



# **Mobile Banking and Payments Survey of Financial Institutions in the Ninth District**

**Federal Reserve Bank of Minneapolis  
Payments, Standards, and Outreach Group**

**November 2016**



# Executive Summary

This report summarizes responses from the 86 Ninth Federal Reserve District financial institutions that responded to the **2016 Mobile Banking and Payments Study** conducted from September 20 to October 21, 2016. In addition to Minneapolis, the Atlanta, Boston, Cleveland, Dallas, Kansas City and Richmond Districts also participated. A report will be available later containing consolidated results from all seven Districts.

Survey findings are presented in five sections:

- 1) General classification questions and overview of why and how Ninth District respondents offer their mobile banking services
- 2) Consumer mobile banking
- 3) Business mobile banking
- 4) Mobile payments and mobile wallets
- 5) Comments on how the Federal Reserve can help increase knowledge about mobile banking and payments

**Table of Contents: Survey Results** starting on slide 6 shows how Ninth District survey respondents answered each question.

## Key Findings

- **Primary business reason:** “Retain existing customers” is the primary business reason given for offering mobile banking services. “Competitive pressure” is the second most popular business reason (slide 11).
- **Operating systems supported:** Nearly all Ninth District mobile banking applications support Apple IOS and Google Android operating systems (slide 12).
- **Provider used:** Over eight of ten survey respondents rely on their core deposit processor or online banking provider to provide their mobile banking service (slide 13).
- **When service began:** Over three-quarters started offering mobile banking services to consumers more than one year ago (slide 15).



# Executive Summary, continued

## Key Findings, continued

- **Mobile banking on tablets:** 86 percent offer or plan to offer mobile banking services to consumer via iPad tablets; and 74 percent offer or plan to offer it via Android tablets (slide 16).
- **Consumer services:** about eight out of ten survey respondents or more now offer or plan to offer the following mobile banking services to consumers in the next two years (slide 17):
  - Check balances (DDA, savings)
  - View statements and/or transaction history (DDA, savings)
  - Transfers funds between same owner's accounts within your financial institution (FI)
  - Bill payment
  - ATM/branch locator

## Key Findings, continued

- **Barriers to consumer adoption of mobile banking:** Security concerns, having their banking needs met through other channels, and lack of trust in the technology are viewed as the three most common barriers to greater consumer adoption of mobile banking services (slide 21).
- **Fees:** Nine out of ten respondents do not charge fees for consumer mobile banking (slide 22). Of those that do charge fees, over half said they charge for now or plan to charge for mobile remote deposit capture and mobile person to person services (slide 22).
- **Mobile alerts:** The most common alerts include low balance, insufficient funds, funds transfer completed, and suspicious activity or other fraud monitoring alerts (slide 23).



# Executive Summary, continued

## Key Findings, continued

- **Security concerns:** The most important security concerns of FIs associated with consumer mobile banking services include inadequate consumer protection behavior, data breach, and weak authentication (slide 24).
- **Card control:** Half of the surveyed FIs do not offer any card control features on their mobile banking app. Of those that do, the most common feature is to turn a payment card off if lost or stolen (slide 25).
- **Security enhancements:** About nine out of ten respondents use or plan to use time-out due to inactivity and multi-factor authentication to enhance mobile security (slide 26).
- **Business mobile banking:** About three-quarters offer mobile banking services to their business customers (slide 28).

## Key Findings, continued

- **Business services:** “Check corporate balances and monitor accounts” and “mobile funds transfer between same business customer’s accounts within your FI” are features offered to business mobile banking customers by nine out of ten respondents (slide 29).
- **Fees charged:** Eight out of ten do not charge fees for business mobile banking. Of those that do, fees most often charged for are mobile remote deposit capture, mobile funds transfer, and a flat monthly fee (slide 30).
- **Mobile payment /wallet services.** Only 10% offer mobile payment services; and about 40% plan to offer it within two years (slide 34). Top influencing factors are to “compete with other FIs” and “mobile payments are gaining momentum” (slide 33).



# Executive Summary, continued

## Key Findings, continued

- **Barriers to consumer adoption of mobile payments/wallets:** “Market immaturity and fragmentation” and “security” are viewed as the main barriers to consumer adoption of mobile payments/wallets (slide 40).
- **Security concerns with mobile payments/wallets:** Top security concerns are “card-not-present fraud (for online purchases made via mobile phone) and “inadequate customer security behavior” (slide 42).
- **Mobile security tools:** Respondents identified biometrics, mobile device ID and payment tokenization as key security tools they use or plan to use (slide 43).
- **Why not offering mobile payments/wallet:** Half of the respondents do not plan to offer mobile payment or wallet services citing security concerns and lack of customer demand as the main reasons (slide 44).

## Survey Methodology

This survey was previously conducted in 2014. The 2016 survey was conducted online via the Survey Monkey tool. To reach Ninth District financial institutions, repeated survey invitations were sent to the entire distribution list of the Upper Midwest Automated Clearing House Association UMACHA). Many thanks to UMACHA for helping make this survey a success.

Individuals from 86 Ninth Federal Reserve District financial institutions completed the survey during the period from September 20 to October 21, 2016. In addition to Minneapolis, the Atlanta, Boston, Cleveland, Dallas, Kansas City and Richmond Districts fielded this survey.

Thanks to all bankers who participated. When the consolidated report is available, it will be shared with Ninth District survey participants.



# Table of Contents: Survey Results

Topic	Page
Asset size	9
Financial institution type	10
Primary business reason for offering mobile banking	11
Operating systems supported by your mobile application	12
Mobile banking service provider	13
<b>Consumer Mobile Banking</b>	14
Length of time mobile banking offered to consumers	15
Mobile banking services to consumers via tablets	16
Mobile banking features offered now or in next two years	17
Mobile banking features planned in the future	18
Mobile banking products for the underbanked	19
Percentage of retail customers using mobile banking	20

Topic	Page
Barriers to greater consumer adoption of mobile banking	21
Fees charged for consumer mobile banking	22
Mobile alerts now offered or planned	23
Security concerns related to mobile banking	24
Card control features supported by your mobile banking app	25
Security enhancements now offered or planned	26
<b>Business Mobile Banking</b>	27
Mobile banking services for business customers	28
Specific services offered to businesses	29
Fees charged for business mobile banking	30
Percentage of business customers using mobile banking	31

# Table of Contents: Survey Results, continued



Topic	Page
<b>Business Mobile Banking, continued</b>	
Business mobile banking challenges	32
<b>Mobile Payments and Mobile Wallets</b>	33
Mobile payment/wallet services offered now or planned in next two years	34
Factors influencing decision to offer mobile payments	35
Familiarity with mobile wallet service providers	36
How mobile wallet is or will be offered	37
Mobile wallet service providers offered	38
Incentives to use mobile wallets	39
Barriers to consumer adoption of mobile wallets	40
Mobile wallets for business customers	41
Security concerns about mobile wallets	42

Topic	Page
Mobile security tools	43
Why don't you offer mobile wallets?	44
Is a mobile payment more secure than a card payment?	45
Predicting consumer adoption of mobile payments	46
<b>Comments on Role of Federal Reserve in Helping Increase Your Knowledge of Mobile Banking and Payments</b>	47



## Survey Results

The following frequency distributions show how each question was answered by Ninth District respondents.

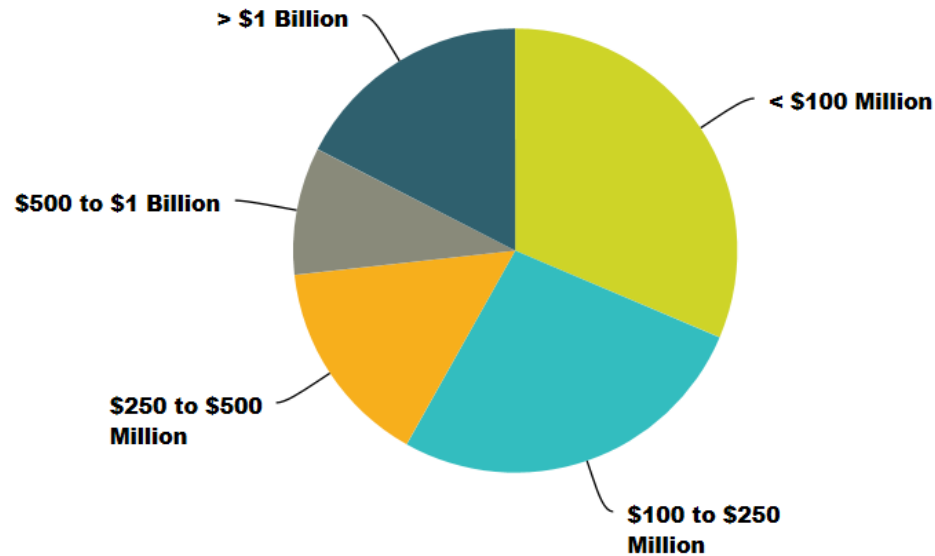




# Asset Size

## What is your FI's asset size?

Answered: 86 Skipped: 0



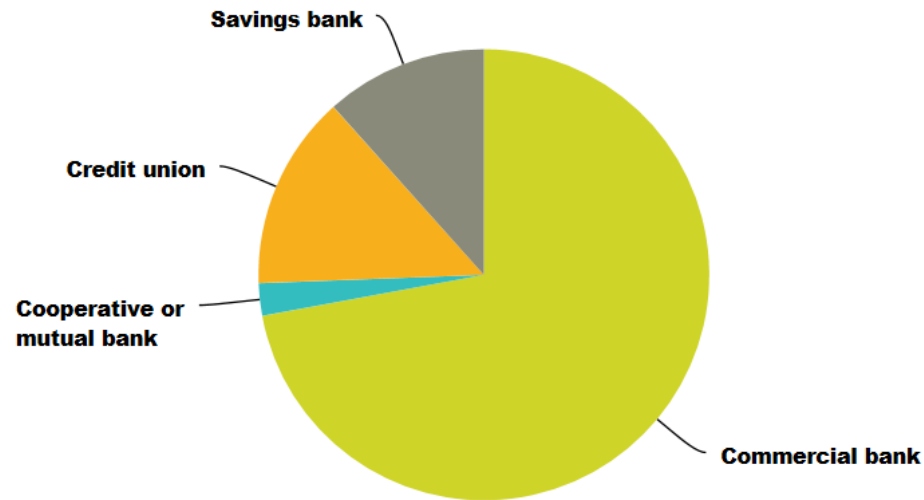
Answer Choices	Responses	
< \$100 Million	31.40%	27
\$100 to \$250 Million	26.74%	23
\$250 to \$500 Million	15.12%	13
\$500 to \$1 Billion	9.30%	8
> \$1 Billion	17.44%	15
Total		86



# Type of Financial Institution

Please indicate your financial institution type:

Answered: 86 Skipped: 0



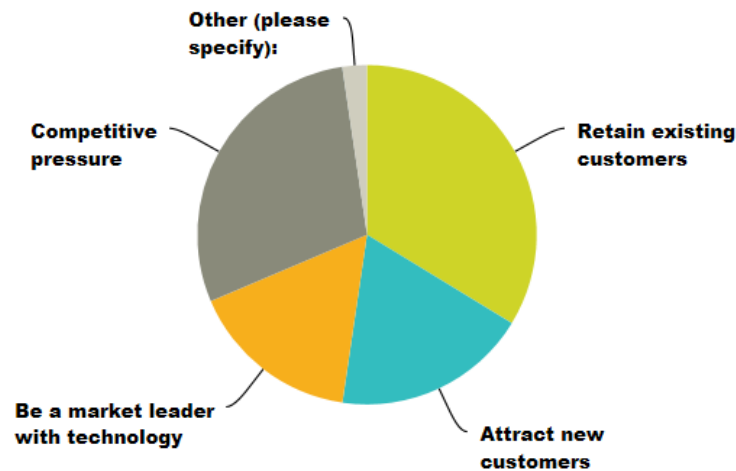
Answer Choices	Responses	
Commercial bank	72.09%	62
Cooperative or mutual bank	2.33%	2
Credit union	13.95%	12
Savings bank	11.63%	10
Other	0.00%	0
<b>Responses</b>		
Total		86



# Business Reason for Offering

What is your **PRIMARY** business reason for offering or planning to offer mobile banking? (Check only ONE)

Answered: 86 Skipped: 0



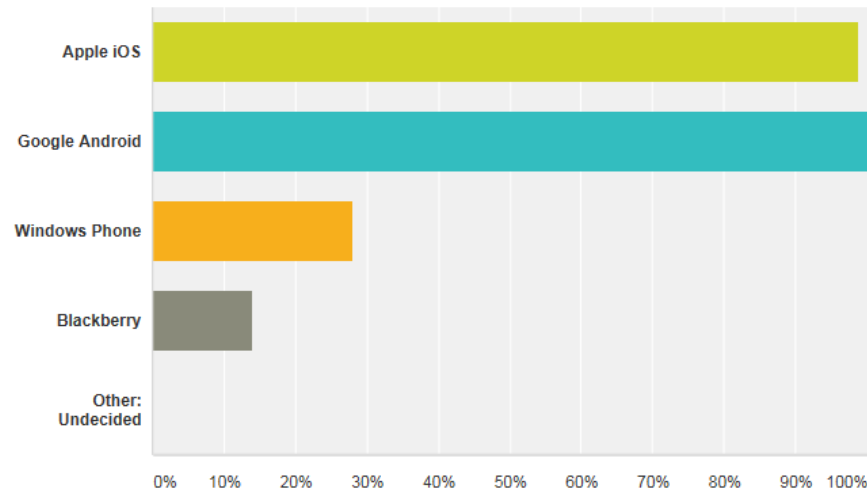
Answer Choices	Responses	
Retain existing customers	33.72%	29
Attract new customers	18.60%	16
Be a market leader with technology	16.28%	14
Competitive pressure	29.07%	25
Increase revenue	0.00%	0
Other (please specify):	<b>Responses</b> 2.33%	2
<b>Total</b>		<b>86</b>



# Operating System

Which mobile operating system(s) (OS) does or will your mobile banking application support? (Check ALL that apply)

Answered: 86 Skipped: 0



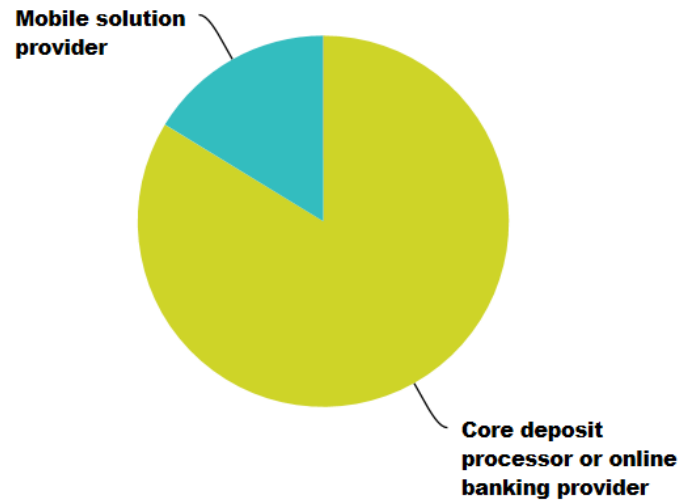
Answer Choices	Responses	
Apple iOS	98.84%	85
Google Android	100.00%	86
Windows Phone	27.91%	24
Blackberry	13.95%	12
Other: Undecided	0.00%	0
<b>Responses</b>		
Total Respondents: 86		



# Provider Used

## Who provides or will provide your mobile banking services?

Answered: 86 Skipped: 0



Answer Choices	Responses	
Core deposit processor or online banking provider	83.72%	72
Mobile solution provider	16.28%	14
In-house system	0.00%	0
Other: Undecided	0.00%	0
Total		86



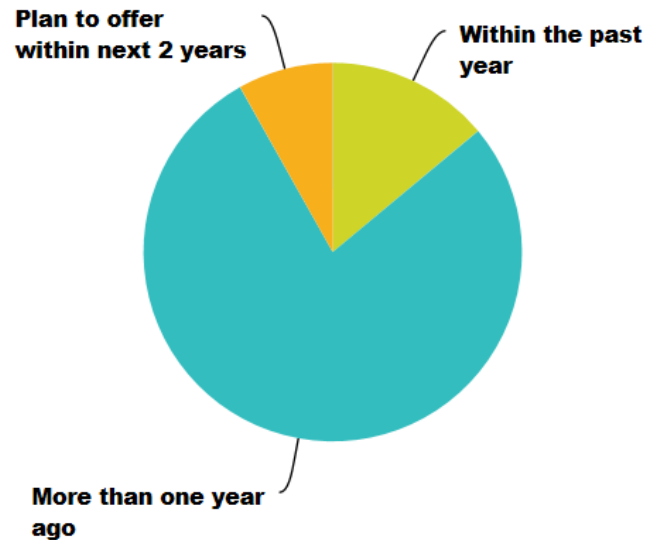
# Consumer Mobile Banking



# Length of Time Mobile Banking Offered

When did you start offering mobile banking to CONSUMERS? (Check only ONE)

Answered: 86 Skipped: 0



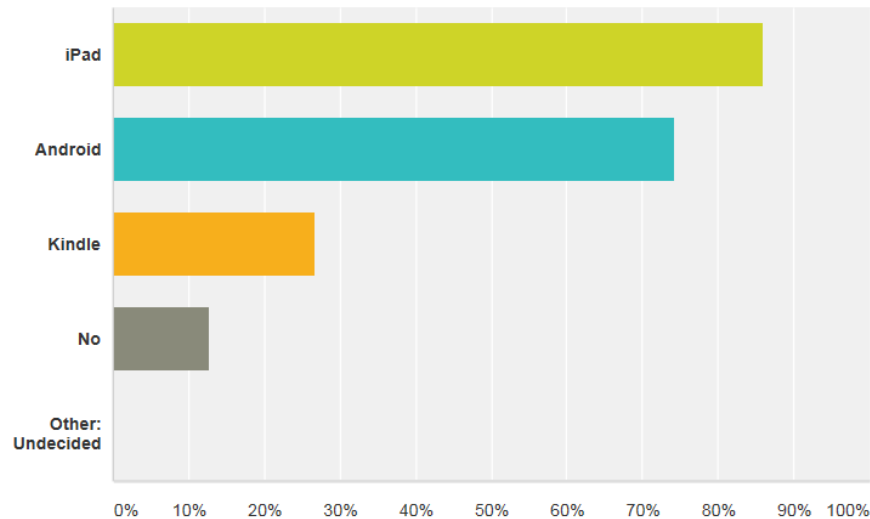
Answer Choices	Responses	
Within the past year	13.95%	12
More than one year ago	77.91%	67
Plan to offer within next 2 years	8.14%	7
Do not plan to offer mobile banking	0.00%	0
Total		86



# Mobile Banking via Tablets

Do you offer or plan to offer mobile banking services to consumers via a tablet? (Check ALL that apply)

Answered: 86 Skipped: 0



Answer Choices	Responses	Count
iPad	86.05%	74
Android	74.42%	64
Kindle	26.74%	23
No	12.79%	11
Other: Undecided	0.00%	0
<b>Responses</b>		
Total Respondents: 86		

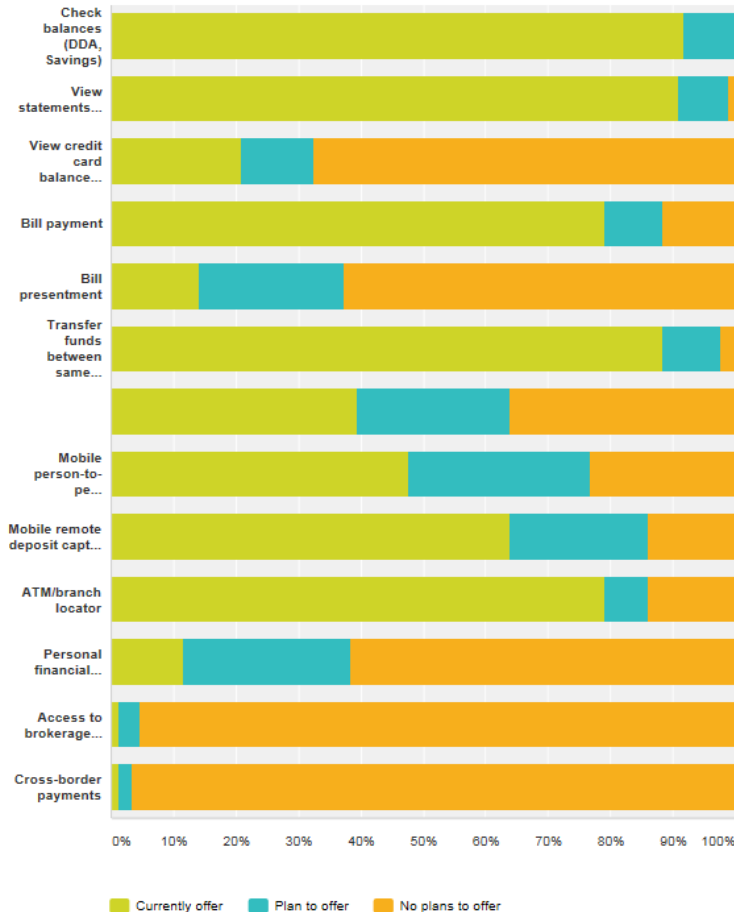




# Features Offered Now or in Next 2 Years

Which of the following mobile banking features do you currently offer or plan to offer to consumers within the next 2 years?  
(Check ALL that apply)

Answered: 86 Skipped: 0



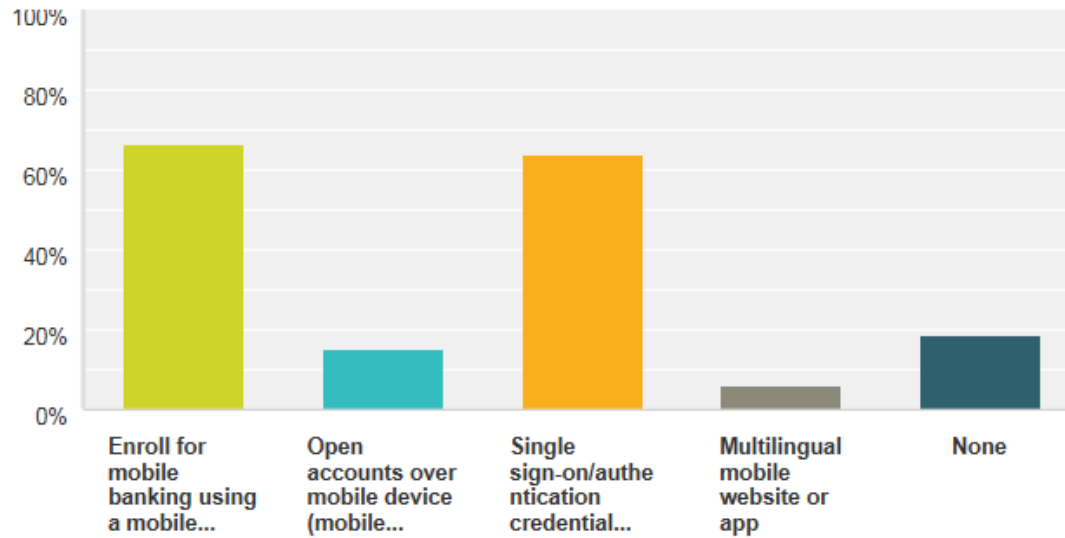
	Currently offer	Plan to offer	No plans to offer	Total
Check balances (DDA, Savings)	91.86% 79	8.14% 7	0.00% 0	86
View statements and/or transaction history (DDA, Savings)	90.70% 78	8.14% 7	1.16% 1	86
View credit card balances, statements and/or transaction history	20.93% 18	11.63% 10	67.44% 58	86
Bill payment	79.07% 68	9.30% 8	11.63% 10	86
Bill presentment	13.95% 12	23.26% 20	62.79% 54	86
Transfer funds between same owner's accounts within your FI	88.37% 76	9.30% 8	2.33% 2	86
Transfer funds between same owner's accounts at different FIs	39.53% 34	24.42% 21	36.05% 31	86
Mobile person-to-person payment (P2P)	47.67% 41	29.07% 25	23.26% 20	86
Mobile remote deposit capture (RDC)	63.95% 55	22.09% 19	13.95% 12	86
ATM/branch locator	79.07% 68	6.98% 6	13.95% 12	86
Personal financial management (PFM)	11.63% 10	26.74% 23	61.63% 53	86
Access to brokerage services	1.16% 1	3.49% 3	95.35% 82	86
Cross-border payments	1.16% 1	2.33% 2	96.51% 83	86



# Future Features Planned

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

Answered: 86 Skipped: 0



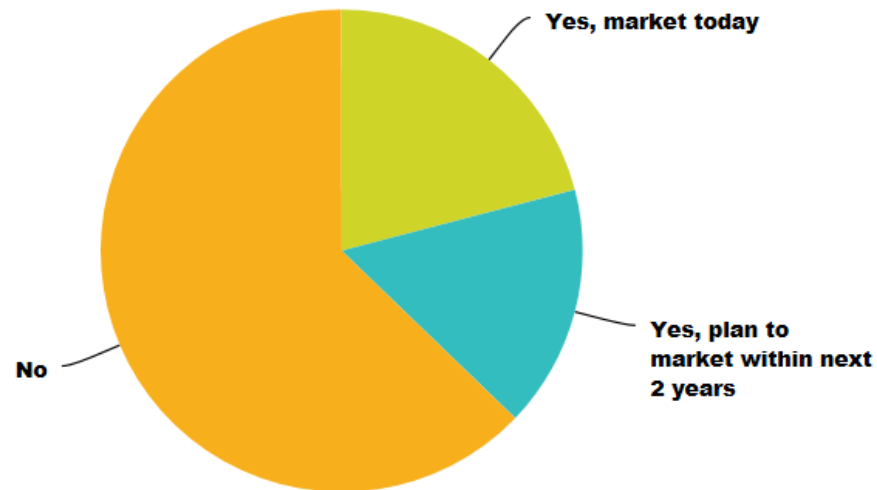
Answer Choices	Responses
Enroll for mobile banking using a mobile device (mobile enrollment)	66.28% 57
Open accounts over mobile device (mobile account opening)	15.12% 13
Single sign-on/authentication credentials for online and mobile services	63.95% 55
Multilingual mobile website or app	5.81% 5
None	18.60% 16
Total Respondents: 86	



# Mobile Banking for the Underbanked

Do you market or plan to market any mobile banking products to the underbanked?

Answered: 86 Skipped: 0



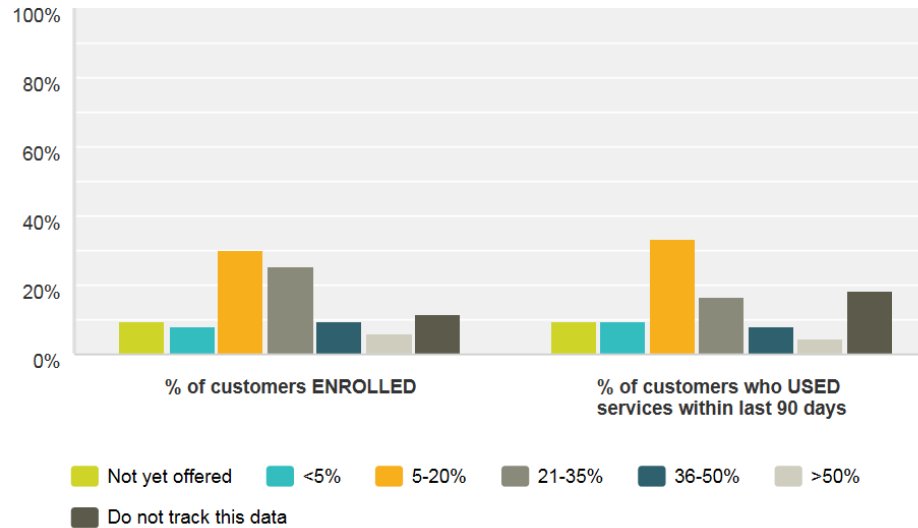
Answer Choices	Responses	
Yes, market today	20.93%	18
Yes, plan to market within next 2 years	16.28%	14
No	62.79%	54
Total		86



# Retail Customers Using Mobile Banking

What percentage of your RETAIL customers has used your mobile banking services?

Answered: 86 Skipped: 0



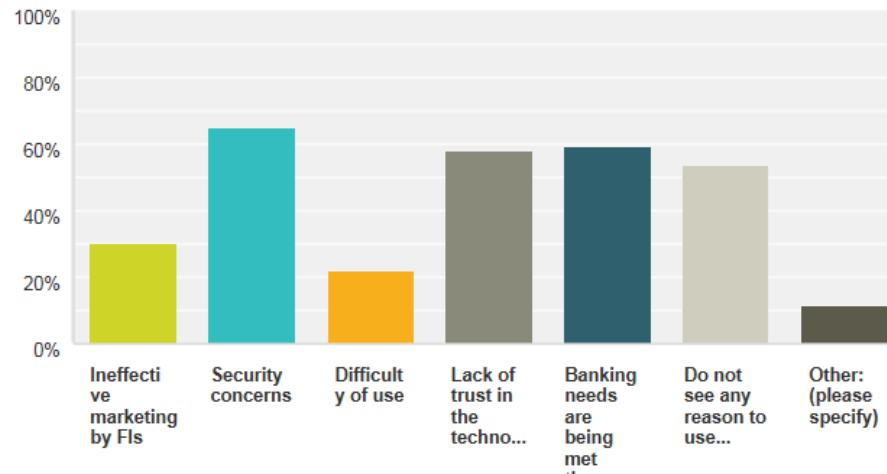
	Not yet offered	<5%	5-20%	21-35%	36-50%	>50%	Do not track this data	Total
% of customers ENROLLED	9.30% 8	8.14% 7	30.23% 26	25.58% 22	9.30% 8	5.81% 5	11.63% 10	86
% of customers who USED services within last 90 days	9.30% 8	9.30% 8	33.72% 29	16.28% 14	8.14% 7	4.65% 4	18.60% 16	86



# Barriers to Greater Consumer Adoption

For your FI, which are the **THREE** most common barriers to greater **CONSUMER** adoption of mobile banking? (Check only **THREE**)

Answered: 86 Skipped: 0



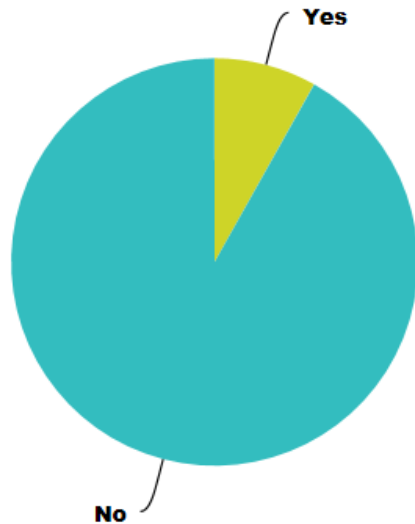
Answer Choices	Responses	Count
Ineffective marketing by FIs	30.23%	26
Security concerns	65.12%	56
Difficulty of use	22.09%	19
Lack of trust in the technology	58.14%	50
Banking needs are being met through other channels	59.30%	51
Do not see any reason to use mobile banking	53.49%	46
Other: (please specify)	11.63%	10
<b>Responses</b>		
Total Respondents: 86		



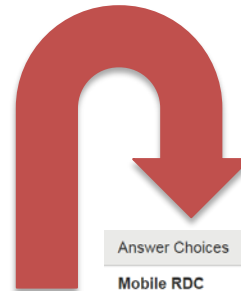
# Fees for Consumer Mobile Banking

Do you charge or plan to charge a fee for any CONSUMER mobile banking services?

Answered: 86 Skipped: 0



If yes, indicate all services for which you charge or plan to charge a fee:



Answer Choices	Responses	
Yes	8.14%	7
No	91.86%	79
Total		86

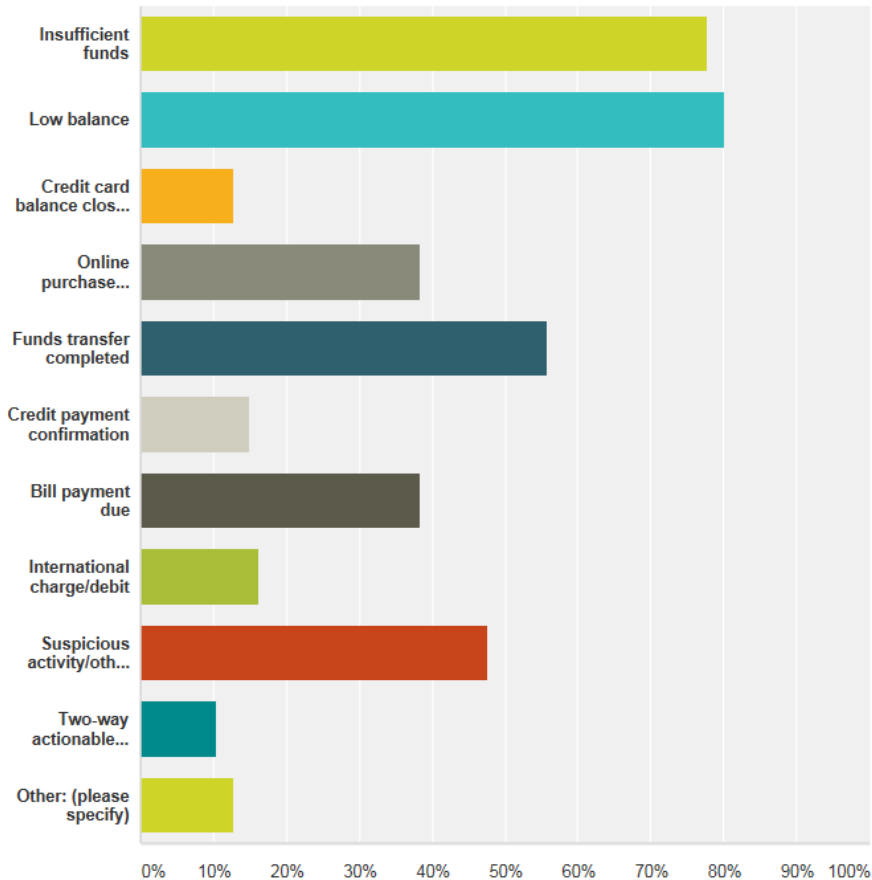
Answer Choices	Responses	
Mobile RDC	57.14%	4
Mobile P2P	57.14%	4
Mobile funds transfer between same customer's accounts within your institution	0.00%	0
Mobile funds transfer between same customer's accounts at different FIs	28.57%	2
Other: (please specify)	<b>Responses</b>	14.29% 1
Total Respondents: 7		



# Mobile Alerts

What types of mobile alerts does your FI offer or plan to offer? (Check ALL that apply)

Answered: 86 Skipped: 0



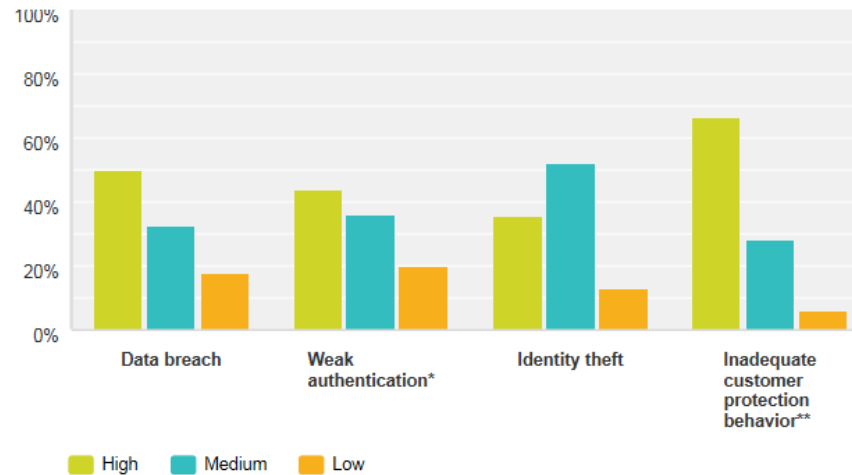
Answer Choices	Responses
Insufficient funds	77.91% 67
Low balance	80.23% 69
Credit card balance close to or over limit	12.79% 11
Online purchase (card-not-present) transactions	38.37% 33
Funds transfer completed	55.81% 48
Credit payment confirmation	15.12% 13
Bill payment due	38.37% 33
International charge/debit	16.28% 14
Suspicious activity/other fraud monitoring alerts	47.67% 41
Two-way actionable alerts (e.g., FI sends customer insufficient funds alert, customer replies to schedule transfer)	10.47% 9
Other: (please specify)	<b>Responses</b> 12.79% 11
Total Respondents: 86	



# Security Concerns

Please RATE the IMPORTANCE of your FI's security concerns associated with offering mobile banking services for consumers.

Answered: 86 Skipped: 0



	High	Medium	Low	Total
Data breach	50.00% 43	32.56% 28	17.44% 15	86
Weak authentication*	44.19% 38	36.05% 31	19.77% 17	86
Identity theft	35.29% 30	51.76% 44	12.94% 11	85
Inadequate customer protection behavior**	66.28% 57	27.91% 24	5.81% 5	86

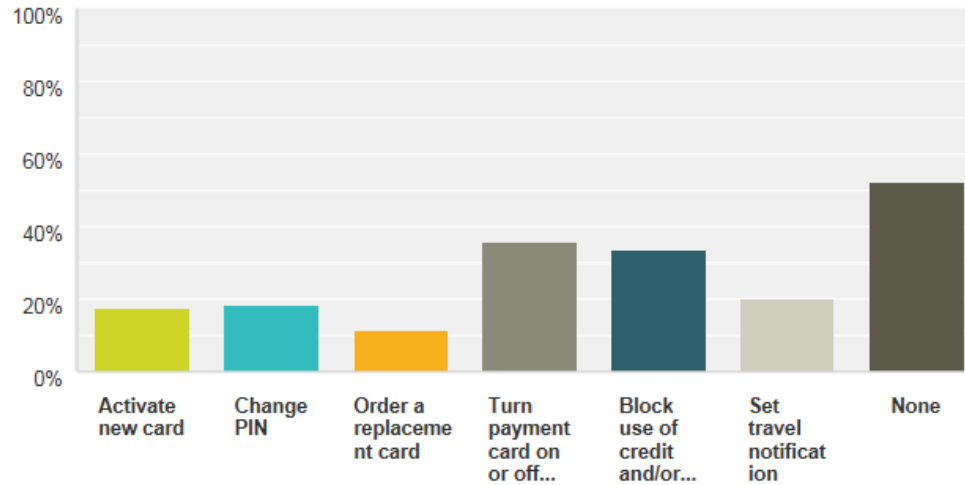




# Card Control Features

Which of the following card control features does your FI's mobile banking app support or plan to support? (Check ALL that apply)

Answered: 86 Skipped: 0



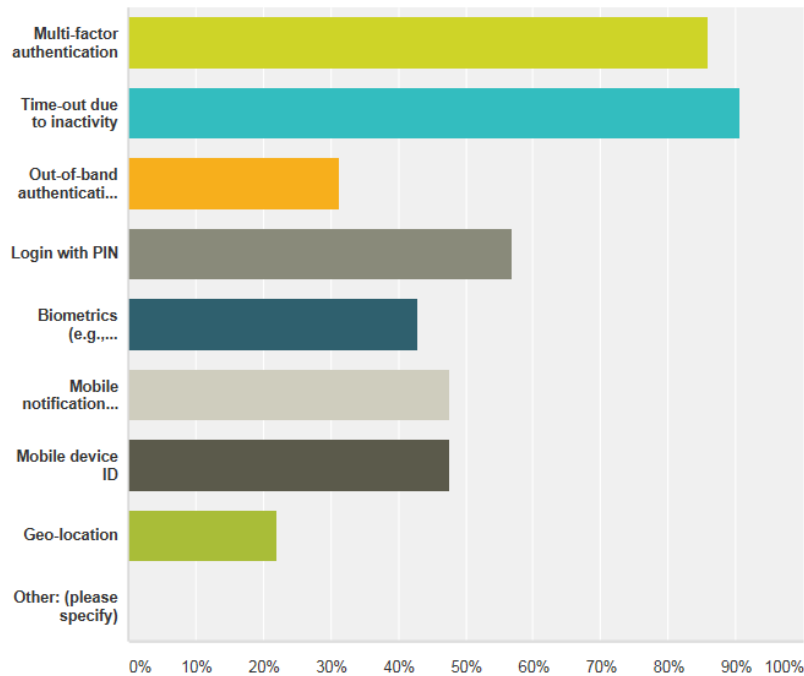
Answer Choices	Responses	
Activate new card	17.44%	15
Change PIN	18.60%	16
Order a replacement card	11.63%	10
Turn payment card on or off if lost/stolen	36.05%	31
Block use of credit and/or debit card	33.72%	29
Set travel notification	19.77%	17
None	52.33%	45
Total Respondents: 86		



# Security Enhancements

Which of the following does your FI use or plan to use to enhance mobile security?  
(Check ALL that apply)

Answered: 86 Skipped: 0



Answer Choices	Responses
Multi-factor authentication	86.05% 74
Time-out due to inactivity	90.70% 78
Out-of-band authentication (e.g., calls/texts to alternate phone number)	31.40% 27
Login with PIN	56.98% 49
Biometrics (e.g., fingerprint, facial, voice recognition, etc.)	43.02% 37
Mobile notifications (e.g., SMS text message, push notifications)	47.67% 41
Mobile device ID	47.67% 41
Geo-location	22.09% 19
Other: (please specify)	Responses 0.00% 0
Total Respondents: 86	



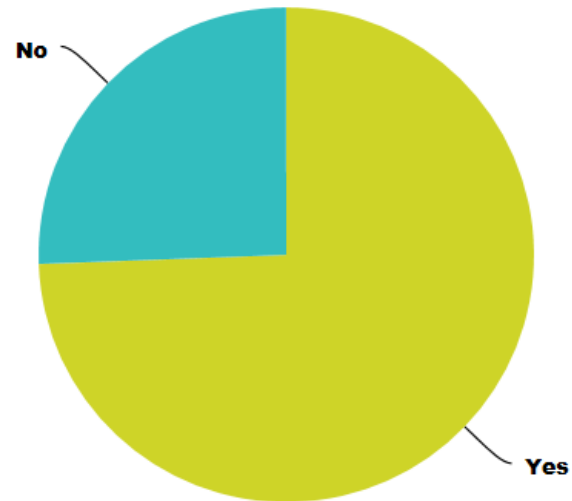
# Business Mobile Payments



# Mobile Banking for Business Customers

Do you offer or plan to offer mobile banking services to your **BUSINESS** customers?

Answered: 86 Skipped: 0



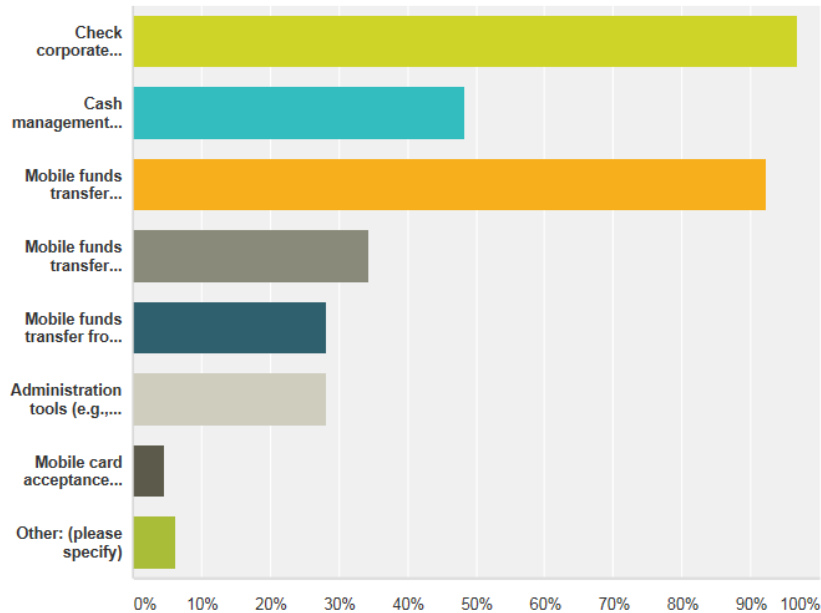
Answer Choices	Responses	
Yes	74.42%	64
No	25.58%	22
Total		86



# Specific Business Mobile Services Offered

What mobile banking services do you offer or plan to offer within the next 2 years to your BUSINESS customers? (Check ALL that apply)

Answered: 64 Skipped: 22



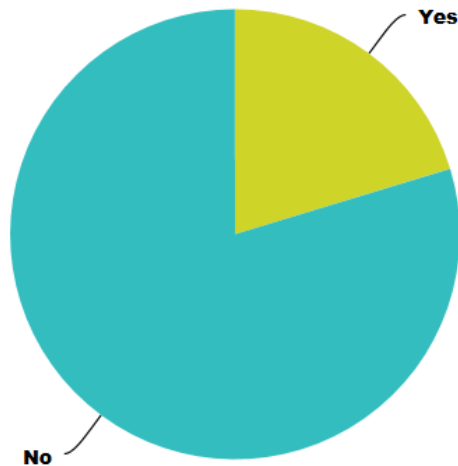
Answer Choices	Responses
Check corporate balances and monitor accounts	96.88% 62
Cash management functions	48.44% 31
Mobile funds transfer between same business customer's accounts within your institution	92.19% 59
Mobile funds transfer between same business customer's accounts at different FIs	34.38% 22
Mobile funds transfer from one business customer's account to another business customer's account at same or different FIs	28.13% 18
Administration tools (e.g., setup and manage users, reset passwords, etc.)	28.13% 18
Mobile card acceptance plug-in reader/mobile POS (e.g., Square, QuickBooks GoPayment)	4.69% 3
Other: (please specify)	6.25% 4
Total Respondents: 64	



# Fees for Business Mobile Banking

Do you charge or plan to charge your **BUSINESS** customers a fee for any mobile banking services?

Answered: 64 Skipped: 22



If yes, indicate all services for which you charge or plan to charge a fee:



Answer Choices	Responses	
Yes	20.31%	13
No	79.69%	51
Total		64

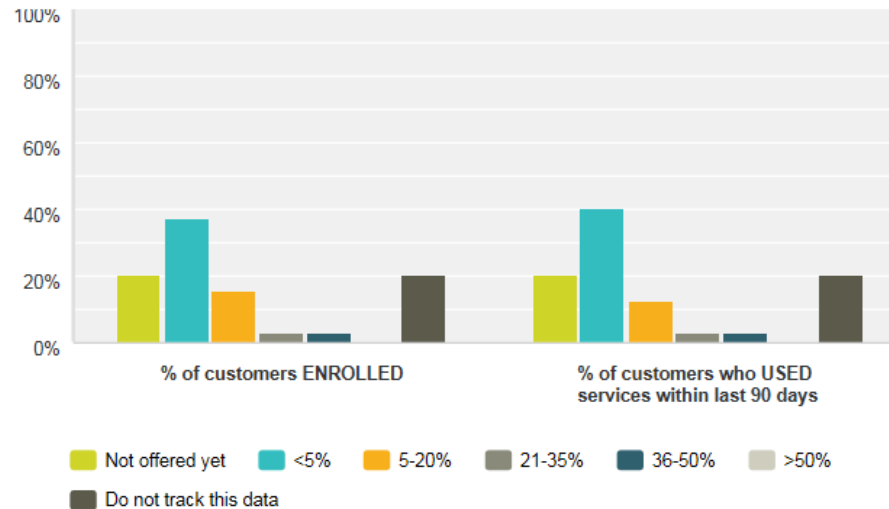
Answer Choices	Responses
Mobile RDC	84.62% 11
Other product/service (e.g., cash management) transaction fee	61.54% 8
Mobile funds transfer between same business customer's accounts within your institution	0.00% 0
Mobile funds transfer between same business customer's accounts at different FIs	23.08% 3
Commercial/small business customers flat monthly fee for services	61.54% 8
Commercial/small business customers by transaction type or volume	53.85% 7
Other: (please specify)	<b>Responses</b> 7.69% 1
Total Respondents: 13	



# Business Customers Using Mobile Banking

What percentage of your **BUSINESS** customers has used your mobile banking services?

Answered: 64 Skipped: 22



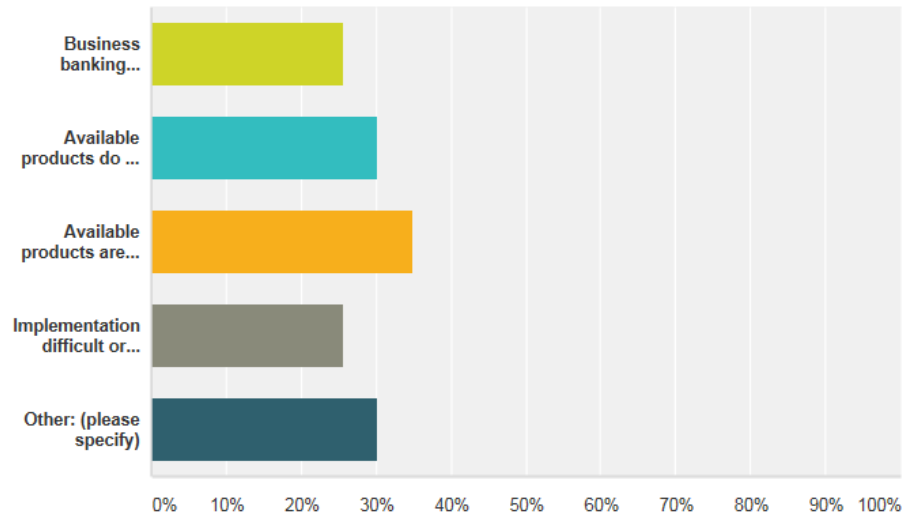
	Not offered yet	<5%	5-20%	21-35%	36-50%	>50%	Do not track this data	Total	Weighted Average
% of customers ENROLLED	20.31% 13	37.50% 24	15.63% 10	3.13% 2	3.13% 2	0.00% 0	20.31% 13	64	1.86
% of customers who USED services within last 90 days	20.31% 13	40.63% 26	12.50% 8	3.13% 2	3.13% 2	0.00% 0	20.31% 13	64	1.86



# Business Mobile Banking Challenges

What challenges do you see in offering mobile banking services to your **BUSINESS** customers? (Check ALL that apply)

Answered: 43 Skipped: 43



Answer Choices	Responses	
Business banking software for mobile not available	25.58%	11
Available products do not meet business customer needs	30.23%	13
Available products are not suited to all FI segments	34.88%	15
Implementation difficult or costly	25.58%	11
Other: (please specify)	<b>Responses</b>	30.23% 13
Total Respondents: 43		





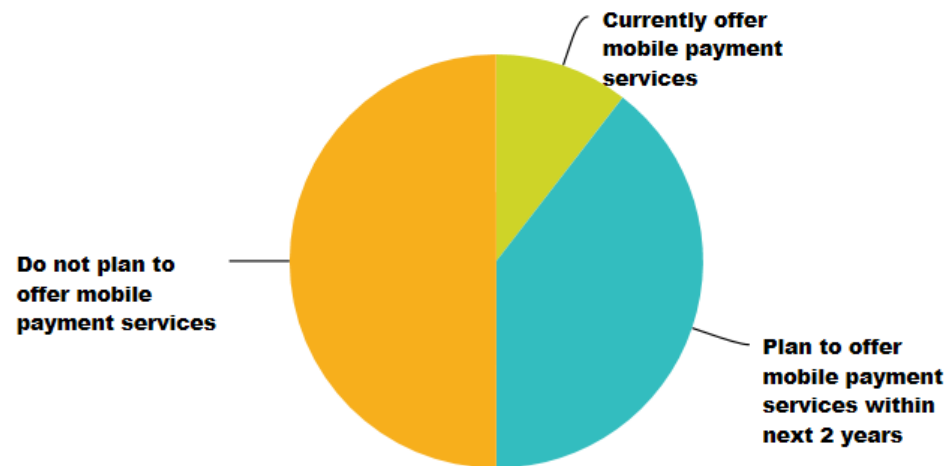
# Mobile Payments and Mobile Wallets



# Mobile Payment/Wallet Services

Do you offer or plan to offer mobile payment/wallet services to customers?

Answered: 86 Skipped: 0



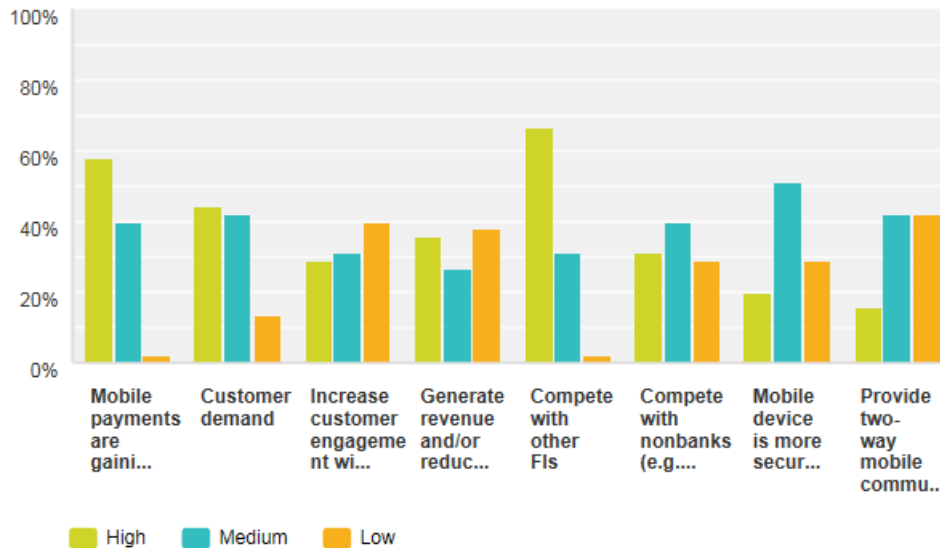
Answer Choices	Responses	
Currently offer mobile payment services	10.47%	9
Plan to offer mobile payment services within next 2 years	39.53%	34
Do not plan to offer mobile payment services	50.00%	43
Total		86



# Factors Influencing Decision to Offer Mobile Payments

Please RATE the IMPORTANCE of factors that influenced your FI's decision or plans to offer mobile payments.

Answered: 45 Skipped: 41



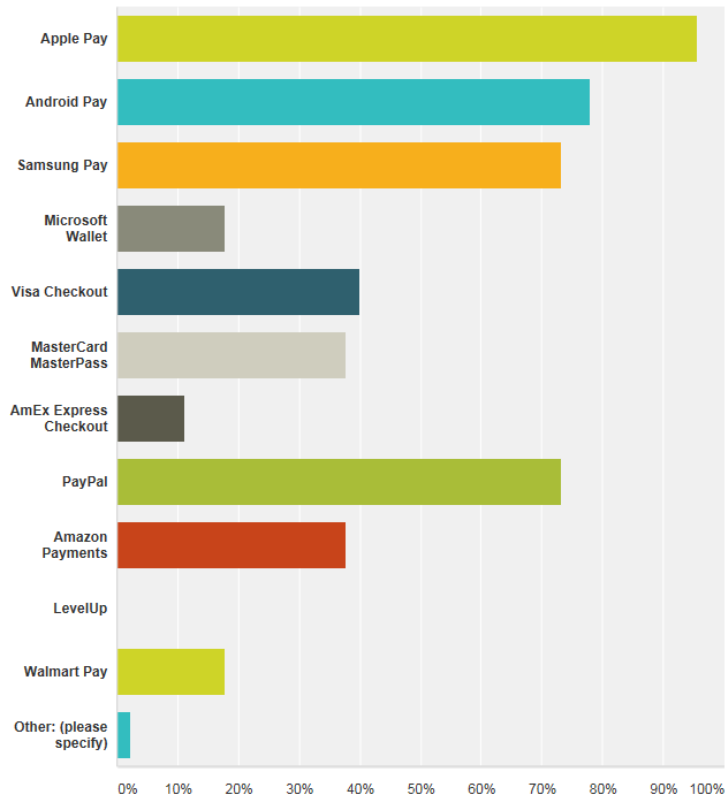
	High	Medium	Low	Total
Mobile payments are gaining momentum	57.78% 26	40.00% 18	2.22% 1	45
Customer demand	44.44% 20	42.22% 19	13.33% 6	45
Increase customer engagement with loyalty, rewards, and other incentives	28.89% 13	31.11% 14	40.00% 18	45
Generate revenue and/or reduce costs	35.56% 16	26.67% 12	37.78% 17	45
Compete with other FIs	66.67% 30	31.11% 14	2.22% 1	45
Compete with nonbanks (e.g., Amazon, Apple, Google, PayPal, etc.)	31.11% 14	40.00% 18	28.89% 13	45
Mobile device is more secure than card or other payment methods	20.00% 9	51.11% 23	28.89% 13	45
Provide two-way mobile communication tool with customers	15.56% 7	42.22% 19	42.22% 19	45

# Familiarity with Mobile Wallet Service Providers



Please indicate the mobile wallet service(s) that you are familiar with. (Check ALL that apply)

Answered: 45 Skipped: 41



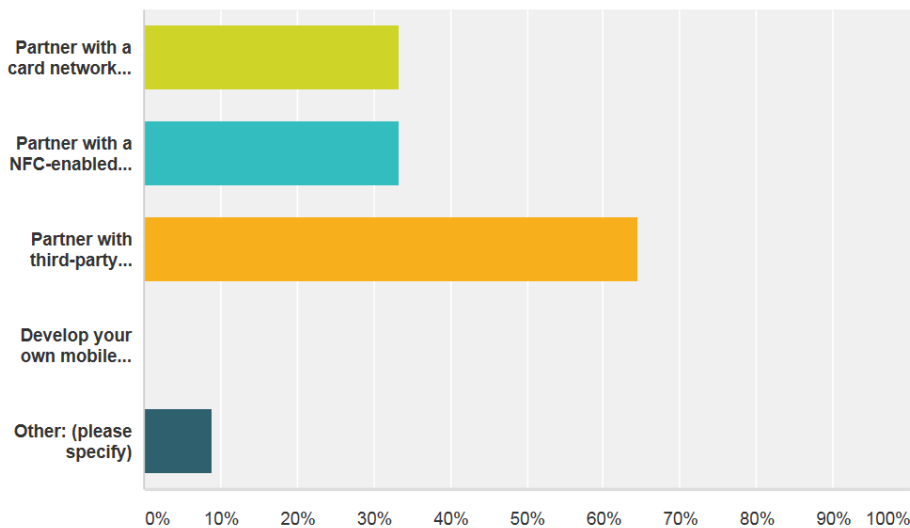
Answer Choices	Responses
Apple Pay	95.56% 43
Android Pay	77.78% 35
Samsung Pay	73.33% 33
Microsoft Wallet	17.78% 8
Visa Checkout	40.00% 18
MasterCard MasterPass	37.78% 17
AmEx Express Checkout	11.11% 5
PayPal	73.33% 33
Amazon Payments	37.78% 17
LevelUp	0.00% 0
Walmart Pay	17.78% 8
Other: (please specify)	<b>Responses</b> 2.22% 1
Total Respondents: 45	



# How Mobile Payment/Wallet is Offered

How do you offer or plan to offer mobile payment/wallet services? (Check ALL that apply.)

Answered: 45 Skipped: 41



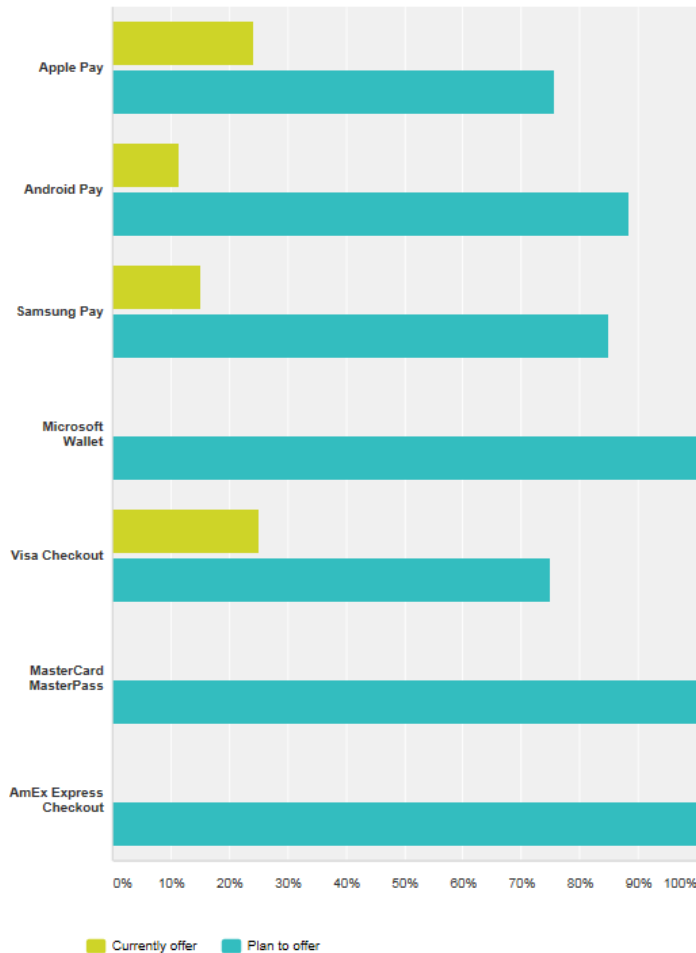
Answer Choices	Responses
Partner with a card network (e.g., AmEx, MasterCard, Visa or Discover to offer online digital wallet (check-out) services via mobile)	33.33% 15
Partner with a NFC-enabled wallet provider (e.g., Apple Pay, Android Pay, Samsung Pay)	33.33% 15
Partner with third-party payment processor (e.g., FIS, Fiserv)	64.44% 29
Develop your own mobile payment solution (e.g., Capital One Wallet, Chase Pay, CU Wallet, Wells Fargo Wallet)	0.00% 0
Other: (please specify) <span style="float: right;">Responses</span>	8.89% 4
Total Respondents: 45	



# Mobile Wallet Service Providers Offered

Which of the following **MOBILE WALLET** service(s) do you offer or plan to offer? (Check ALL that apply)

Answered: 31 Skipped: 55



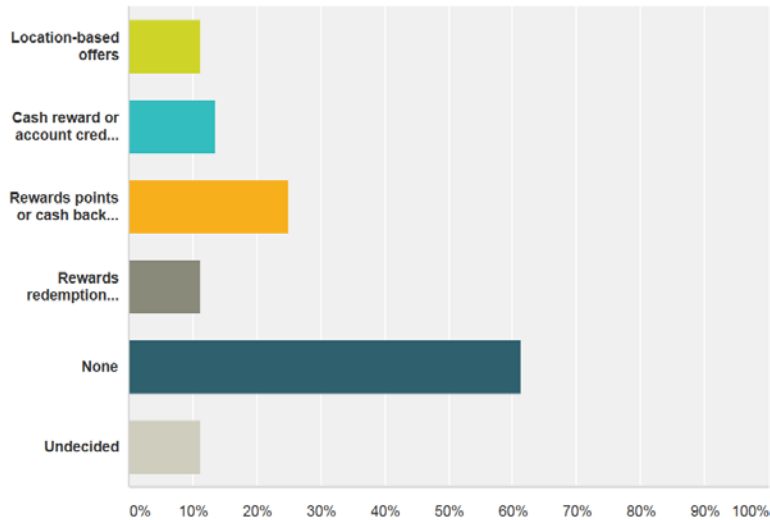
	Currently offer	Plan to offer	Total
Apple Pay	24.14% 7	75.86% 22	29
Android Pay	11.54% 3	88.46% 23	26
Samsung Pay	15.00% 3	85.00% 17	20
Microsoft Wallet	0.00% 0	100.00% 4	4
Visa Checkout	25.00% 2	75.00% 6	8
MasterCard MasterPass	0.00% 0	100.00% 8	8
AmEx Express Checkout	0.00% 0	100.00% 2	2



# Incentives to Use Mobile Wallets

What types of incentives tied to mobile payments/wallets do you offer or plan to offer? (Check ALL that apply)

Answered: 44 Skipped: 42



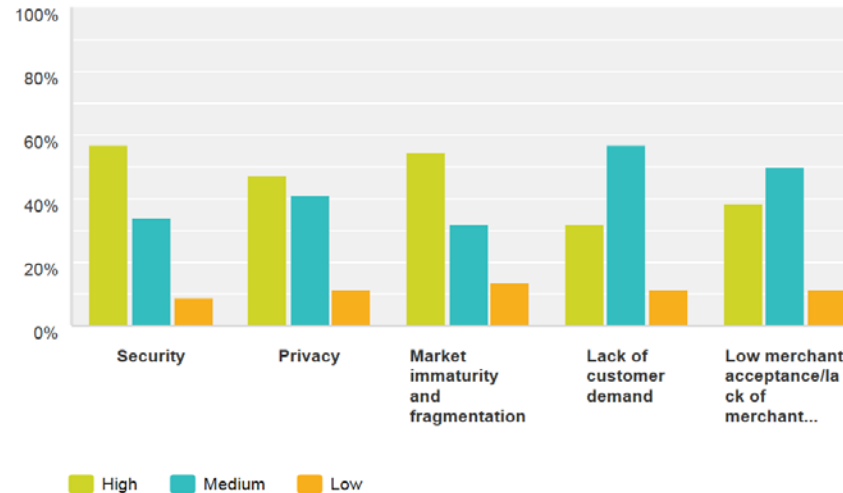
Answer Choices	Responses	
Location-based offers	11.36%	5
Cash reward or account credit for mobile wallet enrollment	13.64%	6
Rewards points or cash back for mobile transactions	25.00%	11
Rewards redemption (e.g., pay with points) for mobile transactions at the POS	11.36%	5
None	61.36%	27
Undecided	11.36%	5
Total Respondents: 44		



# Barriers to Consumer Adoption of Mobile Wallets

From your FI's perspective, please RATE the SIGNIFICANCE of these barriers to consumer adoption of mobile payments

Answered: 44 Skipped: 42



	High	Medium	Low	Total
Security	56.82% 25	34.09% 15	9.09% 4	44
Privacy	47.73% 21	40.91% 18	11.36% 5	44
Market immaturity and fragmentation	54.55% 24	31.82% 14	13.64% 6	44
Lack of customer demand	31.82% 14	56.82% 25	11.36% 5	44
Low merchant acceptance/lack of merchant interest	38.64% 17	50.00% 22	11.36% 5	44

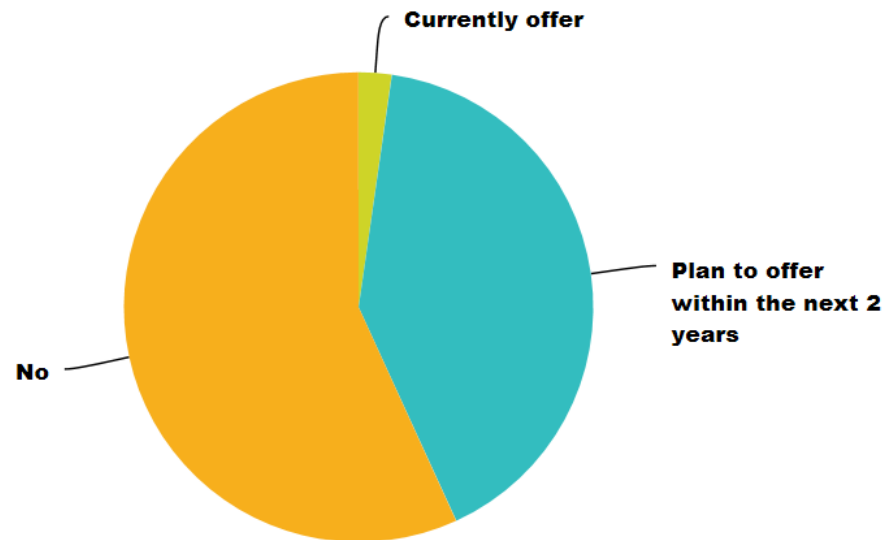




# Mobile Wallets for Business Customers

Do you offer or plan to offer mobile payment/wallet services for your **BUSINESS** customers?

Answered: 44 Skipped: 42



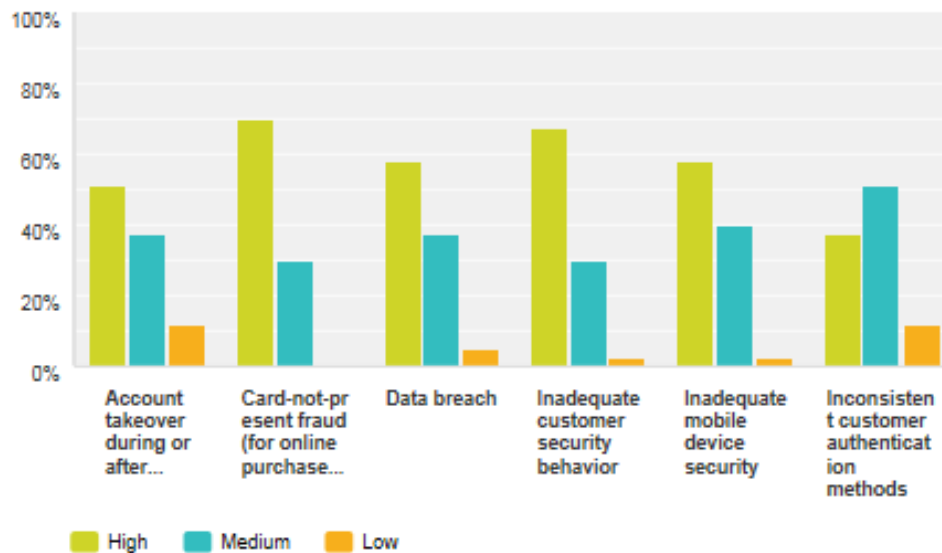
Answer Choices	Responses	
Currently offer	2.27%	1
Plan to offer within the next 2 years	40.91%	18
No	56.82%	25
Total		44



# Security Concerns with Mobile Wallets

Please RATE the IMPORTANCE of your FI's security concerns associated with mobile payment/wallet services.

Answered: 43 Skipped: 43



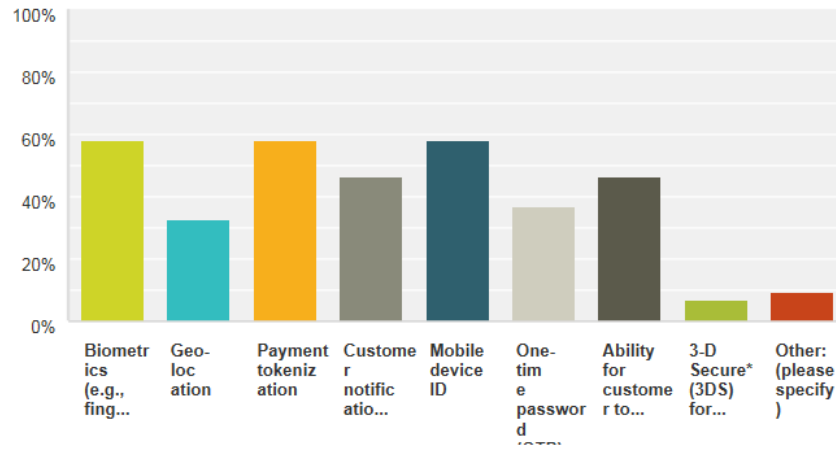
	High	Medium	Low	Total
Account takeover during or after mobile enrollment process	51.16% 22	37.21% 16	11.63% 5	43
Card-not-present fraud (for online purchases made via mobile phone)	69.77% 30	30.23% 13	0.00% 0	43
Data breach	58.14% 25	37.21% 16	4.65% 2	43
Inadequate customer security behavior	67.44% 29	30.23% 13	2.33% 1	43
Inadequate mobile device security	58.14% 25	39.53% 17	2.33% 1	43
Inconsistent customer authentication methods	37.21% 16	51.16% 22	11.63% 5	43



# Mobile Security Tools

Do you use or plan to use the following mobile security tools? (Check ALL that apply)

Answered: 43 Skipped: 43



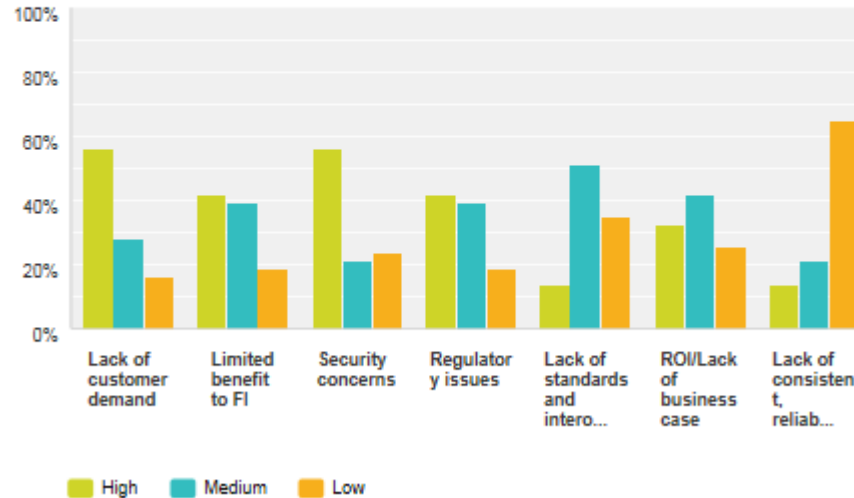
Answer Choices	Responses	
Biometrics (e.g., fingerprint, facial, voice recognition, etc.)	58.14%	25
Geo-location	32.56%	14
Payment tokenization	58.14%	25
Customer notification of attempt/success in provisioning card to mobile wallet	46.51%	20
Mobile device ID	58.14%	25
One-time password (OTP)	37.21%	16
Ability for customer to remotely disable mobile wallet if phone lost/stolen	46.51%	20
3-D Secure* (3DS) for ecommerce transactions	6.98%	3
Other: (please specify)	9.30%	4
<b>Responses</b>		
Total Respondents: 43		



# Why Don't You Offer Mobile Wallet Services?

Please RATE the IMPORTANCE of factors that influenced your decision NOT TO OFFER mobile payment/wallet services.

Answered: 43 Skipped: 43



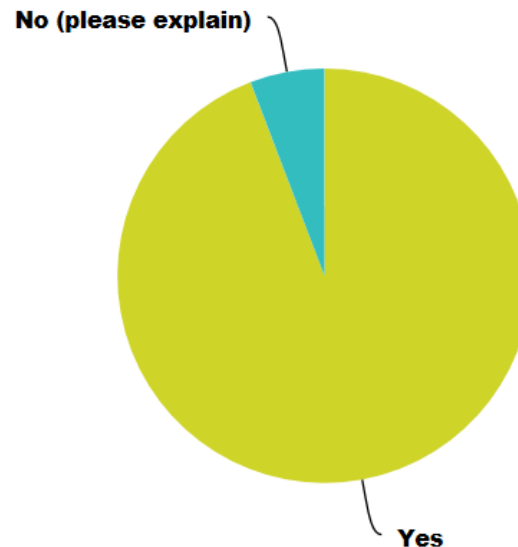
	High	Medium	Low	Total
Lack of customer demand	55.81% 24	27.91% 12	16.28% 7	43
Limited benefit to FI	41.86% 18	39.53% 17	18.60% 8	43
Security concerns	55.81% 24	20.93% 9	23.26% 10	43
Regulatory issues	41.86% 18	39.53% 17	18.60% 8	43
Lack of standards and interoperability	13.95% 6	51.16% 22	34.88% 15	43
ROI/Lack of business case	32.56% 14	41.86% 18	25.58% 11	43
Lack of consistent, reliable cellular coverage	13.95% 6	20.93% 9	65.12% 28	43



# Is a Mobile Payment More Secure than Card Payment?

In your opinion, do you think a mobile payment that uses payment tokenization and biometrics is more secure than a card payment?

Answered: 86 Skipped: 0



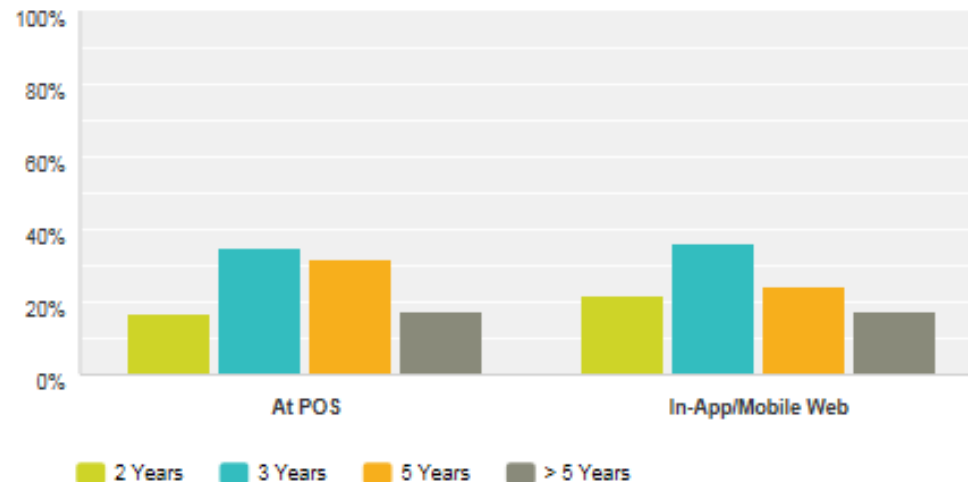
Answer Choices	Responses	
Yes	94.19%	81
No (please explain)	5.81%	5
Total		86



# Predicting Consumer Adoption of Mobile Payments

In your opinion, how long will it take for industry-wide CONSUMER adoption (at least one mobile payment within 90 days) of mobile payments to exceed 50%?

Answered: 86 Skipped: 0



	2 Years	3 Years	5 Years	> 5 Years	Total	Weighted Average
At POS	16.28% 14	34.88% 30	31.40% 27	17.44% 15	86	2.50
In-App/Mobile Web	22.09% 19	36.05% 31	24.42% 21	17.44% 15	86	2.37



# Comments on Role Federal Reserve Can Play in Helping Increase Your Knowledge of Mobile Banking and Payments



# Comments on Role of Fed

*Please share your ideas on what role(s) the Federal Reserve can play in helping to increase your knowledge of mobile banking and payments, and other feedback.*

- Understanding all the layers of protection needed to combat all the layers of risk. Mobile payments is a new concept and FIs often do not have the expertise - especially smaller FIs - to know what is needed, especially when a vendor is offering each layer at an increased cost. How much is the right amount and what does each layer of protection actually protect against? Vendors are usually pretty good, but they are out to sell. The Fed can help by providing a non-biased review of layers and a clear explanation of what each one does and when it might be best used or alternatives.
- Keep us informed of how they are working. Is there fraud occurring and why? Etc.
- Continue to provide industry wire security information and training.
- The Federal Reserve needs to get to the proactive stage in the payment industry. Sharing thoughts and ideas prior to any type of significant roll out by banks.
- Do more to educate the public/consumers
- Free or low cost webinars; email information.



# Comments on Role of Fed, continued



- Webinars and education opportunities
- Provide security education and confidence in payment systems.
- The Federal Reserve could assist in making some of these "Pays" more assessable and more cost effective to community banks. The cost issue has caused us to not jump in as quickly as we had hoped and as quickly as customer demands
- Providing educational webinars including Best Practices, sample risk assessments, etc.
- Provide clear guidelines on the types of dual diligence banks need to conduct before rolling out a product. A step by step checklist to ensure all proper diligence is done on vendors and risk so banks know exactly what is expected of them.
- Make us aware of how many consumers are using it, so we can adapt.
- The information provided by the Faster Payments Initiative and Secure Payments Initiative has been very useful



Please direct questions or comments on this survey to:

Payments, Standards, and Outreach Group

Federal Reserve Bank of Minneapolis

Email: [mpls.psog.events@mpls.frb.org](mailto:mpls.psog.events@mpls.frb.org)