⁹²

Others expressed concerns related to data being used to track where consumers reside, their movements and purchasing patterns, and also to determine with whom a person associates.²⁹³ Commenters also noted that a significant finding of a report on big data from the Executive Office of the President, in a letter to the President from the agencies submitting the report, was that “big data analytics have the potential to eclipse longstanding civil rights protections in how

²⁸⁸ AFR, #23, at 3; NCLC, #35, at 25; PIRG and CDD, #19, at 6.

²⁸⁹ PIRG and CDD, #19, at 8; PRC, #31, at 3-4.

²⁹⁰ *Id.*; Reinvestment Partners, #22, at 2.

²⁹¹ See PIRG and CDD, #19, at 5; AFR, #23, at 2.

²⁹² PIRG and CDD, #19, at 3-4 went on to explain that “[k]ey features of this system include widespread data gathering and analysis; use of real-time location; specialized mobile ad-targeting services that reach a person in real time; formats for ads and commercial content specifically honed for the mobile platform; measurement services that identify how we interact with mobile applications; apps and other specialized applications that make ongoing targeting easier to accomplish; frameworks to utilize mobile and other digital “path-to-purchase” strategies; a focus on multicultural consumers’ use of mobile services; and “Big Data”-driven technologies and practices that incorporate consumer mobile data into comprehensive and actionable user profiles.”

²⁹³ Reinvestment Partners, #22, at 2.

personal information is used in housing, credit, employment, health, education, and the marketplace.”²⁹⁴

Some groups warned that mobile financial services without strong consumer protections related to data collection and use could lead to “virtual segregated neighborhoods.”²⁹⁵ Others warned about the use of cultural differences in behavior to market products. An example provided by a commenter involves situations in which some in a “group” are ranked financially lower based on social media or other information.²⁹⁶

Some commenters spoke positively about the use of big data for validating identity or for fraud detection purposes,²⁹⁷ as well as its use to help financial institutions identify and reach potential new customers, including the underserved.²⁹⁸ Recognizing that “big data is here to stay,” one commenter suggested that the focus should be on how the data is “operationalized.”²⁹⁹ This commenter expressed concerns that the use of big data may bring about both “general privacy problems” as well as “thousands of new possible methods for disparate and adverse impacts upon protected classes.”³⁰⁰ It suggested that the “proper unit for regulatory analysis is the creator of the analytics [that use big data.]”³⁰¹

²⁹⁴ *Id.* citing Executive Office of the President, Big Data: Seizing Opportunities, Preserving Values Introduction, 65 (May 2014)

²⁹⁵ *See, e.g.*, AFR #23, at 3; PIRG and CDD, #19, at 8; Reinvestment Partners, #22, at 2-3.

²⁹⁶ NCLC, #35, at 11-12.

²⁹⁷ Intuit, #21, at 15.

²⁹⁸ AFSA, #18, at 5.

²⁹⁹ Reinvestment Partners, #22, at 2.

³⁰⁰ Reinvestment Partners, #22, at 2.

³⁰¹ *Id.*

4.3 Digital financial literacy and access

4.3.1 Digital financial literacy

The existing challenges and barriers to underserved consumers accessing financial services and products may be exacerbated by a lack of “digital financial literacy.” Digital financial literacy includes knowing how to use devices to safely access financial products and services via digital channels in ways that help consumers achieve their financial goals, protect against financial harm and enhance ability to know where to get help. There seems to be consensus in the comments that along with investments in mobile technology to bridge access, there is a need for “major investments in digital literacy to ensure that consumers are able to navigate the technology necessary to conduct their financial services online.”³⁰² Commenters noted a need for more understanding for both consumers and those intermediaries and front-line staff working with consumers who may benefit from knowing more about MFS options and how to engage in digital finance in ways that help clients achieve their goals.

A recent study conducted by the Federation of Community Development Credit Unions and the Aspen Institute revealed that very low-income members with annual incomes below \$20,000, do not use financial services offered via the internet because “they do not understand the terms and costs associated with services and are afraid of being scammed.”³⁰³

This is not surprising given the level of complexity involved in many MFS. As one commenter noted, in pointing out the need for technological literacy: “MFS applications require users to understand how to download MFS applications, navigate websites using a mobile browser, upload photos for remote deposit capture, etc. Recent innovations in mobile payment services, such as Near Field Communications (NFC) technologies and mobile wallets, require an even

³⁰² ASOC, #40, at 6.

³⁰³ CDCU, #38, at 2.

higher level of comfort with technology and many consumers may find it easier to pay with another method.”³⁰⁴

4.3.2 Access to financial services

“Access” to financial services has long meant having physical access to branches and personnel that help low-income consumers achieve their financial goals. Commenters noted that mobile, as a channel, raises other issues of “access.”

Cost: Comments raised concerns about the increasing costs of data plans, and fewer unlimited plans, as a challenge for underserved and immigrant consumers.³⁰⁵ One commenter noted that various nonfinancial service providers such as social media sites are competing for scarce data allotments.³⁰⁶ Pew’s research found 44 percent of smartphone owners with household incomes less than \$30,000 reported cancelling or having their service cut off for a period of time because maintaining their service was a financial burden.³⁰⁷

In the FRB 2013 Mobile Survey, 11 percent of all mobile phone owners noted that data costs prevented them from using mobile banking and payment services.³⁰⁸ In the FRB 2015 Mobile Survey, 6 percent of respondents chose “my bank charges a fee for using mobile banking” as one of the reasons they did not use mobile banking.³⁰⁹

In addition, commenters expressed concern that the inability to obtain or afford the latest technology could leave low-income and economically vulnerable people behind and may create another means of being “underserved.” One commenter noted that the greater reliance on pay-as-you-go or prepaid phones may mean that consumers do not have 24/7 access if phones run

³⁰⁴ Appleseed, #41, at 8.

³⁰⁵ *Id.* at 9; NCLC, #35, at 23.

³⁰⁶ NCLC, #35, at 23.

³⁰⁷ *Pew Smartphone Use in 2015*, *supra* note 1, at 14.

³⁰⁸ FEDERAL RESERVE BOARD, CONSUMERS AND MOBILE FINANCIAL SERVICES 2013 11 (MARCH 2013).

³⁰⁹ FRB 2015 MOBILE SURVEY, *supra* note 1, at 13.

out of minutes or data or service is not good.³¹⁰ This could affect the ability of the consumer to access his or her prepaid products, potentially locking the consumer out of access to financial services, at least in a convenient and timely manner.³¹¹ One commenter suggested that prepaid phones are helping to make smartphones more accessible to the population at large by reducing prices.³¹²

Some groups pointed to the Lifeline Assistance and other programs where the government provides access to and discounts on cell phone service. Though this may be a way to help low-income consumers access mobile technology, groups pointed out that many low-income consumers still have no access to smartphones through these programs.³¹³ AARP suggested many still view smartphones as a luxury even as more and more financial and other services are moving to online and mobile channels.³¹⁴

Language: According to comments, many if not most mobile applications do not provide multilingual options, limiting the ability of non-English speaking consumers to use MFS or understand the terms and fees.³¹⁵ Some services, one commenter noted, may be marketed in the consumer's primary language, but many of the details in the fine print may only be in English.³¹⁶ One commenter suggested that mobile applications should have a default language feature, which would allow access to the user's native language.³¹⁷ Others suggested that providers should make services available in the different languages used in the bank or credit union's customer service and marketing areas and have service personnel available to explain how to use

³¹⁰ ABA, #45, at 18.

³¹¹ See, e.g., ABA #45, at 18; NCLC #35, at 23; One Financial #33, at 9.

³¹² One Financial, #33, at 9.

³¹³ AARP, #51, at 9; PIRG and CDD, #19 at 7.

³¹⁴ AARP, #51, at 9. .

³¹⁵ AFR, #23, at 3; CUNA, #24, at 4; NCLC, #35, at 25-26.

³¹⁶ NCLC, #35, at 25-26.

³¹⁷ Deloitte, #44, at 13.

the system.³¹⁸ Appleseed also pointed to the need to “ensure to the greatest extent possible that the terms of the services being marketed to non-English speaking customers are the same as those marketed to English-speaking mobile money users.”³¹⁹

Technology: Though technology can enhance access, commenters pointed out that it can also present barriers to access if the technology is turned off, the device is lost or the phone service is terminated.³²⁰ Lower-cost devices may not have the latest technology such as high resolution cameras, larger screens, near-field-communication (NFC), and other features.³²¹ Commenters noted that mobile apps that require the latest features would not be accessible to consumers that do not have or cannot afford the latest technology.³²²

Commenters noted that small screens may not be conducive to reading text-heavy disclosures, particularly for consumers who may be visually impaired. While the small screen may make it difficult to provide detailed or complex information, NCLC noted that “[s]mart design can use that small screen as an advantage, to provide clear information in manageable bites, enhancing understanding.”³²³ One industry commenter listed the following reasons that user experience (UX) design for MFS for underserved consumers is particularly difficult:

- a. *High proportion of customers with limited technological aptitude or experience*
- b. *Low income consumers’ use of a large variety of different smartphones, including those with varying operating systems, screen sizes, hardware, and other key features*

³¹⁸ Appleseed, #41, at 6-7 (Appleseed noted the remittance disclosure provisions added to the Electronic Funds Transfer Act (EFTA) in the Dodd-Frank financial reform legislation that require that the disclosures be made in English and in each of the foreign languages principally used by the remittance transfer provider, or any of its agents, to advertise, solicit, or market, either orally or in writing, at that office.)

³¹⁹ *Id.*

³²⁰ *See* ASOC, # 40, at 5; CFSI, #6, at 8; NCLC, #35, at 22.

³²¹ CUNA, #24, at 4.

³²² *See, e.g.*, CUNA, #24, at 4.

³²³ NCLC, #35, at 5.

- c. *Difficulties designing MFS that provide access to consumers in multiple languages*
- d. *Health problems with higher incidence among low-income consumers (e.g. diabetic retinopathy or arthritis) and which may affect their ability to use the device*
- e. *Limited affordances for consumers who are uncomfortable reading small text or large bodies of text*
- f. *Mandated or standard disclosures that make it difficult for service providers to provide plain English or translated explanations of terms and conditions*
- g. *Trust issues around remote account opening and surveillance*

One Financial, #33, at 6-7.

In addition, another set of access barriers was noted by the ABA, stating that “opening an account through a mobile app (or online) may be more difficult for the unbanked because they may lack commonly used identification verifiers, such as information contained in credit reports, that banks use to verify identities for purposes of compliance with identity theft and customer identification requirements.”³²⁴

4.4 Financial loss

Many comments noted that many underserved or economically vulnerable consumers are living within tight margins and can benefit from MFS because of its real-time tracking and other features.³²⁵ But, they cautioned, the risk of loss also exists as more products may not have safety

³²⁴ ABA, #45, at 17.

³²⁵ MFY Legal, #17, at 2; NCLC, #35, at 22; Netspend, #, 52, at 2.

of funds (FDIC insurance), clear dispute resolution consumer rights and procedures or understandable fee disclosures.³²⁶

It may also be unclear which entity in the mobile payment chain is liable for loss. In "Paper, Plastic ... or Mobile? An FTC Workshop on Mobile Payments," the FTC pointed out that when compared to a more traditional payment system, a mobile payment system involves numerous, unrelated parties that comprise the mobile payment chain, including:

- The developer of the application ("app") that enables the transaction or activity;
- The developer of the operating system of the mobile device;
- The manufacturer of the mobile device;
- The carrier of cellular and data service for the mobile device;
- Payment processors that facilitate the transfer and authorization of payments;
- Advertisers, marketers, data aggregators, billing aggregators, and other third parties who may collect, aggregate, analyze, and/or sell information about the user for marketing, advertising, and other business purposes;
- The financial entity providing funds; and
- The recipient of the funds.³²⁷

One commenter identified risks when third party agents are involved as including that the fund transfers may not occur as directed by the consumer or may not occur at all, or the payment may be late, for an incorrect amount, or sent to the wrong person.³²⁸ The commenter suggested that the problem may be due to an error caused by the financial institution or a third party agent; or

³²⁶ See generally NCLC, #35; Consumers Union, #30.

³²⁷ FTC, #11, at, 7.

³²⁸ Budnitz, #48, at 8.

it may instead be due to one of the parties facilitating the transfer.³²⁹ The commenter questioned whether current law is sufficient to protect against these risks of loss given the various parties that may be involved in mobile transactions.³³⁰

Though many commenters spoke to the convenience and benefits of providing access to multiple forms of payment via a mobile device, commenters raised issues arising from the fact that there are multiple parties to the transaction and the protections that apply may depend on the payment method used for the transaction.³³¹ The presence of multiple parties can cause confusion for consumers, which, in turn, may cause financial loss if it is not clear from which entity they must seek redress.

The varying levels of protection can also cause confusion and loss, commenters noted. From one device, a consumer may use a credit card, a debit card or mobile carrier billing to pay for a transaction. Depending on which payment method is used, varying rules apply. If there is an unauthorized charge on a credit card, for example, one commenter said, there is no liability if the charge is reported, and payment is not due during the time the charge is being investigated.³³² The commenter further noted that unauthorized debits are subject to varying caps on liability depending on whether the access device was lost or stolen and when the unauthorized transfer is reported. In that instance, with debits, funds must be restored in the account unless an investigation shows the transaction was authorized.³³³ But, commenters noted concerns that payments charged directly to a mobile carrier may be treated differently.³³⁴

³²⁹ *Id.*

³³⁰ *Id.*

³³¹ Consumers Union, #30, 9-10; NCLC, #35, at 6-7.

³³² Consumers Union, #30, at 9. *See also* Regulation Z, 12 C.F.R. §1026.12.

³³³ Consumers Union, #30, at 9. *See also* Regulation E, 12 C.F.R. § 1005.6.

³³⁴ *See, e.g.*, Consumers Union, #30, at 9; MFY Legal, #17, at 3. The CFPB, in coordination the state attorneys general and the Federal Communications Commission (FCC), took action against Verizon and Sprint alleging that the companies engaged in unfair practices by operating billing systems that allowed third parties to “cram”

4.5 Loss of other channels – person-to-person contact and customer service

Several comments pointed out the benefits of branches while other comments focused on the impact of more branch closures, which have disproportionately affected low-income communities.³³⁵ One industry commenter expressed the view that “MFS provides an opportunity to replace and supplement the ‘vanishing branch network’ in low income neighborhoods.³³⁶ It viewed MFS as a ‘mitigating factor’ that could help maintain access to mainstream financial services.³³⁷ But consumer groups and others made clear that they believe there is an ongoing need for some physical, in-person presence.³³⁸

In its comment, One Financial noted that its customers typically access accounts at financial institutions through the marketing channel by which they were acquired. But One Financial reported that “customers return again and again to their neighborhood locations for service”³³⁹ for both insured banks and nonbank AFS providers.

While ASOC reported that its Banking in Color survey of low- and moderate-income communities of color showed that “bank branches remain a vital part of how some communities

unauthorized charges on customers’ mobile-phone accounts and ignored complaints about the charges. *See supra* note 139.

³³⁵ *See, e.g.*, CAP, #34, at 2; (“the vast majority of branch closures since 2008 have taken place in zip codes with household incomes below the US median”); CFED, #26, at 5-6; One Financial, #33, at 8.

³³⁶ One Financial, #33, at 8.

³³⁷ *Id.*

³³⁸ *See, e.g.*, ANHD, #12, at 1, 4; AFR, #23, 2-3; CFED, #26, at 5-6.

³³⁹ One Financial, #33, at 3.

access financial products and services,”³⁴⁰ they noted interesting differences across different communities, as follows:

The proximity to home or work was a priority for nearly half (48%) of all survey respondents when choosing where to conduct financial transactions. Forty percent of all survey respondents deposit checks or cash inside a bank branch. While more than one-third of African American and Latino respondents deposited checks within a branch, fifty-two percent of AAPI [Asian Americans and Pacific Islanders] respondents deposit checks inside a bank or credit union branch, 45% deposits [sic] cash inside the branch, and 39% cash checks inside bank branches. By comparison, only 25% of AAPI respondents use online banking services for managing payments and accounts.

The reliance on bank branches was especially high for Chinese and Taiwanese respondents, who deposit checks in bank branches at 57% and 64%, respectively. Chinese language respondents also indicated distance from home (70%) and ability to communicate in their native language (56%) as a top consideration for determining where to bank.... Taken together, survey results reflect both a high level of comfort and reliance on bank branches as well as high prevalence of bank branches with culturally and linguistically relevant services in neighborhoods and communities with high concentrations of the Chinese community.

ASOC, #40, at 6.

A related concern raised by commenters about the move to mobile is loss of customer service. In a survey of low-income Hispanic consumers across California conducted by National Council of La Raza (NCLR) in 2013, 85 percent of account holders and 71 percent of those without a transaction account rated customer service as very important in choosing financial services.³⁴¹ In the Banking in Color survey, LMI consumers, regardless of banking status, identified

³⁴⁰ ASOC, #40, at 6.

³⁴¹ Consumers Union, #30, at 12, n.39.

customer service as a significant factor in what they were looking for in a bank.³⁴² As the FDIC Staff Paper noted (citing a Javelin survey from July 2013) “25 percent of consumers who do not use mobile banking stated that one of the top three reasons they do not use mobile banking was that they preferred to deal with people.”³⁴³

Commenters cited problems related to obtaining service from some mobile service providers, including prepaid products often accessed via mobile channel, that fail to provide a phone number, clearly display the phone number, make phone access difficult to navigate, or charge customers who wish to speak with a customer service representative.³⁴⁴ Commenters pointed to the ongoing need for free customer service via phone, for those using the mobile channel as well as those who cannot easily access internet or who do not transact via mobile.³⁴⁵ As CAP commented: “[t]his is particularly important for mobile products that have either a limited physical retail presence where customers may ask questions and get help, or no physical presence at all.”³⁴⁶

Comments suggested an ongoing need for paper statements or account agreements.³⁴⁷ NCLC also added that “[p]aper copies of account agreements or statements may be unnecessary for mobile transactions that are used only once or for small dollar amounts. But for larger transactions and more significant, ongoing relationships, paper options can ensure that consumers can carefully read or reference account terms and can see ongoing charges.”³⁴⁸

³⁴² ASOC, #40, at 3.

³⁴³ FDIC Staff Paper, *supra* note 57, at 33.

³⁴⁴ *See* Consumers Union, # 30, at 2-4; CAP, #34, at 2; NCLC, #35, at 13-14.

³⁴⁵ *See also*, NCLC, #35, at 13-14 (“All mobile financial services should be required to provide a toll free number to address problems”); CAP, #34, at 2 (“At a minimum, mobile financial services should include free telephone access to customer service.”)

³⁴⁶ CAP, #34, at 2.

³⁴⁷ AARP, #51, at 5-6; NCLC, #35, at 13-18.

³⁴⁸ NCLC, #35, at 15. *See also* AARP, #51, at 3 (consumers should have ready access to paper statements and terms and conditions at no or low cost for a period of two years).

NCLC also pointed out that the person who opens or views an account on a mobile device may not be the account holder. In that circumstance, NCLC noted, it would be inappropriate to have as a consequence taking away the account holder's access to paper statements or other communications.³⁴⁹ Other comments noted the cost savings from moving to mobile and online statements, including saving paper.³⁵⁰

³⁴⁹ NCLC, #35, at 15-16.

³⁵⁰ AFSA, #18, at 2; NBPCA, #13, at 4.

5. Education and empowerment – ideas for the future

Consumer and industry commenters discussed the potential for mobile financial services to help the underserved access financial products and services, and manage financial resources to achieve their goals.³⁵¹ The comments also noted the increasing use of smartphones among the underserved has not led to widespread adoption of mobile financial services, with some exceptions.³⁵² For those who use MFS, the use appears to be significant, especially as it relates to managing money through checking balances and alerts.³⁵³

Though there are many reasons for the rate of adoption, comments suggest that there is a need to enhance digital financial literacy to help bridge the divide. But there are impediments to digital financial literacy. As identified in the comments, these include 1) the cost of the technology and data plans; 2) the lack of comfort with the technology and digital literacy; 3) the lack of transparency with regard to data; 4) the concern about security; 5) the language access issues; and 6) the number of entities in the payment chain. Commenters agreed about the need for more efforts specifically targeting low-income and economically vulnerable populations and the groups that serve them about how to engage through mobile devices safely and effectively.

³⁵¹ See discussion *supra* at pp. 40-52.

³⁵² See discussion *supra* at pp. 46-52.

³⁵³ See discussion *supra* at pp. 17-34.

Many conveyed the same opinion expressed by Javelin that “[a] winning combo” for underserved consumers is “[c]ommunity outreach, personalized support, in their own language.”³⁵⁴ As previously discussed, they noted that underserved consumers show an interest in using both digital and in-person channels. The preference often for in-person transactions was partly attributed to the underserved consumer’s frequent use of cash, or needing guidance when opening accounts or language barriers. Targeted, sensitive, face-to-face education can help underserved consumers move to more sophisticated products and services.

5.1 Suggested areas for further information and research

Personal financial management apps: Several commenters suggested more research on how underserved consumers (and specific subpopulations) might use mobile tools and the impact of such use in areas such as reducing debt and increasing savings.³⁵⁵

Impact analysis of digital analytics: Commenters suggested a need for research to analyze the impact that the real-time and location-aware financial mobile services marketplace will have on economically vulnerable consumers. These commenters pointed out that there will be legitimate advantages for consumers using mobile financial services to obtain product information, pricing options, and discounts.³⁵⁶ But commenters also cited potential risks and suggested that policymakers could do more research on how and what types of information are being shared and how to help inform efforts to prevent discrimination and virtual segregated neighborhoods.³⁵⁷

³⁵⁴ Javelin, #49, at 6.

³⁵⁵ See CFSI, #6, at 4, 10.

³⁵⁶ FTC, #11, at 1; NCLC, #35, at 1, 6, 22; PIRG and CDD, #19, at 8.

³⁵⁷ See AFR, #23, at 2-3; PIRG and CDD, #19, at 8.

Security: Several commenters suggested that there is a need to promote greater consumer awareness regarding important security issues.³⁵⁸ Also, commenters noted that more information is needed around the extent to which consumers understand the differences in security among operating systems they use or among mobile applications. One commenter also suggested research and analysis on how personal and financial security are advanced or imperiled by a shift to mobile technologies.³⁵⁹

One commenter, who provides digital security services, outlined various security risks and some of the ways technology can be used to provide more security.³⁶⁰ Along with specific examples of some actions consumers can take, the commenter also suggested the need for providers to give “simple and to the point” messages about mobile security, such as reminders about using a pin code and activating the remote location and phone wipeout feature to help if the phone is lost or stolen.³⁶¹

Specific population needs: Several comments pointed to the need for more research on specific populations and how they use mobile and access financial services, including issues around language and culture, to help identify ways to remove barriers to access, for both mobile and physical channels. Commenters pointed out that communities of color and underserved consumers are often lumped together but they often have different needs, challenges and use patterns. For example, Appleseed commented that there is little information on how non-Hispanic immigrants use technology for financial services.³⁶² Those groups for which comments suggested more information should be sought include:

- Unbanked and underbanked;
- Rural consumers;

³⁵⁸ See, e.g., Deloitte, #44, at 15; EPCOR, #46, at 2; Privacy Rights Clearinghouse, #31, at 1-4.

³⁵⁹ Appleseed, #41, at 7.

³⁶⁰ See generally Gemalto, #37.

³⁶¹ *Id.* at 10.

³⁶² Appleseed, #41, at 4.

- People with disabilities;
- Consumers with limited English proficiency;
- Recent immigrants;
- Underserved youth or “opportunity youth” (i.e., youth between the ages of 16 and 24 who are neither enrolled in school nor participating in the labor market); and
- People residing in traditionally underserved communities.

Use of text messaging: Commenters highlighted the importance of text messaging, pointing out that many underserved consumers do not have smartphones and their only way to benefit from alerts, etc. would be via text.³⁶³ To facilitate effective texting and mobile banking, particularly for communities of color, ASOC proposed partnerships with government entities to work to better understand the problems and test out the solutions to bring more consumers and communities of color into the mobile banking space.³⁶⁴

5.1.1 Moving forward

Commenters provided various suggestions to help make MFS a more viable option for helping to empower and improve the financial lives of low-income and economically vulnerable consumers, including:

Consumer security toolkit: One suggestion was for financial service providers to develop “a simple customer security toolkit, showing consumers how to protect their mobile devices and payments data by creating passwords for login and access; using antivirus software to ensure the applications downloaded are safe from viruses and malware; loading software that enables the

³⁶³ Intuit recommended that CFPB consider the opportunities available to consumers through texting because it may “provide real-time information to consumers in a way that they are most likely to read.” Intuit, #21, at 19.

³⁶⁴ ASOC, #40, at 9.

phone to be remotely wiped, locked, or deactivated if lost or stolen; and encouraging more consumers to set up fraud alerts.”³⁶⁵

Tokenization: To help mitigate the loss associated with data breaches, several commenters suggested and highlighted the benefits of tokenization. Tokenization works by substituting a sensitive data element with a non-sensitive equivalent “token” that has no extrinsic or exploitable meaning or value.³⁶⁶ Using tokens for transactions, known only to the parties to the transaction, reduces the digital footprint that enables others to track or steal information.

Privacy: Many commenters suggested the need for consumers to be able to control their privacy and access to their data. Some stated a need for additional regulatory mechanisms. Other comments from products providers pointed to technology to give consumers the ability to control their privacy when data is used in transactions.³⁶⁷ A commenter suggested a box display with fees that comes up before any personal information is submitted to help prevent entities not involved in a transaction from obtaining personal information.³⁶⁸

³⁶⁵ CFSI, #6, at 8. Some comments referred positively to a mobile device feature that allows consumers to remotely delete information and disable applications or the device itself as a way to prevent loss, referred to as “kill switch.” Consumers Union, #30, at 13; EPCOR, #46, at 2; Gemalto, #37, at 5. One commenter suggested federal legislation to require devices to have “kill switch” feature built into all mobile devices. Budnitz, #48, at 5.

³⁶⁶ See, e.g., Merchant Advisory Group, #39, 1-3 (comments suggested an open and competitive process for security standards creation and enforcement and included its support for guiding principles for the creation, maintenance, and enforcement of tokenization security standards); VISA, #25. See also, Dwolla, #36, at 2 provided a description of its tokenization process. Using an API (Application Programming Interface), it stated that its system removes sensitive banking information and: 1) transparently notifies the sender of the additional information and privileges, which may be needed by the third party in order to complete the service or deliver value; 2) requires explicit authorization from the sender to use said information; 3) provides the receiver with a unique “token” that only the authorized receiver can use; and 4) allows the sender or Dwolla to revoke or invalidate the token at any time. Dwolla suggested that its design helps its community reduce its digital “financial fingerprint,” offers greater transparency to its users and improves privacy controls.

³⁶⁷ See AgeCheq, #9, at 1 (commented that “Over the past few years, mobile device manufacturers have systematically removed the ability for a device to be uniquely identified through programming means. This change was prompted by privacy concerns, but ironically the removal of device identification has made it impossible for services such as ours who seek to help users understand and manage their personal privacy”); PrivacyCheq, 8, at 2; Intuit, #21, at 15.

³⁶⁸ Consumers Union, #35, at 4.

Public Service Campaigns: One commenter suggested that any campaign encouraging use of mobile device software have as a component a Public Service Advertisement campaign targeted toward low-income and limited-English proficient communities to help educate about the risks of mobile banking to consumers who are new to it.³⁶⁹

Training: Several comments suggested the need for education and training programs, though not as a replacement for consumer protections, that help teach technological literacy (generally or focused on specific topics), and recommended training workers who already interact with low-income populations to address some of the vulnerabilities as well as the benefits.³⁷⁰ One comment identified municipally run financial empowerment centers as examples of appropriate places in which to locate such trainings.³⁷¹

Mobile-enabled websites: One commenter noted that mobile-enabled websites are able to detect the size of the user's screen and provide full website-level services regardless of the access device.³⁷² This can help consumers who primarily use smartphones access a broader range of financial services features and functions available on the website.

³⁶⁹ MFY Legal, #17, at 3.

³⁷⁰ See, e.g., Appleseed, #41; ASOC, #40; CDCUs, 38; #Deloitte, #15; Privacy Rights Clearinghouse, #31.

³⁷¹ MFY Legal, #17, at 3.

³⁷² CFSI, #6, at 4.

6. Conclusion

The increasing access to and use of mobile technology available to conduct financial transactions and manage personal finances presents opportunities and risks for the underserved.

Commenters suggested that mobile financial services can drive access to products and services that meet the needs of the underserved and enhance opportunities for saving time and real time money management.³⁷³ But several industry and consumer commenters expressed the viewpoint that mobile financial services is not a panacea or a silver bullet and “will not undo fundamental financial issues that cause some consumers to be underserved.”³⁷⁴ Commenters suggested that while MFS may help people access financial services and products and achieve cost savings, the reasons underlying consumers’ use of higher-cost products and the need for “in-person consultation” (e.g., brick and mortar) will continue for some time.³⁷⁵ Many noted that unless MFS is coupled with strategies to address the underlying issues related to lack of access to safe and affordable products, the full potential benefits for low-income and underserved consumers will remain elusive.³⁷⁶ In order for MFS to achieve those benefits, comments suggest, there needs to be broader digital financial literacy, more confidence that appropriate consumer protections are in place and greater comfort with the technology, including around security and other potential risks associated with this data driven ecosystem.

³⁷³ See discussion *supra* at pp. 46-52.

³⁷⁴ US Chamber, #42, at 12. See ABA, #45, at 10; CFED, #26.

³⁷⁵ See discussion *supra* at pp. 49-52, 72-75.

³⁷⁶ See discussion *supra* at pp. 37-38.