



Digital Banking

Chapter 5 : Effects on Retail LOBs

Prepared : October, 2014

Bank's view of itself



Customer's View of Bank





Introduction

Customer

Digital Banking

Channel Transformation

Effects on Retail LoBs

Consumer Lending

Digitization Themes



Origination on the Go



e Delivery & Signature

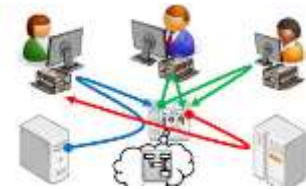


e Notifications



Document Management

Foundational Themes



Workflow



Rules



Common Origination

↑
Sample Journey
↓

- Secure Message (with preview) in mail accessible via 2FA
- Dashboard with missed payment / invoice, cash flow forecast, finance options (OD/Loan), appointment, chat/call/query, FAQs, Summary of previous interactions, scenario calculators, peer actions
- Screen share (and screen capture to capture conversation) with Relationship Manager with video chat
- Action needed (with ETC) box for prior application / conversation
- Application progress tracker with contextual mouse over help, progress & document details
- Follow up information sending options (camera, email)
- Phase wise ETC, duration taken to complete, financial offer calculations, appointment for clarifications (interaction mode, location, reminder)
- T&C, Signature, Reminder for next in workflow
- Account Summary

Consumer Lending ... additional observations



Established Bank

Video content on starting, running, growing a business including preparing for a client meeting

Customized Business Cards from the site with business logo; site optimized for a Mobile view

Business checking accounts up by 5.2 % over last year, 98K unique visitors last May and 94K in last June



Startup

Provides information on small businesses to potential lenders; marketplace solving inefficiency

Scours public and private databases, collecting any information attached to the tax ID number providing hard to get cheaper intelligence to banks

Revenue Model = Fee from Banks post completion of transaction & listing fee from SMEs



Merchant cash advance (Square Capital) with repayment based on sales ; no apparent fixed repayment period



Providing customers with instant lines of credit, with risk being gauged from information available in social media profiles



Uses job histories, grades, alma mater, area of study (other than Social Media info) to assess credibility

Mortgage *(Functional View)*

Key imperatives across Lead Management, Origination & Servicing include :
Mobile-Social-Omni channel interaction layer + Glued by B2B/C integration & BPM enabled Omni channel + Supported by Customer MDM and Analytics (Customer & Market)

Lead Management

Appraisal Enablement



Property Search (AR)



Property Blogs



Neighborhood Community



Good Faith Estimate



Connect to Bank



Financial Advice from Bank



Origination

Application Initiation



Channel Continuity



Rule based auto decisioning



Drop Box, Disclosures



eConsent, eSignature



Actionable Notifications



Mobile Docs



PaaS for Imaging



Dynamic Case Management



Servicing

Retention Strategy



Early Warning System



Financial Planning



Financial Responsibility



Dynamic Case Management



Insurance, Maintenance



Mortgage *(Systemic View)*

Mobile

- Appraisal & Online pre qualification for Field Officer (property snaps, GPS enabled borrower & realtor location)
- Property Search (price range, map, configuration, comparisons, real time connect via click to chat/call, pre approval / application initiation)
- Augmented Reality for pre approved properties
- Comprehensive GFE calculator and Bank advice on financing
- Drop Box, Disclosure, e-Consent, Notifications

Utilities

- Channel continuum for application processing
- Mobile Docs
- PaaS for Imaging & Document Management
- Automated rule based offer management, loan decision, loan monitoring
- Early Warning system leveraging Enterprise and Credit Bureau data
- Dynamic Case Management enabling anytime anywhere initiation, approval and modification



Social

- Property Blogs
- Proximity to essentials (clinic, school, mall)
- Neighborhood social community peer interaction
- Analytics for customer retention and Early Warning triggers
- Bank hosted or supported 3rd party blogs on Financial Planning & Responsibility

Financial Inclusion

Here, the Segment Category = Unbanked + Under served + Unhappily Banked

Mobile Networks

Mobile Talk time Top Up,
Load Cash, P2P, Pay Bill,
Commerce, Donations
(Charity, Political Parties)

India, Africa

Retailer, Utility Firms

Micro Lending and Micro
Insurance based on
transaction, utility
payment history

Latin America

Cross Border Remittance

Money Transfer at Retail
Store to avoid high cost
of Western Union

Latin America

Alternate Lending

From entities like Square
Capital against invoice,
not fixed monthly
installments

USA

Intimate Banking

Co Operative society with
financial agents doing
banking (OAO, deposits,
payments) over mobile

India

Prepaid Solutions

Serve and Blue Bird from
American Express and
Money Card from Green
Dot

USA

Mobile Payment Instruments

Mobile at POS

It is about paying in store with mobile device with 'Tap & Go' or NFC or BLE any other communication protocol



Mobile as the POS

Merchant using Mobile Devices for cards payments



Mobile Payment Platform

This enables P2P, Merchant payments in both POS/Online



Direct Carrier Billing

MNO driven model of topping up and usage

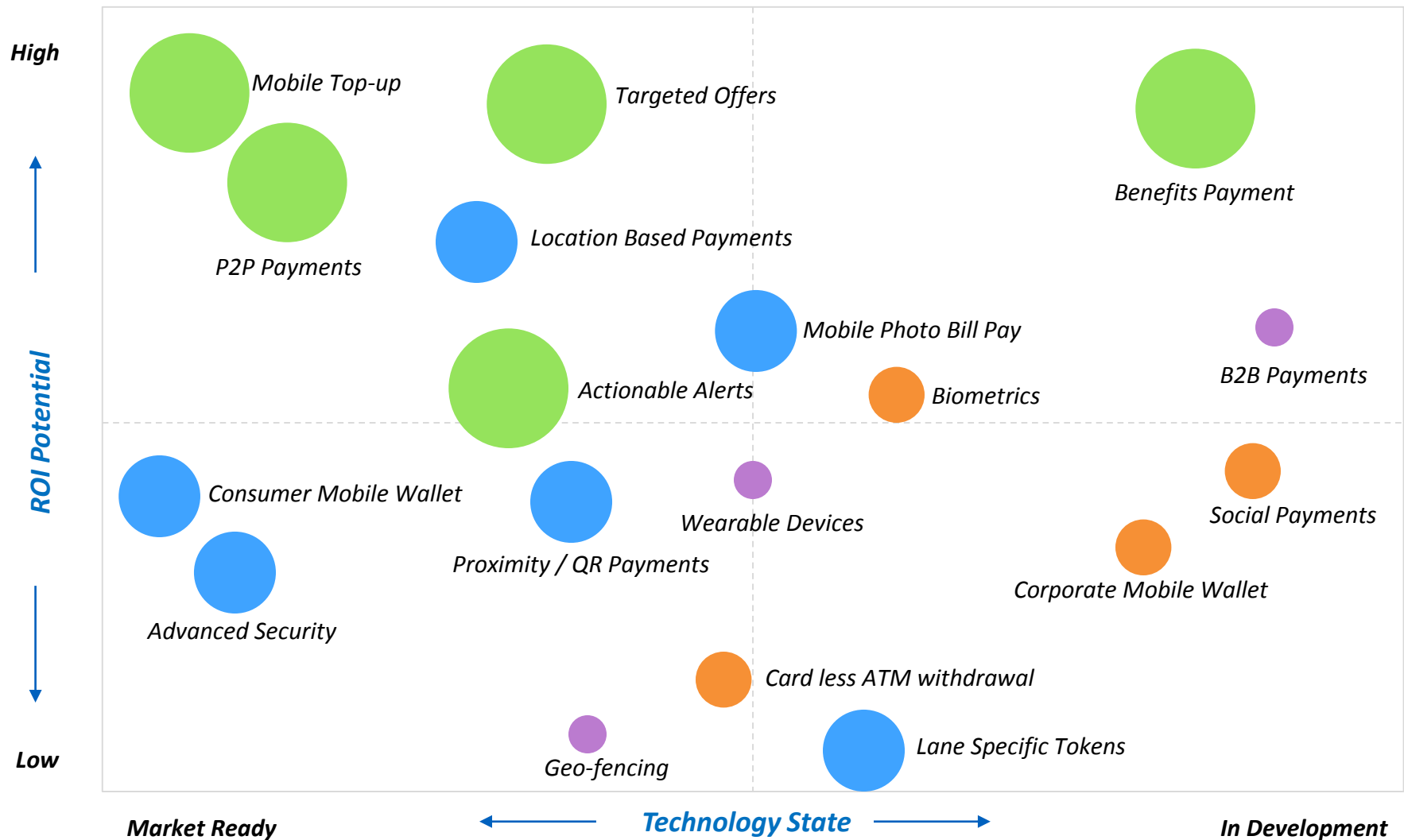


Closed Loop Mobile Payments

Store Cards on mobile; operating within a defined ecosystem



Mobile Payment Happenings



Popular Digital Wallets



Common Functions offered:

Balance check, Txn history, In-store and Online payments, 1-3 clicks checkout, Offers, Alerts, Allow major credit and debit cards, APIs and SDKs for easy partner integration, Security of payment credentials through tokenization / secure cloud, Fraud checks through device and IP data



Open for all cards,
Works in Store &
Online,
Provides Developer
Sandbox

Google Wallet Card,
P2P using email ID,
Tracks Online
Purchases

Auto Pay when checked
in, MRDC to fund
wallet, P2P Payment,
Order Ahead

Location Based
Services, Large
Ecosystem of Players,
Model success in
Financial Inclusion



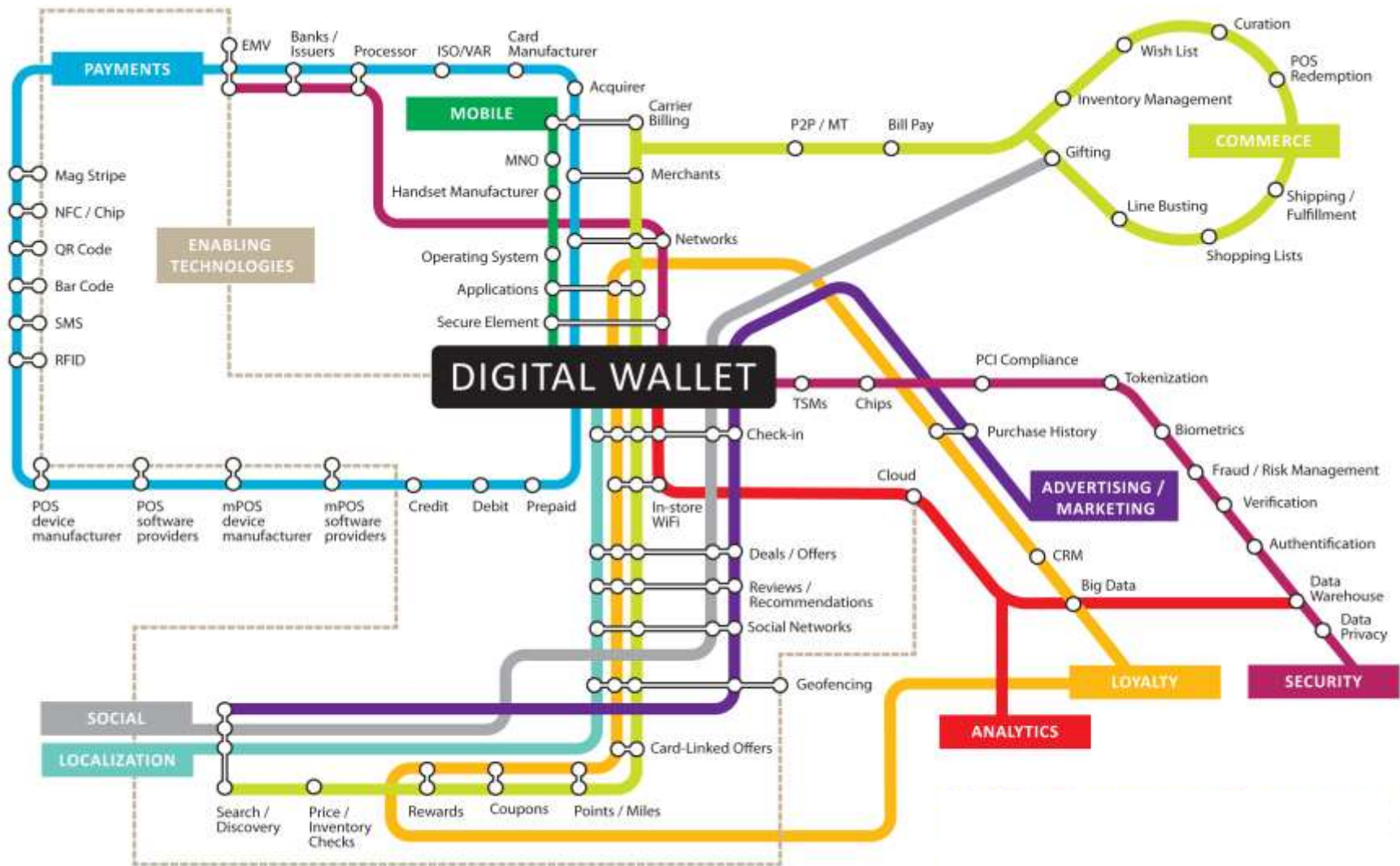
No Bill Payments, No
Recurring Payments,
Complete card data
sent

No Merchant specific
rewards, Bonus
rewards from Financial
Institutions

No Scheduled
Payments, Service
problems for Financial
Institute customers

Primary funding source
is limited, Dependent
on Mobile Carriers

Digital Commerce Ecosystem



Apple Pay : Overview

A device based Digital Wallet with NFC implementation, Issuer side Tokenization, Network supported TSP without needing to store PAN details on the device, involvement of any MNO/TSM and visibility into transaction details for monetization.

How it Works

Provisioning: Take picture → Send to TSP →
Get DAN from TSP → Store in Passbook

Merchant Readiness: EMV Contactless for in
store; Implement Apple Pay using PassKit
framework for in App

In Store Txn: Proximity hold with Touch ID →
Dynamic Secure Code & Txn Cryptogram →
TSP translation → Issuer for Auth

In App Txn: Check for device with SE &
Payment instruments provisioned therein →
Payment Token from PassKit → Processor SDK
APIs called by app

Observations

- Safer CNP ; possible review of pricing around 'mobile present' paradigm
- Commercial & Liability Models to evolve in US and Abroad ; MNO and TSM models hammered
- International Expansion: A few positives (EMV Contactless, Consumer familiarity) and a few hurdles (71 % Android, Device Ownership)
- Amazon, Braintree to remain a formidable competitor; PayPal did not participate
- Absentees : PayPal, Walmart, BestBuy
- iBeacon (P2P) and iPad Touch ID could be next

Apple Pay : Implications on Ecosystem



Consumers

Easy to set up & cool to use, No fees,
Familiar payment instrument

Consumer Reach, Limited Acceptance, No
value added services (yet), Niggling Security
concerns (iCloud hacking), No P2P / Bill Pay

Merchants (In Store)

Based on EMVCo contactless standards,
Possible PCI relief, Customer transaction
data ownership

System changes, Debit volume moving to
Credit, Debit Txn routing choices unclear,
MCX

Merchants (In App)

Simplified check out & reduction in basket
abandonment, Reduced Fraud (biometrics +
tokenization), Higher spend velocity

Liability ownership unclear, system changes
to integrate Apple Pay into the App

Issuers

Reduced fraud rates (without interchange
changes), Txn & Interchange volume (in lieu
of cash), Access to customer txn data

Transaction fees, Investment into
tokenization, Brand in the shadow,
Credential inaccessible from bank app, No
direct control on instrument choice

Networks

Cards centric models, Higher Txn volume,
TSP role & revenue, In Store Brand visibility

No brand visibility for in app purchases,
possible future impact on Network digital
wallets

Summarizing 2014 Trends in Digital Payments

*This space is witnessing polymorphism enabled by diverse forces : **Wearables** (Glass, Watch, Ring), **Modes** (BLE, iBeacon, QR Code), **Technologies** (Biometrics, In App, Host Card Emulation)*

1

NFC's global survival will continue to be challenged (local success in China, South Korea)

2

BLE will conquer Retail with usage in Payments, P2P fund transfer, notifications & offers in store

3

Bitcoin itself might be controversial but the concept of a global exchange will gain traction

4

Amazon to offer retail solutions for payments, customer insights

5

Digital Payment industry might consolidate with targets being Stripe, Dwolla, LevelUp etc.

6

Carrier Billing will continue to dominate emerging markets

7

Square will see slower growth in spite of Square Capital and Square Market

8

Mobile Wallets to face convenience parity unless it takes 'passbook' form

9

Retail Banking apps to be all in one multi device payments and finance platform

Data might be the 'D' in Digital

We are living in the world of digital trace where we or somebody can collect, analyze and explore.

Intelligence agencies of any country can combine data/information from social media, CCTV cameras, phone calls and messages to track down criminals and predict the next criminal activity or terrorist attack

Political parties can use social media sentiment & analytics to determine where they need to focus while **Companies** can analyze FB & Twitter posts to determine & predict marketing campaigns, sales pitch

Insurance Companies can use GPS information to analyze how fast we are moving and can provide real time and live traffic up-dates ; now the same could be augmented by Apple's new **Barometer sensor**

Facebook using targeted advertising based on analyzing information of FB profile and activity- hobbies, age, location, relationship status, like, area of interest, favorites (movies, songs)

Album Companies can use the web log files and data to determine the listening preferences and sequences and predict the most popular song/track in that particular area for next live shows and events

Google driverless car is another project by Google where they are analyzing a colossal volume of data from sensors and cameras in real time to stay on the road safely

Hence, "Search" is key

Page Rank



Social Graph



Graph API



Graph Search

Big Data : Analytics & Insights

Solution looking for problem; current usage paradigms = Do More + Do Faster + Do Cheaper

Customer & Market Insights

- *Social Media & Clickstream Analysis*
- *Customer Churn & Delinquency*
- *Enhance Customer Segmentation*
- *Next Best Action*
- *Customer Profitability and life time value*
- *Data Monetization & Merchant Analytics*

Risk & Fraud Insights

- *Financial Risk Analysis*
- *Market & Portfolio Risk Analysis*
- *Lending Risk Assessment (SME or Institutions)*
- *AML & Fraud Investigation*
- *Real-time Fraud Detection*
- *Market Surveillance*
- *Warm Data Archival*

Operational Insights & Optimization

- *High Volume ETL offload*
- *Computing Intensive Batch offload*
- *Storage Cost Optimization*
- *System Log Analytics*
- *System Failure Analysis*
- *Data Integration Hub*

Segmentation drives the need for Analytics with Analytics driving more sophisticated segmentation levels ; ultimate goal being 'segmentation of one'

Without being intrusive

Survey Observations across Investment versus Values, Location-Authorization and Location-Purchase

Better response to product customization based on structured data over social data

Customer Analytics to blend Retail and Wealth divisions with more wealth managers offering card, cash management solutions

Better response from higher income groups ; neutral impact on education levels

Better response with messages from the Financial Advisor rather than contextual messages from system

Better response from younger age bracket; US being more open than UK within same age group

Better response when message emanates from a Loyalty (“consent”) context

Fine line between delighter and creepy feel = Real time responsiveness from Financial Advisor versus Contextual messaging leveraging customer analytics



THANK YOU

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