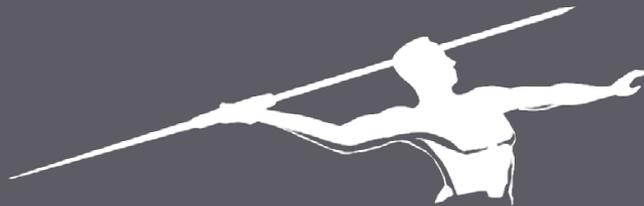


# Mobile Consumer Financial Services



JAVELIN STRATEGY & RESEARCH

SYNDICATED RESEARCH  
CUSTOM RESEARCH  
STRATEGIC CONSULTING

# Mobile Definitions - ABC's and More

- Mobile Authentication – verifying identity. This is one of many security related mobile finance apps.
- Mobile Banking – monitoring and managing finances
- Mobile Commerce/Shopping – buying via mobile, generally for mobile (digital content)
- Mobile Marketing – attracting, cross-selling, keeping customers via mobile devices
- Mobile Payments – transferring money
- Mobile Wallet – replacing cash, checks and cards



# Mobile Platforms and Finance Industry Impact

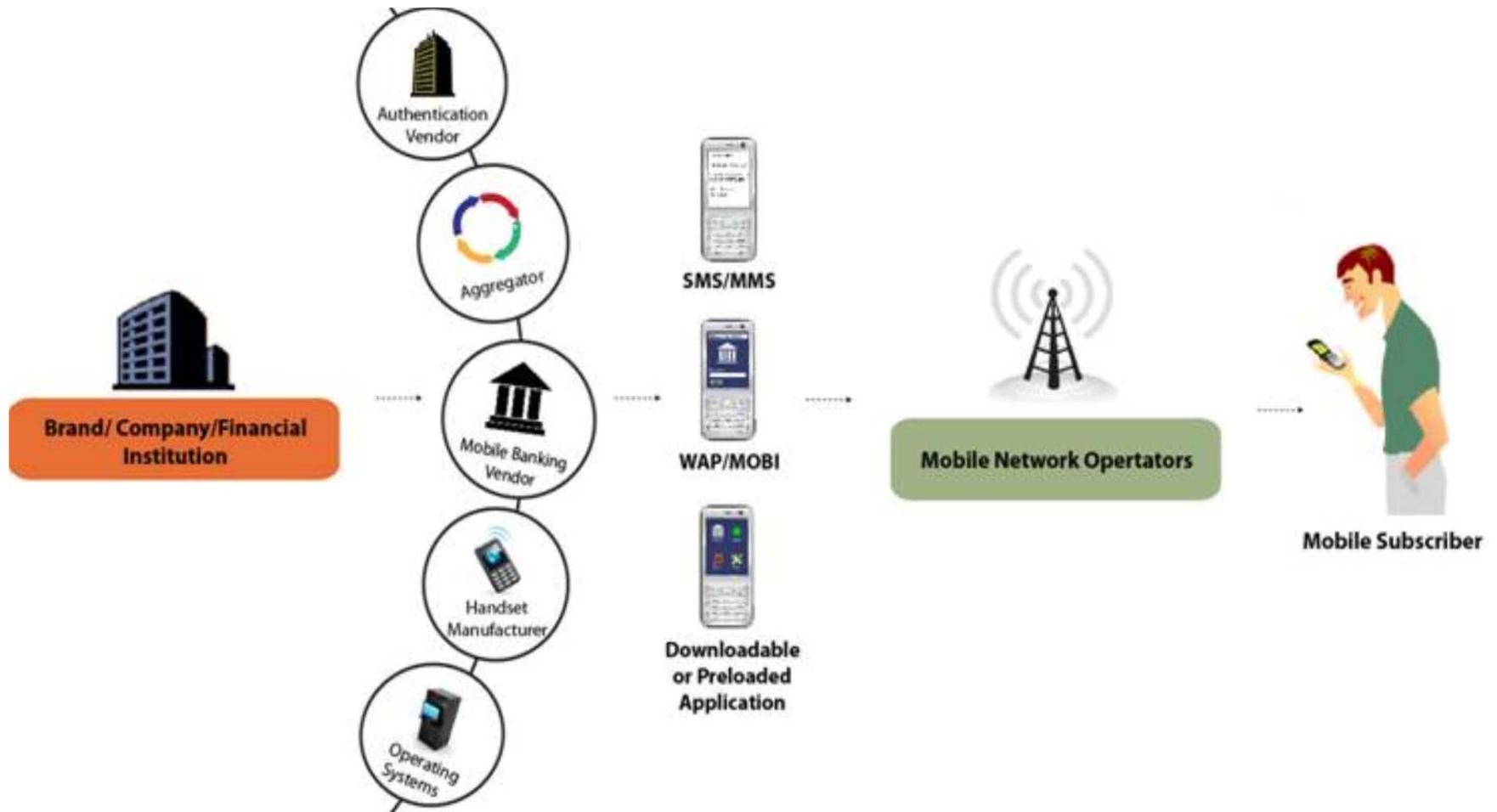
## SMS Text , WAP/Browser-based, Downloadable and Embedded Applications Features Comparison

SMS/Text	WAP/Browser-based	Downloadable application	Embedded application
100% of phones sold today	95% of phones sold today WAP-enabled; but many require difficult activation 18% have smartphones-best for viewing	95% of phones sold today WAP-enabled; but many require difficult activation	Not widely available yet
FI-carrier-independent	FI-carrier-independent	Requires FI partnerships with wireless carriers - mobile banking vendors can facilitate partnerships	Requires FI partnerships with wireless carriers and mobile handset vendors - mobile banking vendors facilitate
Relatively less expensive (depending on plan) or approx. \$0.20 per message	Requires expensive data plan	Requires expensive data plan	Requires expensive data plan and new phone
Easy to set up and use for most consumers	Fairly easy to set up and use for most consumers	More difficult; downloading application can be challenging for many	Easiest to set up and use for consumers, but availability is limited
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# Mobile Banking Ecosystem Has its own Complexities

Figure 2: Mobile Banking Ecosystem



# NFC/Contactless and M-Payments: Where's the Value? (And for Whom?)

## Contactless and Mobile Payments Ecosystem



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# Compared to Other Finance Channels, Mobile *Currently* Has More Security Upside

Mobile can have a positive or negative impact on institution and consumer safety

<p><b>Mobile</b> (bank access via handheld mobile device with an over-the-air or mobile Internet connection)</p>	<ul style="list-style-type: none"> <li>• Lost/ Stolen Phone</li> <li>• Mobile Malware/ Spyware</li> <li>• Phishing</li> <li>• WAP gap</li> </ul>	<ul style="list-style-type: none"> <li>• Most Frequent Account Access</li> <li>• 24/7 Anytime/Anywhere Access</li> <li>• Ability to Interact Directly w/ CSR</li> <li>• Diverse Operating Systems</li> <li>• Decrease Risk of Malware</li> </ul>	<ul style="list-style-type: none"> <li>• Geolocation</li> <li>• Remote Deactivation</li> <li>• E-mail Alerts</li> <li>• Mobile Alerts</li> </ul>	
<p><b>Fixed Online</b> (bank access via desktop or laptop computer with an Internet connection)</p>	<ul style="list-style-type: none"> <li>• Phishing</li> <li>• Spoofed Sites</li> <li>• Malware/ Spyware</li> <li>• Cracking</li> <li>• Lost or Stolen Laptop</li> </ul>	<ul style="list-style-type: none"> <li>• Man in the Middle</li> <li>• Spamming</li> <li>• Online Scams</li> <li>• Sniffing</li> </ul>	<ul style="list-style-type: none"> <li>• More Frequent Account Access</li> <li>• Turn Off Paper Statements</li> <li>• Ability to Interact Directly w/ CSR via VOIP, IM, Chat</li> <li>• 24/7 Access</li> </ul>	<ul style="list-style-type: none"> <li>• E-Mail Alerts</li> <li>• Ability to Manage Detailed Account Settings</li> </ul>
<p><b>Voice</b> (access via voice call to customer service center)</p>	<ul style="list-style-type: none"> <li>• Vishing</li> <li>• Pretexting (Social Engineering)</li> </ul>	<ul style="list-style-type: none"> <li>• 24/7 Access</li> <li>• Ability to Interact Directly w/ CSR</li> </ul>		



# Mobile Finance Apps: Another Perspective

Banking, payments, commerce and more

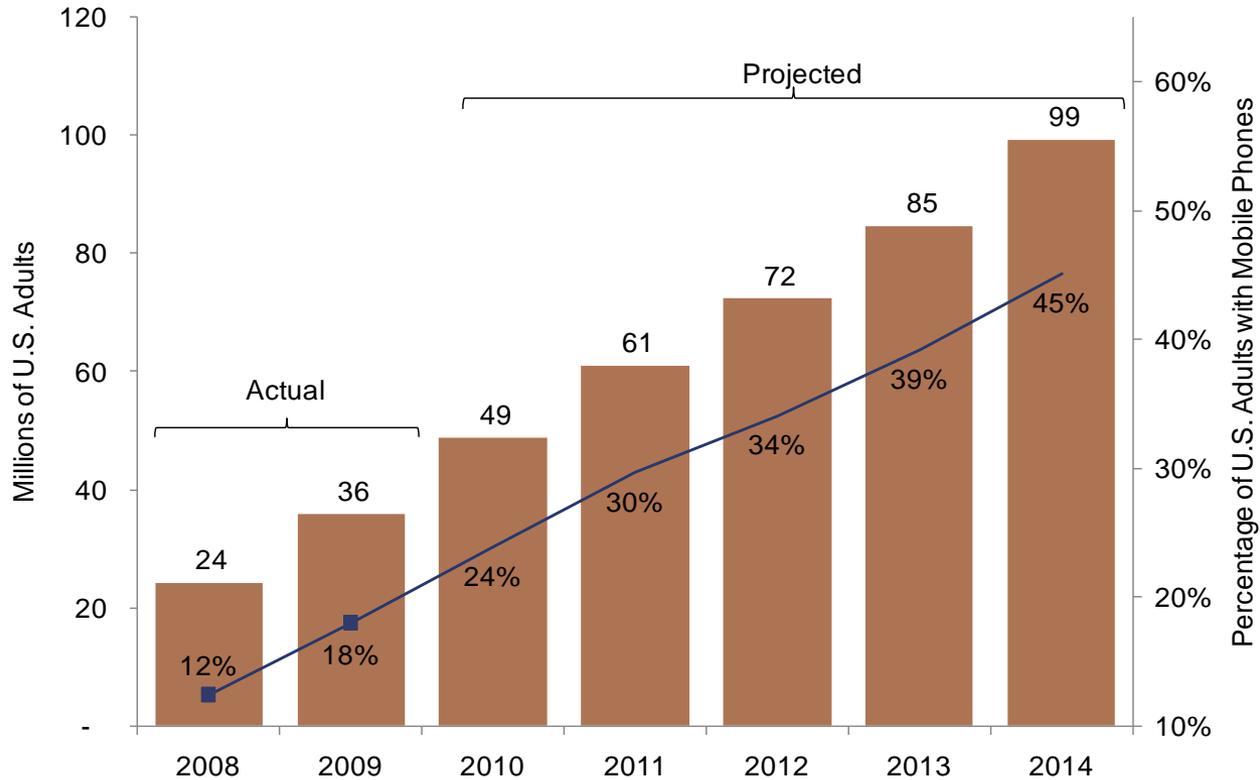
M-Finance App.	Market Impact	Security Impact	Players	US Adoption
Marketing	Low	=	FIs, Telcos	Moderate
Alert notices	Low	+	FIs, ?	Growth slowing
Authentication	Low	+	FIs, Telcos,	Nascent
Review-and-release alerts	Medium	++	FIs	Urban legend
Bank acct mgt.	Medium	-	FIs	Growing fast
Payment Transfers	High	--	FIs, Telcos,	Low
In-mobile or EC purchases	Low	-	FIs, Telcos,	Moderate
In-store purchases	High	?	FIs, Telcos, merchants, chips, networks	No, high in long-term

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# Javelin's Five-Year Forecast for Mobile Banking Adoption in the United States

Millions of Mobile Banking Users and Percentage of Users



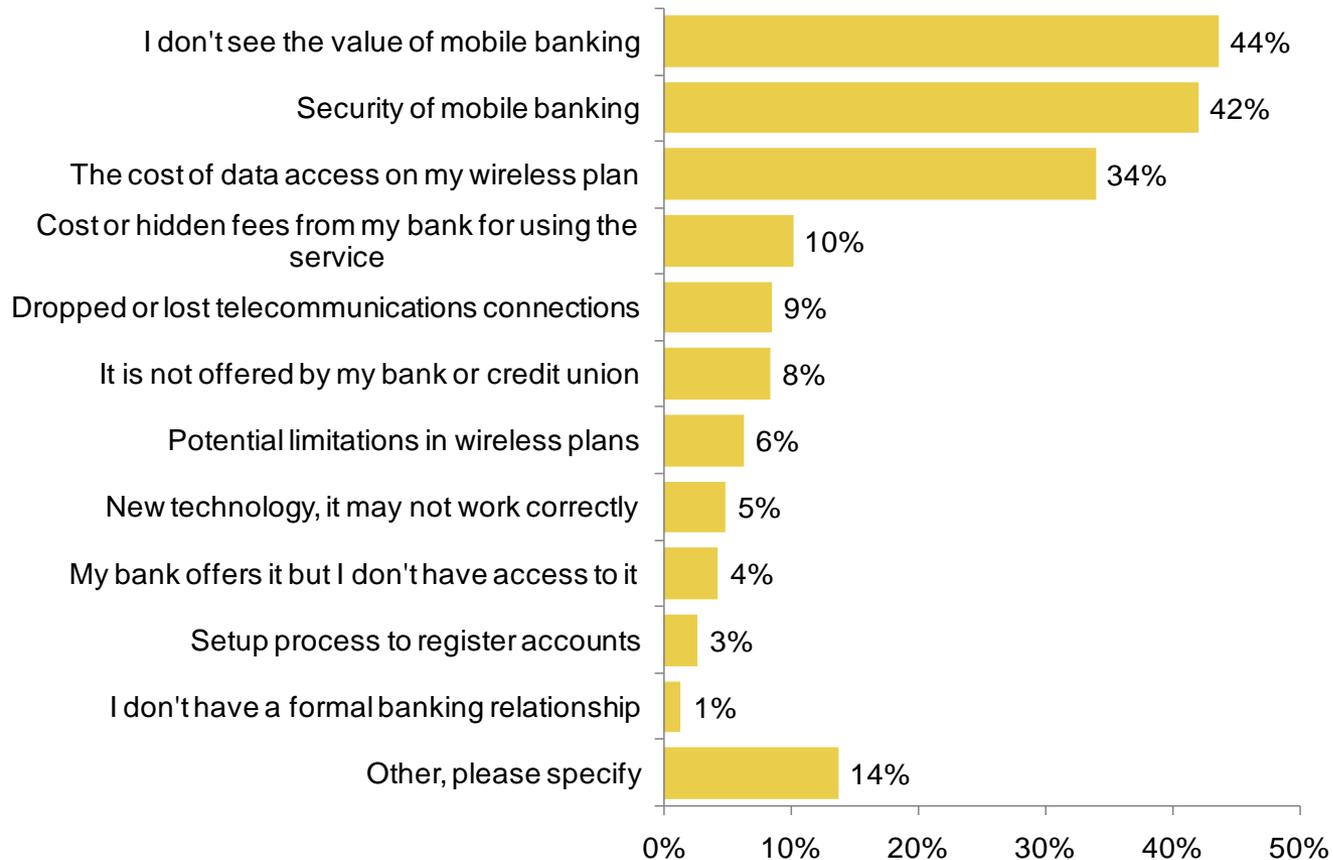
■ U.S. adults using mobile banking last 12 months  
— % of U.S. adults using mobile banking in the last 12 months

Base: U.S. adults with mobile phones.  
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# Unclear Value, Security Fears Remain Biggest Obstacles for Mobile Banking

## Primary Reasons Consumers Do Not Use Mobile Banking



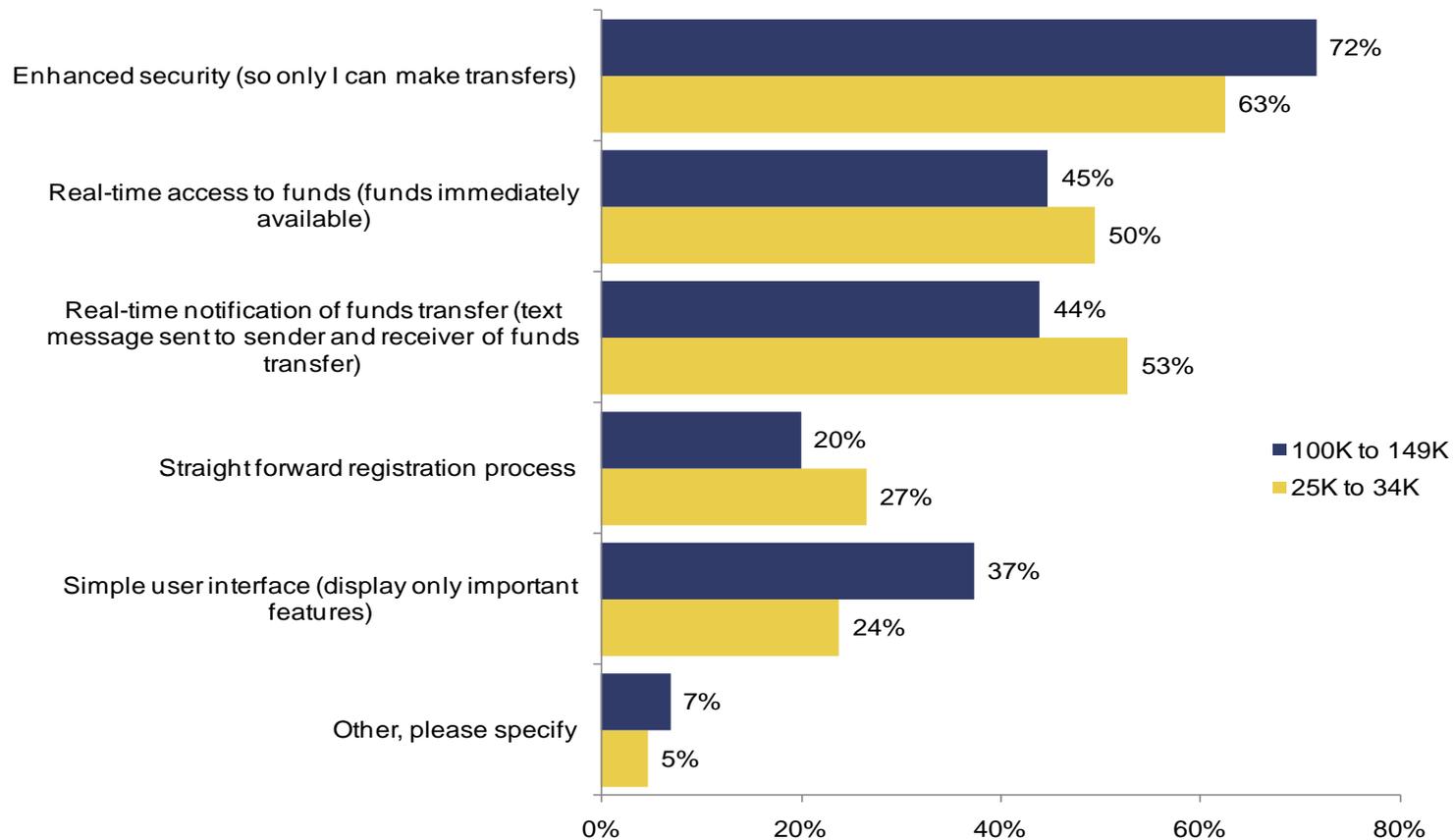
Q6: You indicated you do not use mobile banking. For what reasons do you not use mobile banking? (select up to three)

July 2009, n = 2,396  
Base: All consumers with mobile who do not use mobile banking.  
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# Underserved and Less Affluent: Real-time Notification and Access Resonates

## Essential Features to Spur Mobile P2P Usage, Affluent vs. Less Affluent



Q 35: Which of the following features do you believe are essential in order for you to begin using mobile person-to-person (P2P) transfers?

Sept. 2008 n = 92, 60  
Base: Consumers likely to use mobile P2P  
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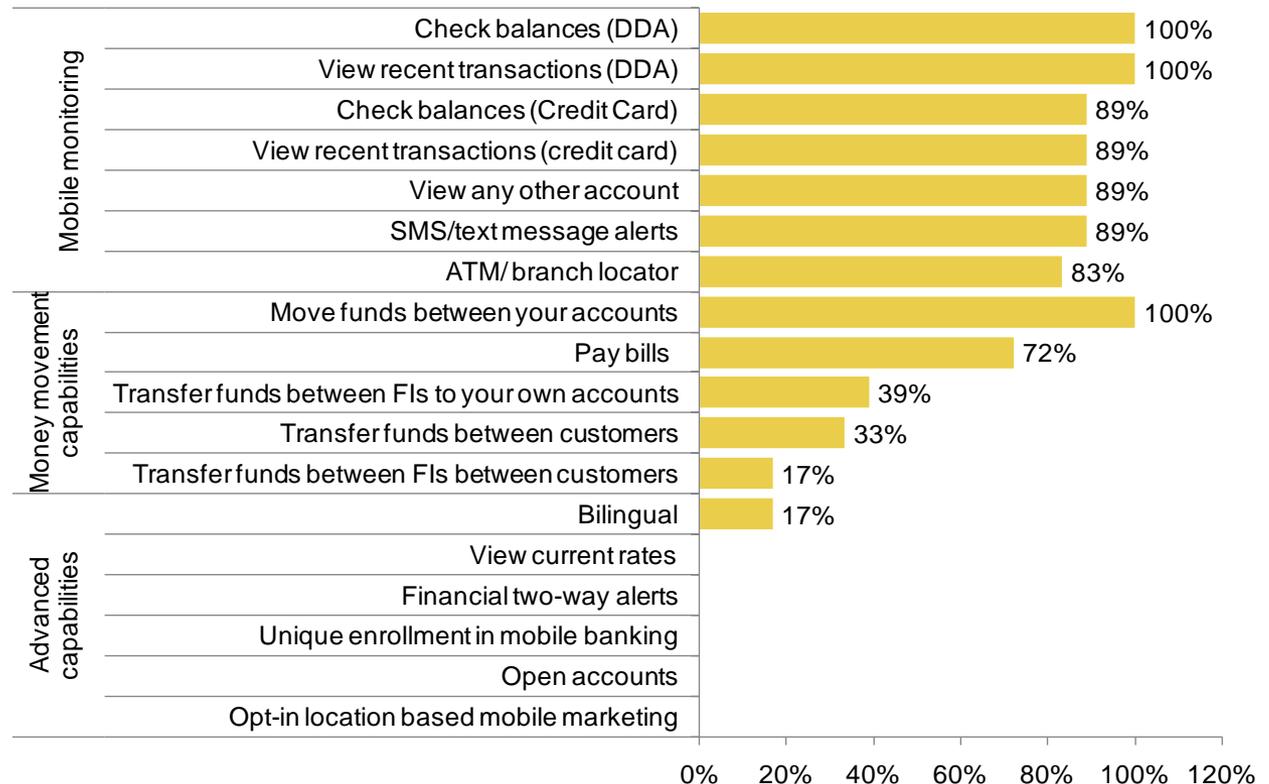
# What M-Features Are Top FI's Offering?

Leaders among 18: Citi, USAA, Chase, Bank of America, Capitol 1, Wells Fargo

## Mobile Monitoring

## Money Movement

## Advanced Capabilities

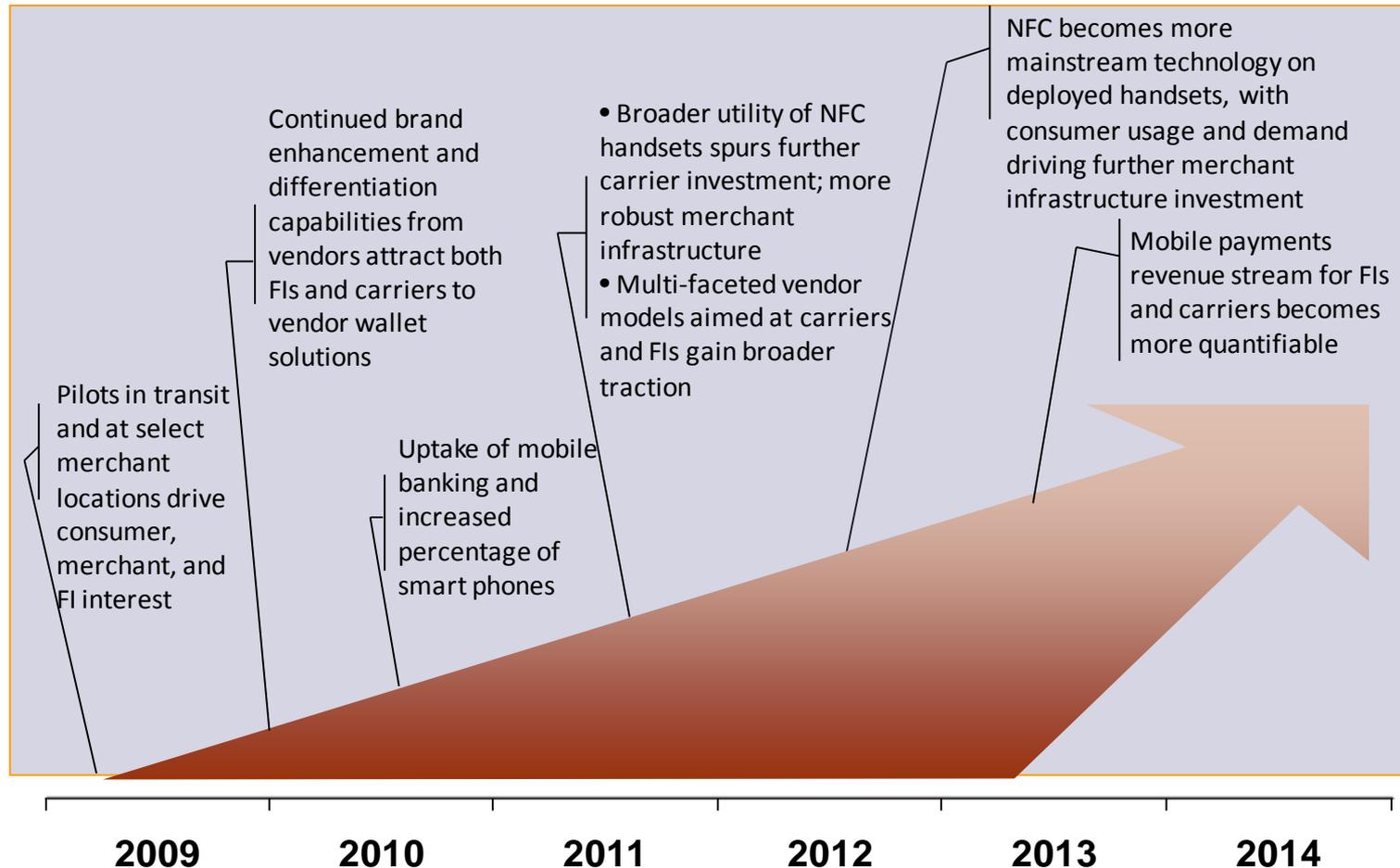


September 2009, n= 18  
 Base: All financial institutions reviewed.  
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# M-Finance Outlook: How We Get From Alerts to Wallets

## Potential Evolution and Key Catalysts for US Mobile Wallet



How well do we understand the problem we're working to solve?

*Thank You*

Javelin provides superior direction on key facts and forces that materially determine the success of customer-facing financial services, payments and security initiatives. Our advantages are rigorous process, independent position, and expert people.



**For questions regarding access to Javelin research please contact: [inquiry@javelinstrategy.com](mailto:inquiry@javelinstrategy.com)**

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