

“Emerging Trends on Functional Utilization of Mobile Banking in Developed Markets in Next 3-4 Years”

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Mobile Banking channel is more than a decade old now. In the initial days, Mobile usage by Banking and financial world was limited to the SMS or basic banking services etc. However with the advent of technology, Mobile banking channel is offering many dynamic functionalities. Within the developed markets, the transaction users over mobile for Mobile based transactions of Far Eastern countries is far exceeding that of North America and Western Europe. While phone would become more “smart” enough and technologies proliferate, North America and Western Europe would catch up with greater force by next 3 to 4 years. These countries have not utilized the true potentials of the most cost effective channel such as mobile banking and there is a growing need to envisage the possible functionalities which can change the face of corporate sector. This paper looks at various advanced functions which could be conducted over mobile banking as the technology of the hardware, infrastructure, network, software would improve and become de-facto functions in the new era and changing aspirations of the banking world from this new-age channel.

Field of Research: - Mobile Banking – Functionality view

1. Introduction

During this decade starting 2000, Mobile Banking advanced from mere providing basic text messaging services to that of pseudo Internet Banking while customers could not only view the Balances, set up multiple types of alerts, but also transact activities such as Fund transfer, instruct payroll based transactions, access / redeem loyalty coupons, deposit the check over mobile. The list of such activities is increasing day by day as mobile infrastructure can align with various other technologies such as imaging, GPS/ GRPS, RFID etc and as the handsets are becoming “smart” enough to browse and interact RFID etc and as the handsets are becoming “smart” enough to browse and interact with various functionalities either similar to that provided by Internet Banking or there would be possibilities of new functions which would be more suitable to the Mobile Banking.

As the browsers would become more video friendly, interactive, light-weight; Banks would be able to service customer from multiple perspective not only for transacting but also for strengthening customer relationships. In last few years of global recession, customers have become more skeptical on the servicing capabilities of the traditionally established banks and prefer to bank with multiple banks.

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Vaidya

However there is an growing demand by the businesses as well as user community to extensively utilize this channel to move from merely “improving new features” to “create business objective based roadmap” while offering any new functionalities. In the absence of any strategic envisioning, cost effectiveness of the mobile banking channel cannot be established.

Therefore Banks would like to reduce attrition, improve customer retention, offer more loyalty offerings, create newer virtual solutions, reduce cost of operation, improve independent revenue generation and achieve comprehensive utilization of the Mobile channel from multiple dimensions. This paper provide in-depth view of how will the banks and financial institutions in the developed markets will enrich the functionalities in the next 3-4 years and each of such enhancement can be related to broader objectives within the organization.

2. Literature Review

Functionalities provided by banks in the developed markets has been incrementally enhanced by various banks which initiated from basic information such as “viewing” to that of “transactional capabilities” in last few years till 2010. Study conducted by Rajesh Tiwari and Stephen Buse demonstrated the functionalities such as Mobile Payment Mobile account operations, Mobile Brokerage, Mobile based financial Information service suiting to the advancement in the technologies till that period (Tiwari & Buse 2007). Yankee Group’s study indicated Moving Banks from Inquiry to revenue generation including Peer-to-Peer Payments to Attract Generation Y, the Un-banked and Under-banked (Paisner, Castonguay & Collins 2009). Also the research paper by Tower group on “Ceiling Banking to Your Customers” describes the progress of mobile banking in the developed markets with popular functionalities up to 2007-2008 such Balance Inquiries, Funds Transfer, Location finders, Bill Pay, Normal alerts (Riley, Schmidt & Tubin 2009). Further in 2009-1010 advanced functionalities have stabilized e.g. View Images, Check reorder, M-statements, personal finance, Action alerts, Advanced Mobile payments. Celent research report “key trends Key Trends in Mobile Financial Services in the European describes functionalities such as Mobile digital content, Mobile remote purchases, Mobile proximity purchases, Mobile ticketing, Mobile P2P and remittances (Florina 2009). Also Blog by Celent Research’s senior analyst Jacob Jegher, describes the functional usage to advance to automated functionalities to positive pay decisioning, payment approvals esp. in corporate Banking world (Jegher 2010).

3. The Methodology and Model

In predicting the multi-dimensional functional I referred various research materials in terms of

- A) Understanding the potentials Capabilities of mobile phones to cater to multiple areas suiting the business needs in future
- B) Composition of Mobile wallet capabilities
- C) Probable growth of smart phones Vis-à-vis standard handset in USA,
- D) CAGR growth rate of the Mobile Banking channel
- E) Regional trends of Mobile Banking growth

Let us see these points in detail,

Vaidya

A) Understanding the potentials Capabilities of mobile phones to cater to multiple areas suiting the business needs in future

I have studied few illustrative drivers for predicting the future needs of the mobile banking industry e.g. Tower group has predicted following key drivers in their report on “Top 10 Business Drivers, Strategic Responses, IT initiatives in US Mobile Banking and Payments” (Tower Group 2010). These key drivers will drive the new functionalities in the mobile banking world, in times to come.

Business Drivers

- Market Opportunities due to high Tele-density
- Market Demand for Payments convergence

Strategic response

- Deploy Market-focused mobile solutions
- Monetize Mobile functions
- Manage customer loyalty

Technology Initiatives

- Integration of mobile marketing programs
- Device-centric solutions

B) Composition of Mobile wallet capabilities

Time and again vendors, researchers, practitioners of mobile banking world have termed every incremental enhancement as “mobile wallet”. But Tower group as well as Celent Research describes functionality of Mobile Wallet as one which would have convergence of various functions with one-stop facility e.g. Tower group have illustratively demonstrated “mobile wallet” with functional features converging Deposit Accounts, Credit accounts, Loyalty Accounts, Merchant Accounts, Gift cards and coupons, Line of credit stored on the wallet with remote communication facility at a dynamic time and location (Riley, Schmidt & Tubin 2009).

C) Probable growth of smart phones Vis-à-vis standard handset in USA,

Yankee Group expects the market share of “Advanced Operating System” or “Smartphone” devices in the U.S. to increase from 15.1 percent in 2008 to 39 percent in 2012, representing one of the fastest growing markets for these high-end devices (Paisner, J, Castonguay A & Collins, C 2009).

Also Tower group has predicted “**100% household penetration of the Full-feature (smart types) phones by the year 2014 across USA, in their discussions of paper of 2010 “Ceiling Banking to Your Customers: Latest Trends in Mobile Banking”** and Tower group is very optimistic on the fact that “Growth of Full Feature Phones Presents Market Opportunities for Mobile Payment Enablers” in this same paper. Here predictions for Active Mobile banking users, Mobile Banking Transaction, Smart Handset - full feature depicts positive growth , whereas normal handset users (without full feature capabilities) enumerates decreasing trend (Riley, Schmidt & Tubin 2009).

Vaidya

Refer case study for predictions on the Mobile banking scenario in table 1 below, based on the Tower group's study as referred above.

Table 1: - Mobile Banking data on usage and handsets in USA

<u>Year / Data</u>	<u>Active Mobile banking users (Millions)</u>	<u>Mobile Banking Transaction (US\$ billion)</u>	<u>Smart Handset - full feature (approx million)</u>	<u>Normal handset (approx Million)</u>
2010	17.8	2.9	60	220
2011	27.4	5.6	70	210
2012	39.3	9.4	80	200
2013	53.1	14	100	190

From the above data, the CAGR is calculated as follows a) Active mobile banking users CAGR at 44.16%, b) Mobile banking transaction CAGR at 69.97% c) Smart Handset sale at 18.65% whereas d) the normal handset sale numbers depicts a negative story.

Therefore Smartphone's rise will continue to act as a key catalyst for greater adoption of mobile banking services within the masses irrespective of the vendor and service providers. And this will give set higher expectations of functional offering from mobile banking world.

D) CAGR growth rate of the Mobile Banking channel in comparison to other channels of distribution

Tower group predicts a CAGR rate of 138% p.a. from a period from 2008 to 2012 as a representative of the volume shifting to mobile environment whereas the CAGR for transaction on other channels has been predicted at Internet 14%, Call Centre 4%, Branch 1%, ATM 1% (Riley, Schmidt & Tubin 2009).

E) Regional trends of Mobile Banking growth

Jupiter research has highlighted the prediction of transaction users in the developing countries up to 75% of the global users. Currently Far East and china exceed 41% against USA at 22% and Western Europe at 12%, but with the predictions described by Tower group till 2014 where USA will be aggressive user of Full featured Smart phones; USA will be very aggressive in numbers starting 2011 (Riley, Schmidt & Tubin 2009).

4. The Findings

Based on the observation above let us look at the existing functionalities described by Mobile Banking world

Vaidya

A) Illustrative Mobile banking functionalities in the current context (irrespective of handsets)

Existing mobile Banking illustrative functionalities offered by banking world irrespective of type of handset at different level of maturity has been detailed in the following table.

Table 2: - List of functionality currently used in Mobile Banking

<u>Mobile Banking Agenda</u>	<u>Functionality Details</u>
Information	View bank Balance
	M-statement
	Transaction History
	360-Degree View of the account including e.g. Saving, deposits, loans, credit card, mutual fund, stocks, Insurance etc
Origination and fulfillment	Account opening with digital signatures (subject to regional regulations)
Money Movement	Inter-account transfer
	Transfer within same bank with same country
	Transfer within same bank across globe
	Transfer to other banks within same country, region and globe (limited reach for many banks)
Servicing and support	Alerts e.g. Balance alerts, payment alerts, Transaction alerts, profile based alerts, Service based alerts, abnormal items alerts, Research alerts for niche customers etc
	Profile-driven changes e.g. address
	Back office driven support e.g. Stop payment, check book request etc
Multiple-LOB adoption	Moving mobile banking to non-banking products such as Banc assurance (i.e. alliance between a bank and an insurance company)
Mobile based value-added transaction offerings	Various mobile based value-added offerings such as Stock Trading, MBPP (Mobile bill Presentment and Payment)
Proximity Payments (e.g. NFC driven)	Use of mobile at POS and as an ATM
	- To initiate transaction requests and communicate with bank to solicit transaction authorization
	-To pay for good at store
	- To make withdrawals in specific shops and shopping malls

Vaidya

Remote Payments	Digital downloads with limited streams such as Gaming
	Phone top-ups
Featured Phone Driven Capabilities	Calendar
	Scheduling based on calendar incorporated with Banking transactions
	Calculators
	Tools
	ATM / Branch Locators
Technology-led value-added facilitation	Remote Mobile Deposit
	Check image view
Relationship driven enrichments	Cross-selling Banners
	Behavior based messaging
	Loyalty Coupons
	General Customer communication
	Event driven customer communication
	Profile driven customer communication
Money Management and personal finance	Personal Financial Management (PFM)
	Portfolio
	Account aggregation
Corporate / commercial banking specific	Payroll driven services
	Positive pay decisioning
	Document workflow based remote approvals
	Comprehensive Small and Medium Business kit from e-invoicing, Accounting, Reporting, communicating with extensive supply chain incorporation.
Other Mobile Banking services	Ticketing for events and transportation
	Car Park tickets

The above data has been enlisted and categorized after studying research report from Celent, Tower group, Yankee Group, research paper from Rajesh Tiwari / Stephen Buse and also my personal research based on interaction with various banks and financial institutions.

Vaidya

The functionalities listed above in the current era have been created to achieve following objectives by banking organizations such as;

- Customer communication and information
- Customer convenience
- Conduct Transactions
- Create customer centricity
- Enrich Mobile Banking experience to non-banking financial services
- Building the customer relationship
- Extract the best advantage of technology
- Provide value-added propositions
- Generate new revenue streams
- Reduce cost of transactions
- Achieve Multi-channel advantage
- Automate the servicing and support

B) Illustrative Mobile banking functionalities envisaged in developed markets over a period of next 3-4 years bringing enriched and new functionalities in the Smartphone environment

As discussion in the section 3D) on methodology and model above, the higher CAGR growth of mobile channel in comparison to other distribution channels, the functional expectation of the mobile banking channel shall move from merely “improving new features” in earlier phase to “create business objective based roadmap” in the Smartphone era.

With the advent of newer technologies bringing extensive use of Smartphone in the developed markets, Mobile Banking would find newer ways to connect with the customers and utilize the mobile channel comprehensively. While the features, functionalities and objective mentioned in the above paragraph in current context will continue; Mobile banking would take a new leap with moving to higher value chain. During this time the Mobile channel would be utilized from established objectives such as built relations, reduce cost, achieve new revenue stream to that of connecting with the new customer segments, enhancing customer relationships to improve loyalty and reduce attrition, create new ways to generate lead in the process of prospecting, real time experience of bi-directional customer experience etc.

Therefore the envisaged functional improvement based on the growth of technology, customer adoption, changing customer needs have given rise to higher level of objectives from achieving better utilization from the existing objectives in the Mobile banking world.

Vaidya

Table 3: - List of envisaged functionality with radically different objectives in next 3-4 years

<u>Defining Customer relationship with specific objectives</u>	<u>Functionality Details</u>
Communication enrichment	Automated Proactive Video interaction with agents, generic advisors while user is browsing the Banking site on Mobile
	Video interaction with the agents, advisors with a specific request by customer or a prospect.
	Video interaction of special advisor or relationship managers for niche high value customer
	Video conferencing with multiple users in the corporate banking
Pervasive Transactions capabilities	Introducing “Mobile wallet” in true sense comprehensively utilizing mobile banking potentials to converging areas such as Deposit Accounts, Credit accounts, Loyalty Accounts, Merchant Accounts, Gift cards and coupons, Line of credit etc (Riley, Schmidt & Tubin 2009)
Education surrogated to drive cross-sale / up-sell	Rich media demos for various transactions over mobile
	Test drive for hands-on experience to the customers prior to conducting transaction.
	Education contents customized to the customer profiles
New segment connect	Connect with say Gen Y / Z segment with incorporation of gaming ambushed to achieve cross-sale / up-sell in Banking transaction
	Connect with Gen Y / Z segment over social platform on mobile to achieve cross-sale / up-sell in Banking transaction
Content monetization and target enrich revenue streams	Content monetization tuned to various micro opportunities such as music download, books download (assuming interaction on gadgets such as I-pad), advertising, various subscriptions.
Build Brand	Built the bank’s brand with entire reshuffle of the “Mobile real estate”. This would reflect in the way screen would
	- Enable features such as say offer dashboard look
	- Enable various parallel activities at the dynamic time,
	- Create new “behavior based interaction” (beyond purely messaging),

Vaidya

	- Improve customer experience with improved access
Incorporation of multiple technologies at the mobile phone with changes at front-end as well as back-end offering to offer customer convenience	Multiple technologies collaborated to come out with value-propositions in various new solutions e.g. incorporation of Radio-frequency identification (RFID) and workflow softwares viewing dynamically customer mortgage based documents in the back-office for the home loan approval process intended for top management's convenience
	Use of Bio-matrix for identity recognition of the user and enabling marketing based interaction while aligning Customer Relationship Management (CRM) application of the Bank.
Horizontal positioning (Business relations across multiple industries and products)	Banks will align with shopping malls incrementally to offer new mobile based offers, comprehensive e-shopping transaction and post transaction relations building e.g. banks executing transactions dynamically over Mobile wallet and banks as well as shopping malls create cross sell / up sell based relationship on his / her spending pattern.
Vertical positioning (Business relations with specific sector or industry group)	Banks will align with vertical industry such as travel, entertainment, hospitality etc to create new offers and offer comprehensive experience while customer is moving across different geographies
Proactive positioning to improve loyalty and offer better customer experience	Instead of asking customers to fill form, maintain loyalty card, cell phones automatically creates a discount coupon for download
Proliferation of virtual currency while developing new revenue segments	Creation of new virtual currency with redemption of coupons / e-gifts, while social platform slowly moving from Internet based to mobile driven environment.
Personalization of corporate banking services	Mobile banking will offer great advantage to create personalization experience beyond role based experience offer by corporate banking as previously the web real state in corporate banking more was on a segment driven.

5. Summary and Conclusions

Mobile Banking has been in existence since more than a decade. However in the earlier phase of Mobile Banking was more used for quick reference to the banking transaction and balances esp. in SMS environment. However with the proliferation of multiple technologies in the hardware, infrastructure, network, software segments, the mobile banking has found its due recognition in last couple of recession. Less developed market could adopt transaction based mobile irrespective of the type of handset due to innovative products esp. in “fund transfer” or “remittances” segment with collaboration between telecom companies, payment providers, banks etc and some of the selected features have been effectively utilized in these markets. In contrast to this, developed world excluding Far Eastern market could adopt the mobile Banking in a limited way esp. due to multiplicities of the operators in this segment and heavily developed Internet Banking market. However with the high-featured mobile phones in Smart environment would definitely take mobile banking to the next height in next 3 to 4 years from now. Mobile Banking would be increasingly used from “Building customer relations, reducing cost, achieving new revenue stream” etc to that of “connecting with the new customer segments, enhancing customer relationships to improve loyalty and reduce attrition, create new ways to generate lead in the process of prospecting, real time experience of bi-directional customer experience etc.” And needless to say the technological revolution would play a major role in days to come.

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Vaidya

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Annexure

Explanation to Some of the Terms used in this Paper:

Following is the explanation to some of the concepts relevant to mobile banking and world of commerce;

Capabilities of Smart phone

Teledensity of "Smart phones" have characteristic creating higher capabilities in areas such as :

- Superior Browsing capability
- Higher Video usage Capabilities
- Higher Speed of browsing
- Superior storage capabilities, enabling running of pseudo-workplace environment
- Multiple functionalities over handset such as e-mailing, Internet Mobile, dynamic gaming abilities, touch-screen features, sound or voice based controls etc
- incorporation of varied technologies within the phone

Term "Developed market" described in the paper above

The term "Developed Market" has been conceptually termed for countries with higher technologies capabilities or perceivably with better infrastructure to conduct business e.g. North America, Western Europe, Far Eastern countries / Asia Pac countries.

Multiple Ways to Deploy Mobile Banking

As referred by Harland Financial solutions white paper in ABA Banking Journal in 2010, the different Ways to Deploy Mobile Banking

- Mobile optimized Web Site (e.g. microsite)
- Web-based Technology providing Mobile Internet
- Client-based downloaded Applications
- Short Message Service (SMS)
- Near Field Communications (NFC)
- IVR (Interactive voice response)

Out of above, Smart phones would have more relevance in Mobile Optimized websites and web based technology providing mobile Internet, though it could be obviously useful for other deployments.

Vaidya

Importance on period of 3 to 4 years in developed markets

While we are in the middle of the years 2010, technological standards, infrastructure, budding alliances between telecom industry, payment service providers and banks would mature in next 3 to 4 years; at the same time demand for high-featured smart phones would mature in this time zone. Currently this industry is scattered with too many players chasing for similar initiatives across various dimensions and regulatory directive would also stabilize during this period.

Meaning of term Generation Y / Z

Generation Y: Term commonly used by marketing professionals for describing the segment of population born between 1977 up to 1994

Generation Z: Term commonly used by marketing professionals for describing the segment of population born post between 1994 up to 2000.