Federal Reserve Bank of Boston®

Payment Strategies

June 15, 2020

2019 Results From the Mobile Banking and Payments Survey of New England Financial Institutions

Marianne Crowe and Breffni McGuire

Contents

The views expressed in this paper are those of the authors and do not necessarily represent those of the Federal Reserve Bank of Boston or the Federal Reserve System.

INTRODUCTION

The Federal Reserve's biennial Mobile Financial Services (MFS) study highlights the latest trends and developments in mobile banking and payments among financial institutions (FIs) across the United States (U.S.). Eight Federal Reserve banks – Atlanta, Boston, Cleveland, Kansas City, Minneapolis, Philadelphia, Richmond and San Francisco – jointly fielded the *2019 MFS Survey* with FIs in their districts. The multi-district results were discussed in the *Consolidated Report* published in December 2019.[1] The results presented in this new report represent information only from FIs headquartered in the six New England states – Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont.

In the initial MFS survey that the Federal Reserve Bank of Boston (FRBB) conducted in 2008, only 12 percent (37 FIs[2]) of New England (NE) respondents reported offering retail mobile banking services. Since then, the NE mobile landscape has transformed. In the *2019 MFS Survey,* 92 percent (119 FIs) of participants indicated that they offered retail mobile banking, and 58 percent (72 FIs) offered both mobile banking and payment services to consumer and business customers.

The *2019 MFS Survey* reflects changes in the MFS environment and builds on surveys fielded in 2014 and 2016. The 2019 survey has a somewhat stronger focus on mobile payments than earlier surveys. Key questions in the survey include:

- What mobile banking and payment services do NE FIs offer to consumers, and what types of services or capabilities are these FIs considering?
- How are NE FIs approaching enhanced mobile banking services, including both riskier services and complex security issues?
- What business MFS are these FIs offering today or planning to offer by 2021, and are they increasing customer adoption or able to monetize such services?
- In what ways do the services offered differ by FI type (bank or credit union)?
- How are NE FIs evolving their retail mobile payment offerings and strategies?

The NE *2019 MFS Survey*, therefore, offers insights into the mobile practices and plans that regional FIs have implemented or are planning to implement by 2021. Where relevant, the report compares key findings with those from the 2016 survey of NE FIs.

---

[1] Consolidated results from all FIs that participated in the 2019 MFS survey are presented in the report, *Financial Institutions across the U.S. Participate in the Mobile Landscape Transformation* (the "*Consolidated Report*") – available at https://www.bostonfed.org/publications/mobile-banking-and-payment-surveys/financial-institutions-across-the-us-participate-in-the-mobile-landscape-transformation.aspx

[2] The 2008 survey included a few top-tier banks that did not participate in subsequent surveys.

SURVEY BACKGROUND AND METHODOLOGY

Background

The FRBB, in conjunction with the New England Automated Clearing House (NEACH), conducted its first survey of mobile banking at New England FIs in 2008 and completed subsequent surveys in 2010 and 2012. In 2014, five FR banks fielded a multi-district survey, and seven FR Banks fielded the follow-on survey in 2016. The 2019 survey is the third multi-district study. Eight FR banks sponsored the survey, completed by 504 FIs – 337 banks and 167 credit unions from across the country, including at least one institution from each state. The 130 NE FIs – 85 banks and 45 credit unions – represented all six states[3] and 26 percent of total 2019 survey respondents.

Methodology

The FRBB fielded the multi-district *2019 MFS Survey* from June 3, 2019, to June 28, 2019. The FRBB promoted the survey via direct email to regional institutions and indirectly with support from NEACH. Respondent FIs completed the survey using an online survey tool.

Survey Respondent Demographics

One-hundred and thirty NE respondents completed demographic information and indicated whether they offered mobile banking services and/or mobile payment services to consumers. One-hundred and twenty-four FIs responded to the retail mobile *banking* section (83 banks and 41 credit unions), as six FIs had no plans to offer mobile banking services to consumers. Ninety-seven FIs (71 banks and 26 credit unions) completed the retail mobile *payments* section. Among the 107 respondents that had business customers, 90 (71 banks and 19 credit unions) already offered or planned to offer business MFS.

Figure 1a shows the number of respondents by state and the percentage of the total number of banks and credit unions in each NE state.

Figure 1a: Bank and Credit Union Respondents by State vs. State Totals (# and % of respondents)

STATE	BANKS			CREDIT UNIONS		
	#, State Respondents	#, State Total	Percentage of State Total	#, State Respondents	#, State Total	Percentage of State Total
CT	14	36	39%	10	36	28%
MA	46	115	40%	14	162	9%
ME	13	26	50%	12	57	21%
NH	5	17	29%	4	19	21%
RI	2	8	25%	2	19	11%
VT	5	11	45%	3	19	17%
TOTAL	85	213	40%	45	312	14%

[3] One New York bank completed the survey and was counted in the Connecticut total.

Figure 1b compares the composition of respondent banks and credit unions to the composition of total banks and credit unions in each state. In five states, respondents were not compositionally representative of total state FIs. Respondents were within 10 percent of state totals in only Connecticut and New Hampshire. In every state, banks responded at higher rates and credit unions at lower rates than would be expected, based on the state data.

Figure 1b: Composition of Respondents Compared to State Totals (% of respondents)

State	Total FIs by State	Total FI Respondents by State	# of Banks by State	# of Bank Respondents by State	# of Credit Unions by State	# of Credit Union Respondents by State
CT	72	24	50%	58%	50%	42%
MA	277	60	42%	77%	58%	23%
ME	83	25	31%	52%	69%	48%
NH	36	9	47%	56%	53%	44%
RI	27	4	30%	50%	70%	50%
VT	30	8	37%	62.5%	63%	37.5%
New England	525	130	41%	65%	65%	35%

Payment Strategies

The survey categorized respondents into six asset tiers, as shown below (Figure 2).

Figure 2: Respondents by Asset Tier: (# and % of respondents)

Asset Tier	Asset Range	# of FI respondents	% of total FI respondents
Tier 1:	< $50 million	16	12%
Tier 2:	$50-$100 million	8	6%
Tier 3:	$100-$250 million	21	16%
Tier 4:	$250-$500 million	24	19%
Tier 5:	$500 million - $1 billion	30	23%
Tier 6:	>$1 billion	31	24%
Total NE Tiers		130	

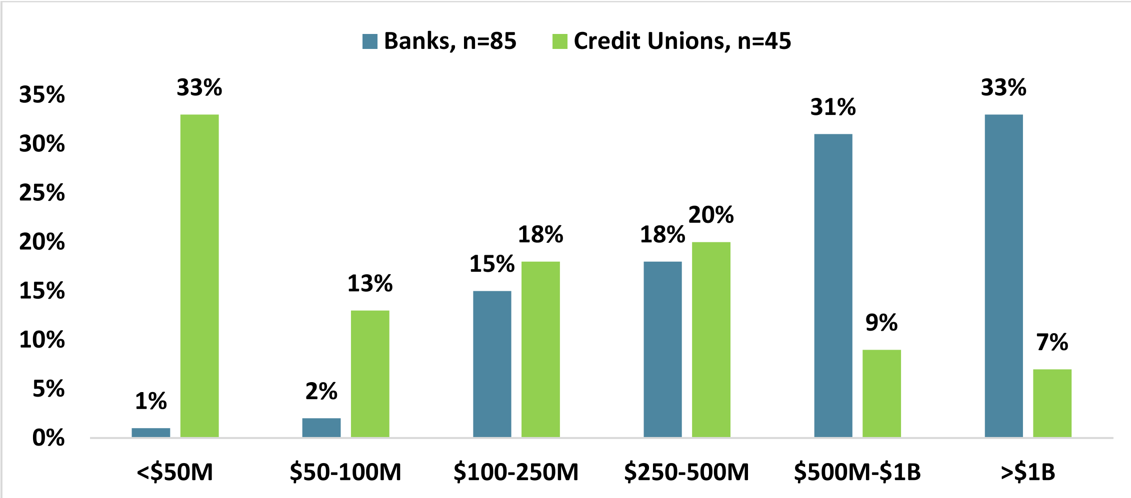
Q8. What is your FI's asset size?

Although the *Consolidated Report* found that respondents were typically smaller FIs, the situation was somewhat different in New England, where the number of respondents increased by asset tier, with the exception of Tier 2. Forty-seven percent of respondents were over $500 million in assets (Tiers 5 and 6), compared to 34 percent that were under $250 million (Tiers 1, 2 and 3).

In New England, 64 percent of credit union respondents had less than $250 million in assets (Tiers 1-3), (which is comparable to the 66 percent of credit unions in the same asset group in the *Consolidated Report*[4]). However, only 18 percent of NE banks were in these tiers, compared to 39 percent of bank respondents overall in the *Consolidated Report*. This data should be considered when comparing NE to all survey respondents. Nonetheless, 2019 NE respondents were smaller than their 2016 counterparts, which is important to note when comparing the 2019 to the 2016 data. **Figure 3** compares the percentage of 2019 bank and credit unions in each asset range, and **Figure 4** compares 2019 to 2016 respondents by size.

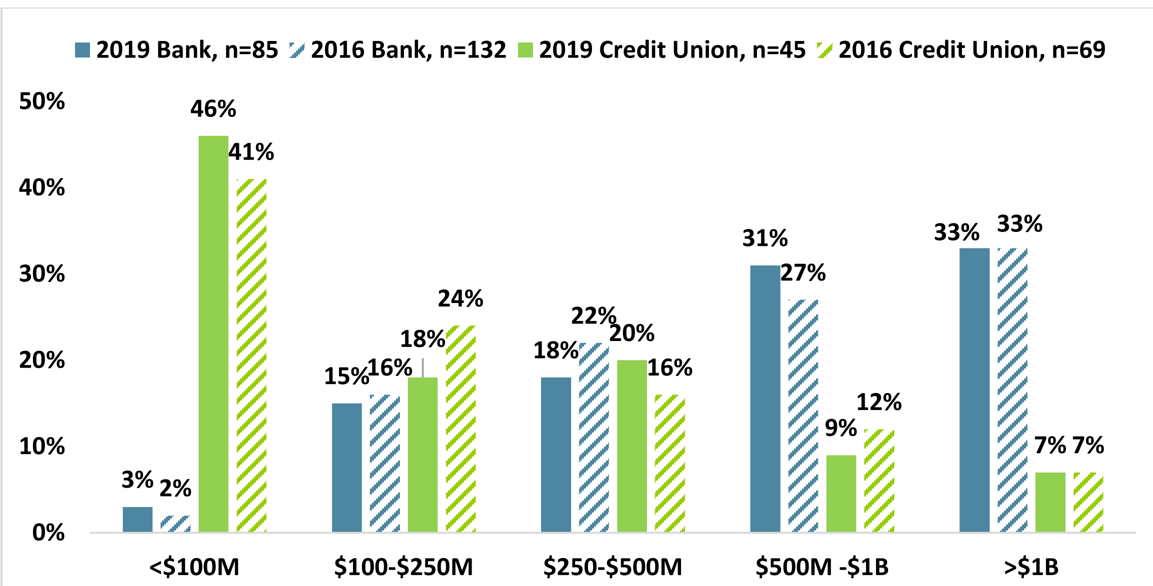
[4] The NE results are included in the *Consolidated Report* findings.

Figure 3: Banks and Credit Unions by Asset Range (% of respondents)



Q8. What is your FI's asset size?

Figure 4: Respondents by Asset Range, 2019 vs. 2016 (% of respondents)



Q8. What is your FI's asset size?

2020 U.S. MOBILE BANKING AND PAYMENTS LANDSCAPE

Expansion of mobile banking capabilities

Mobile banking is growing, driven by more mobile phone use and steadily improving mobile banking services across the globe. In the U.S., 48 percent of online adults use a smartphone for banking activities at least once per month for a wide range of interactions that include checking account balances, viewing recent transactions, making payments, transferring money, and depositing checks.[5]

As functionality of mobile devices continues to expand, there are more opportunities for consumers and businesses to conduct financial activities. Consumers can use their mobile phones to purchase goods and services at a growing number of physical and remote merchant locations, as well as for public transportation and ridesharing, which generate more volume with recurring types of transactions. Consumers can also conduct many financial services online using a mobile app or mobile browser, reducing visits to their financial institution. Mobile phones enable consumers to manage their purchases, bills, and other activities through alerts and easy access to service providers.

A growing base of consumers and businesses are becoming more comfortable in the digital space. This *digital transformation* means that customers are using their mobile phones to do more banking activities remotely. For these customers, mobile is becoming their primary mode of banking. Younger generations of customers, in particular, have higher expectations for mobile services. Industry research estimates that the Gen Z population will be about 40 percent of all U.S. consumers in 2020.[6] Gen Z grew up with Google, Apple, Facebook, and Amazon and want self-service, personalization, and immediate assistance – and their requirements are influencing other consumer cohorts. This shift requires FIs to rethink their banking strategies to focus even more on the user experience, which is a prime competitive differentiator. FIs must leverage the latest mobile banking innovations to keep up with consumer preference and remain competitive, particularly in the areas discussed below.

Increased FinTech services in the banking and retail space

FinTech companies are working with FIs to provide access to remote payment accounts, digital credit cards, and other digital banking solutions. Partnerships can be a winning combination because FIs have brand recognition, a deep understanding of regulations and compliance that many FinTechs lack, experience in the mobile space, and customer base to scale. Meanwhile, FinTechs potentially provide disruptive technology, products, and agility.

Digital transformation through open banking

FIs of all sizes need to understand the impacts of digital transformation and open banking. FIs engaged in open banking are implementing application program interfaces (APIs) and using data engines and chatbots to deliver a more unified mobile banking experience to their customers, which accelerates digital adoption. FIs use APIs to share user data with third-party providers (TPPs) to create more robust personalized user experiences with new products and services. Customers benefit from a single login to a central hub and receive a single, comprehensive dashboard to manage all their accounts. Open

[5] L'Hostis, Aurelie, Forrester. 'State of Digital Banking, 2019.' September 6, 2019.

[6] Accenture "Driving future of Payments – 10 mega trends" (2017 North American Consumer Payments Pulse Survey.)

banking is still emerging, especially in the U.S., as privacy, data protection, and other regulatory concerns need to be evaluated.

Changes in traditional FI mobile banking and payment services

Contactless payments: In the traditional mobile banking space, FIs are enhancing several card features. They have begun to replace EMV chip credit and debit cards with contactless (i.e., dual interface) cards that include the same near field communication (NFC) technology[7] used by the Apple, Google and Samsung Pay wallets to "tap to pay" at the point-of-sale (POS). As the cards enter the market, more merchants are enabling NFC contactless at their terminals. Industry supporters hope this will have a positive impact on growth in mobile contactless payments at the POS because greater merchant acceptance will allow customers to tap to pay using a contactless card or NFC mobile wallet as the payment mode.[8]

Mobile P2P Payments: Due to their convenience and growing availability, digital person-to-person (P2P) payments are beginning to displace other payment forms such as cash and checks for some use cases. For example, consumers use Venmo to split restaurant bills, pay rent, or pay their portion of ride-sharing services, which can reduce the number of cash, card, or check transactions. Some P2P payments are funded through bank or stored value accounts instead of cards, which can reduce the cost of payment acceptance while improving overall customer satisfaction and building loyalty.

Zelle[9] is a bank-centric digital P2P payment network that competes with PayPal's Venmo mobile payment service, Square's Cash App, and others. Early Warning Services (EWS), the network that operates Zelle, reported that for 2019, Zelle processed $187 billion in payments on 743 million transactions, a year-over-year growth of 57 percent and 72 percent, respectively.[10] By comparison, in Q1 2020 Venmo's net payment volume was $31 billion, a 48 percent year-over-year increase.[11]

A 2019 EWS survey found that first-time Zelle users were 45 or older. This age group appears to be overcoming their skepticism of P2P payments, as they tend to have a high degree of trust in their financial institutions. Including the P2P service in a mobile banking app can further increase consumer confidence.

---

7 Near field communication (NFC) is a standards-based wireless communication technology that allows data exchange between devices that are a few centimeters apart. Some NFC-enabled mobile phones incorporate a smart chip (secure element) to store the payment app and consumer payment credentials securely for use with a mobile wallet.

8 Recent data from the card networks indicate increasing use of contactless cards and mobile phones in response to Covid19. https://www.retailcustomerexperience.com/news/visa-says-contactless-use-surged-amid-covid-19/

9 Zelle is a consumer P2P transfer service, offered by Early Warning Services for U.S. financial institutions. Users can send funds directly from their bank account to their recipient's bank account via the recipient's mobile phone number or email address. Cocheo, Steve, The Financial Brand, "Zelle Outpacing PayPal's Venmo in Person-to-Person Payments." July 2019.

10 https://www.zellepay.com/press-releases

11 https://www.statista.com/statistics/763617/venmo-total-payment-volume/

Cardless ATMs[12]*:* Cardless ATM features enable consumers to access their bank accounts and withdraw cash using mobile phones to tap to pay via NFC technology or a QR-code displayed on the ATM,[13] instead of inserting their cards into the ATM machine. Consumer interest is driving more FIs to offer this feature, but it is still primarily limited to large FIs with substantial ATM distribution channels.

Biometric authentication to enhance mobile banking security: Data breaches continue to grow as fraudsters become more sophisticated. The mobile NFC "Pay" wallets initially implemented biometric technology for consumers to authenticate when opening their wallets to tap to pay. This type of biometric authentication is now becoming a mainstream security tool that many FIs are adding to their mobile banking applications. Biometric scans (e.g., fingerprint, facial recognition) eliminate the need for a consumer to use a password when making a mobile payment or logging in to a mobile banking app. Industry experts note that consumers are prepared and willing to adapt biometrics as a Personal Identification Number (PIN) replacement and see it as a faster, convenient, and more secure process.

Considered collectively, mobile banking and payment services, functionality, and security requirements are converging. Developments in the mobile space are having a major impact on FIs. Institutions need to keep abreast of related mobile activities and develop a digital strategy to support their customers as they become more mobile-centric. Mobile banking was an established channel several years before mobile payments emerged. While retail mobile payment adoption has been slow, a successful mobile payments environment combines banking services and payments functionality. FIs play a key role in ensuring that the foundation for mobile payments evolves. Payment methods supported and funded through FIs underlie most mobile payment transactions. However, in a banking industry that is typically slow to change, many FIs are behind in developing digital solutions for consumers. As innovations surface, there are opportunities for FIs to move beyond traditional services by working with FinTech and mobile solution providers to enhance their customers' experiences.

In summary, the pace of change has yet to slow down. This makes for a frenetic MFS environment. As most respondents tend to be followers due to limited resources, their pace is somewhat slower. Nonetheless, they still need to be aware of on the changing environment in payments. Survey respondents should work with their solution providers and industry organizations to determine the best strategies for their organizations.

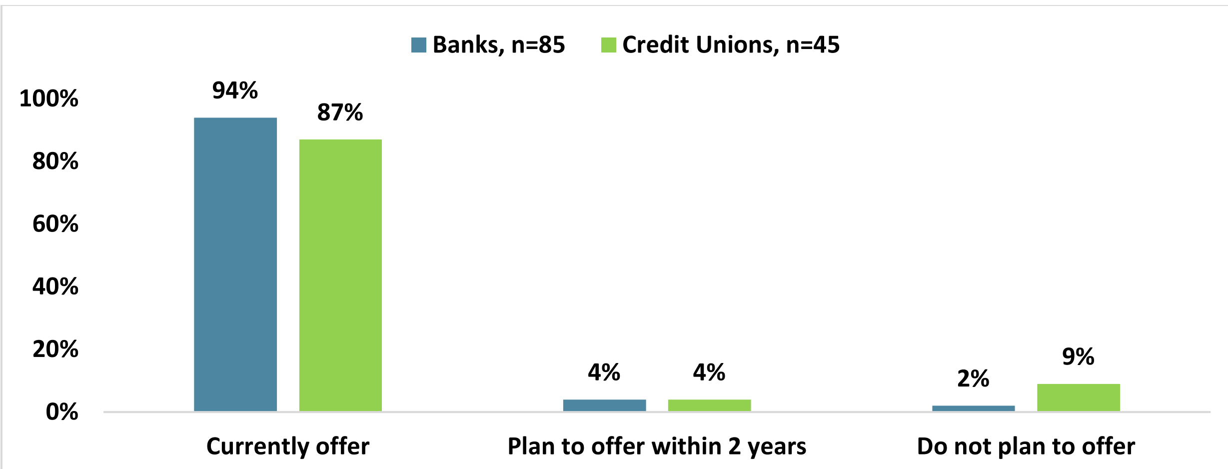
[12] Pinder, Jean, BAI Banking Strategies, "Top Mobile Banking Trends for 2019." January 14, 2019.

[13] A QR code displayed on the ATM is an authentication of the pre-staged withdrawal completed on the mobile banking app. The phone's camera captures the QR code.

RETAIL MOBILE BANKING RESULTS

The 2019 MFS survey found that 91 percent of NE respondents offered mobile banking to retail customers, and 4 percent planned to do so within the next two years. These results are projected to bring the total of NE mobile-enabled respondents to 95 percent by 2021.[14] The number of NE FIs providing mobile banking services to consumers has more than tripled since 2008, even as consolidation has reduced the number of FIs in the region. However, 2019 appears to mark a leveling off in that increase, because 91 percent of FIs in the region - 94 percent of banks and 87 percent of credit unions - already offered mobile banking services by mid-2019 when the survey was fielded (**Figure 5**). **Figure 6** shows the continued growth in the percentage of New England FIs offering mobile banking from 2014 to 2019 alongside the steady 5 percent that had no plans to offer it.

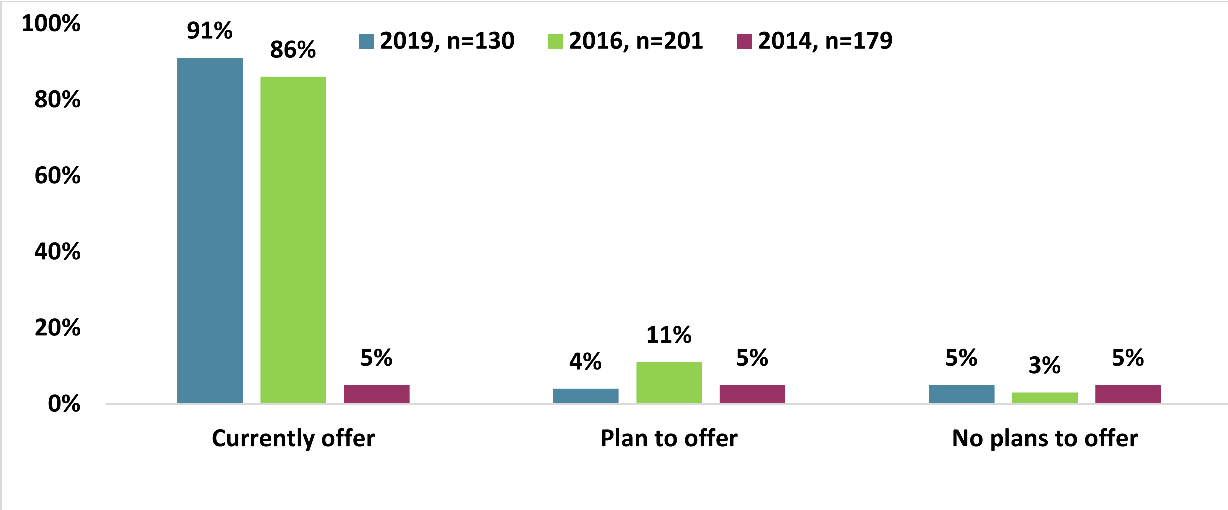
Figure 5: FIs Offering Mobile Banking Services (% of respondents)



Q9. Do you currently offer or plan to offer mobile banking to retail customers?

[14] While the percentage of respondents offering *and* planning to offer retail mobile banking was higher in 2016 than in 2019, the percentage of those currently offering such services in 2019 was five percentage points higher than in 2016.

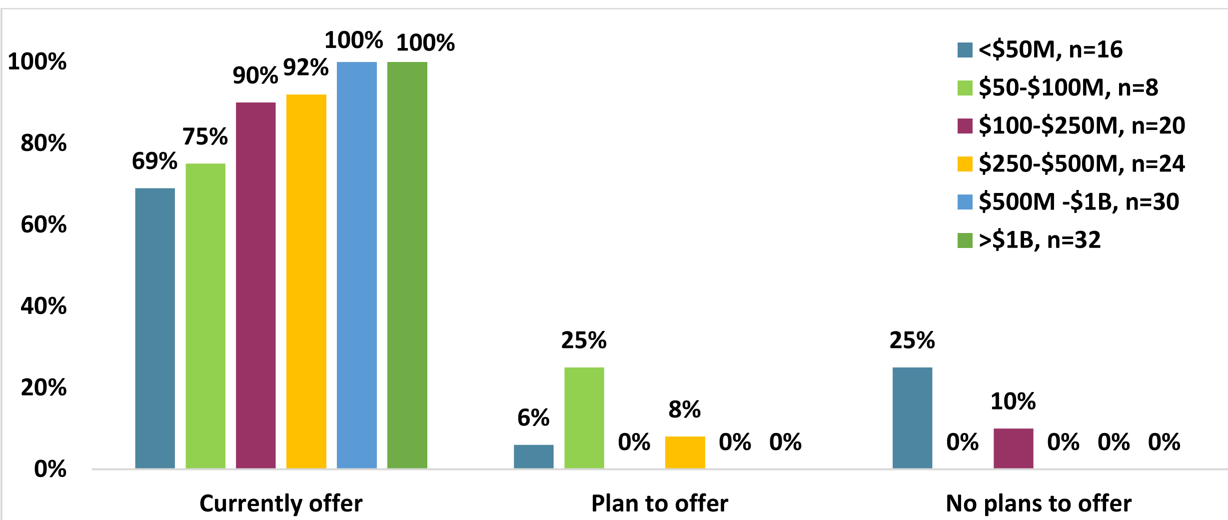
Figure 6: FIs Offering Mobile Banking Services, 2019, 2016, & 2014 (% of respondents)



Q9. Do you currently offer or plan to offer mobile banking to retail customers?

Both institution type and asset size make a difference, but the latter is the stronger correlation on a percentage basis (**Figure 7**). Among the six respondents that did not plan to offer mobile banking, two were banks with $100 million to $200 million in assets, and four were credit unions with less than $50 million in assets.

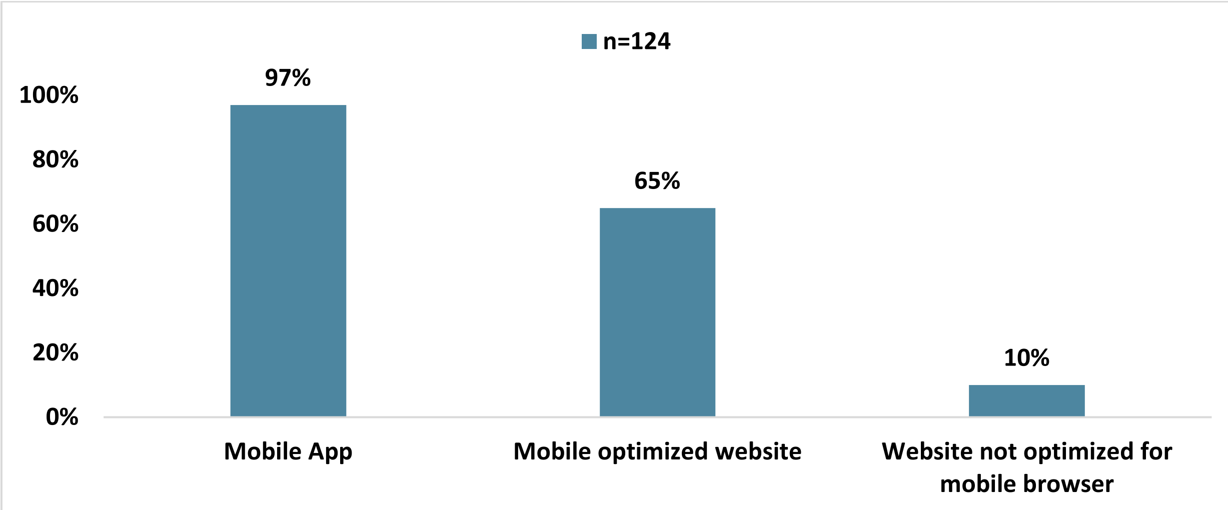
Figure 7: FIs Offering Mobile Banking Services by Asset Size (% of respondents)



Q9. Do you currently offer or plan to offer mobile banking to retail customers?

FIs provide mobile banking services to customers over several channels, with mobile app the most common (**Figure 8**). Nearly all respondents that offered or planned to offer mobile banking have a mobile app (97 percent), and 65 percent offered a mobile-optimized website. Two-thirds (63 percent) of respondents offered both a mobile app and a mobile-optimized website. Only one respondent planned to offer mobile banking exclusively through the same website for desktop and mobile.

Figure 8: Mobile Banking Access Interfaces Offered by FIs (% of respondents)

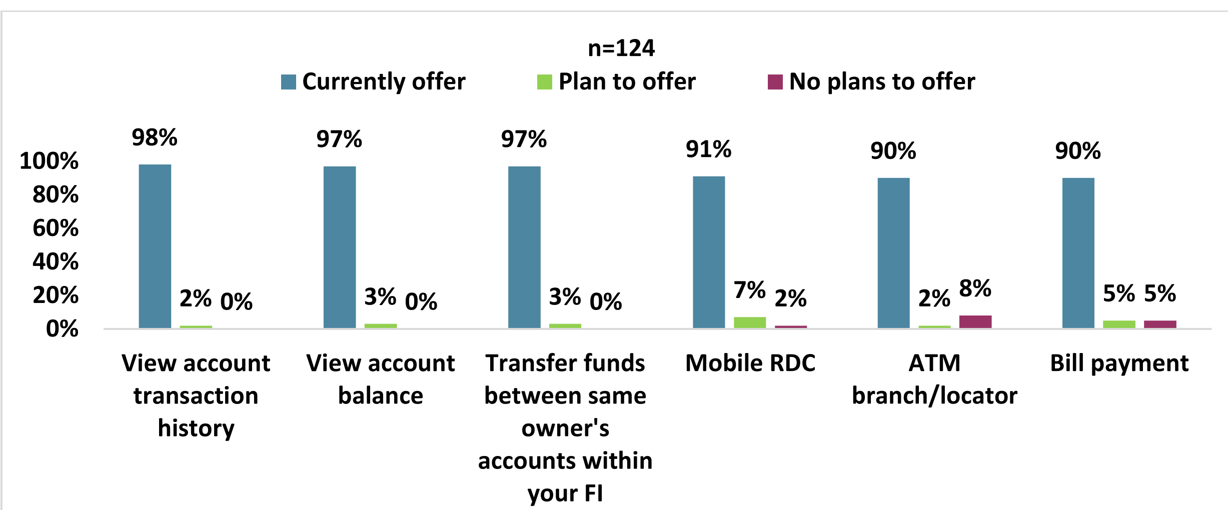


Q10. How do you offer retail customers access to your mobile banking services? (Check ALL that apply)

Standard Mobile Banking Features

The initial services that FIs offered to consumers mirrored the services offered via their online banking platform. To date, most FIs' retail mobile banking services have followed this model. In New England, the three most prevalent features respondents offered in 2019 were *view account transaction history* (96 percent), *transfer funds between accounts within the same institution* (96 percent), and *view account balances* (95 percent). All respondents planned to offer these services by 2021 (**Figure 9**). Mobile bill payment and ATM/branch locator features are also standard and offered by 90 percent of respondents. Findings from NE differed from the *Consolidated Report* findings because more NE respondents (91 percent) supported mobile RDC (mRDC) at a higher rate than those offering either *bill payment* or *ATM/branch locator.*

Figure 9: Standard Mobile Banking Features Offered by FIs (% of respondents)

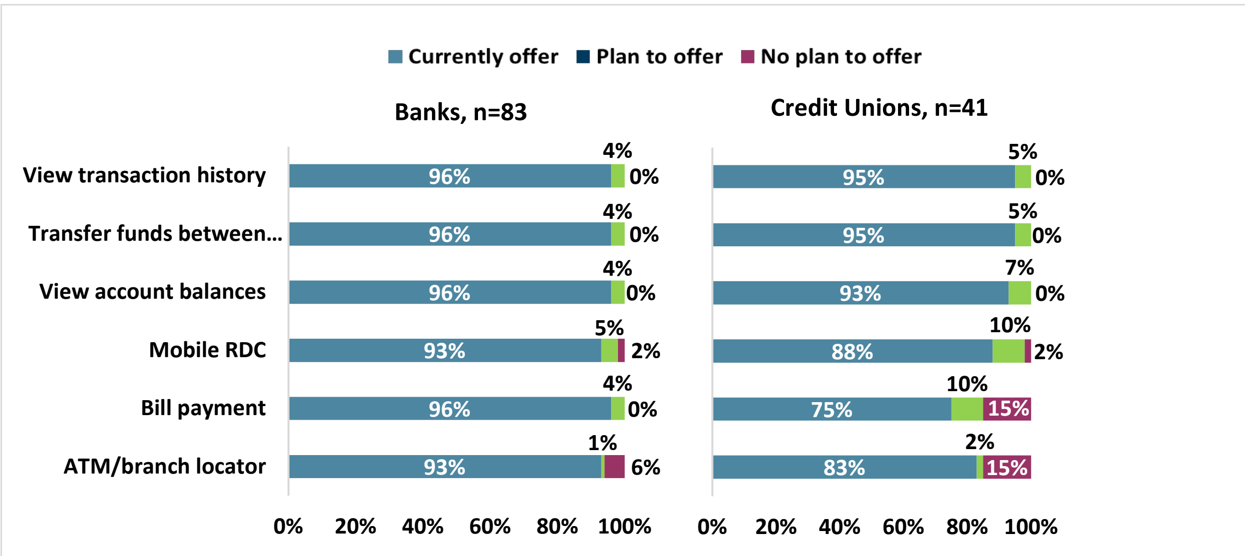


Q11. Which of the following mobile banking features do you currently offer or plan to offer? (Check ALL that apply)

Payment Strategies

The biggest difference between NE banks and credit unions offering services related to mobile bill payment was that all banks offered or planned to offer it, while six credit unions had no plans to offer it. Banks and credit unions were consistent in their plans for both ATM/branch locator (five banks and six credit unions had no plans to offer) and mRDC (just two banks and one credit union lacked plans to offer it). In New England, many credit unions offered retail mRDC earlier than banks did, a factor that may account for the small gap between credit union respondents (88 percent) and bank respondents (93 percent) already offering mRDC (**Figure 10**).

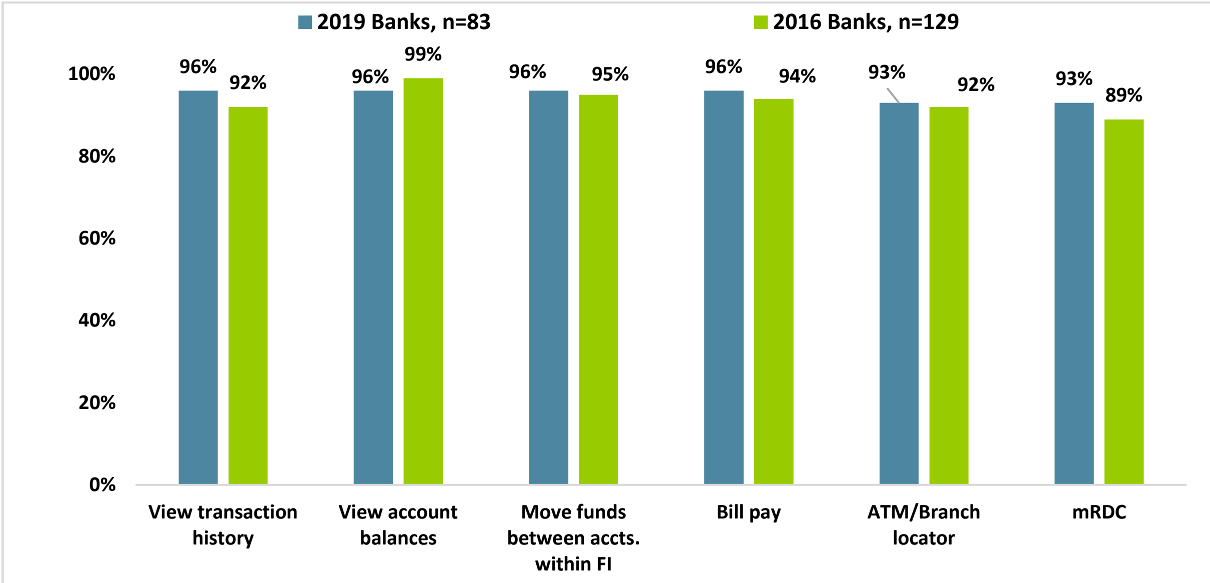
Figure 10: Standard Mobile Banking Features Offered by Banks and Credit Unions (% of respondents)



Q11. Which of the following mobile banking features do you currently offer or plan to offer? (Check ALL that apply)

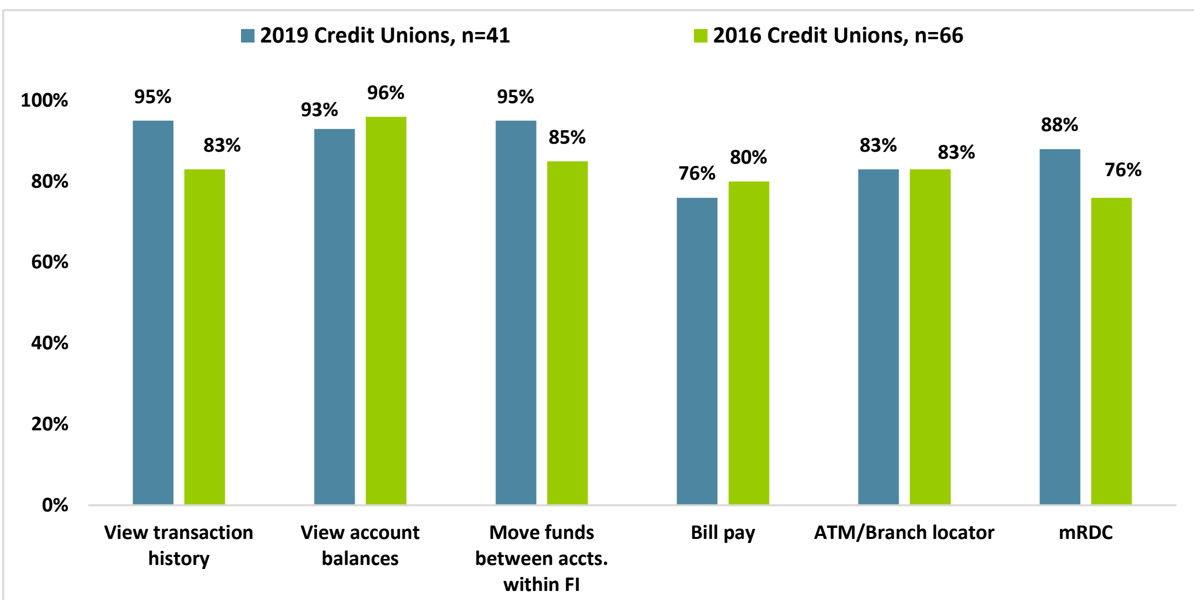
From 2016 to 2019, the biggest increase in FIs supporting these mobile features was *view account transaction history*. The percentage of bank respondents offering it rose four points, but the number spiked 12 percentage points among credit union respondents (**Figure 11a and 11b**). Given the smaller asset size of 2019 credit unions, this data point signifies a real change from 2016. However, respondents already offering mobile bill pay was five percentage points lower in 2019 than in 2016, which makes sense, given the differing asset sizes of credit union respondents in each year.

Figure 11a: Standard Mobile Banking Features Offered by Banks, 2019 vs. 2016 (% of respondents)



Q11. Which of the following mobile banking features do you currently offer or plan to offer? (Check ALL that apply)

Figure 11b: Standard Mobile Banking Features Offered by Credit Unions, 2019 vs. 2016 (% of respondents)



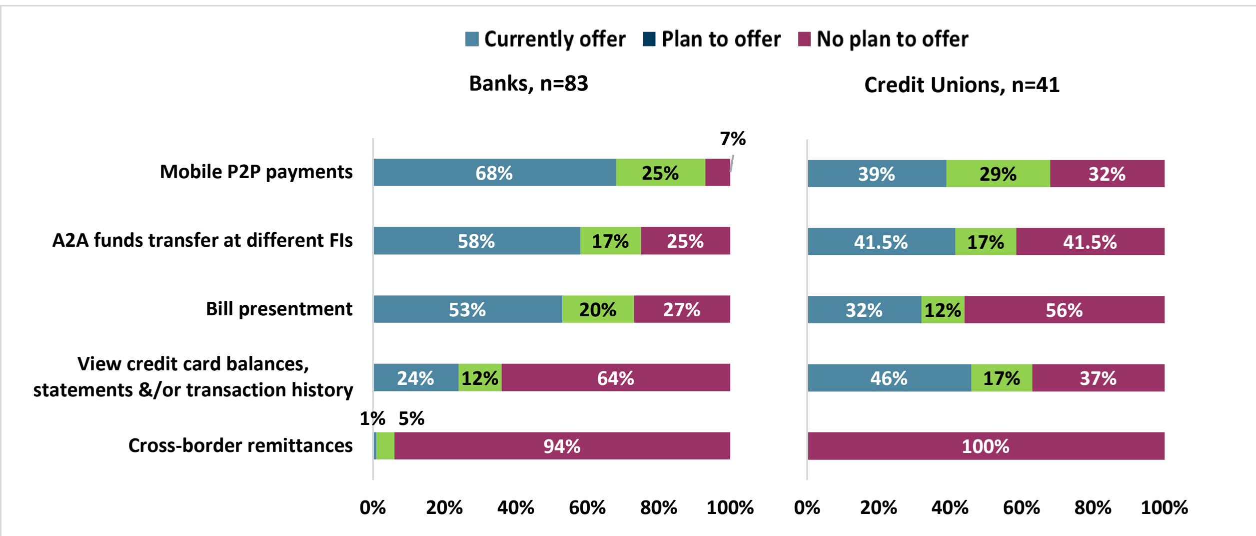
Q11. Which of the following mobile banking features do you currently offer or plan to offer? (Check ALL that apply)

Advanced Mobile Banking Features

Continuing the trend from 2016, regional FIs, like those nationally, have been adding more advanced retail mobile products and capabilities. In 2019, both banks and credit unions reported supporting mRDC, P2P payments, external Account- to-account (A2A) transfer (funds transfers between a customer's accounts at different FIs), bill presentment, view access to card balances, and cross-border remittances.

More than half of the bank respondents offered mobile P2P payment services (67 percent), mobile external A2A transfer (58 percent), and bill presentment (53 percent), while almost half of the credit union respondents (47 percent) offered *view access to card balances*. Only one bank offered *initiate cross-border remittances*, although four others planned to offer remittance services (**Figure 12**). Asset size was a determining factor for offering bill presentment (Tier 1 and 2 respondents under $100 million in assets do not plan to offer it), and cross-border remittance services (four of the five respondents considering it were over $500 million in assets).

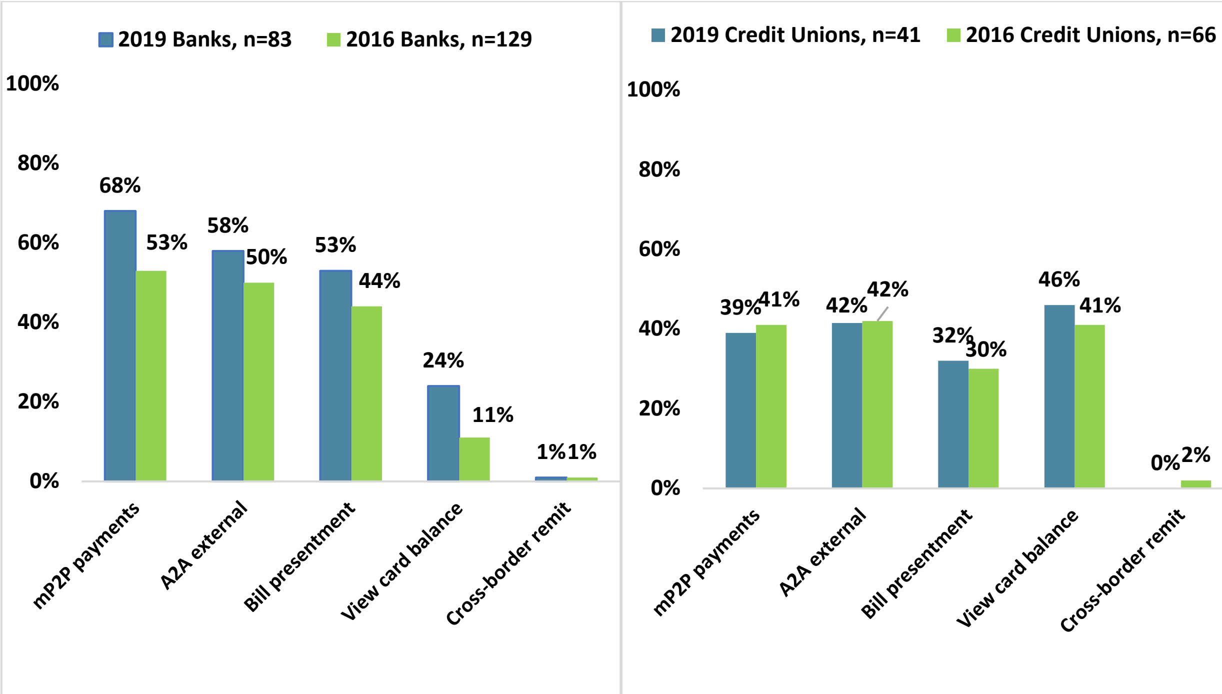
Figure 12: Advanced Mobile Retail Banking Features Offered by FIs (% of respondents)



Q11. Which of the following mobile banking features do you currently offer or plan to offer? (Check ALL that apply)

From 2016 to 2019, the percentages of bank respondents offering all services but cross-border remittances continued to rise steadily, but credit unions stalled, likely due to the small number and asset sizes of 2019 credit union respondents. **Figure 13** shows survey-over-survey changes for those "currently offering" each service.

Figure 13: FIs Offering Advanced Retail Mobile Banking Features, 2016-2019 (% of respondents)



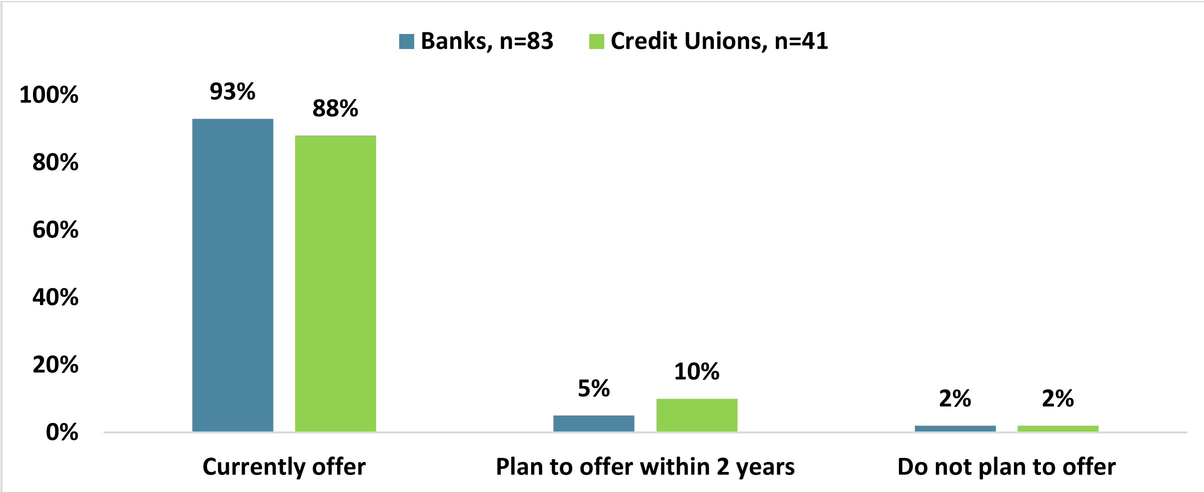
Q11. Which of the following mobile banking features do you currently offer or plan to offer? (Check ALL that apply)

Mobile Remote Deposit Capture (mRDC)

FIs increasingly leverage mobile technology to offer features beyond those offered via their online banking services. Services like mobile remote deposit capture (mRDC) and mobile person-to-person (P2P) payments rely on the phone camera and access to a customer's mobile contacts to provide an optimal user experience that the desktop cannot match.

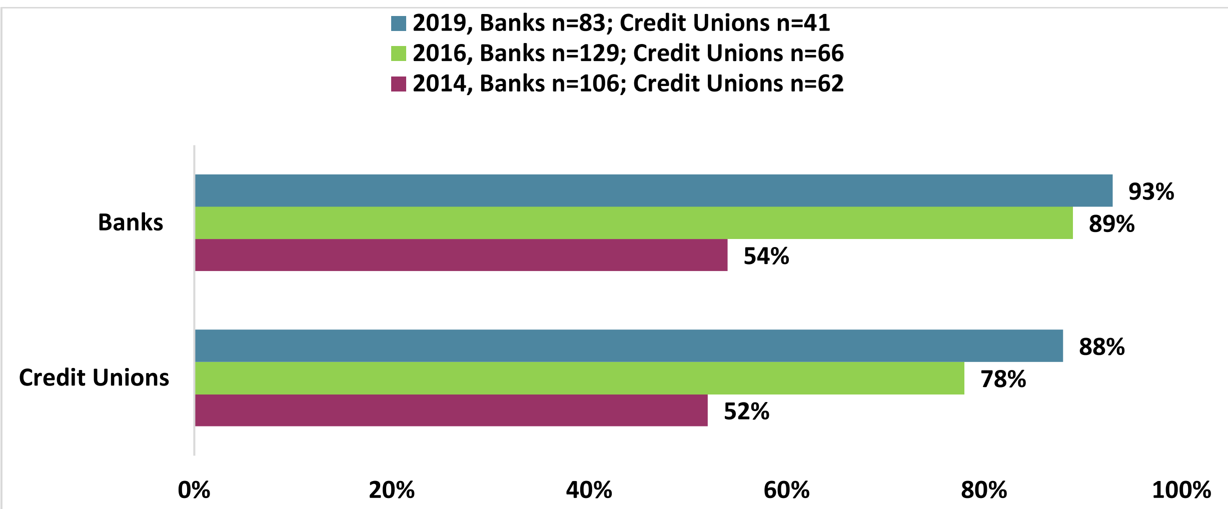
In 2019, retail mRDC became a standard service among NE FIs: 93 percent of bank and 88 percent of credit union respondents offered the service (**Figure 14**). FIs across all asset sizes offered mRDC, including 67 percent of respondents with under $50 million and all FIs with over $500 million in assets. The percentage of FIs that offered mRDC rose over 70 percent between 2014 and 2019 (**Figure 15**).

Figure 14: Mobile Remote Deposit Capture Offered by FIs (% of respondents)



Q12. Do you currently offer or plan to offer mobile remote deposit capture (RDC)?

Figure 15: FIs Offering mRDC: 2019, 2016, and 2014 (% of respondents)

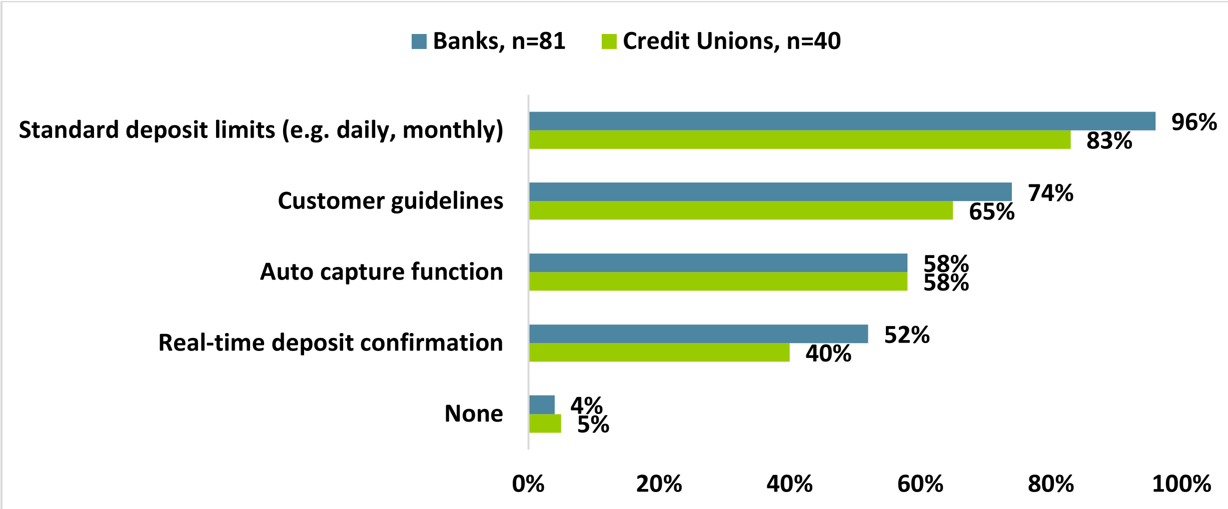


Q12. Do you currently offer or plan to offer mobile remote deposit capture (RDC)?

In 2019, many New England FIs offered advanced mRDC features such as auto-capture, real-time deposit confirmation, standard deposit limits (e.g., daily, monthly), and consumer guidelines, such as recommended check hold times (**Figure 16**). More respondents had mRDC policy-related functions – standard deposit limits (92 percent) and consumer guidelines (71 percent), but over half of both bank and credit union respondents (58 percent) offered an auto-capture function where the check image is auto-captured by the mobile app. Overall, a higher percentage of banks than credit unions offered these features.

Standard deposit limits was the only feature tied to asset size – ranging from 50 percent of Tier 1 (<$50 million) respondents, to 97 percent of Tier 6 (>$1 billion) respondents. Just five FIs provided no special mRDC features.

Figure 16: Mobile RDC Features Offered by Banks and CUs (% of respondents)

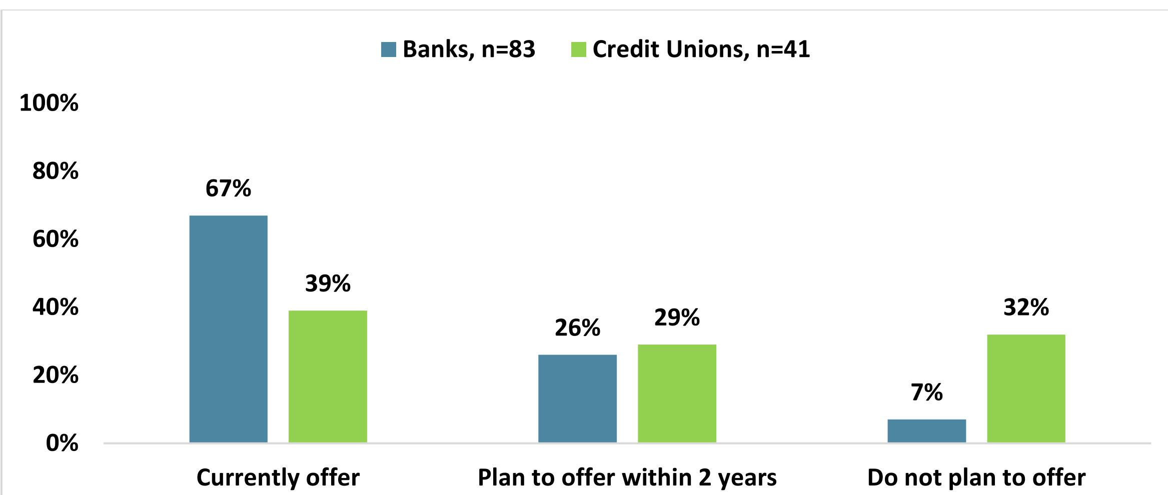


Q13. Which of the following mobile RDC features do you currently offer or plan to offer? (Check ALL that apply)

Mobile Person-to-Person (P2P) Payment Services

Consumers increasingly send money to friends and family via mobile P2P apps, such as Apple Cash, (Square) Cash App, Google Pay, Venmo, and Zelle. To compete with nonbank providers, New England FIs have begun to offer mobile P2P payments (**Figure 17**). In 2019, 67 percent of bank respondents and 39 percent of credit union respondents already offered mobile P2P payment services, and 26 percent of banks and 29 percent of credit unions planned to offer mobile P2P payments by 2021. While the percentage of credit unions offering mobile P2P payments has remained essentially level since 2016,[15] the number of banks supporting these payments rose 13 percentage points during the same period.

Figure 17: Mobile P2P Payments Offered or Planned by FI Type (% of respondents)



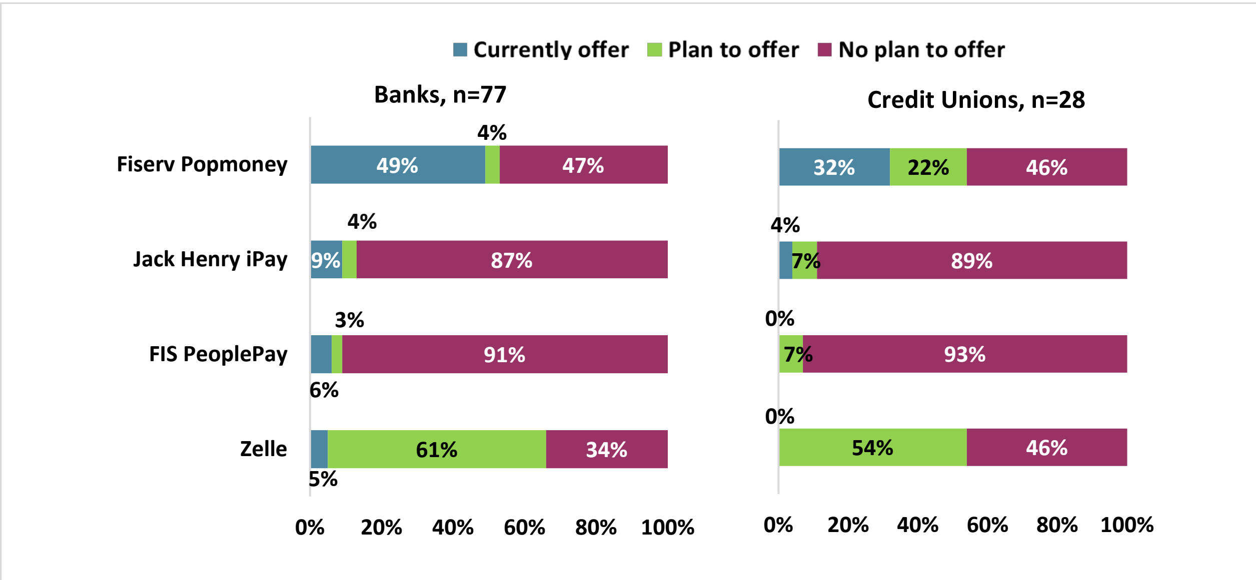
Q14. Do you currently offer or plan to offer mobile person-to-person (P2P) payment services?

[15] The credit union percentage declined two percentage points from 2016 to 2019.

Payment Strategies

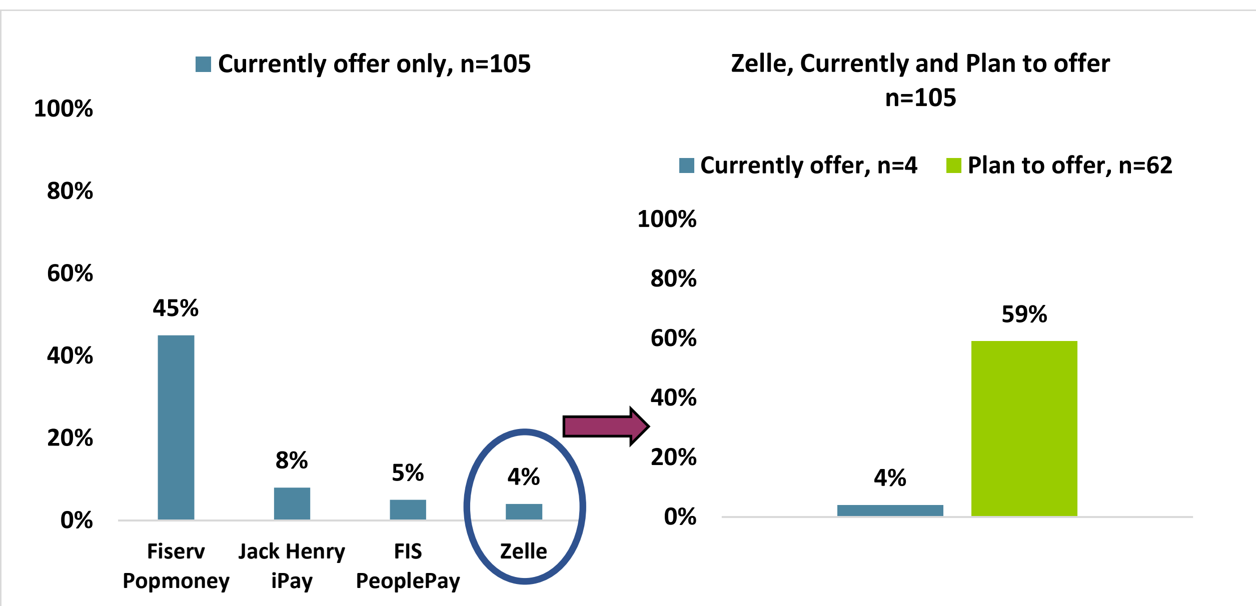
Due to their relatively small asset size, many NE FI respondents offering mobile P2P payment services used a third-party processor (e.g., Fiserv, FIS, Jack Henry) for their core businesses and some have continued to use their processors for mobile P2P payments (**Figure 18a**). However, it is possible that as Zelle grows, processors will replace their proprietary solutions and make Zelle available to their FI clients. Already, the majority of respondents (61 percent of banks, 54 percent of credit unions) plan to provide mobile P2P payments through Zelle by 2021 (**Figure 18b**).

Figure 18a: Mobile P2P Payment Providers Used by FIs (% of respondents)



Q15. What mobile P2P payment services do you currently offer or plan to offer?

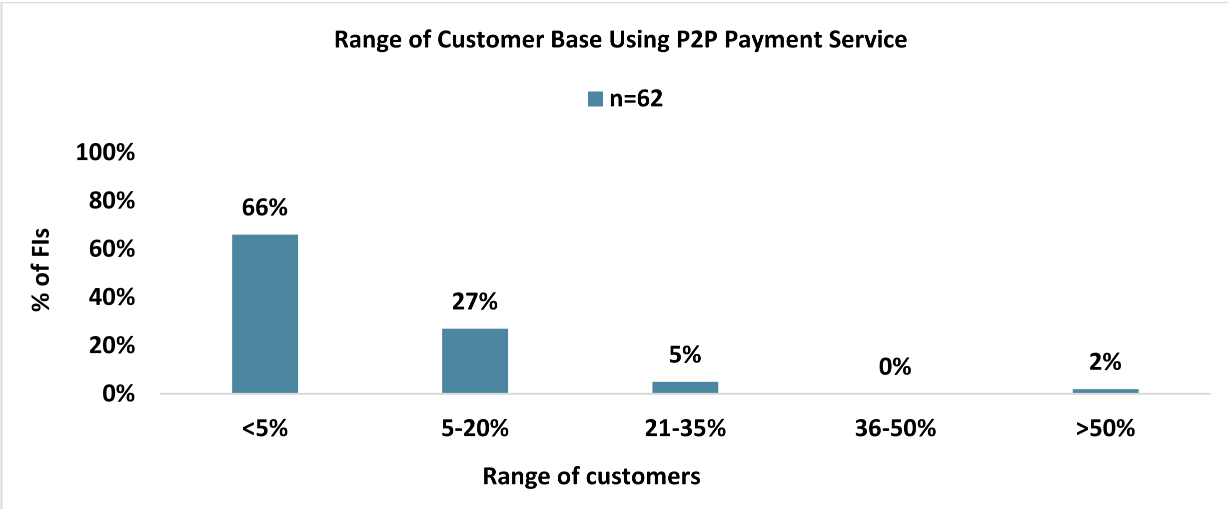
Figure 18b: Planned Transition from Current Mobile P2P Payment Services by FIs (% of respondents)



Q15. What mobile P2P payment services do you currently offer or plan to offer?

NE FIs reported relatively low customer use of their mobile P2P payment services. Among the 62 respondents that tracked mP2P payments usage, 66 percent – 35 banks and six credit unions – had fewer than 5 percent of their consumer customers actively using their P2P service (**Figure 19**).

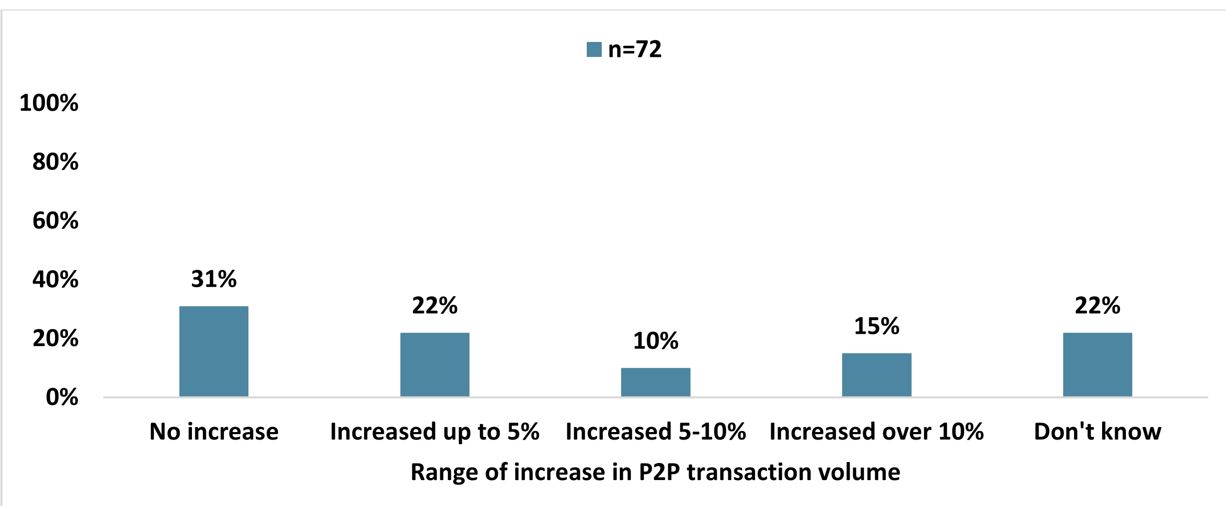
Figure 19: Mobile P2P Payments Customer Adoption (% of respondents)



Q16. What percentage of your customers used your mobile P2P payment services in the last 12 months?

Almost half the respondents (46 percent) that offered mobile P2P payments in 2019 saw an increase in transaction volume (**Figure 20**). Just 32 percent of respondents reported no increase in mobile P2P transaction volume, and 22 percent did not know if there were any changes.

Figure 20: Change in Mobile P2P Payment Transaction Volume (% of respondents)

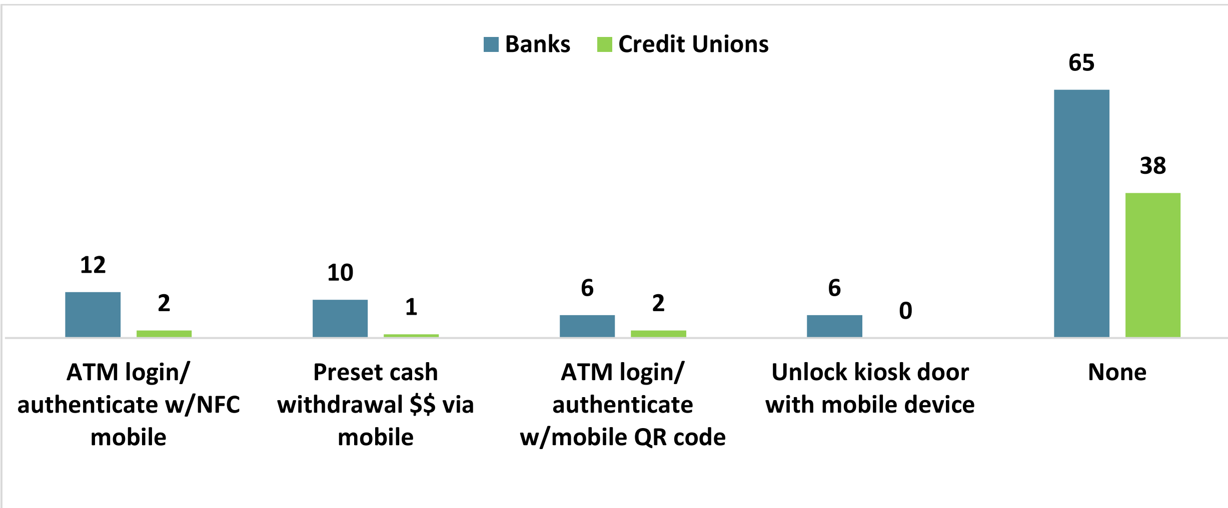


Q17. Please select the response that best reflects your mobile P2P transaction volume over the last 12 months.

Cardless ATM Capabilities

Only 18 respondents offered or planned to offer cardless ATM capabilities, while 103 had no plans to do so (**Figure 21**). All but three of the large respondents had cardless ATM capabilities.[16] Among survey respondents with more than $1 billion in assets (Tier 6), the most prevalent capability, *use mobile NFC contactless feature to login/authenticate at the ATM in place of debit card*, was offered or planned by just 11 of the 31 respondents. Ten of the over-$1 billion group also selected *set up cash withdrawal transaction prior to getting to ATM*. Twelve respondents offered a single cardless ATM capability, while the remaining nine offered between two and four capabilities.

Figure 21: Cardless ATM Features Offered/Planned by FI Type (# of respondents)



Q18: Do you currently offer/plan any cardless ATM features via your mobile banking app? (Check all that apply)

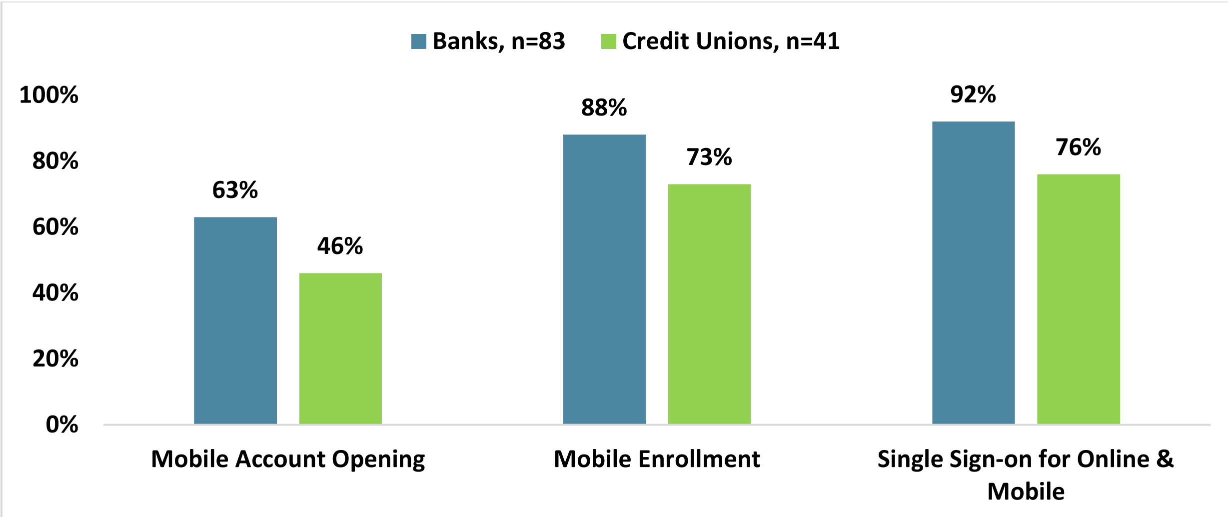
Mobile Banking Usability Features

In New England, banks are more likely than credit unions to offer mobile onboarding and usability features: single sign-on (SSO), enrollment and account opening (**Figure 22**).[17] Eighty-three percent of all NE respondents supported mobile enrollment to consumer customers. However, this percentage obscures a statistically significant 15-percentage-point difference between banks and credit unions, with similar differences between bank and credit union respondents for SSO and mobile account opening. In total, 86 percent of NE respondents offered SSO (92 percent of banks and 76 percent of credit unions), and 57 percent offered mobile account opening (63 percent of banks and 46 percent of credit unions).

[16] Anecdotal evidence indicates that the largest U.S. banks are driving cardless ATM capabilities.

[17] Mobile enrollment enables an FI's existing customer to download and enroll in its mobile banking app using their online credentials (e.g., user ID/password or biometric fingerprint). SSO permits use of the same credentials online and via mobile device. Mobile account opening enables a new or existing customer to open a bank or credit card account via a mobile device.

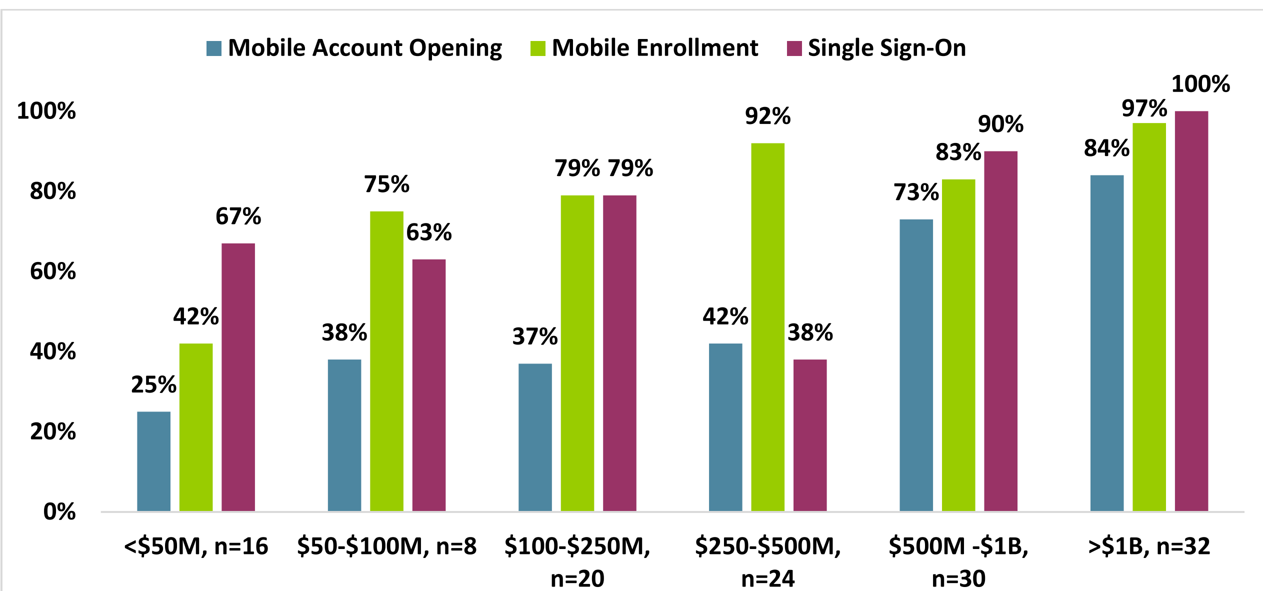
Figure 22: Mobile Banking Usability Features Offered by FIs (% of respondents)



Q19. Do you currently offer or plan to offer the following mobile features? (Check ALL that apply)

As the 2019 data showed, asset size is a strong indicator for whether FIs offer mobile usability features (**Figure 23**). There was a large disparity between the smallest FIs in Tier 1 (<$50 million) and the largest FIs in Tier 6 (>$1 billion). This was particularly true for mobile account opening, a feature that is inherently riskier and has stringent compliance requirements. Fewer than half the respondents under $500 million in assets offered or planned to offer this service. Mobile enrollment percentages ranged from 42 percent of Tier 1 FIs to 97 percent of Tier 6 FIs. For SSO, it was from 67 percent to 100 percent, respectively. Meanwhile, support for mobile account opening rose from a mere 25 percent of the smallest FIs to 84 percent of the largest FIs.

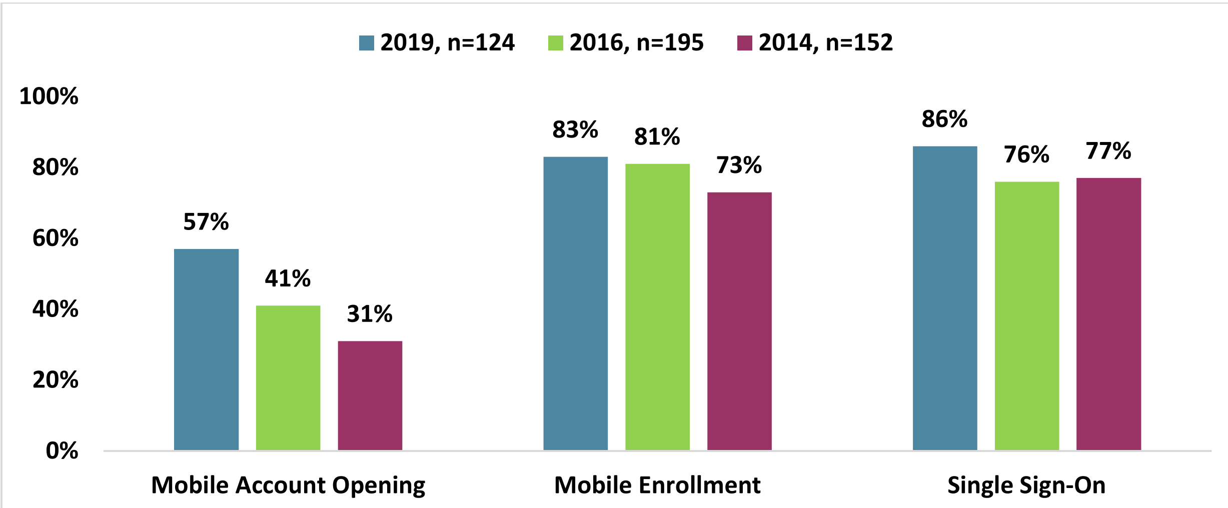
Figure 23: Mobile Banking Usability Features by FI Asset Size (% of respondents)



Q19. Do you currently offer or plan to offer the following mobile features? (Check ALL that apply)

The percentage of respondents offering mobile account opening increased 27 percent from 2014 to 2019 **(Figure 24)**, but there was some downward pressure from credit union respondents. For example, the percentage of credit unions offering SSO dropped from 79 percent in 2014 to 70 percent in 2016 (nine percentage points), so even with a six-point gain among 2019 credit union respondents, the 2019 percentage is still below the 2014 level.

Figure 24: Mobile Banking Usability Features Offered by FIs, 2014-2019 (% of respondents)

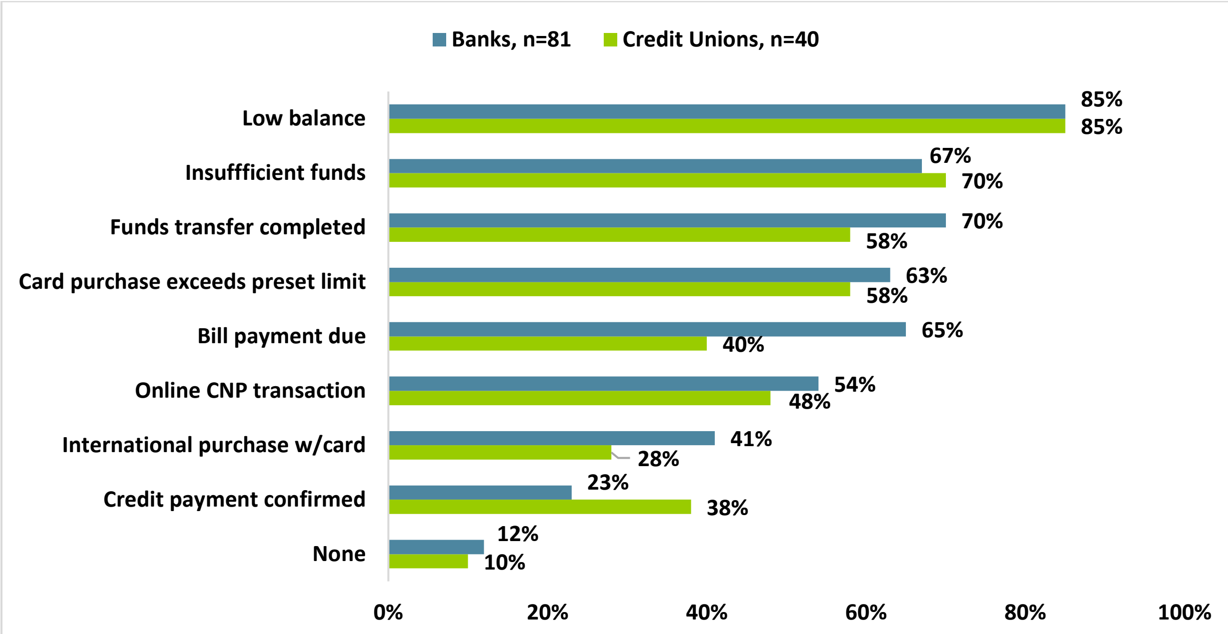


Q19. Do you currently offer or plan to offer the following mobile features? (Check ALL that apply)

Mobile Alerts

Mobile alerts have become an important means for banks and credit unions to communicate to consumers about account activity. Alerts are widely used by NE respondents (**Figure 25**) and at somewhat higher rates than among *Consolidated Report* respondents as a whole. The most common alert was *low balance*, offered by 85 percent of bank and credit union respondents. About two-thirds of respondents also offered mobile alerts for *insufficient funds* (66 percent), *funds transfer completed* (65 percent), and *card purchase exceeding preset limit* (61 percent). Alert usage differed between bank and credit union respondents: A higher number of bank respondents pushed up *bill payment due* to 57 percent for all FI respondents and increased card not present (CNP) *online purchase* to 52 percent of total respondents, even though both were offered (or planned) by a much lower percentage of credit unions. Just 14 FIs (12 percent of respondents) did not offer any alerts.

Figure 25: Mobile Alerts Offered by FIs (% of respondents)



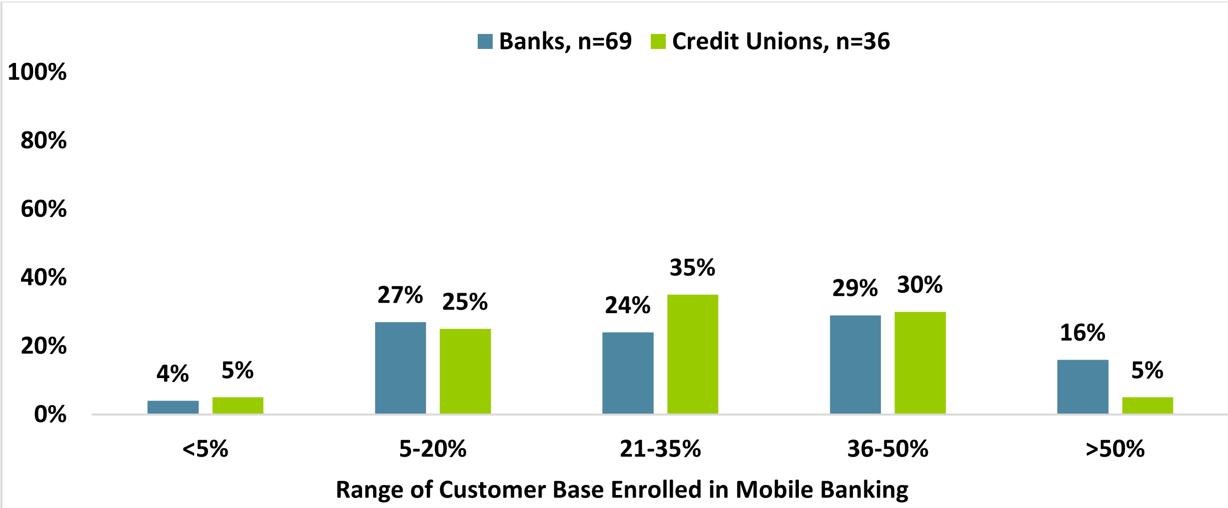
Q20. What types of mobile alerts do you currently offer or plan to offer? (Check ALL that apply)

Consumer Adoption of Mobile Banking Services

Customer adoption of retail mobile banking services increased substantially from 2016 to 2019 among NE FIs. Enrollment and usage rates were trending low until 2016, when, for the first time in the survey's history, more than half the respondents (51 percent) reported having more than 20 percent of their retail customers enrolled in mobile banking. By 2019, 45 percent of the bank and 35 percent of the credit union respondents that tracked enrollment data had mobile banking enrollment rates in excess of 35 percent (**Figure 26**).

Twelve banks and two credit unions did not track mobile enrollment data, although six planned to do so within the next 12 months. All perceived value in tracking the data, but two of the banks did not receive the data from their processor and another two stated that the product was too new or data too low to be tracked. Four respondents (three banks and one credit union) did not have the tools, technology or staff to be able to track enrollment data.

Figure 26: Range of Retail Customers Enrolled in Mobile Banking (% of respondents)

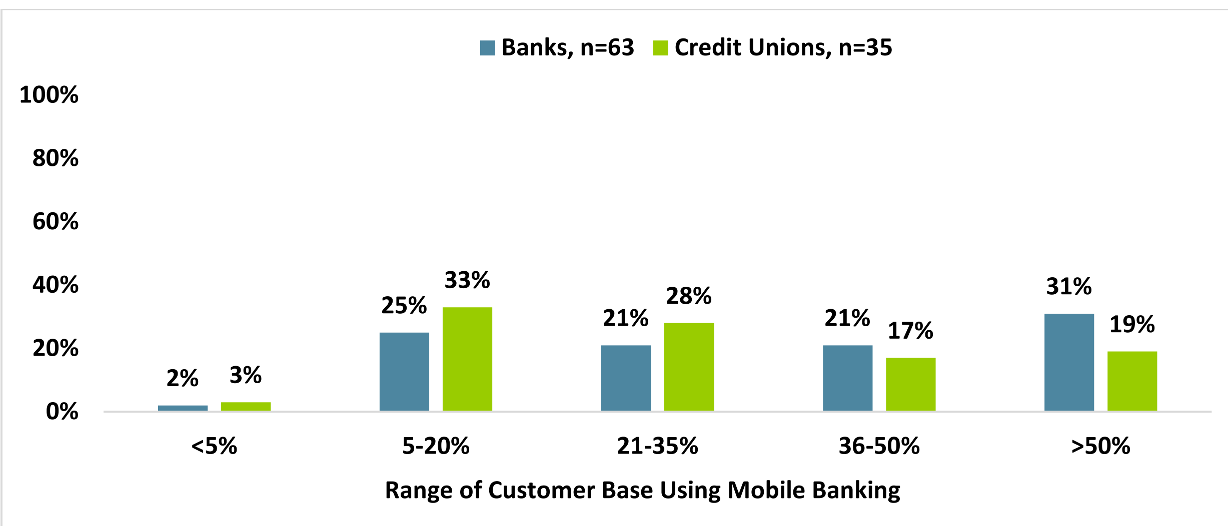


Q21. What percentage of your retail customers are ENROLLED in your mobile banking services?

Customer usage rates were higher than enrollment rates: 52 percent of bank and 36 percent of credit union respondents reported usage rates above 35 percent (**Figure 27**).

Nineteen banks and three credit unions did not track mobile banking usage, even though all saw value in tracking the data, and nine (seven banks and two credit unions) planned to track within the following 12 months. Three banks did not receive the data from their processor and another stated that the product was too new to track. Seven respondents (five banks and two credit unions) did not have the tools, technology, or staff to track usage data.

Figure 27: Range of Retail Customers Using Mobile Banking (% of respondents)

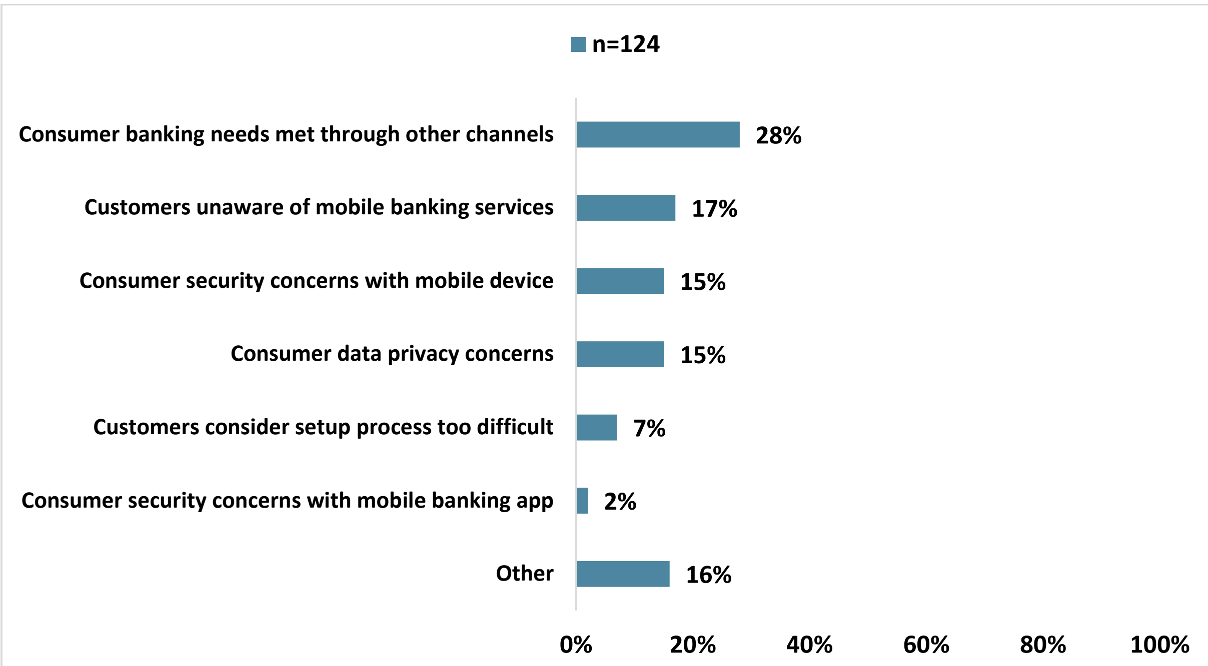


Q22. What percentage of your enrolled customers USED your mobile banking services in the last 90 days?

Barriers to Retail Adoption of Mobile Banking

New England respondents perceived a variety of barriers to consumer adoption of mobile banking (**Figure 28**). Twenty-eight percent of respondents (27 percent of banks and 32 percent of credit unions) believed that the most important barrier to adoption was *customer banking needs [are] met through other channels*. Perhaps acknowledging limitations in their marketing strategies, 17 percent of these FIs (18 percent of bank and 15 percent of credit union respondents) believed that their *customers [are] unaware of mobile banking services (e.g., insufficient marketing)*. Fifteen percent of respondents also highlighted customer security and data privacy concerns as important barriers. Among the "Other" responses, four FIs were not sure what the barriers were. One believed there were no barriers, one cited *poor cell service*, another noted *internal resistance* to mobile banking, and two were still in the process of implementing mobile banking.

Figure 28: Most Significant Barriers to Customer Adoption of Mobile Banking (% of respondents)



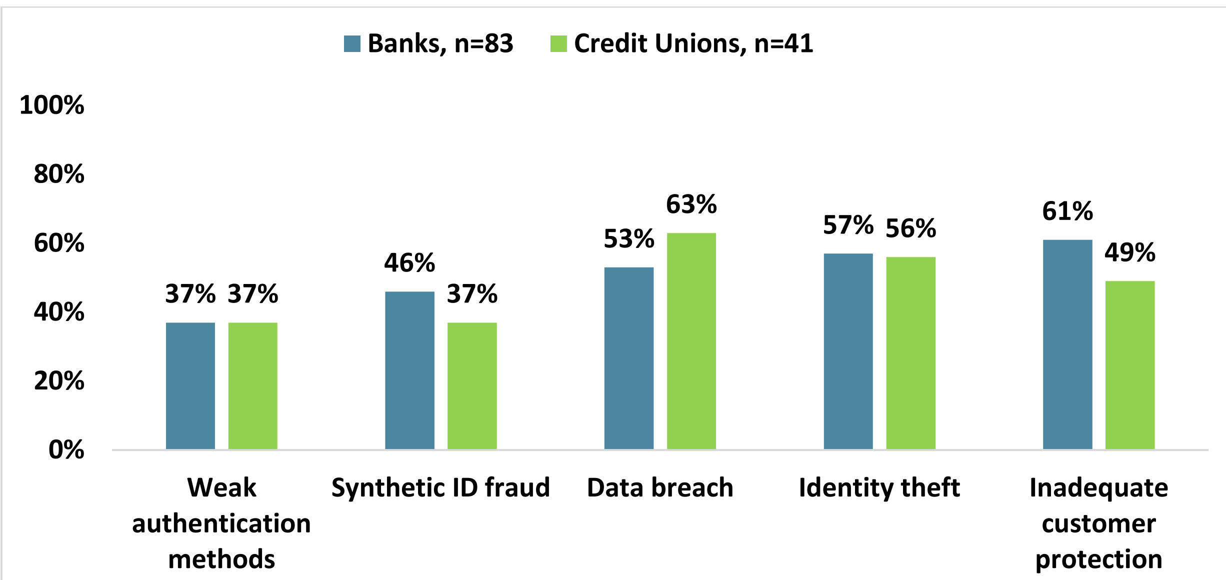
Q23. What do you perceive as the most significant barrier that prevents your customers from adopting mobile banking? (Select only ONE)

Mobile Banking Security

FIs understand the importance of strong security controls to protect their mobile banking customers, apps and services. They also recognize that although the mobile channel can provide some security advantages, they need to utilize new technologies to prepare for increasing security threats.

The *2019 MFS Survey* found that FIs continue to have concerns related to the security of mobile banking in numerous areas. The three "high"-rated concerns that most NE respondents selected were *inadequate customer protection behavior* (57 percent), *identity theft,* and *data breach* (both 56 percent). Banks were more concerned than credit unions by customer behavior (61 percent vs. 49 percent), and credit unions were more concerned than banks about data breach (63 percent vs. 53 percent). Both were equally concerned about identity theft (57 percent of banks and 56 percent of credit unions, respectively). In addition to *identity theft,* NE respondents worried about *synthetic ID fraud*,[18] a newly identified threat not included in the 2016 survey. Forty-three percent of respondents rated *synthetic ID fraud* "high" and another 45 percent rated it "medium," indicating that this threat is now on the radar of FIs. Banks rated the problem higher than credit unions did, but only 12 percent of all respondents rated it "low." (**Figure 29** shows the percentages of banks and credit unions that rated these security concerns as "high.")

Figure 29: 'High' Rated Mobile Banking Security Concerns by FI Type (% of respondents)

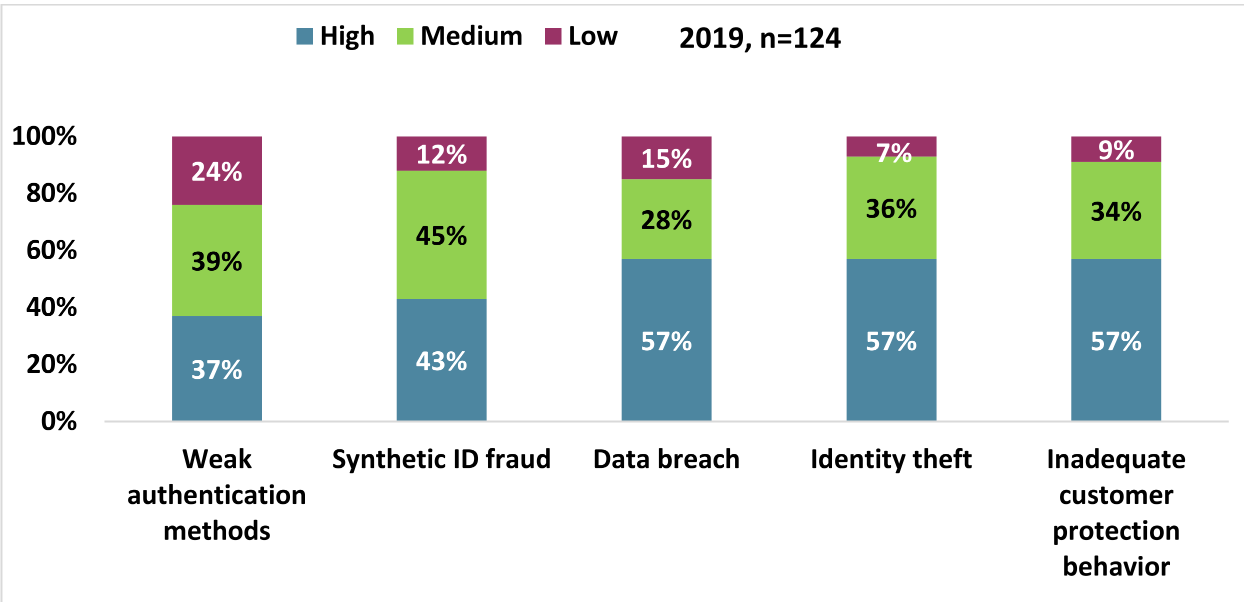


Q27. Please RATE the IMPORTANCE of your FI's security concerns with offering m-banking services.

[18] Synthetic identity fraud is a crime in which perpetrators combine fictitious and real information, such as Social Security number and name, to create new identities to defraud financial institutions, government agencies, or individuals. For more information on synthetic identity fraud, see https://fedpaymentsimprovement.org/strategic-initiatives/payments-security/synthetic-identity-payments-fraud/.

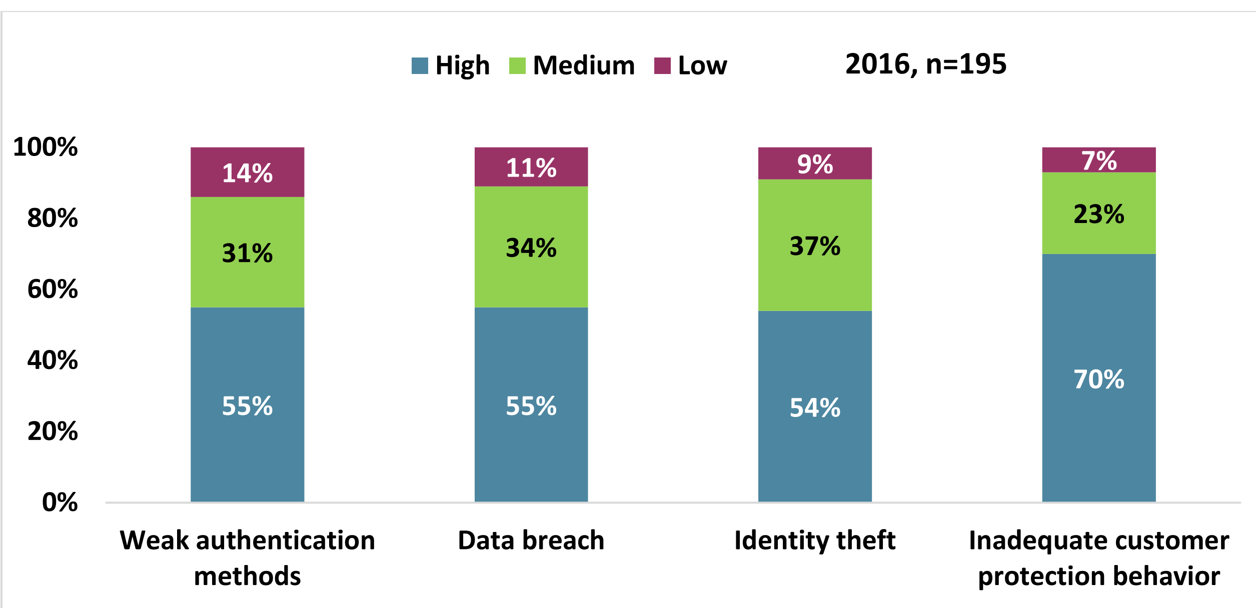
Except for the addition of synthetic ID fraud, the 2019 list of security concerns was identical to 2016's, but the focus of NE respondents has shifted. Respondents generally rated concerns lower than in 2016. For example, the percentage of respondents concerned about *inadequate customer protection behavior* dropped from 70 percent in 2016 to 57 percent in 2019. The percent of respondents highly concerned about *weak authentication* fell from 55 percent in 2016 to 37 percent in 2019. Only *identity theft* rose slightly. (**Figures 30a and 30b** compare 2019 and 2016 survey security findings.)

Figure 30a: FI Mobile Banking Security Concern Ratings, 2019 vs. 2016 (% of respondents)



Q27. Please RATE the IMPORTANCE of your FI's security concerns with offering m-banking services.

Figure 30b: FI Mobile Banking Security Concern Ratings, 2019 vs. 2016 (% of respondents)

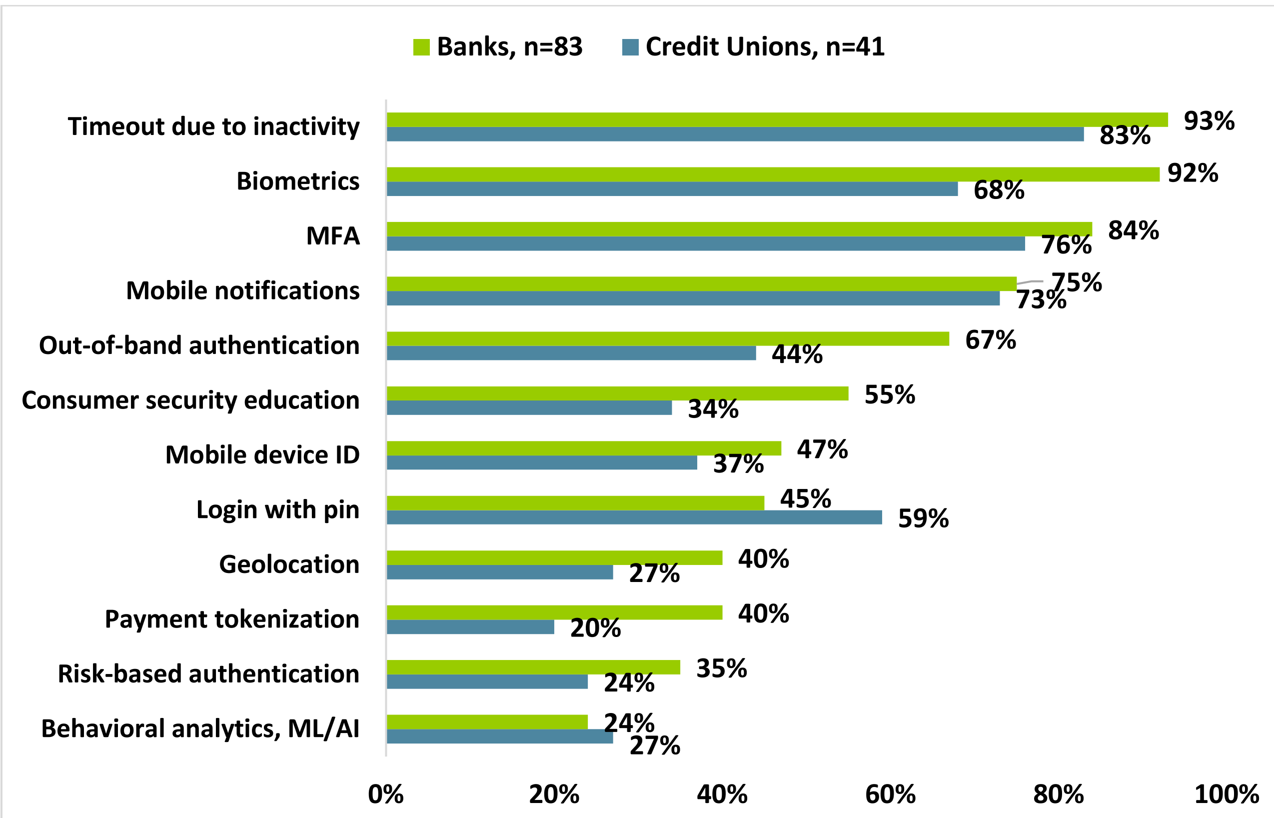


Q27. Please RATE the IMPORTANCE of your FI's security concerns with offering m-banking services.

Mobile Banking Security Technology

FIs can use a growing array of tools and technology to secure their mobile and digital payment services and protect their customers. The 2019 survey found that more than half of NE respondents used the same five technologies to strengthen mobile banking security. Most respondents (90 percent) used the simple *timeout due to inactivity*, followed closely by stronger methods such as *multifactor authentication (MFA)* (81 percent) and *biometrics (e.g., fingerprint, facial, or voice recognition)* (84 percent). The MFA percentage was identical to the *Consolidated Report* findings, but the 90 percent of NE FIs using *timeout due to inactivity* was eight percentage points higher, and the percentage for *biometrics* usage was a surprising 16 points higher. Additionally, more than half of the bank respondents relied on *consumer education on mobile security* (55 percent), and more than half of the credit unions (59 percent) still used *login with PIN*. **Figure 31** shows the difference between bank and credit union respondents.

Figure 31: Tools used by FIs to Enhance Mobile Banking Security (% of respondents)



Q26: Which of the following does your FI currently use/plan to use to enhance mobile banking security? Check all that apply.

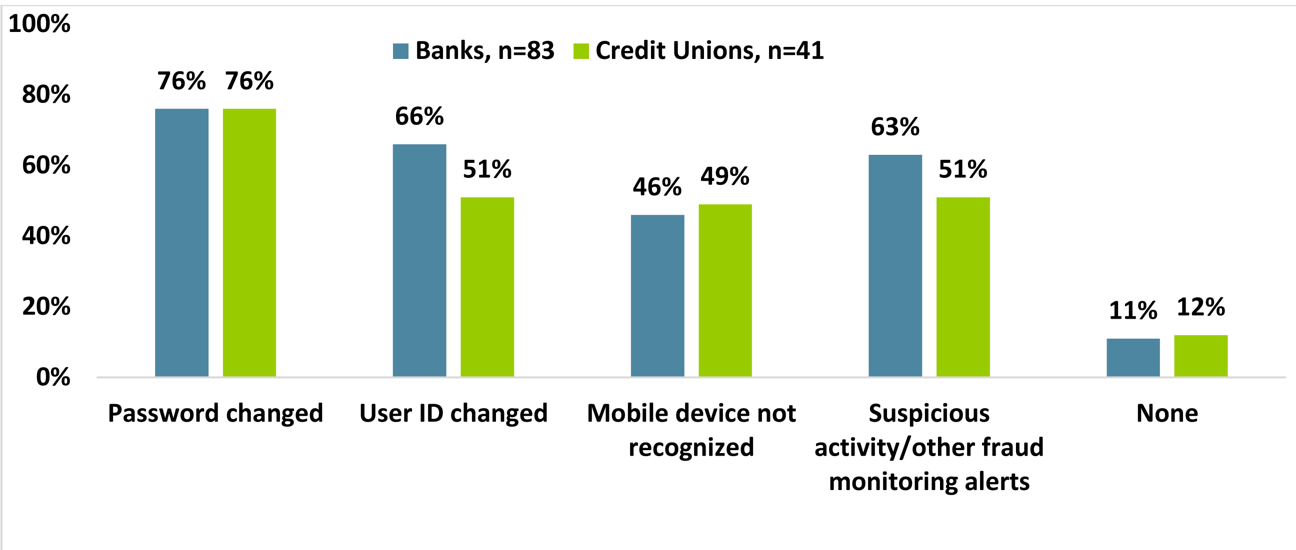
Mobile Banking Security Alerts and Customer Notifications

Providing mobile security alerts is a valuable tool that FIs rely on to mitigate fraud and other threats in the mobile channel. FIs use alerts to notify customers in real time when significant or high-risk changes are made to their bank accounts, enabling customers to respond quickly if they did not make such changes. Examples include notifying customers of changes to passwords or user IDs, confirming transactions and other activity, and warning of potentially suspicious activity.

The most common alerts NE respondents offered or planned were *password changes* (76 percent), followed by *user ID changes* (61 percent) and *suspicious activity* (59 percent) (**Figure 32**). *Mobile device not recognized* (47 percent) was the only alert used by a higher percentage of credit unions than banks. All percentages are comparable, but not equal, to the *Consolidated Report* findings. (This was a new question in 2019, so there was no corollary for 2016.)

Eleven percent of respondents provided no alerts, which is a little concerning, given the availability of relevant technology and the opportunity to mitigate potential fraud. Institution size was the significant factor for offering alerts. Among respondents with under $500 million in assets (Tiers 1 to 4), the percentages of those not offering or having no plans to offer alerts ranged from 13 percent to 21 percent,[19] but that percentage dropped to 3 percent for respondents with more than $500 million in assets (Tiers 5 and 6).

Figure 32: Alerts FIs Use for Mobile Banking Security (% of respondents)



Q24. What mobile security alerts do you currently offer or plan to offer? (Check ALL that apply)

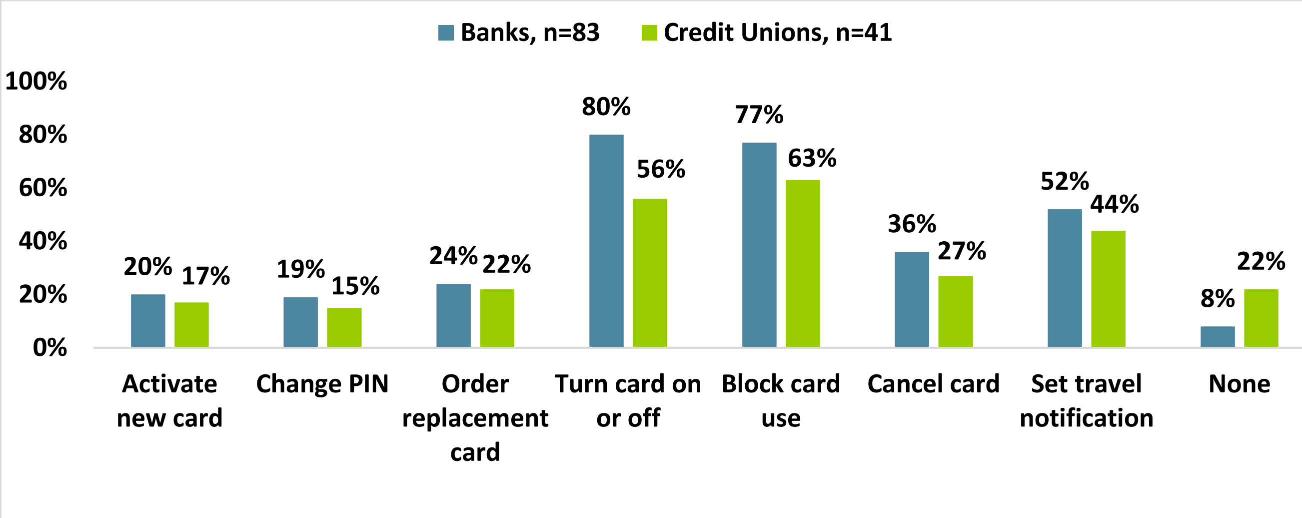
Mobile Card Controls

Survey respondents indicated what mobile card control features they supported to secure their mobile app **(Figure 33)**. A third of 2019 respondents already offered or planned to offer the ability to cancel a card (not asked in 2016). The two features with the most current or planned support were *block use of credit/debit card* (73 percent) and *turn payment card on or off* (72 percent). In both cases, particularly the latter, there were substantial differences between bank and credit unions respondents.

Between 2016 and 2019, the percentages of bank and credit union respondents offering card control features increased for every category except new card activation, which remained flat **(Figure 34)**. *None of the above* dropped substantially from 26 percent in 2016 to 13 percent in 2019, as more FIs recognized the need for card controls to mitigate fraud.

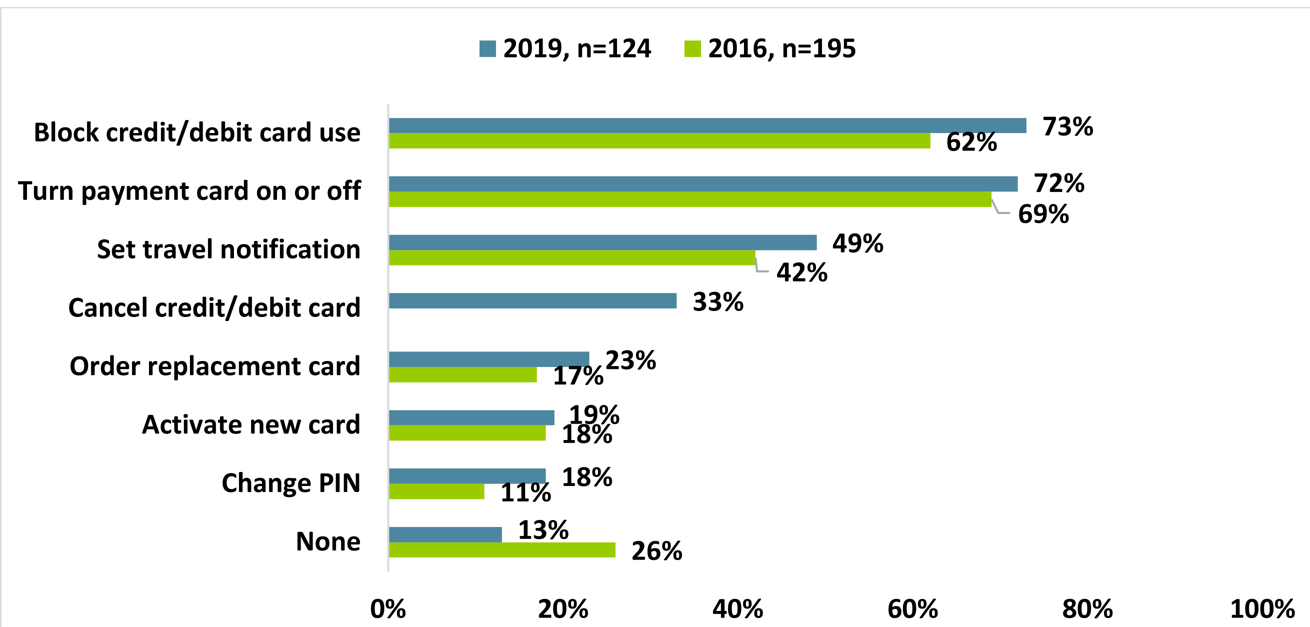
[19] There was no straight-line correlation across asset tiers: 17 percent, 13 percent, 21 percent, 21 percent. The aberration was in the $50 million to $100 million in asset range.

Figure 33: Mobile Card Controls Supported by FIs (% of respondents)



Q25. Which card control features do you currently or plan to support via your mobile banking app? (Check ALL that apply)

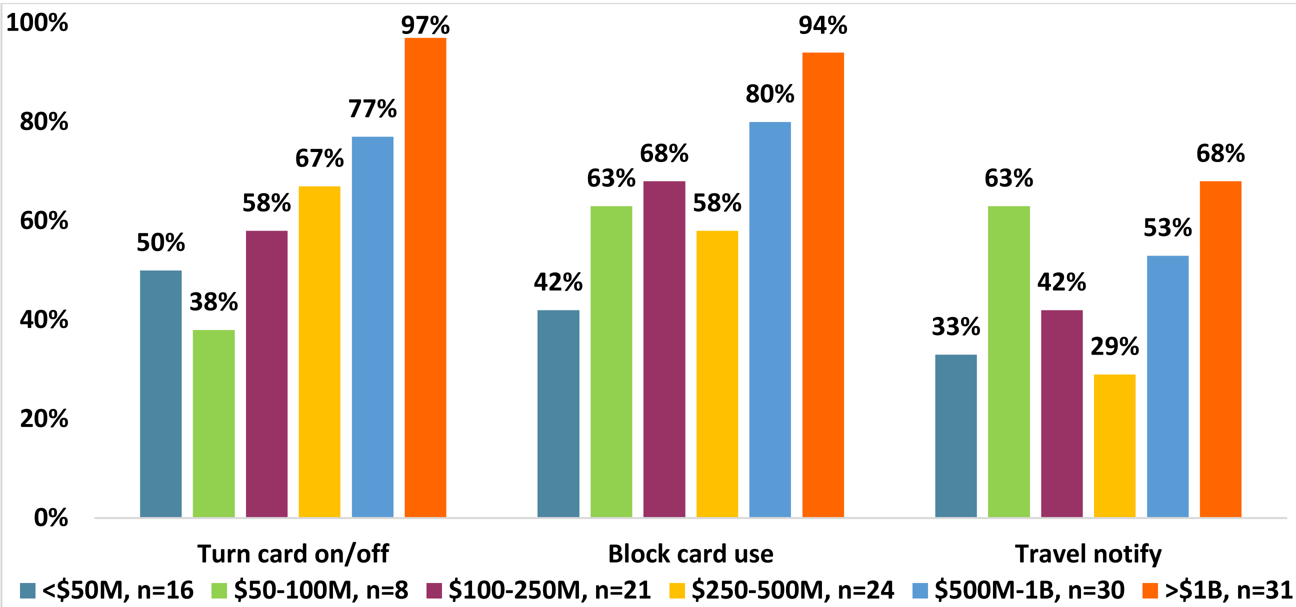
Figure 34: Mobile Card Controls Supported by FIs, 2019 vs. 2016 (% of respondents)



Q25. Which card control features do you currently or plan to support via your mobile banking app? (Check ALL that apply)

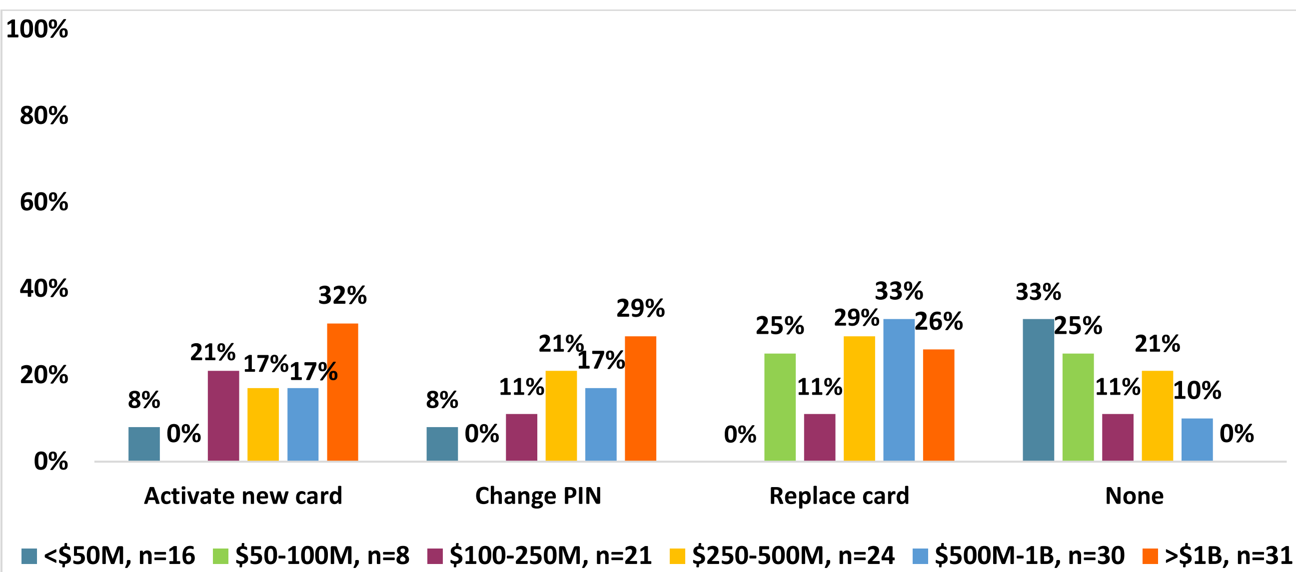
Asset size remained a key criterion for the number and types of card controls an institution offered. Small respondents, those in Tiers 1 and 2 with less than $100 million in assets, supported or planned to support the ability to *turn payment card on/off*, *block use of credit and/or debit card*, or *set travel notification*. However, the corresponding percentages of the largest respondents (Tier 6 with over $1 billion in assets) were much higher, at 97 percent, 94 percent, and 68 percent, respectively (**Figure 35a**). Few respondents overall had the resources to support features deemed higher risk, such as allowing customers to *activate a new card*, *change PIN*, *order a replacement card,* or *cancel a card via mobile*, but larger FIs were somewhat more likely to offer such features (**Figure 35b**). Additionally, the percentage of FIs with no controls fell sharply as asset size increased.

Figure 35a: Mobile Card Controls Supported by Asset Size (% of respondents)



Q25. Which card control features do you currently or plan to support via your mobile banking app? (Check ALL that apply)

Figure 35b: Mobile Card Controls Supported by Asset Size (% of respondents)

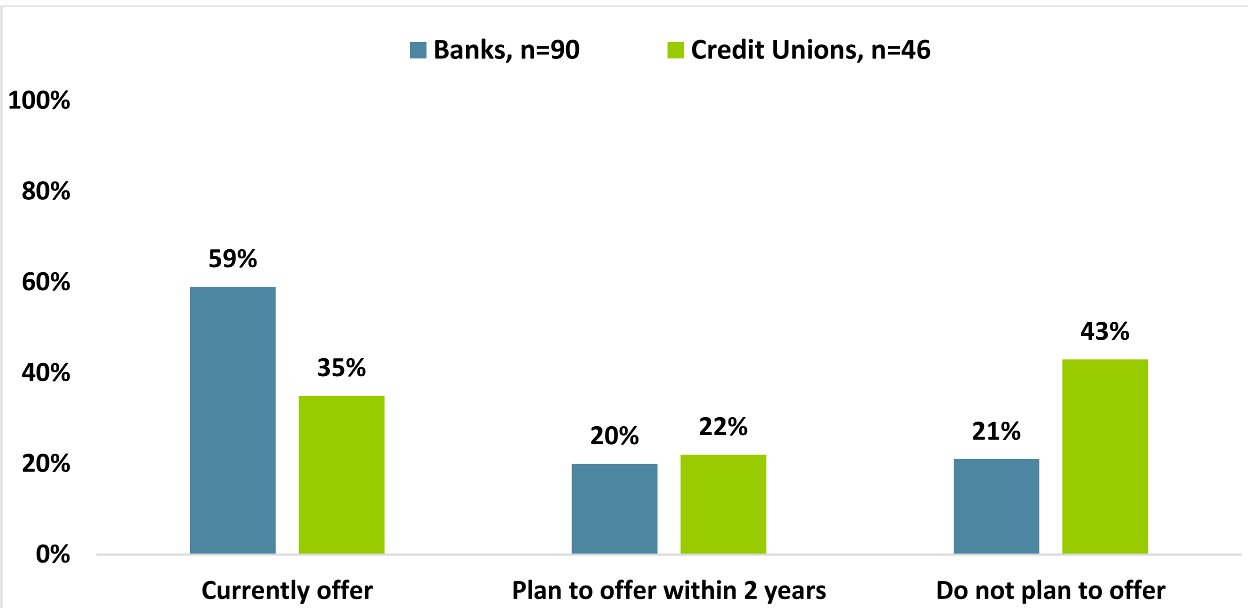


Q25. Which card control features do you currently or plan to support via your mobile banking app? (Check all that apply)

MOBILE PAYMENTS RESULTS

More institutions now offer or plan to offer mobile payment/wallet services to consumers. The *2019 MFS Survey* indicates, however, that there were real differences between banks and credit unions in this regard. Fifty-nine percent of bank respondents *already offered* mobile wallets compared to 35 percent of credit union respondents, a 24-percentage-point difference. And, although NE banks and credit unions *planned* to offer mobile payment/wallet services at the same rate (approximately 21 percent), more than twice as many credit unions (43 percent) as banks (21 percent) had *no plans to offer* mobile payments. By 2021, 79 percent of bank respondents will offer mobile payment services to consumers, compared to only 57 percent of credit union respondents (**Figure 36**).

Figure 36: FI Plans to Offer Mobile Payment Services (% of respondents)



Q31. Do you currently offer or plan to offer any type of mobile payment/wallet services for retail customers?

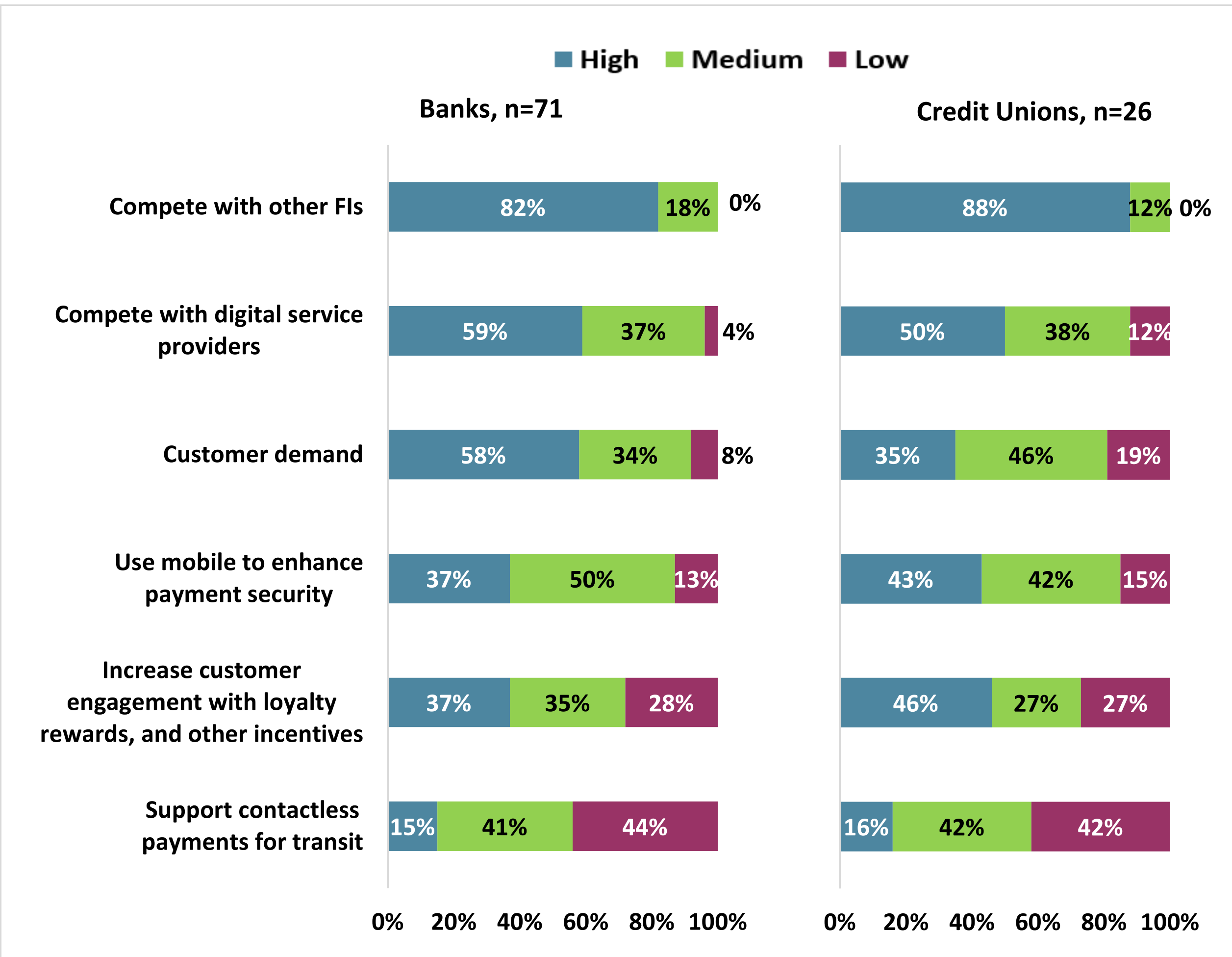
The *2016 MFS Survey* projected that increased mobile payment activity would lead FIs to engage more actively in the market. The 2019 data bore this out for NE respondents with more than $100 million in assets. However, for the smaller Tier 1 and 2 FIs (<$100 million in assets), particularly credit unions, the 2019 data indicates a backing off from the 2016 projections. The percentage of credit unions in Tiers 1 and 2 planning to offer mobile payments dropped from 42 percent to 22 percent, while those with no plans to offer rose by 17 percentage points.

The percentage of bank respondents that *currently offer* mobile payments rose from 39 percent in 2016 to 59 percent in 2019, while the corresponding result for credit union respondents was relatively flat, rising from 32 percent in 2016 to 35 percent in 2019. Perhaps engendered by uncertainty about which solutions will prove to be winners in this fragmented market, the percentage of respondents planning to offer mobile payments “in two years” fell 50 percent from 2016. In addition, the percentage of credit union respondents with no plans to offer mobile payments climbed from 26 percent in 2016 to 43 percent in 2019.

Payment Strategies

As previous surveys have shown, competition and other factors can drive increased market participation.[20] Competition was the most important factor influencing respondents' decisions to offer mobile payments (**Figure 37**). In NE, respondents focused more on FI competition (88 percent of credit unions and 82 percent of banks rated it "high"). Between 2016 and 2019, competition with other FIs increased 10 percentage points to 84 percent of respondents. This suggests that for most NE respondents, competition in mobile payments remains local. Competition with nonbank digital wallet providers (e.g., Amazon, Apple, Google, and PayPal) was less intense: 59 percent of bank and 50 percent of credit unions gave it a "high" rating. The only other factor influencing more than half the bank respondents' decision to offer mobile payments was *customer demand*, which rose from 40 percent of 2016 respondents to 53 percent of 2019 respondents. This factor was much more important for banks than credit unions: 58 percent and 35 percent, respectively, rated it "high."

Figure 37: Drivers for Offering Mobile Payment Services (% of respondents)



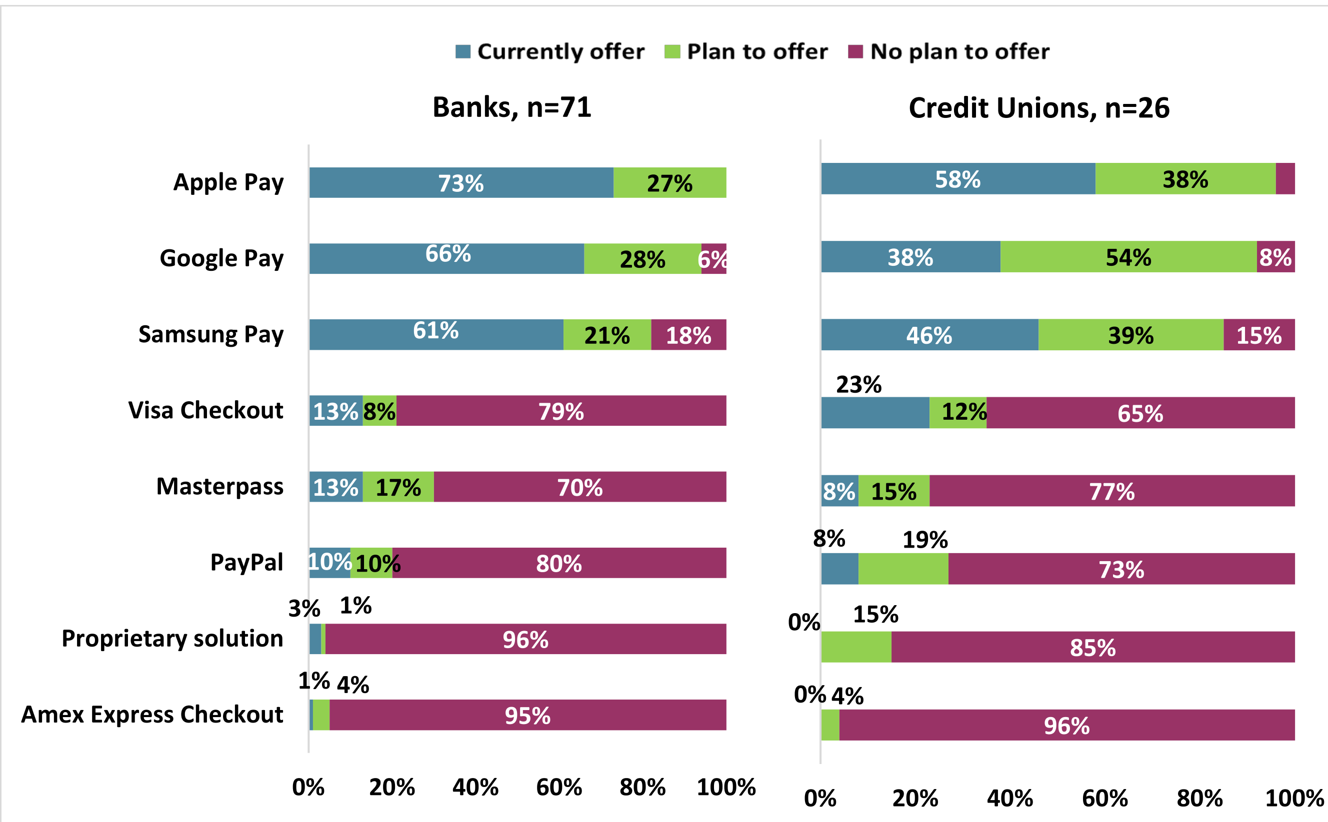
Q32: Rate the importance of factors that influenced your FI's decision to offer or plan to offer mobile payments.

[20] The coronavirus economy does not lend itself to investment. However, recent media reports indicate that contactless forms of mobile payments may gain traction as "social distancing" tools.

Mobile Wallets

Two-thirds of NE respondents (69 percent) supported *Apple Pay*, 59 percent *Google Pay*, and 57 percent *Samsung Pay*. These percentages obscured double-digit differences between bank and credit union respondents (**Figure 38**), which is most pronounced in *current* support for *Google Pay* (a 28-percentage-point difference – 66 percent vs. 38 percent). However, a different picture emerged when respondents were asked about their plans to offer the services within two years. Support for *Apple Pay* was strong: Only a single (credit union) respondent had no plans to offer it by 2021. The difference between bank and credit union respondents that had no plans to support *Google Pay* was only two percentage points and just three percentage points for *Samsung Pay*. However, credit union support for other alternatives diminished sharply – *Masterpass* was the only other solution considered.[21] Seven respondents (three banks and four credit unions) with more than $250 million in assets (Tiers 4, 5, and 6) had or were implementing a proprietary solution.

Figure 38: Mobile/Digital Wallets Offered by FI Type (% of respondents)



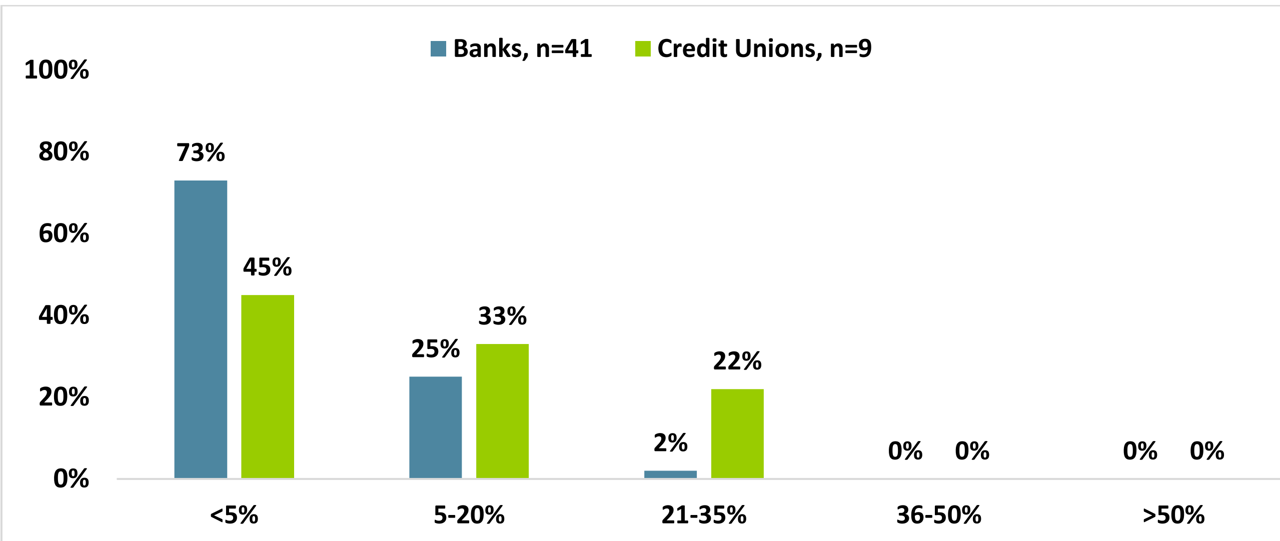
Q33: Which of the following mobile/digital wallets do you support or plan to support?

[21] The card network digital wallets (Visa Checkout, Masterpass, Amex Checkout, and Discover) are being replaced with EMVCo's Secure Remote Commerce (SRC) solution to support the growth in ecommerce. SRC is a "virtual payment terminal" that enables a consistent one-click checkout button when making a purchase on a website, mobile app, or any other digital channel with an Amex, Discover, Mastercard, or Visa credit, debit, or prepaid card.

Customer Adoption of Mobile Wallets

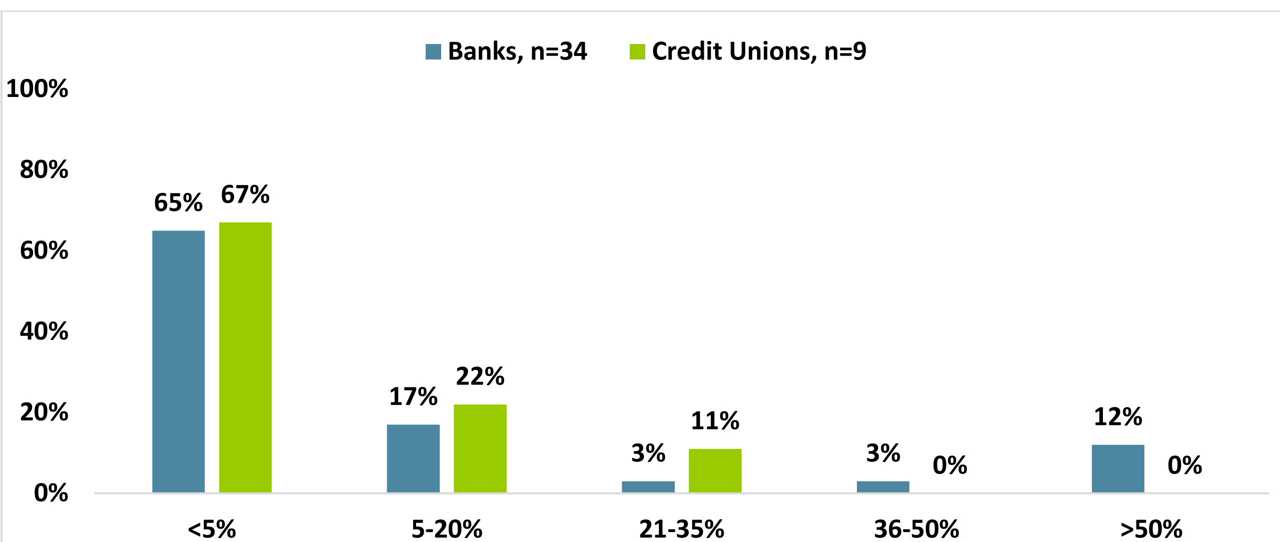
In a departure from the 2016 MFS Survey, the 2019 Survey asked two sets of parallel questions about mobile wallet enrollment. The first set addresses *NFC wallets (Apple Pay, Google Pay, and Samsung Pay)* and the second set, *digital wallets (Masterpass, Amex Express*, and *Visa Checkout)*. Among respondents that tracked enrollment data, none had more than 35 percent of customers enrolled in *NFC wallets*, but one bank had between *36-50%* of customers using its services, and four banks – one each in Tiers 3, 4, 5 and 6 – had more than 50 percent customer NFC mobile wallet usage (**Figures 39a and 39b**).

Figure 39a: NFC Wallet Customer ENROLLMENT by FI (% of respondents)



Q35. What percentage of your customers uses your mobile wallet services?

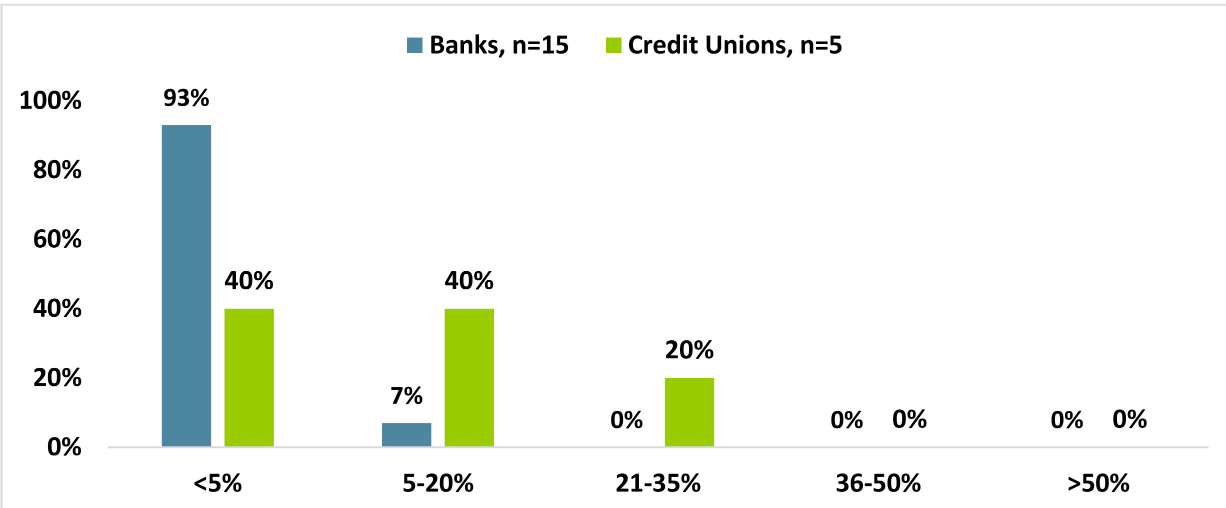
Figure 39b: NFC Wallet Customer USAGE by FI (% of respondents)



Q35. What percentage of your customers uses your mobile wallet services?

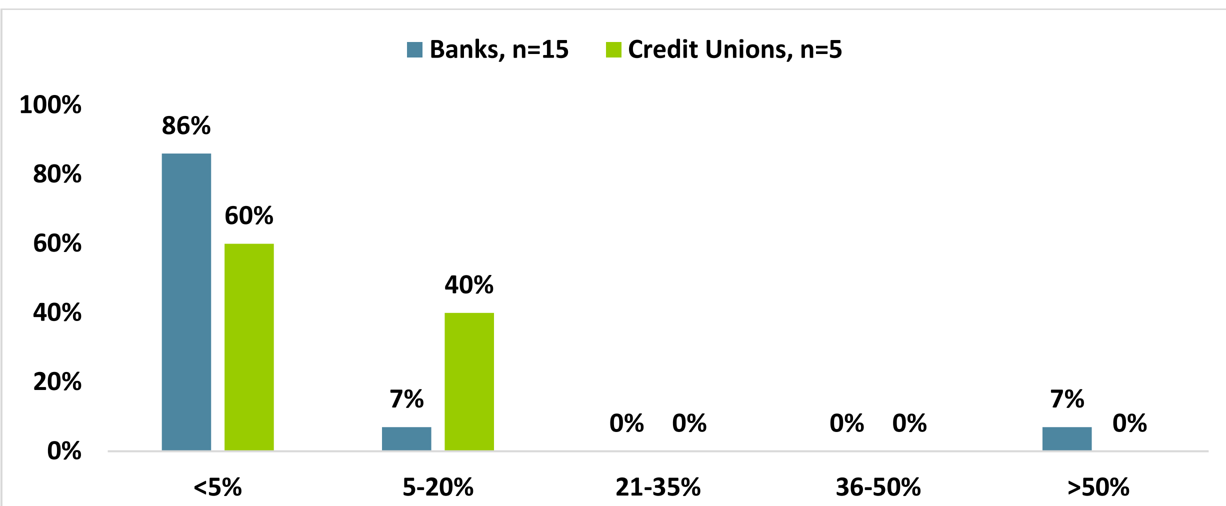
Only 20 respondents – 15 banks and five credit unions – tracked enrollment and usage for their digital wallet services. Fourteen bank and two credit union respondents had enrollment under 5 percent. A single bank and two credit unions had between *5-20%* of customers enrolled, while a single credit union had enrollment in the *21-35%* range. Usage rates were similar, although a single Tier 3 ($100-$250 million) bank had more than 50 percent of its customers using its digital wallet services (**Figures 40a and 40b**).

Figure 40a: Digital Wallet Customer ENROLLMENT by FI (% of respondents)



Q35. What percentage of your customers uses your mobile wallet services?

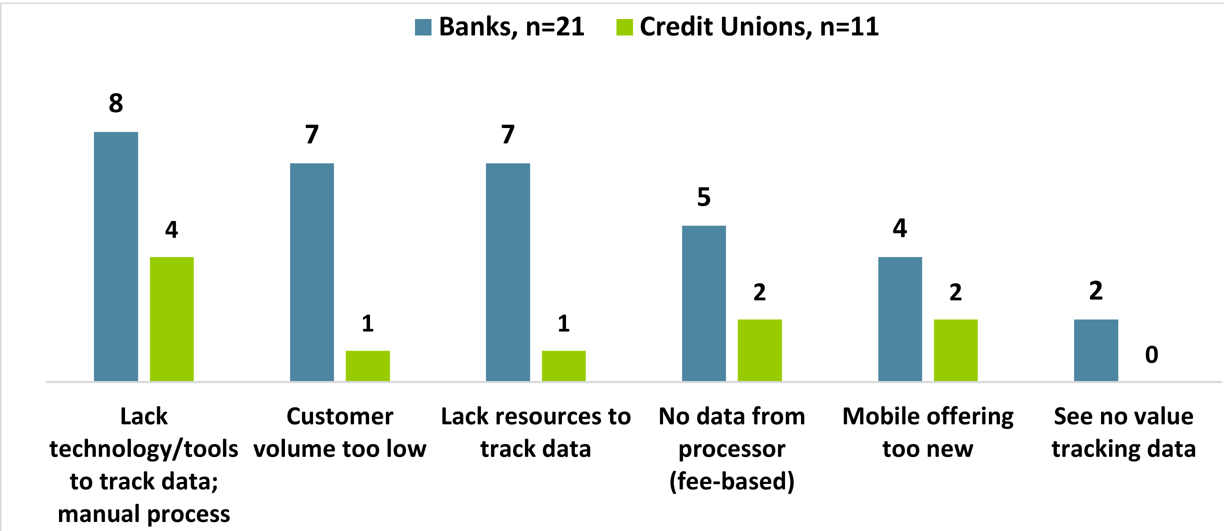
Figure 40b: Digital Wallet Customer USAGE by FI (% of respondents)



Q35. What percentage of your customers uses your mobile wallet services?

Among the 21 bank and 11 credit union respondents that did not track mobile wallet customer enrollment and usage data for any wallets, *lack of technology/tools* was the most challenging reason (**Figure 41**). For other respondents, reasons not to track data centered on a dearth of customers or resource constraints. Seven respondents cited processor fees as the gating factor. Three banks and seven credit unions plan to track this data going forward. Excluding two respondents, both of which had over $500 million in assets and saw no value in capturing this data, the number of respondents tracking data rose sharply among the highest Tier 5 and 6 institutions.

Figure 41: Reasons Hindering Mobile Wallet Enrollment & Usage Data Tracking (# of respondents)



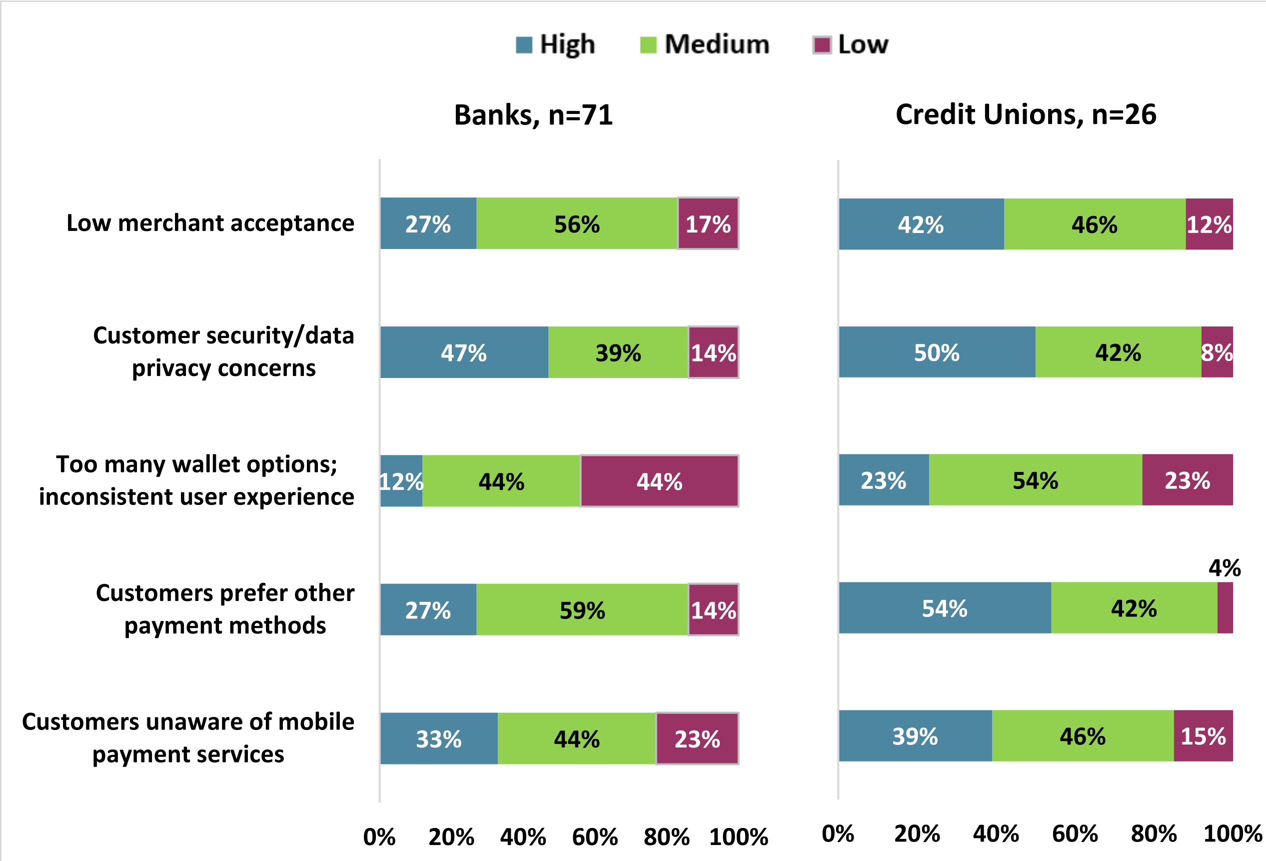
Q35: Please indicate why you do NOT track data on mobile wallet customer enrollment and usage.

Barriers to Retail Adoption of Mobile Payments

Previous MFS Surveys asked respondents about potential barriers to consumer adoption of mobile payments. In 2019, the question asked respondents to *rate the impact* of issues deterring their retail customers' adoption of mobile payments (**Figure 42**). There were substantial differences between bank and credit union perspectives. For example, although the majority of bank and credit union respondents did not rate any issues "high," 54 percent of credit unions rated *customers prefer other payment methods* "high," and 50 percent rated *customer security/data privacy concerns* "high."

The results suggest that none of these issues individually had a major impact on whether a consumer will adopt mobile payments and that FIs have more work to do to increase adoption. The ratings also clarify that respondents did not view market fragmentation or mobile user interfaces as issues: Just 15 percent thought too many mobile wallet options/inconsistent user experience was a key concern.

Figure 42: FI Issues Affecting Consumer Adoption of Mobile Payments (% of respondents)

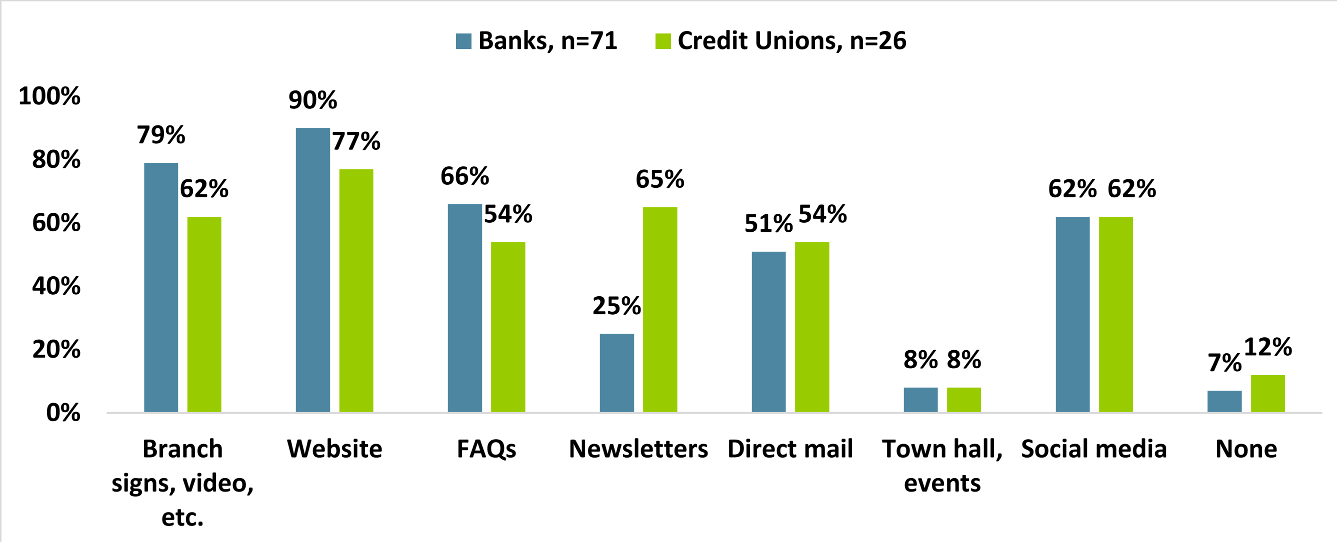


Q36: Reasons why consumers do not adopt mobile payments.

FIs use most of the marketing tools at their disposal to educate their customers – and, to a lesser extent, their staff – about mobile payments. More than half of all respondents used five of the seven tools to educate customers (**Figure 43**), and more than 50 percent of credit unions used six. Only *town halls/hosted events* elicited little support from respondents. In an interesting juxtaposition of complex and non-complex technology, the top two methods used to educate customers were *website* (87 percent) and *branch signage, video, etc.* (74 percent). In both cases, the percentage of banks was considerably higher. Notably, credit union respondents used push technology – newsletters (digital or print) and direct mail (email or print) – more than the banks. This outreach may reflect credit unions more personal relationships with their members. Eight respondents (five banks and three credit unions) did not provide any mobile education or marketing materials to their customers.

Asset size was a factor only for the number of methods used: Larger respondents used more options.

Figure 43: FI Mobile Education Methods for Customers (% of respondents)



Q34: How do you currently educate your customers and staff about mobile payments? (Check all that apply.)

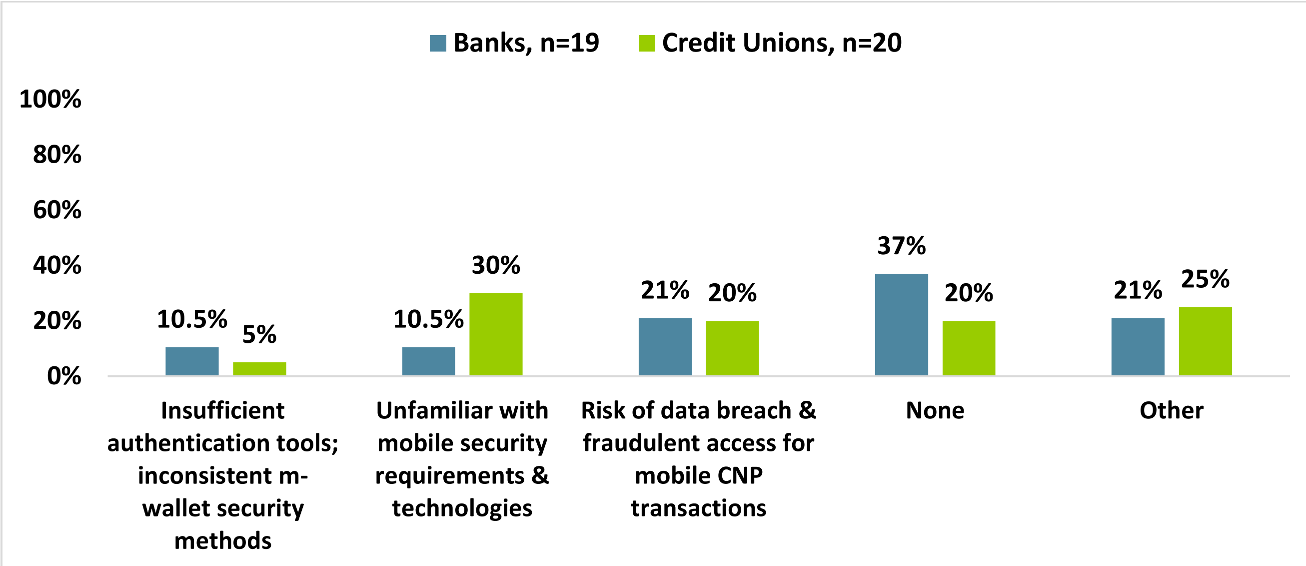
Far fewer bank and credit union respondents provided staff with mobile banking education: Just 58 answered the question. They also prioritized different options compared to what they used to educate customers. Not surprisingly, providing *Frequently Asked Questions (FAQs)*, (offered by 67 percent of respondents) was the most common method to educate staff. Two-thirds of respondents also used their *website* (64 percent), and *branch signage, videos, brochures, etc.,* (60 percent) to ensure that staff members understood their mobile offerings.

Reasons for Not Offering Mobile Payments

In 2019, the survey asked the 39 respondents that indicated that they did not plan to offer mobile payment services why they had reached this decision. The questions addressed security, regulatory compliance, and consumer-related issues (**Figures 44a, 44b and 44c**).

About half of respondents viewed security reasons as important to their decision not to offer mobile payment services, and a third of the group had no concerns ("None"). About 20 percent of both banks and credit unions selected *risk of data breach*, and 30 percent of credit unions selected *unfamiliar with mobile security requirements and technologies* as important influencers **(Figure 44a)**. Of the seven respondents who selected *Other* factors, five cited cost issues as important, and one mentioned customer demographics as a major consideration. Another respondent was conducting a risk analysis and had not ruled out offering mobile payments.

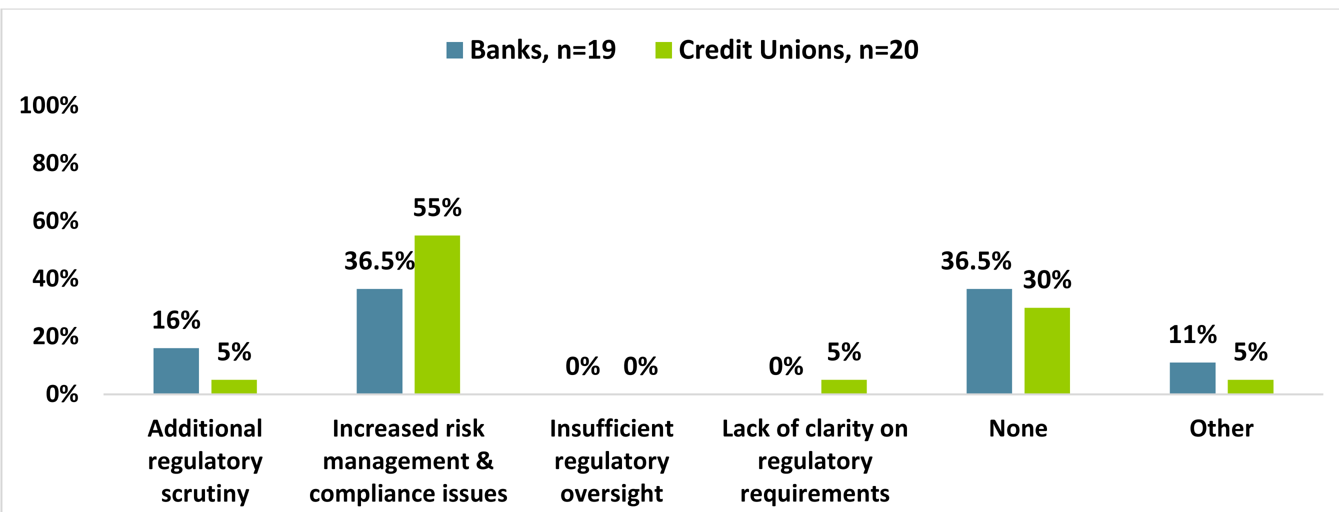
Figure 44a: FI Security Reasons for Not Offering Mobile Payments (% of respondents)



Q39. Which security reasons listed, if any, most influenced your decision NOT to offer mobile payment services?

In response to regulatory and compliance reasons, a third of respondents had no concerns. However, 47 percent of respondents (37 percent of banks and 55 percent of credit unions) found *increased risk management and compliance issues* to be a concern (**Figure 44b**).

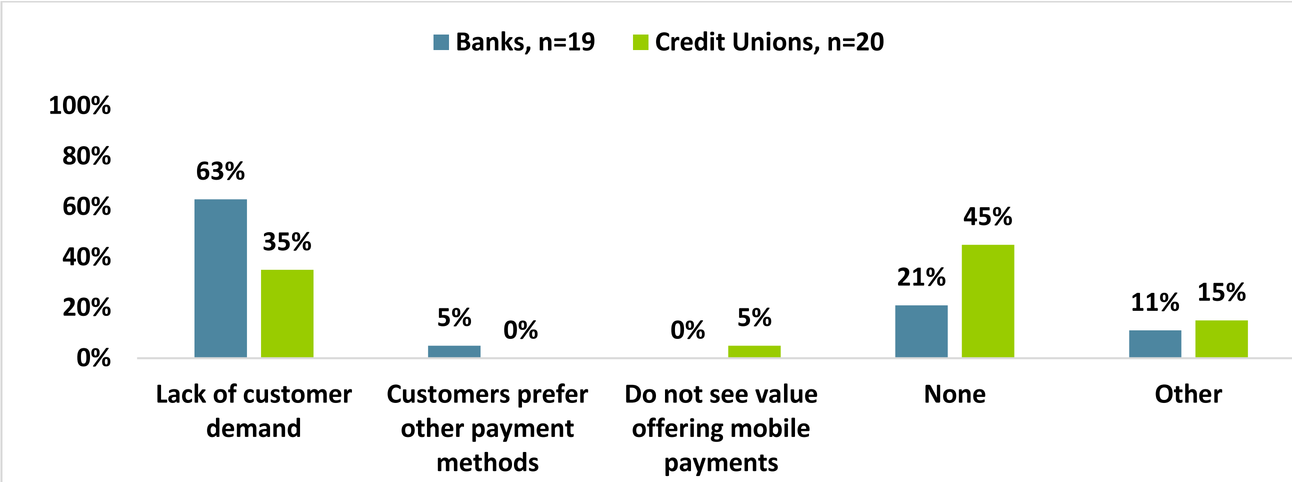
Figure 44b: FI Regulatory Reasons for Not Offering Mobile Payments (% of respondents)



Q40. Which regulatory and compliance concerns related to mobile payments listed, if any, influenced your decision to not offer mobile banking services?

Banks were twice as likely as credit unions to perceive customer issues (lack of demand and preference for other payment methods) as a reason for not offering mobile payments. *Lack of customer demand* was *the* compelling issue for bank respondents. Sixty-three percent selected it, compared to the 35 percent of credit unions (**Figure 44c**).

Figure 44c: FI Customer Reasons for Not Offering Mobile Payments (% of respondents)

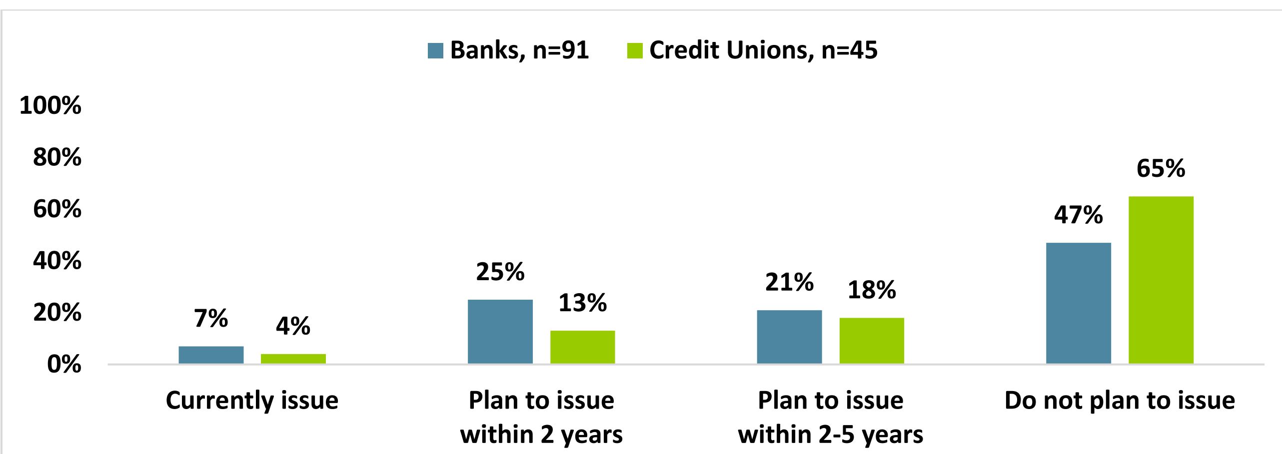


Q41. Which of the consumer-related issues listed, if any, influenced your decision not to offer mobile payment services?

Contactless Cards and Mobile Payments

The 2019 survey asked three new questions related to contactless cards and mobile payments. The data highlight that although large banks have begun to offer or expand such services, NE FIs were not thinking about contactless payments at the time of the survey. Fifty-three percent of respondents – 47 percent of banks and 65 percent of credit unions – had no plans to offer contactless credit or debit cards by 2021 (**Figure 45**). Just eight respondents (six banks and two credit unions) offered contactless, and six of the eight FIs had more than $1 billion in assets.[22]

Figure 45: FI Plans to Offer Contactless Cards (% of respondents)

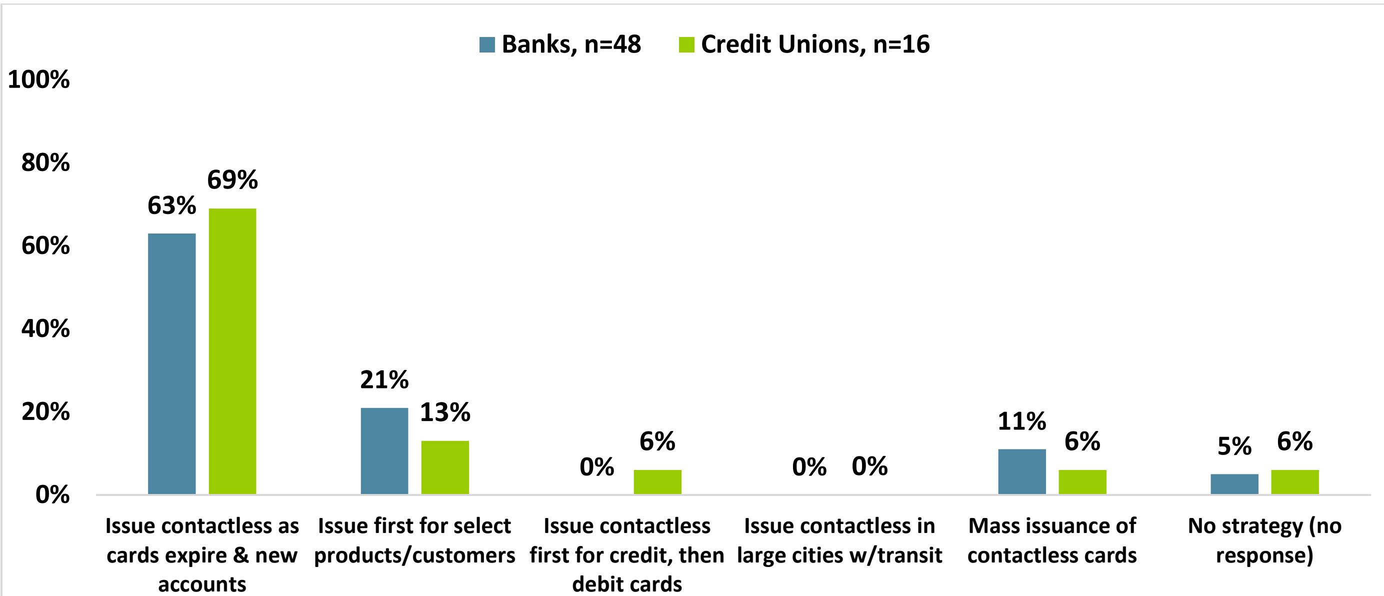


Q42. Do you currently issue or plan to issue contactless (credit and/or debit) cards?

[22] Responses also reflect the smaller asset size of most respondents. Large FIs have begun to replace traditional with contactless cards. However, those FIs did not participate in the survey.

Of the 64 FIs that offered or planned to offer contactless cards, 64 percent (63 percent of bank and 69 percent of credit union respondents) planned to issue such cards only as customers' current cards expired or as they added new customers. Few respondents had a different strategy (**Figure 46**).

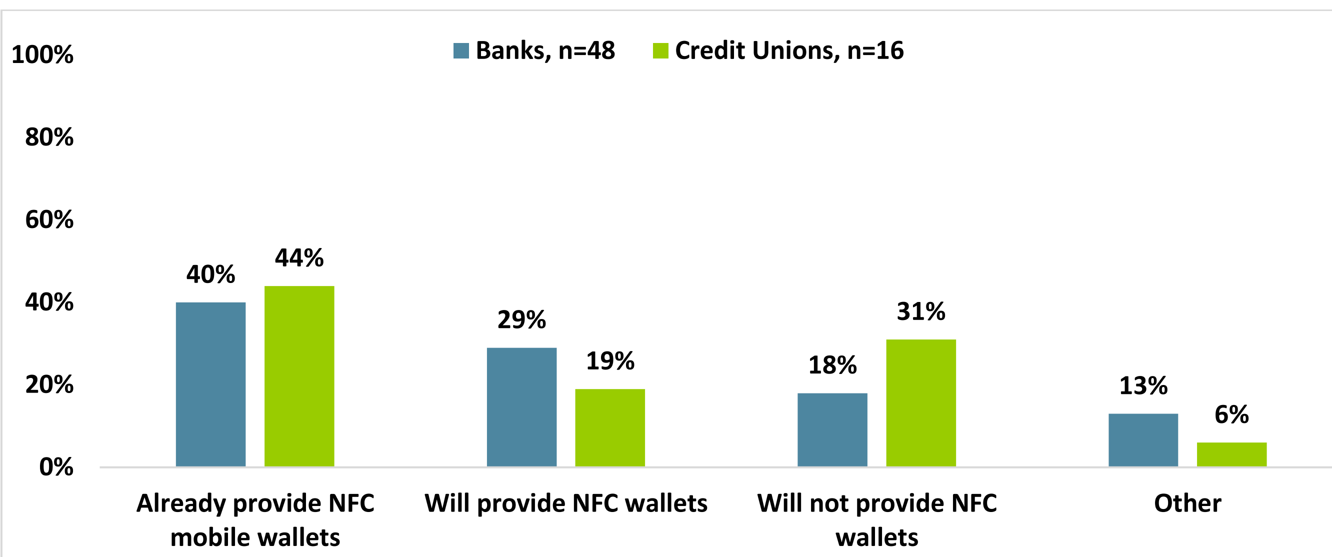
Figure 46: Strategies for Offering Contactless Cards (% of respondents)



Q43. What is your strategy for issuing contactless cards? (Check ALL that apply)

The survey data indicated that offering contactless cards is likely to have a slight influence on future NFC mobile wallet enablement. Most of the respondents interested in contactless cards already offered NFC wallets as of the date of survey, and just 27 percent (17 respondents) planned to offer NFC wallets in the future (**Figure 47**).

Figure 47: Influence of Contactless Cards on FI NFC Wallet Enablement (% of respondents)

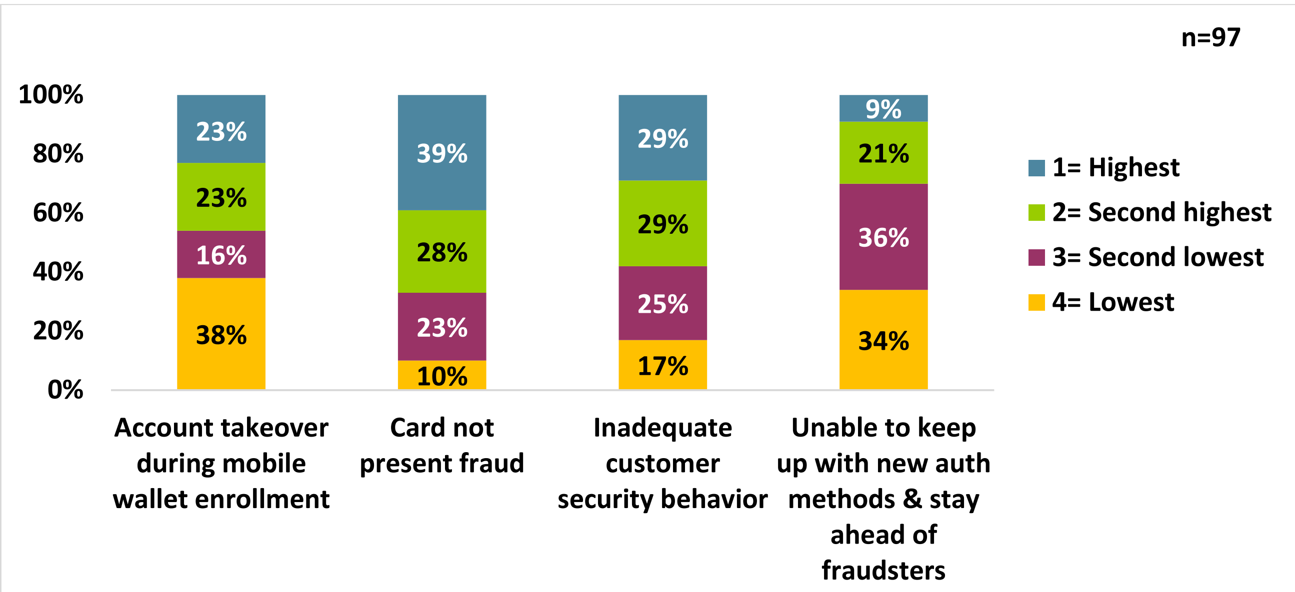


44. How will issuance of contactless cards influence your decision to enable NFC mobile wallets?

Mobile Payments Security

FIs recognize that strong security controls are essential to safeguard their mobile payments environment. Nonetheless, respondents' assessments of the importance of mobile payment security concerns appear to have shifted somewhat since 2016 (**Figure 48**).[23] The rankings (#*1* the most important and #*4* the least important) illustrate that *inadequate customer security behavior* (58 percent when combining #*1* and #*2* rankings) dropped from the biggest concern in past surveys and was replaced by the more pressing concern of *card not present (CNP) fraud* (67 percent of combined #*1* and #*2* rankings). The *inability to keep abreast of new authentication methods and stay ahead of fraudsters* was the lowest-ranked by a considerable percentage, with just 9 percent giving it a #*1* ranking.

Figure 48: FI Ranking Importance of Mobile Payment Security Concerns (% of respondents)

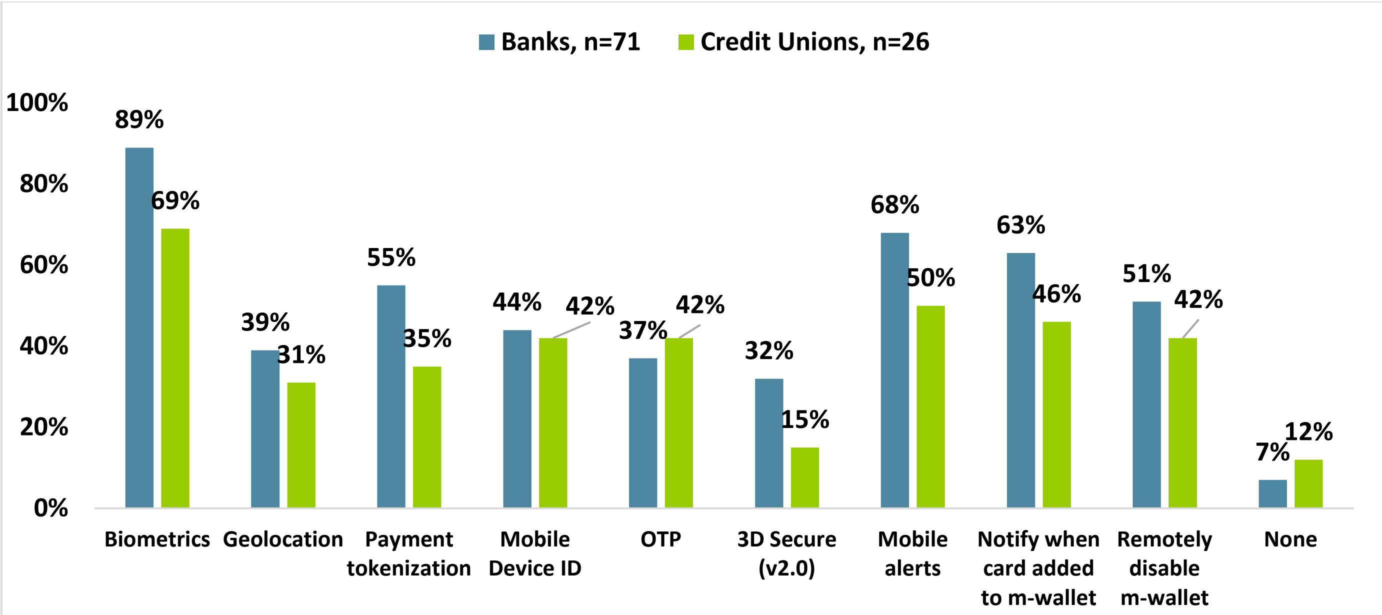


Q37. Please RANK the IMPORTANCE of your FI's security concerns associated with mobile payment services (1-most important, 4-least important)

Security tools to protect mobile payments continue to advance, and the *2019 Survey* findings reflect such changes (**Figure 49**). Biometrics showed the most notable growth in 2019: 89 percent of bank respondents and 69 percent of credit union respondents used or are planning to use biometrics. The percentage of respondents providing *customer notification of attempt/success in provisioning card to mobile wallet* rose five percentage points to 63 percent of bank respondents (and remained essentially flat for credit unions). The use of *one-time passwords (OTPs)* trended up as well. Responses for *3D Secure (3DS)* reflect the newness of version (2.0), as only 27 FIs indicated that they offered or planned to offer 3DS. However, this number represents 28 percent of all respondents (32 percent of banks and 15 percent of credit unions), an increase since 2016. A small number of respondents, five banks (7 percent) and three credit unions (12 percent), still reported using no security tools.

[23] 2016 used a high, medium, low rating system, while 2019 asked for a four-tiered ranking, so an apples-to-apples comparison is not possible.

Figure 49: Security Tools Used by FIs for Mobile Payments in 2019 (% of respondents)

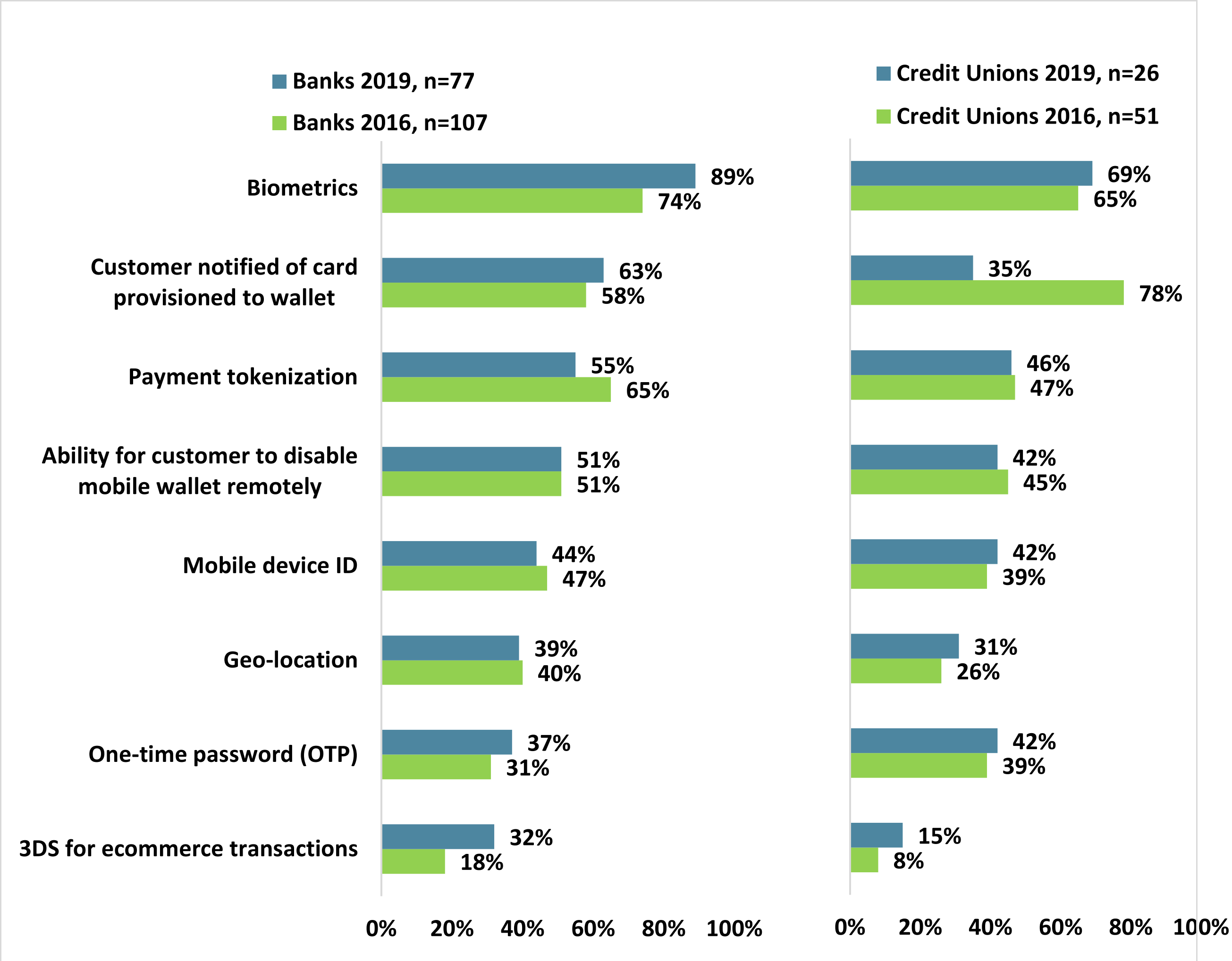


Q38. Do you currently use or plan to use the following security tools for mobile payments? (Check ALL that apply)

Figure 50 compares the 2019 and 2016 survey data for banks and credit unions. Most notable was the flat-to-low use of more technical tools (*OTP, 3D Secure*), or tools that are mobile device-specific (e.g., *geolocation, mobile device ID*). The one exception was biometrics, which showed strong growth. Several of the findings might relate to either the smaller size of respondents and/or the smaller respondent pool,[24] but it is difficult to determine whether the changes represent a lag in implementation, cost, or availability of the upgraded tools (e.g., 3DS) when the survey was fielded.

[24] Bank respondents dropped 39 percent, while credit union respondents dropped 49 percent.

Figure 50: Security Tools Used for Mobile Payments, 2019 vs. 2016 (% of respondents)

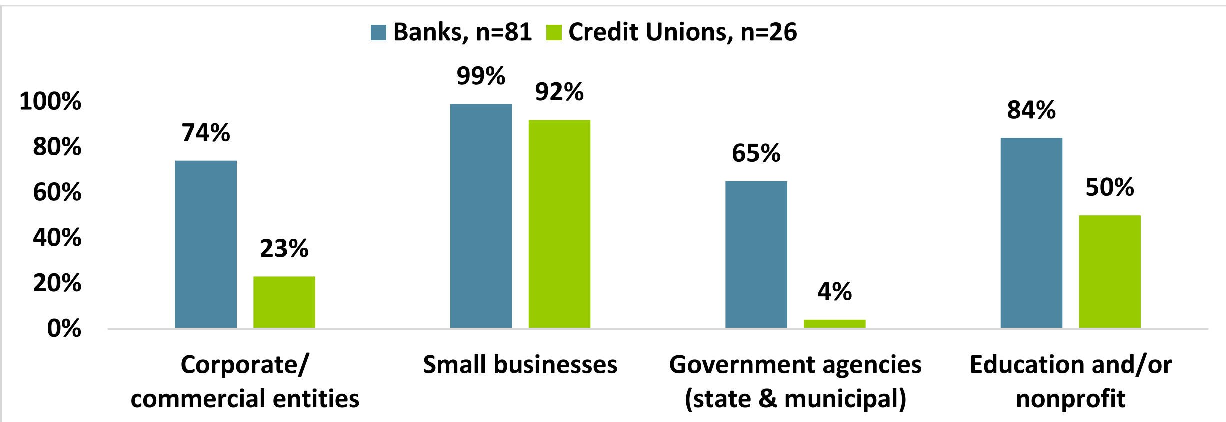


Q38. Do you currently use or plan to use the following security tools for mobile payments? (Check ALL that apply)

BUSINESS MOBILE BANKING RESULTS

One hundred and seven respondents – 81 banks and 26 credit unions – had various types of business customers (**Figure 51**), but small businesses predominated. Among those with business customers, 92 percent of credit union respondents and all banks but one had small business relationships. (These figures are consistent with the *Consolidated Report* findings.) More than two-thirds of bank respondents had business customers in every category, 50 percent of credit union respondents had educational or nonprofit customers, but only 23 percent had larger commercial customers, and almost none had relationships with government agencies. One bank (1 percent) and 18 credit union (41 percent) respondents had no business customers.

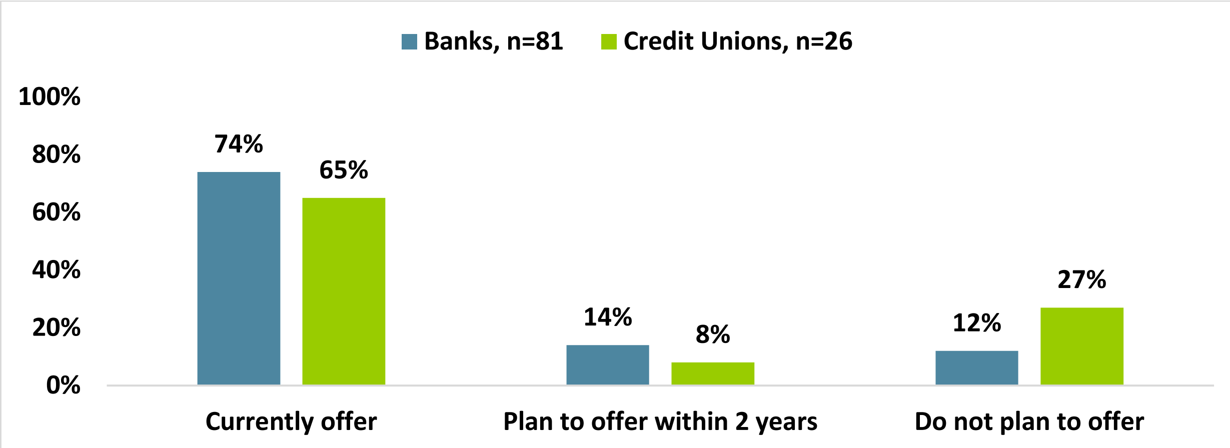
Figure 51: Types of Business Relationships Supported by FIs (% of respondents)



Q45. What type of BUSINESS customers do you serve? (Check ALL that apply)

Seventy-two percent of respondents (74 percent of banks and 65 percent of credit unions) already offered mobile financial services (MFS) to their business customers, and another 12 percent planned to do so – bringing the total of those offering and planning to offer MFS within two years to 84 percent. (**Figure 52** shows the percentage of bank and credit union responses.) Twenty-seven percent of credit union and 12 percent of bank respondents had no plans to offer MFS to their business customers. (Both percentages for *do not plan to offer* were two percentage points lower than in 2016.)

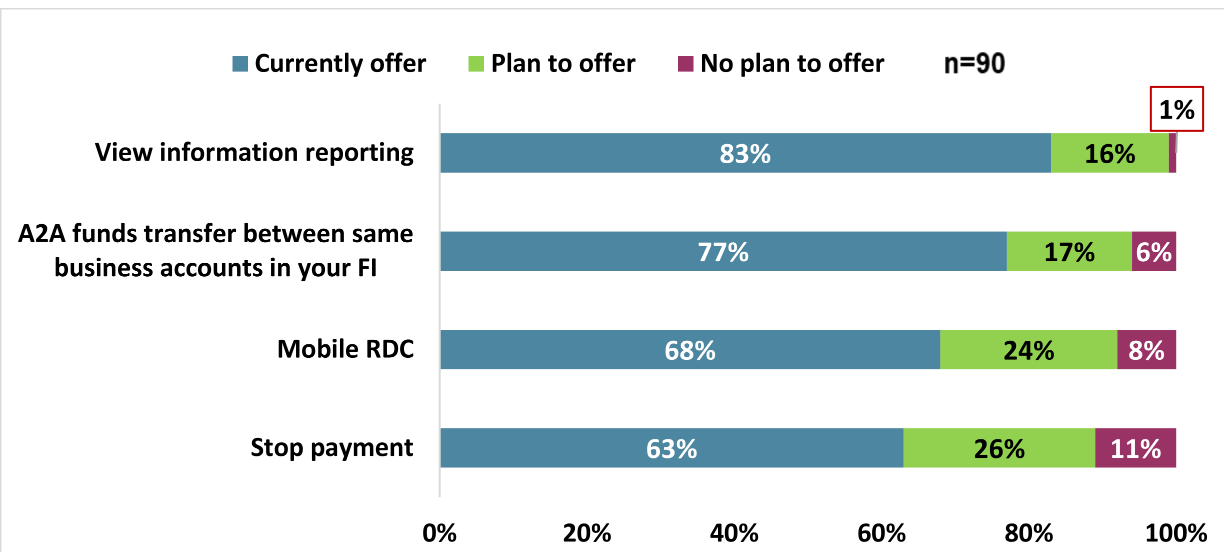
Figure 52: Mobile Financial Services Offered to Businesses by FI Type (% of respondents)



Q46. Do you currently offer or plan to offer mobile financial services to your business customers?

More than two-thirds of respondents offered four key mobile services to their business customers (**Figure 53**). The most common services were view information reporting data (83 percent) and A2A funds transfer between same business accounts within your institution (77 percent). Sixty-eight percent offered mRDC, and 63 percent supported stop payments. Those FIs with no plans to offer these key services ranged from just one bank for view access to information reporting data to 10 institutions for stop payment services.

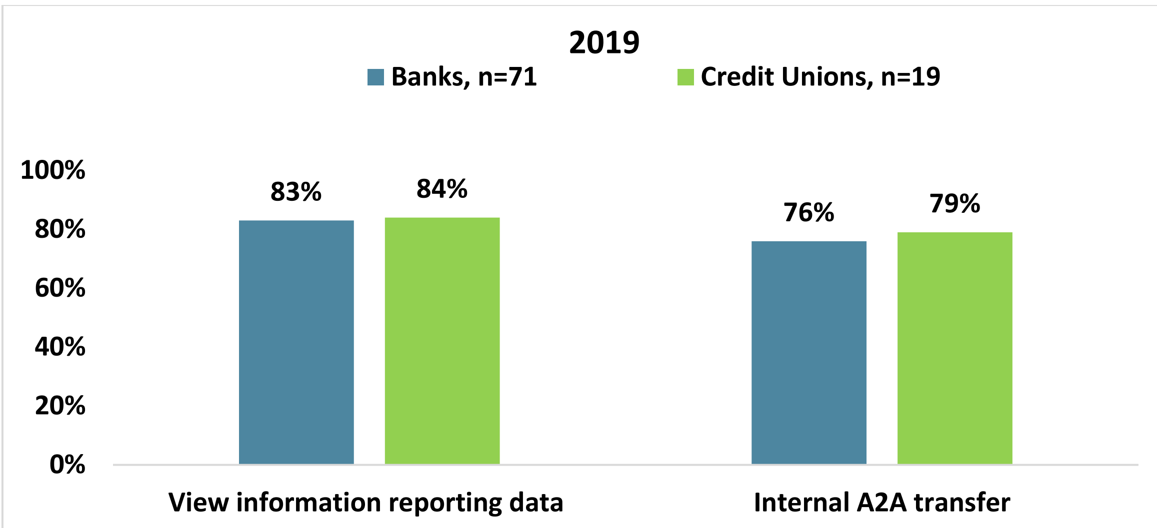
Figure 53: Most Common MFS Offered to Businesses by FIs (% of respondents)



Q47. Which of the following mobile services do you currently offer or plan to offer to your business customers?

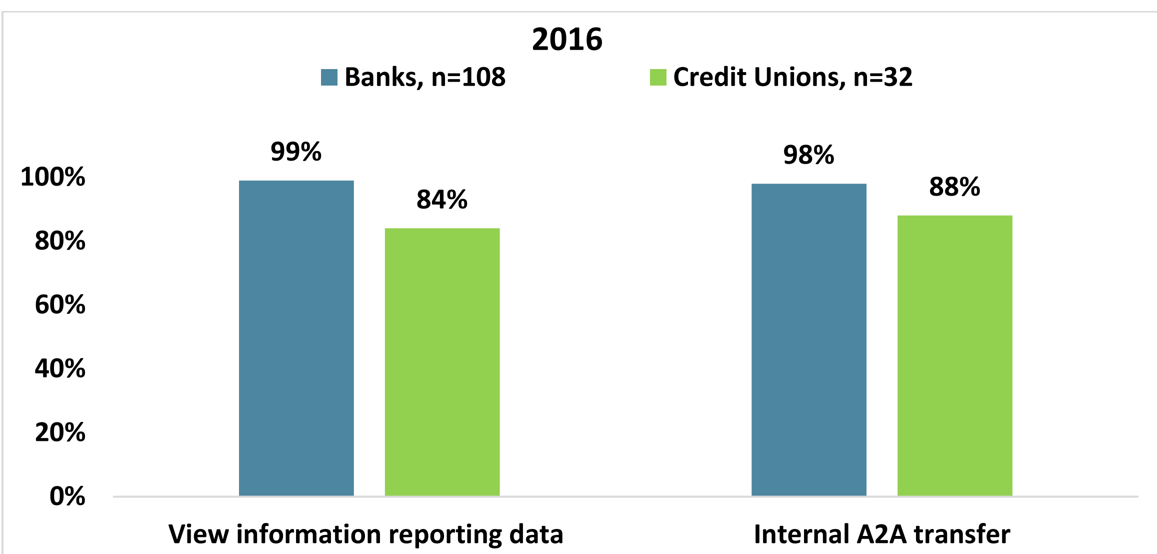
The 2019 version of the question about which mobile services FIs offered business changed substantially from 2016, so there is little overlap in responses. Nonetheless, for the two services that were directly comparable, view information reporting data and internal A2A transfers, the percentages in 2019 were lower, except that 84 percent of credit union respondents in both years offered/planned to offer view information reporting (**Figures 54a and 54b**).

Figure 54a: Business Information Reporting & A2A Transfers Offered by FIs, 2019 (% of respondents)



Q47. Which of the following mobile services do you currently offer or plan to offer to your business customers?

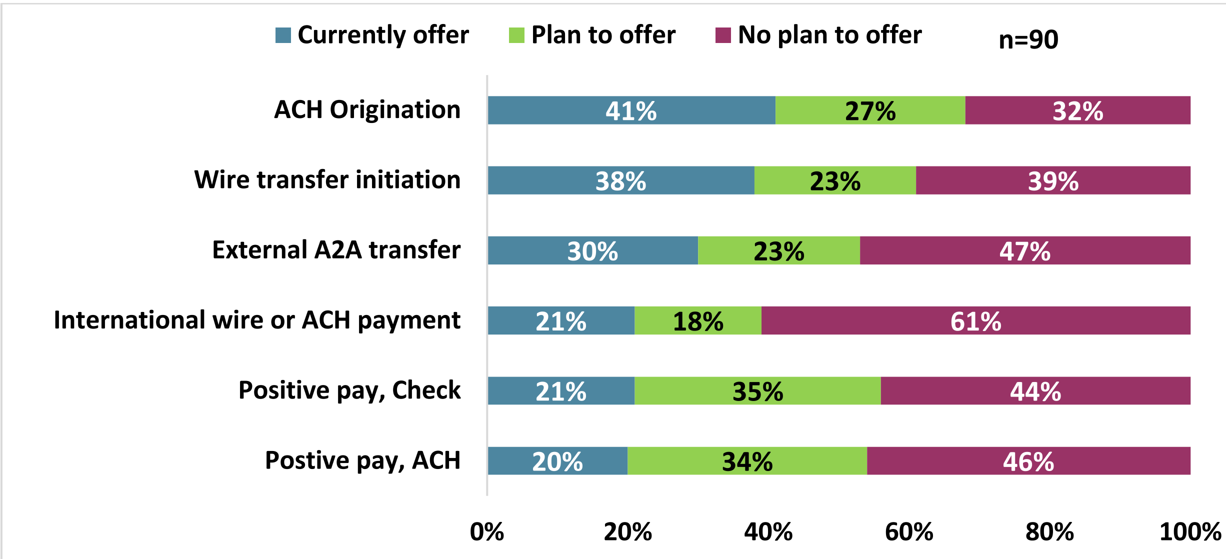
Figure 54b: Business Information Reporting & A2A Transfers Offered by FIs, 2016 (% of respondents)



Q47. Which of the following mobile services do you currently offer or plan to offer to your business customers?

In 2019, other business MFS offered by fewer than 50 percent of respondents ranged from 20 percent that offered *ACH positive pay* to 41 percent that offered *ACH origination* (**Figure 55**). The biggest differences between bank and credit union respondents centered on three services*: ACH positive pay, check positive pay,* and *wire transfer initiation*. Banks offered or planned to offer these services and credit unions did not.

Figure 55: MFS Capabilities Offered to Businesses by FIs (% of respondents)

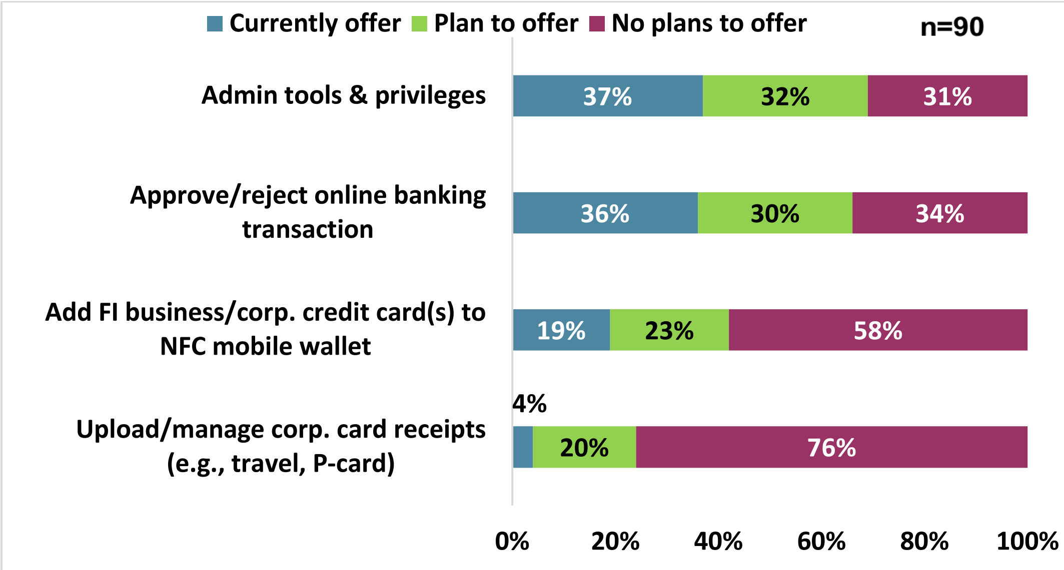


Q47. Which of the following mobile services do you currently offer or plan to offer to your business customers?

Additionally, respondents provided insight about the types of MFS capabilities offered to business customers (**Figure 56**). Just over a third of respondents offered *administrative tools/privileges* (37 percent)[25] and the ability to *approve/reject online banking transactions* (36 percent), although significantly more banks (41 percent) than credit unions (only 16 percent) offered the ability to *approve/reject online banking transactions*. Only 19 percent of respondents – 17 percent of banks and 26 percent of credit unions – offered the *ability to add (your) FI business credit and corporate prepaid card(s) in NFC wallets*, and just 4 percent supported *upload and manage corporate card receipts*, such as P-card or travel reimbursements. The chart also highlights the percentages of those with “no plans to offer” within two years, which can be as informative as data about those currently offering such capabilities, because it gives insight into future plans.

[25] The total for those offering and planning to offer administrative tools in 2016 was 32 percent of banks and 16 percent of credit unions. The comparable offered/planned percentages for 2019 were 72 percent and 58 percent.

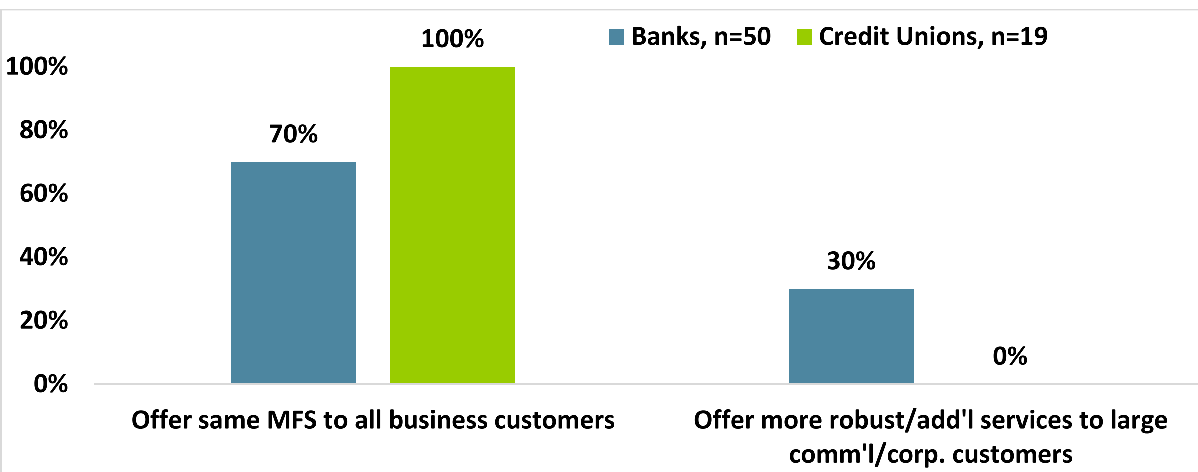
Figure 56: MFS Capabilities Offered to Businesses by FIs (% of respondents)



Q47. Which of the following mobile services do you currently offer or plan to offer to your business customers?

NE bank respondents were slightly less likely than all the *Consolidated Report* respondents to offer the same business mobile services to different customer segments: 70 percent of banks in New England **(Figure 57)**, compared to 74 percent of *Consolidated Report* bank respondents (not shown). However, all NE credit union respondents offered the same mobile services to all their business customers (also Figure 57), compared to 92 percent of *Consolidated Report* respondents (not shown).

Figure 57: MFS Offered to Business Segments by FI Type (% of respondents)



Q48. Please select the statement that best reflects your approach to business mobile services.

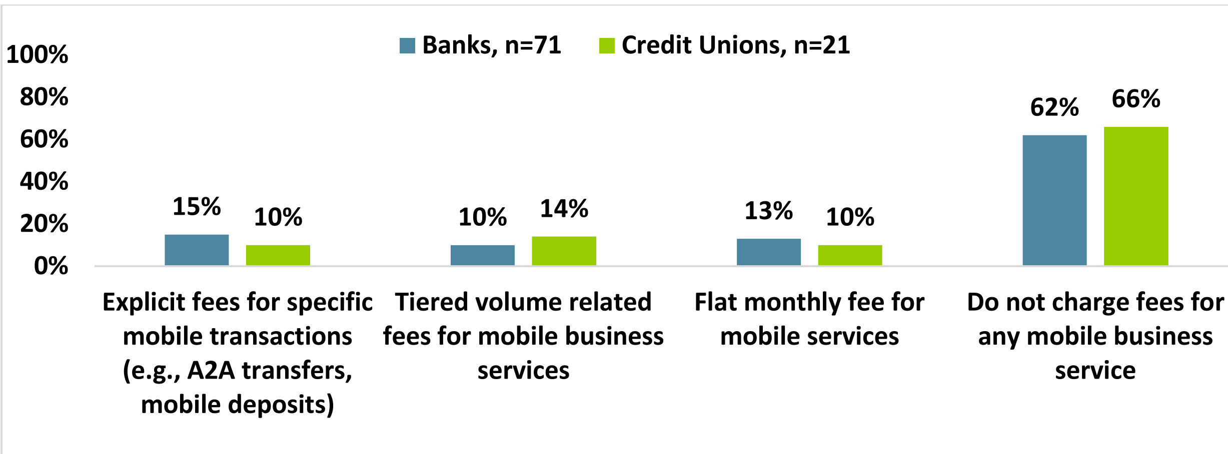
Given that large bank respondents have corporate and large commercial relationships, asset size was an important factor in their responses. Sixty-three percent of NE banks with more than $500 million in assets (Tiers 5 and 6) offered enhanced services to their business clients.

Business MFS Fees

About one third (36 percent) of respondents charged a fee for mobile services, as 62 percent of bank and 74 percent of credit union respondents had no plans to charge a fee (**Figure 58**). Among those charging, 14 percent of respondents had *explicit fees for specific mobile services*. Some also assessed *flat monthly fees* (12 percent) or *tiered volume-related fees for mobile services* (11 percent).

It appears that FIs' perspectives on fees have changed since 2016. At that time, 74 percent of bank and 81 percent of credit union respondents had no plans to charge a fee for any mobile banking service. In 2019, the (slightly reframed[26]) question elicited a 12-percentage-point increase between 2016 and 2019 bank respondents, and a seven-percentage-point change between credit unions.

Figure 58: FI Pricing Strategies for Business MFS by FI Type in 2019 (% of respondents)



Q49. Please describe how you currently charge or plan to charge business customers for mobile services. (Check ALL that apply)

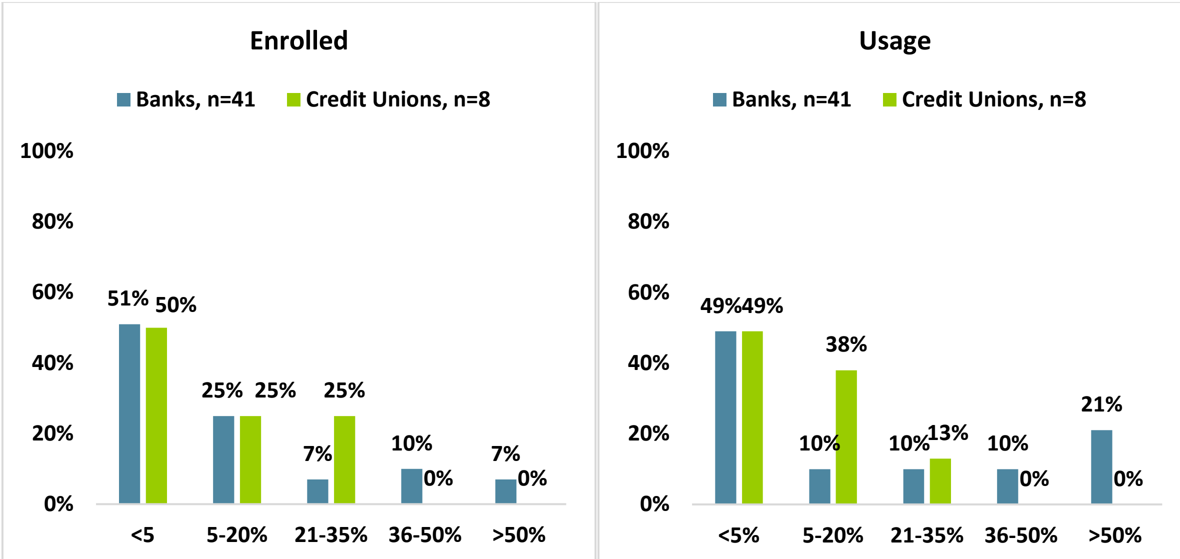
Business Adoption of MFS Services

Business customer adoption of MFS services remained low: Half of the respondents still had less than 5 percent of their business customers both enrolled and using their services. Nonetheless, enrollment and usage increased since 2016, especially among banks. In 2019, 75 percent of bank and credit union respondents had enrollment rates of 20 percent or less, but 17 percent of banks had enrollments of 36 percent or more. (The remaining 25 percent of credit unions all had enrollments in the *5-20%* range.) Banks also had higher usage rates: 32 percent had at least 36 percent of customers using their services. Usage rates for credit union business customers topped out at 35 percent. **Figure 59** highlights 2019 results.

---

[26] In 2016, the question asked, "*Do you charge or plan to charge your business customers a fee for any mobile banking service*?" In 2019, the wording was "*Please describe how you currently charge or plan to charge your business customers for mobile services.*"

Figure 59: Business MFS Customer Enrollment and Usage by FI Type (% of respondents)



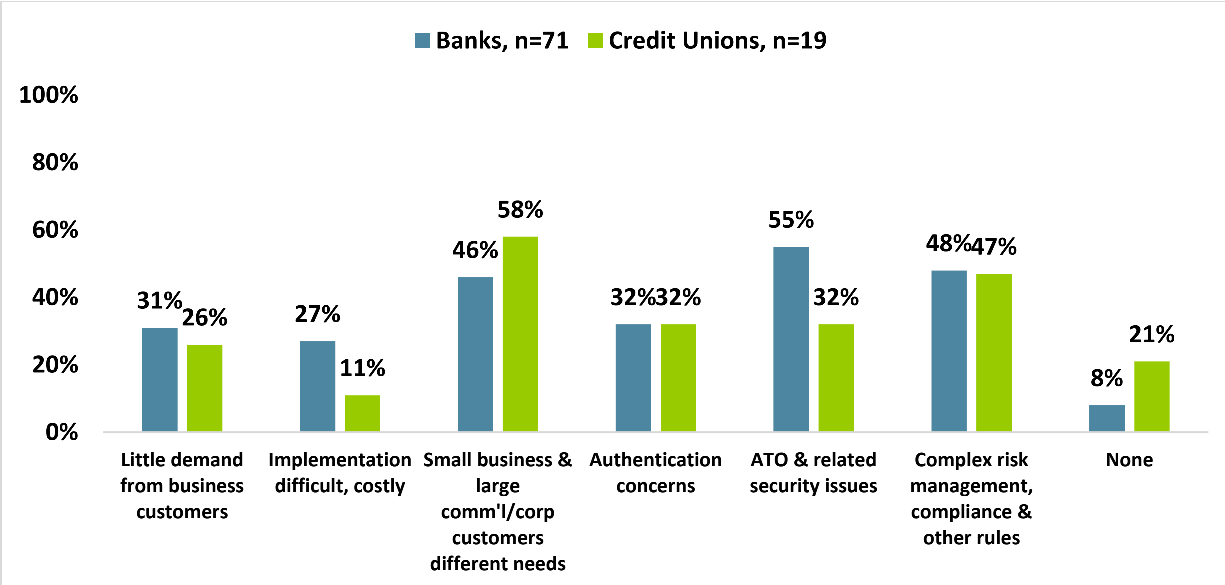
Q50. What percentage of your business customers has ENROLLED in your mobile services? Q51. What percentage of your enrolled business customers has USED your mobile services in the last 90 days?

FI Challenges to Offering Mobile Banking to Businesses

About half of the 90 respondents perceived three major challenges in offering mobile banking to their business customers (**Figure 60**): *account takeover and related security issues* (50 percent), *small business and large corporate commercial customers have different needs* (49 percent), and *complex regulatory compliance, risk management and other rules* (48 percent). Of these, the last was most consistent between bank and credit union respondents. A third of the respondents (33 percent) also had *authentication concerns*. Large banks, in particular, were far more likely than credit unions (by 23 percentage points) to be concerned by account takeovers, while credit unions, somewhat surprisingly, were more concerned than banks (by 12 percentage points) about the differing needs of small and larger business customers.

Ten institutions (six banks and four credit unions) perceived no challenges in offering business MFS.

Figure 60: Perceived Challenges in Offering Business MFS by FI Type (% of respondents)



Q52. What challenges do you see in offering mobile services to your business customers? (Check ALL that apply)

CONCLUSIONS

New England FIs, like other *2019 MFS Survey* respondents, are moving forward with both mobile banking and payment services. Basic retail mobile banking services are virtually ubiquitous at FIs across the region, and many FIs are implementing advanced products and value-added services that deliver a more frictionless mobile customer experience. For the most part, such services are consumer-focused and more device-centric – and increasingly, extending to mobile payments.

Respondents with business customers have implemented MFS for small businesses, with larger institutions offering more services to other market segments. Larger FIs are also considering how best to offer more robust products and services to commercial and corporate customers.

As always, the findings indicate that larger institutions bring greater resources and services to the table: Asset size was the major factor in many mobile decisions. Important differences remain between bank and credit union approaches to, and support of, mobile banking and payment services. Most differences relate to non-mobile factors – markets served, mission, and customer relationships/experiences – rather than to mobile drivers alone.

Like their counterparts elsewhere in the U.S., NE respondents reported challenges such as finding a balance between new product introduction and risk management and security considerations – including those stemming from poor customer protection behavior, as well as those arising from technology advances. Biometrics headed the list of key fraud mitigation technologies being considered.

Marketing and education are essential drivers for greater mobile adoption, and in 2019, NE respondents continued to implement a variety of tools to help customers understand and use the mobile channel effectively.

New England FIs were unique in several respects. Credit unions represented a slightly higher percentage of regional respondents than elsewhere, and bank respondents as a group were larger than bank respondents in other regions.[27] As such, NE respondents led all regions in key indicators, including the percentage of respondents offering:

- Retail mobile banking services
- Mobile RDC services
- Mobile P2P payment services
- Mobile payment services
- Business MFS

Adoption of mobile banking services rose substantially from 2016 to 2019: New England FIs experienced healthy growth of both consumer enrollment and usage rates, as measured by the percent of respondents with rates exceeding 20 percent. In fact, retail mobile banking services rates were higher in New England than elsewhere, as was the use of NFC wallets for mobile payments. Greater adoption is an important indicator that NE institutions are seeing their mobile strategies begin to pay off and pave the way for future mobile development, e.g., in enhanced mobile banking, as well as contactless and digital payments.

[27] New England FI data are included in the *Consolidated Report* findings. Given that NE respondents are 26 percent of the *Consolidated Report* total, the differences are somewhat greater.

About the Author

Marianne Crowe is a vice president in the Payment Strategies Group at the Federal Reserve Bank of Boston.

Breffni McGuire is principal at BMCG Consulting.

Acknowledgements

The authors would like to thank Nicholas Bennett and Ranjita Shrestha for their help developing the report.