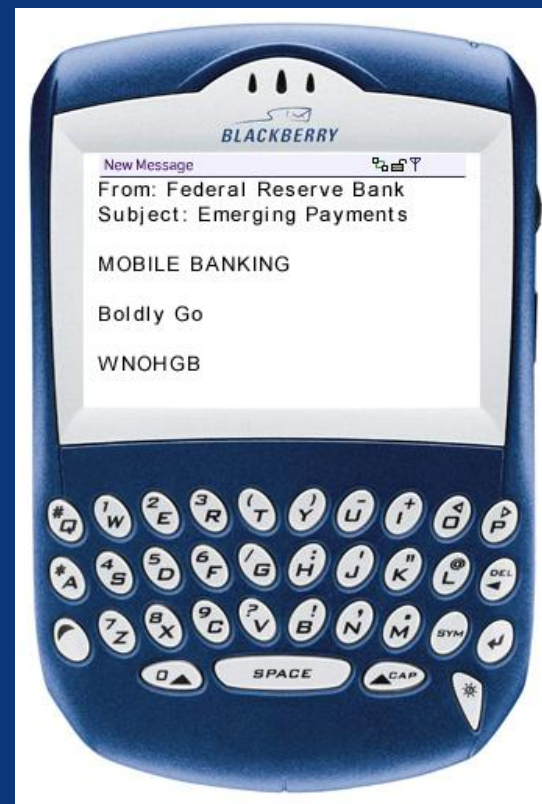

Mobile Banking: Boldly Go “WNOHGB”

Regional & Community
Bankers Conference

October 16, 2008

Mike Stewart, Assistant Vice President
Business Development & Customer Services



Discussion Topics

- Some Definitions
- The Mobile Landscape
- Why Offer Mobile Banking Services?
- Risks and Regulations
- What the Future Holds
- Your Mobile Banking Strategy



Mobile Banking Definitions

Mobile Banking:

- Use of mobile device to connect to a financial institution to conduct customer self-service (CCS).
- Includes viewing account balances, transferring funds between accounts, paying bills or receiving account alerts.

Mobile Payments:

- Use of a mobile device to make a purchase or other payment-related transaction.
- Payments initiated in physical or virtual worlds, and can be conducted via SMS, MMS, mobile Internet, downloadable application, and NFC chips.

Source: NACHA . Mobile Channel Terminology .August 2008

Mobile Banking Definitions

Mobile Commerce

- Extends e-commerce to mobile devices to buy and sell goods and services.
- Includes use of handheld devices such as cellular phones or personal digital assistants (PDAs).

Mobile Wallet

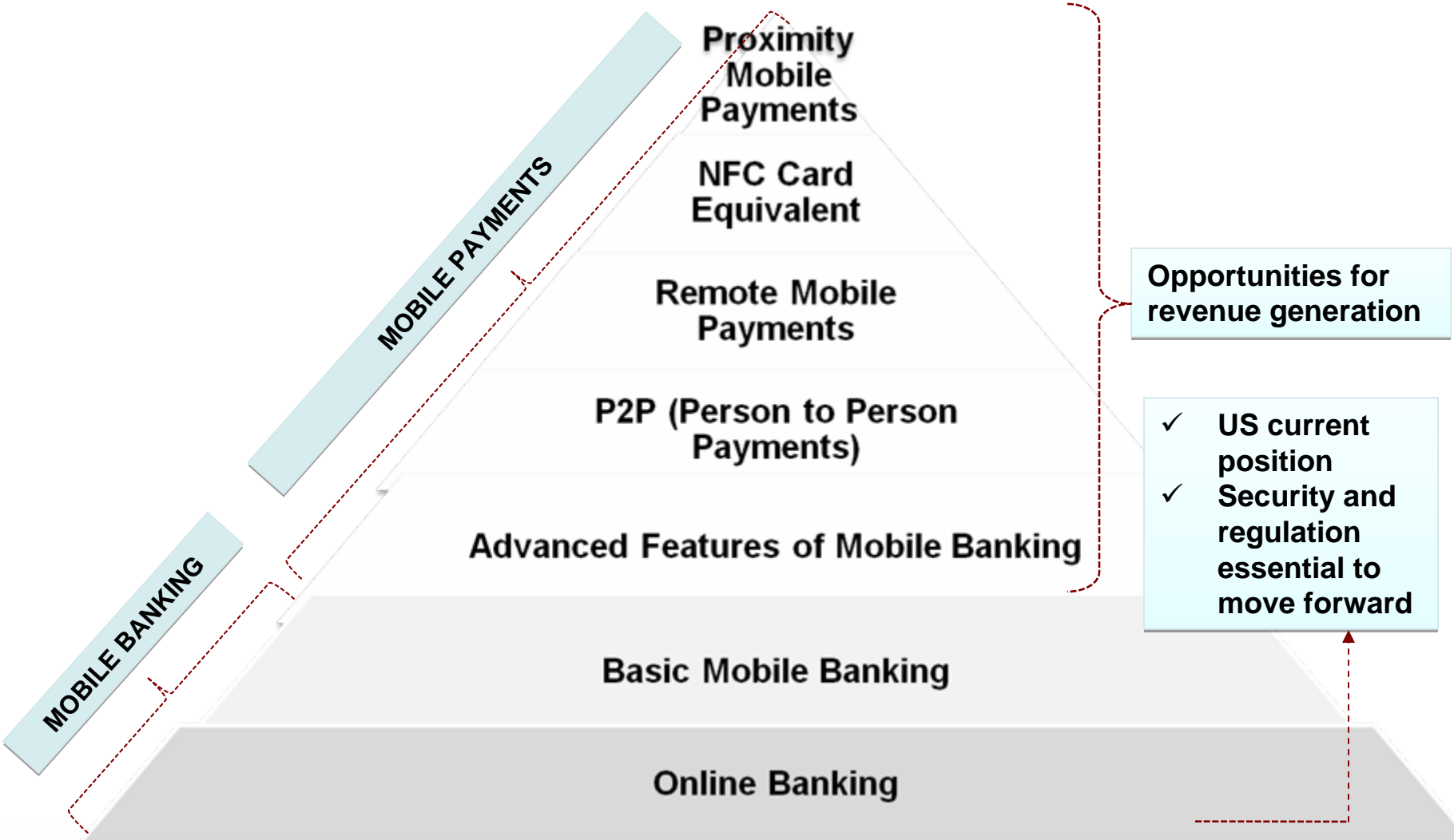
- A secure location on a mobile device to store information and make payments from multiple credit, debit, membership or loyalty cards, and any other current forms of card-type transactions.
- Wallet can store multiple addresses for delivery purposes.
- Information is typically protected by a PIN, code or token.

Source: NACHA . Mobile Channel Terminology .August 2008

U.S. Mobile Banking Landscape

- All large banks, most regionals, and many mid-tier FIs now offer mobile banking services
- There is little real “hard” usage data
 - Most FIs limit announcements to percent of online users
- Offering browser-based services that mimic home-banking functions is most common, except among largest banks
- Functions offered are chiefly information-based
 - e.g., branch & ATM locators, transaction history, balance inquiries
- Payments are “phase 2” services
 - Remittances appear to be an area of new opportunity
- Finding a ROI model is difficult
 - FIs offering mobile services appear to be absorbing the expense for strategic reasons

Building Blocks of Mobile Banking & Payment Services

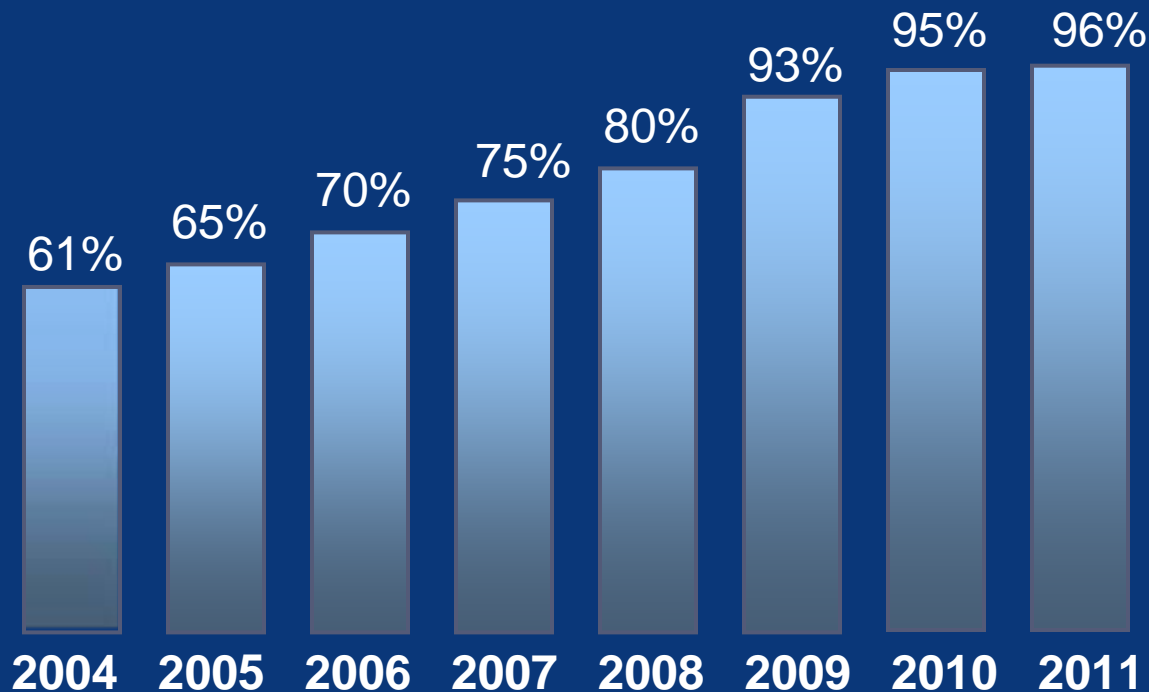


WHY OFFER MOBILE BANKING SERVICES?



U.S. Mobile Phone Population Shows Steady Growth

Mobile Phone Subscribers as a Percentage of Total U.S. Population



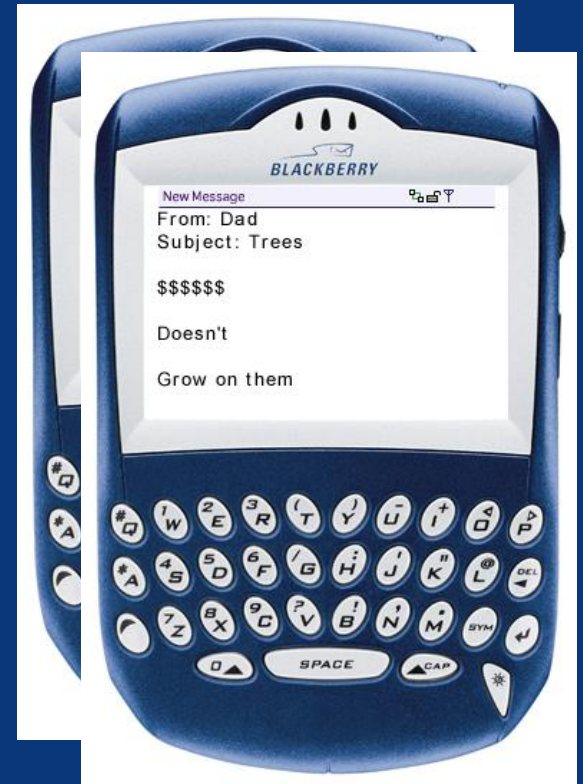
Source: Celent, Sept. 2008

Value Propositions for FIs

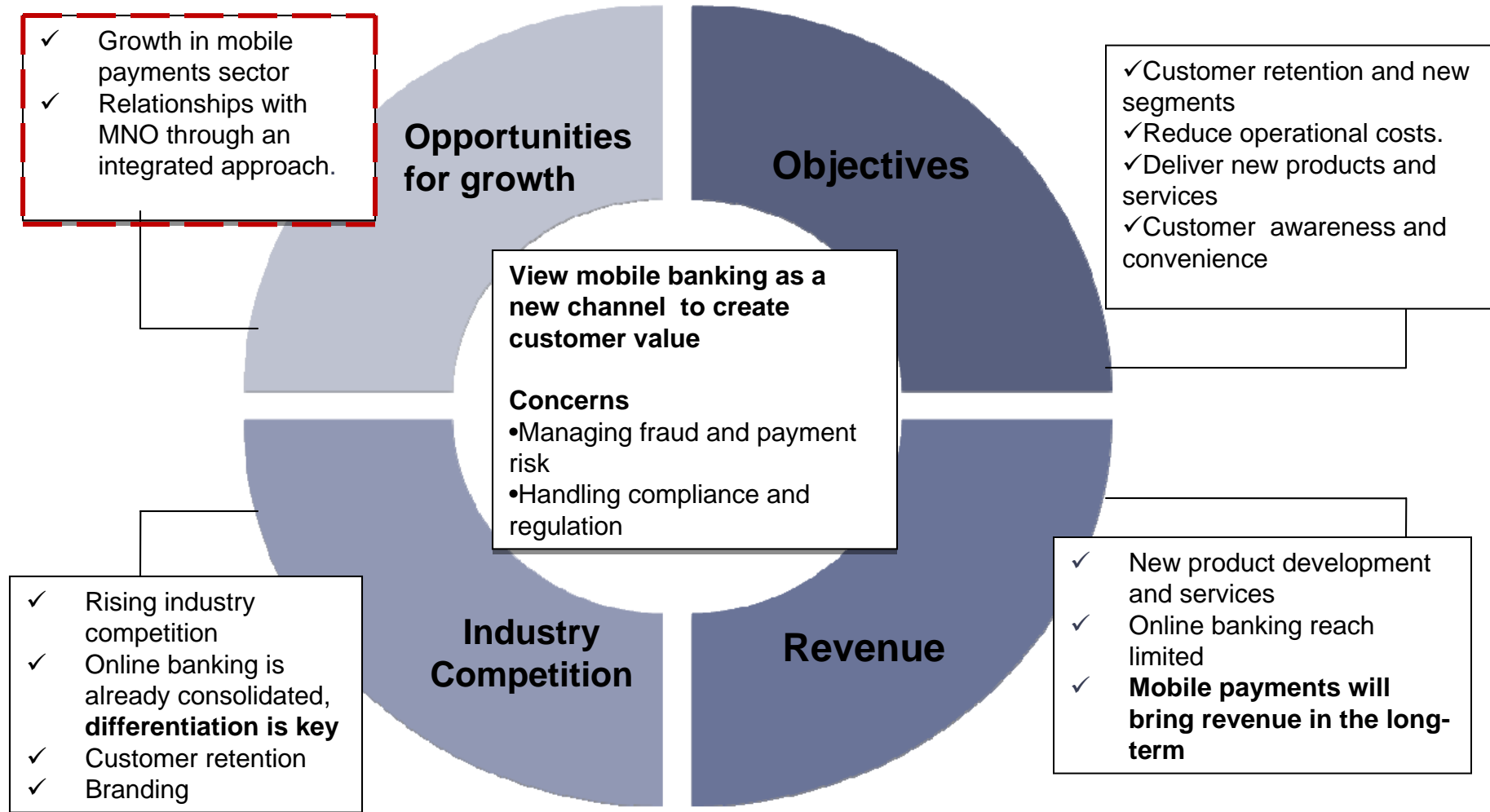
- Attract a growing number of younger consumers, as well as remittance and underbanked market segments
- Use the mobile phone (etc.) as an authentication device
- Keep up with the Joneses – maintain competitive position relative to larger FIs
- “Create a new user experience” – offering a new value proposition to customers
- Ability to move to fee-generating services
 - Payments
 - Real-time information

“If all we do is replicate Internet banking on this mobile device, it will just be yet another cost to the financial institution.” Tripp Rackley, CEO, Firethorn

An Illustration . . .



Financial Institutions Business Model



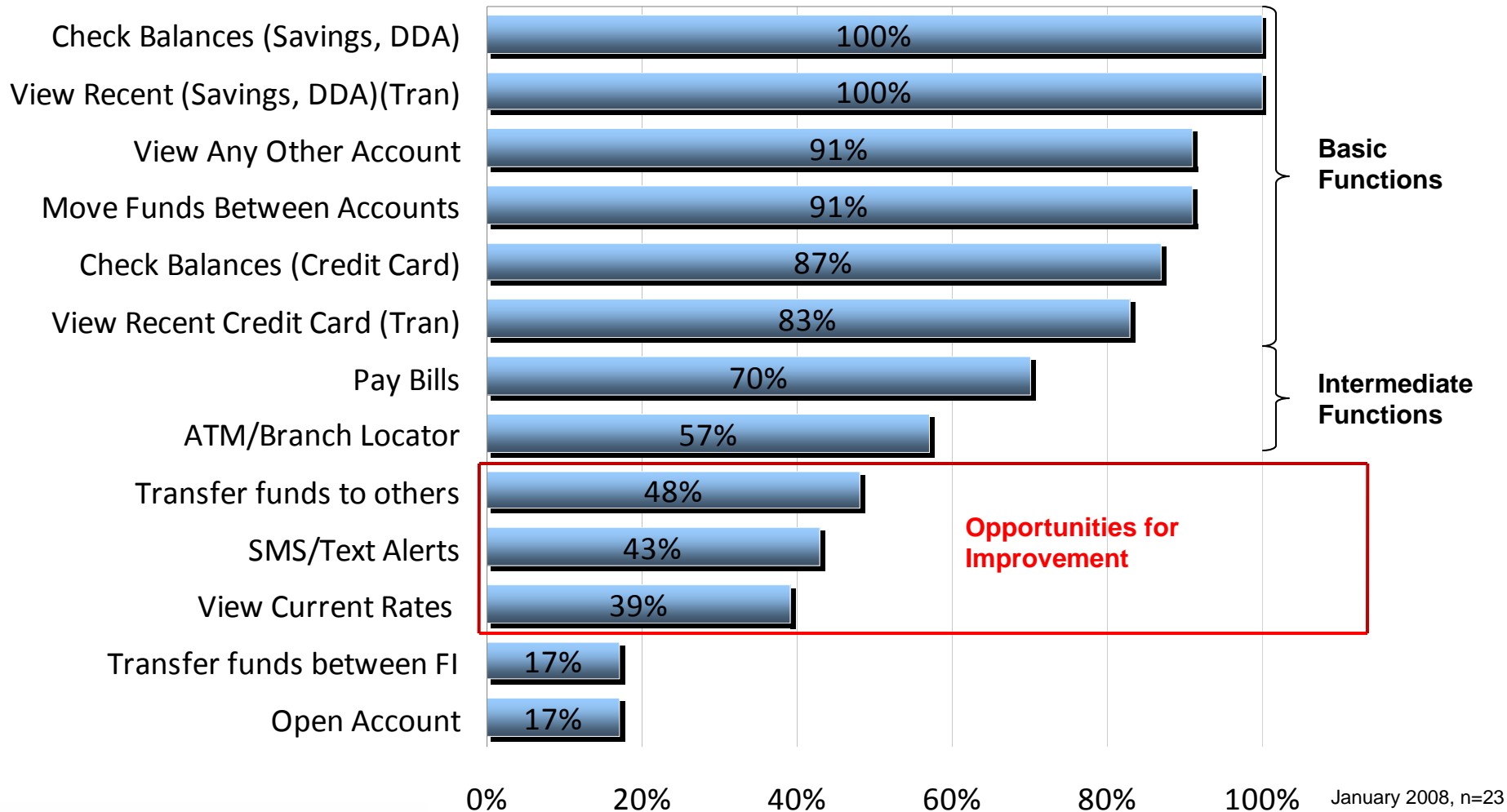
Source: Boston Federal Reserve

Roll-out by Major Financial Institutions by Year

2006	2007	2008
Wells Fargo 350,000-550,000 users	Bancorp South	PSCU Financial Services
Wachovia 175,000-225,000 users	Citibank 20,000 users	Washington Mutual
	Bank of America 1 million+ users	U.S. Bank
	JP Morgan Chase 15,000-90,000 users	HSBC (USA)
	SunTrust	Capital One
	America First CU	

Source: RBI, Crone Consulting estimates, June 2008

Mobile Banking Features Offered To Consumers By U.S. FIs



Source: Javelin Strategy & Research. Report: "2008 Mobile Banking Benchmark Study"

Mobile Banking Profile – Bank of America Example



BofA WAP
Access Browser
(iPhone)

BofA WAP
Access Browser
(All mobile devices)

Snapshot

Access Platform: WAP/Browser

Launch Date: March 2008

Handset: All mobile devices internet enabled

Carriers: Not carrier dependent

Vendor: In-house Implementation

Functions: View account balance, review transactions, pay bills, transfer funds

Mobile Banking “Success”

- “> 4 Mn M.B. customer sessions (May 2008)
- 224,000 activations reaching 840,000 active customers.
- Customer Base:
 - Two-thirds are under 35 years old
 - Four out of five under 45

Corporates Look for Other Services

Today

- Alerts
- Balance and account data
- Payment transaction history



Future – Static Features

- Viewing check images
- Balance reporting



Future -- Interactive Features

- Customer self-service
- Positive pay tools
- Payment initiation with approval functions
- Investments

Source: Celent, NACHA teleseminar , Mobile Banking Way Stations, Sept. 2008

Risks & Regulations



Risks and Barriers to Mobile Banking

- Carrier/vendor technologies incompatible, lack standards
- Business models not yet standard
- Complexity using device
 - Entering passwords, commands difficult
 - Applications can be tricky on handset
- Customer ownership unresolved
 - Bank or carrier?
 - Responsibility for customer service, fraud prevention, billing
 - Revenue sharing
- Regulation emerging – liability issues unresolved
- Security
 - Authentication and Fraud, especially cross-channel
 - Lost/stolen phones
 - Secure access via wireless network
- Customer demand – is it there? Will it be?

Will Regulatory Issues Impede Growth in Mobile Banking?

- Numerous regulatory agencies touch payments and/or wireless transactions
 - e.g., Federal Reserve, FTC, FCC, SEC, NACHA, FDIC, OTC, OCC, NCUA
- No legal framework specific to mobile banking today
- Financial services' and telecoms' regulations differ significantly
 - Telecoms have limited liability
- Cost of regulatory compliance may be too high
 - e.g., KYC, BSA/AML, state MSB licenses
- Mismatch between potential regulatory requirements and mobile payment standards
 - Participants might take “wait and see” approach

Possible Oversight / Regulatory Requirements

- Mobile banking services should be ubiquitous – fair access for all consumer segments
- Interoperability among networks and handsets
- Protect against unauthorized transfer of funds at any point in the process
- Establish grievance procedures
- Ensure customer data privacy
- Identify recourse for technical failures
- Customer Notification - Provide adequate and timely disclosure of risks, responsibilities and liabilities of mobile transactions to customers
- Ensure security requirements met for authentication

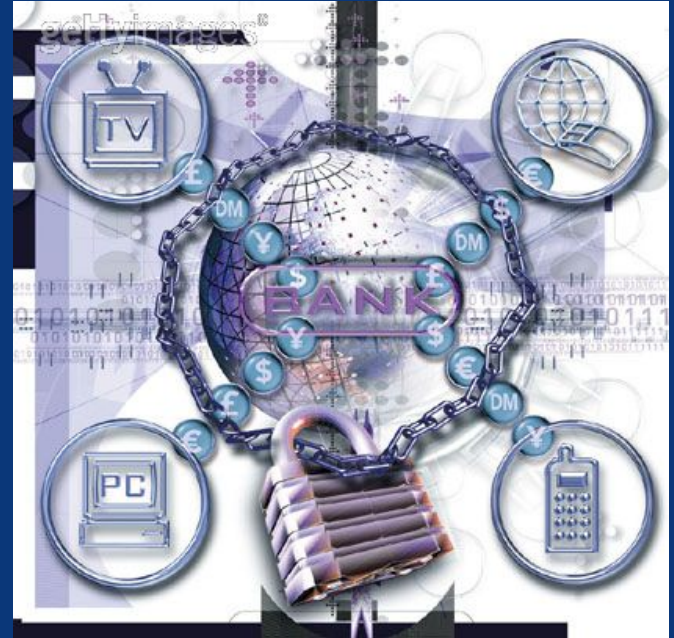
Outlook



Outlook

- More FIs will offer mobile banking -- with continuing evolution and enhancement of services offered
 - Businesses will adopt mobile banking services more readily
 - Payments (especially for bill pay) and NFC will be levers for value-added, priced services
 - International remittances will foster mobile payment transfer offerings ... at least by selected (larger) FIs
 - Cell phone will act as “authentication device”
- Vendors will continue to consolidate
 - Alliances of top FIs and carriers, vendors, or other third parties will proliferate
- U.S. market will follow other markets in the near future
- The market will be driven by standards and technology – carriers remain a wildcard

Developing Your Mobile Banking Strategy



Four Steps to Determine your Financial Institution's Mobile Banking Strategy

Step 1:

Identify your customer base

- Demographics
- Desired mobile banking functions
- Preferred mobile access platforms

Step 2:

Define your mobile strategy

- Budgeting
 - Implementation
 - Infrastructure
 - Support
- Mobile Banking
 - In- House vs vendor
- Long-term vs short- term investment

Step 3:

Choose an access solution

- SMS
- WAP
- Downloadable/ Embedded Application

Step 4:

Select a vendor

- Different packages
- Implementation costs
- Vendors target your specific type of FI
- Vendors aligned with your mobile banking strategy

Source: Javelin Strategy and Research. Mobile Banking Vendor Analysis, August 2008, Boston Federal Reserve Internal August 2008.

