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SCIENTIFI REVIEW

Disruption in Banking in Emerging Market Economy: An Empirical Study of India

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ABSTRACT
The present study was taken up to capture the ongoing disruptions in banking in the Indian economy. The objective of this research was to: (1) study the initiatives taken by Reserve Bank of India to stimulate the payment market, (2) explore the disruptions in the Indian payment space, (3) examine the digitization at banks in India and (4) identify the challenges faced by traditional Indian banks and (5) propose measures to cope with threats posed by non-bank players. The study found that as technology companies and other non-bank players have successfully penetrated into large customer segments by offering basic banking services, to the customers at their doorsteps and at their convenience; it is obligatory for the traditional banks to expand market outreach and enrich service quality via digital podia, strategic alliances and disruptive innovations, in case they wish to avoid the risk of being relegated to back-office utilities.

Key words: *disruption, fintech, payment space, digitization, uberisation*

JEL Classification: G21, G15

INTRODUCTION

Digitization has transformed the financial services sector. It may be rightly said that no other service has been impacted as much by the phenomenon of digitization as payments, a traditional throttlehold of retail banks. By enabling the customer, digitization has allowed non-bank players to intimidate banks' dominance in this area. As millennials appear to be leading adopters of smart phones and internet technology, banks have to be appropriately equipped to entice and hold this significant demographic. So the present study was taken up to capture the ongoing disruptions in the banking in the India economy.

OBJECTIVE OF THE STUDY

The objective of this research was to: (1) study the initiatives taken by Reserve Bank of India to stimulate the payment market, (2) explore the disruptions in the Indian payment space, (3) examine the digitization at banks in India and (4) identify the challenges faced by traditional Indian banks and (5) propose measures to cope with the threats posed by non-bank players.

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METHODOLOGY

This was an empirical research. The research was built on secondary information. The facts and figures were collected from large number of publically available sources such as research papers, periodicals, and government documents, reports prepared by private agencies, newspaper articles and websites.

The data was collected from some of the recent reports prepared by government, semi-government as well as private agencies such as Internet and Mobile Association of India, Payment Council of India, Price Waterhouse Cooper, Confederation of Indian Industry, eMarketer, GSMA Intelligence, KPMG, IAMAI, MXV Consulting, ASSOCHAM, RNCOS to name a few. Information was also collected from the official website of several financial institutions such as IndusInd Bank, ICICI Bank to name a few. The information collected from these reports was then used, to demonstrate the varied dimensions of the digital transformation taking place in the banking sector in India.

RESEARCH IMPLICATIONS

The study provides valuable insights, to the traditional banks and micro finance institutions, to help them envisage strategies to benefit from the ongoing transformation in the Indian economy and also advantage from globalization. The study will enthuse the policy-maker to bring about desirable reforms to stimulate financial outreach to all strata of society through digital podia without jeopardizing the public interest. The study gives food for thought to the academicians and researchers, who can conduct further researches, to explore the implication of digitization on the people living at grass root level and examine whether there is any correlation between digitization and poverty reduction and other such aspects.

OVERVIEW OF THE LITERATURE

As the developed economies witnessed the transition of smart-phone users from the cash payment to digital payment, the emerging economies are also exploring ways to use their 3G and 4G mobile phones for delivering wide-ranging financial services to the end users (Hughes & Lonie, 2007; Holmes, 2011; William & Suri, 2010; Bold & Rotman, 2012; Donovan, 2012, Ehrbeck et al, 2012; The Economist, 2012). Newman (2012) stated that as people increasingly adopt smart phone and internet and readily switch to on-line purchasing; it seems that smart phone will soon substitute the paper currency and plastic currency.

In developing countries, where there is dearth of formal financial institutions and basic banking as well as money transfer is still a challenging task (Collins et al., 2009; de Soto, 1989; Noz et al., 2010), the growth of e-payment and e-banking is a laudable achievement (Okereocha, 2010). The use of credit cards, debit cards, smart cards and online banking is widely prevalent and mobile payments, transfers and mobile money are rapidly becoming popular (OECD, 2006). According to Desai (2012), the mobile money industry is expanding rapidly and the growth has been driven largely by Mobile Network Operators (MNOs). Davidson and Pénicaud (2012) in their survey (in June 2011), found that mobile money service providers processed 141.80 million transactions, out of which 29.80 million transaction were related to transfers, bill payments, and bulk payments while the rest were cash in, cash out, and airtime top-ups.

The mobiles have made it possible for the unbanked to avail banking services, thus making it eligible to play the role of a “branchless bank” (William and Suri, 2010; Martinez and Mc Kay, 2011). Mobile phones have the ability to transform the regions and grow economies (ADB, 2003; Butler, 2005; Elijah & Ogunlade, 2006; Srivastava, 2008; Business Week, 2007; Ssewanyana, 2007; The Economist, 2012; Etim, 2011, 2012). Today it is essential that retail banks create partnership with mobile network operators (MNOs) for the delivery of financial services to the world`s unbanked (Ehrbeck, 2012; Jenkins, 2008).

FINDINGS

Disruption in Payment Space

Digital payments are a direct result of the digitization. They cover all payments and transfers made through electronic formats, including online payments, mobile payments and crypto-currencies through instruments such as mobile wallets, digital wallets and contact-less cards. With the creation of National Payments Corporation of India (NPCI) as a nodal infrastructure agency for small payments and real time payments using Immediate Payment Service (IMPS), there was a fillip to the system and growth of electronic payments started in right earnest. Licenses were issued to forty Prepaid Payment Instruments (PPIs) and ten payment aggregators to operate in India (KPMG, 2016). PPIs began with railway ticketing, bill payments, recharges and small remittances and gradually captured larger portions of the customer wallet by offering convenient and secure options for small payments and transfers and by creating touchpoints for cash loading and cash out, acting as Banking Correspondents, thus creating a new set of service providers to assist in this low-margin, high-volume business. As per PWC (2015) "in a span of less than eighteen months, PPIs contributed to more than forty percent of all IMPS transactions between banks and non-banks connected to IMPS switch. Despite the friction faced by lack of cash-out and interoperability, PPIs deserve much credit for spurring an almost eight-fold increase in prepaid transactions" (Annex 1).

In the spree to further add momentum to the payment space, the Reserve Bank of India in August 2015 granted 'in-principle' licenses to eleven non-bank entities, to establish 'payment bank' in India. The payment licenses were granted to the telecom companies, security market entity, postal service provider, payment service provider, technology companies, and non-banking finance companies. With the entry of these new payment banks the landscape is bound to change and the payment solutions are bound to become efficient and cost effective. Given below is a brief overview about the new entrants in the payment space:

i. Aditya Birla Nuvo: It is an Aditya Birla Group Company that owns Idea Cellular. As of June 2015, Idea Cellular had a customer base of 162.08 million mobile phones and 37.16 million internet subscribers. Idea Cellular has partnered with Axis Bank to offer money transfer services through mobile.

ii. Airtel M Commerce Services: It started its operations three years ago. As on June 2015, Airtel had a customer base of 234.11 million mobile and 82. 57 million internet subscribers. As on March 2014, Airtel Money had conducted 38 million transactions and had 1.70 million active customers. Partnership with Kotak Mahindra Bank.

iii. Cholamandalam Distribution Services: The company has a network of 534 branches and more than 7,000 dealers across India. It has a customer base of over 750,000 and seventy one percent of its branches are in rural areas. The end customers are majorly farmers.

iv. Department of Posts: It has the largest postal network in the world. It has a network of 154,856 post offices in India with ninety percent post offices are in rural areas and 260,000 'dak sevakas' (Postmen). It offers saving schemes and accepts public deposits.

v. Fino Pay Tech: It acquired Nokia Money in 2012. It then launched Alpha Payment Services in 2013. Today the company has 450 FINO Money Marts and 15,000 merchant distribution services. It has reached to 80 million individuals for their banking needs. It provides customer service points including Business Correspondents to nationalized banks like State Bank of India.

vi. National Securities Depository: It provides permanent account number (PAN). It enrolls individuals for the implementation of the Aadhaar project. It holds 14 million demat accounts and handles large volume of transaction as a depository.

vii. Tech Mahindra: It operates a pre-paid payment instrument (m-wallet) known as 'Mobo Money', which is Near Faced Communication (NFC) based mobile wallet solution from group company CanvasM. It has launched NFC based payments for ICICI bank. It has partnered with Mahindra Finance for operating the payment bank. It has a network of about 100,000 outlets under Saral Rozgar Yojana.

viii. Reliance Industries: The Company has nationwide 4G telecom license. It provides telephony and broadband services in all states, ninety percent of urban India and over 215,000 villages in India. It has 2300 retail stores across 166 cities, connects to more than 1 million customers per day. It has entered into a joint venture with State Bank of India for setting up payments banks. State Bank of India operates 16,377 bank branches across the nation, has 59,516 customer services points including Business Correspondents.

ix. Dilip Shantilal Shanghvi: He is the founder of Sun Pharmaceuticals. He partnered with Telenor Group and IDFC bank. Telenor group is world's leading providers of mobile financial services.

x. Vijay Shekhar Sharma: He is the founder of Paytm. Paytm is a mobile payments commerce business. Paytm got prepaid wallets license from RBI in 2013. It has reached a customer base of 100 million wallet users and facilitates 75 million transactions per month through its platform.

xi. Vodafone M Pesa: It is a two year old venture. It has 90,000 agents through which it facilitates money transfers. It has a customer base of 3.60 million.

These entities who entered into the foray of payment banking certainly enjoy an edge over the existing traditional retail banks in terms of robust infrastructure, huge market outreach (including rural outreach), huge customer base, trained and experienced workforce, advanced technology, updated digital platform to engage the customer, capacity to handle huge volumes of transactions, economies of scale and first mover advantage. As these entities already have a huge existing customer base they can easily and immediately offer the basic banking services to their existing customer without much difficultly.

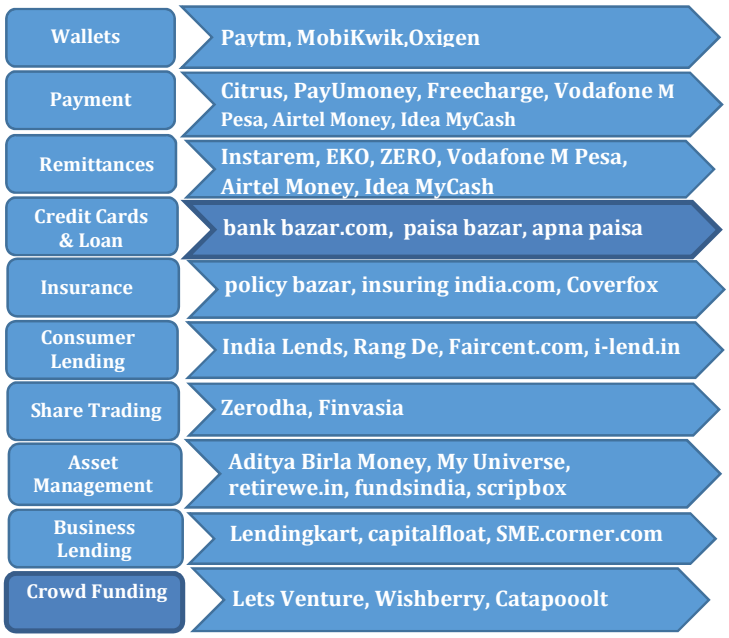

Figure 1. Prominent Fintech Player Operating in India Payment Space

Source: MXV (2015)

The various technology companies also known as 'Fintech' that have emerged as prominent players in the payment space in India include: aytm, MobiKwik,Oxigen, Citrus, PayUmoney, Freecharge, Vodafone M Pesa, Airtel Money, Idea MyCash, Instarem, EKO, ZERO, Vodafone M Pesa, Airtel Money, Idea MyCash, bank bazar.com, paisa bazar, apna paisa, India Lends, Rang De, Faircent.com, i-lend.in, policy bazar, insuring india.com, Coverfox, Lets Venture, Wishberry, Catapooolt. Aditya Birla Money, My Universe, fundsindia, scripbox, Lendingkart, capitalfloat, SME.corner.com, Zerodha and Finvasia.

While some areas are in early stages of adoption, the others have already gained wide acceptance. According to KPMG (2016) in India share trading via digital platform has already reached maturity; digital payments and remittances are enjoying rapid growth; credit cards, insurance, digital wallet, mobile wallet are being enthusiastically accepted by consumer; whereas lending and crowd funding thru digital route is still in an early stage (Annexure 2). The emerging payments segment has enormous potential due to: (i) the speed with which it recognizes and captures the space of small transactions, primarily e-commerce, peer to peer and bill payments and (ii) their capability to arrange funding and make a mark, along with their e-commerce peers, who are fast disrupting the traditional retail space, and giving way to aggressive competition between themselves and their offline counterparts.

With advanced technology mobile phones have become disruptive payment platform, attempting to replace cash and cheques. Some of the products that have the potential to disrupt the payments industry include P2P payments, mobile wallets and pre-loaded cards among others.

i. P2P payments: Vodafone led M-Pesa and Airtel Money provide successful mobile money system for the unbanked, which lets customers pay bills, transfer money without any bank involvement.

ii. Mobile wallets: A number of non-bank players like Paytm, Oxigen, MobiKwik among others, have taken the lead in launching the mobile wallet. Contactless payment technologies allow these players to launch digital wallets that can potentially replace physical wallets and also provide a number of add on services like ticketing, couponing, loyalty offers, payments and banking. According to RNCOS (2015), the current Indian market size of mobile wallet market stands at INR 3,500 million and is estimated to rise at INR 12,100 million by 2019 and anticipated to grow at 225 percent CAGR to become USD 5.12 billion in 2020.

iii. Pre-loaded cards: Reloadable prepaid cards sold at retailers and banks function like debit cards without the checking account. They target people who are unbanked and those who would like to avoid high bank fees. These cards can be used for: cash withdrawal at ATMs, online purchase, purchases at supermarkets, reloading cash, with lower fees than that of bank accounts.

At the heart of the digital revolution in payments sits the smartphone and the internet access. Some of it is due to the increased 'uberisation' of user experience and involvement in both online and offline spaces, some of the services became the instrument of choice for small payments, even for customers of traditional banks. The quick footed non-bank players, undeterred by their heritage, have been fast to seize the business opportunity. To this end, banks need to adopt technologies and strategies that will allow them to sustain their relevance in the payments market.

Banks Going Digital

Given the level of customer-centricity in the financial service sector and the digital wave further empowering the customer, it is critical to explore the impact of digital on banking. This exploration should not be limited to customer contact points, but should also include banks internal processes and operations where digital will have impact.

i. Using Social Media Platforms: Growing one's customer base continues to be one of the top priorities for any banking institution. Traditional customer acquisition strategies tend to have relatively low conversion and purchasing customer database is an expensive option. Digital avenues provide alternatives to tackle both these issues. One of the most significant effects of the digital boom is the accessibility of data at fairly low cost. Social media podia are fertile ground for understanding the customer perception, testing hypotheses and building brand equity. Banks today are raiding this space to obtain huge data and use it in novel ways. The objective is not only to get connected to potential customers, but also to use powerful analytics tools and techniques to better understand their requirements. ICICI bank helps customers connect via Twitter ("Bank on Twitter"), Facebook (app by the name of 'Pockets' on Facebook) (ICICI, 2016) to get the related benefits.

ii. Making Strategic Alliances: Data analytics can help in understanding the customer's interests and needs based on their purchases, locations, frequency of transaction, seasonality, demographics, phase of life cycle, travel pattern, etc., create customized offers and make pointed suggestions. Analytics can also help banks in partnering with vendors and e commerce companies. With phenomenal boom in the e-commerce space in India, banks use these channels to connect to new customers, especially in smaller cities and also use it for joint product offerings. Bankbazaar.com, which is an aggregator for loans and credit cards among other financial products, recorded double the disbursements across all product categories, in 2013-14, the company disbursed INR 30 billion across all products on its platform (CII & PWC, 2015). HDFC bank and Snapdeal (online marketplace company) have entered into a partnership to launch a co-branded credit card, which will target customers in smaller towns and cities. This will jointly provide a host of opportunities to both the companies: (i) for Snapdeal, the tie-up will drive more purchases apart from potential sales increases with specific offers from using the card, the company expects to generate a significant portion of its annual gross merchandise sales, from Tier III and Tier IV towns and cities; (ii) for HDFC, this move will help in customer acquisitions in smaller towns, apart from gains from increased card usage and transaction volumes (Gooptu, 2015).

iii. Leveraging Technological Boom: Mobile and smartphones continue to be a prime channel for reaching customers. With a burst of affordable smartphones being launched in the Indian mobile market, the device penetration is estimated to experience substantial growth. With such fascinating trends, designing content tailored for smartphones, and leveraging the increased functionality of smartphones, including GPS, camera and access to fast internet, will continue to be a key driver for the growth of the industry. Developing innovative apps and tying with the smartphone's GPS to locate branch, ATM etc. and also to provide with top retail offers and further bundling this with discounts when using the bank's products has induced the customer to use bank's products. Messaging or calling through the app or geo-tagging the customer's location is being used to set up a meeting with a bank sales representative. With the onset of 'Aadhar', biometric technologies banks can now develop 'doc-less' application processes. By scanning one's fingerprint and hitting the 'Aadhar' and PAN database, one's KYC is automatically generated, eliminating the need for photo-identification or having to carry duplicates. Various examples, such as ICICI's Tab Banking, illustrate the leveraging of digital technologies to streamline processes and overcome the application drop-off hurdle. Aditya Birla's MyUniverse is an innovator in the personal finance space, it provides a completely digital customer experience. The registration process is simple. The platform helps to get the summary of one's accounts, track expenses and manage one's personal finances. The platform classifies the expenses, provide expenditure analytics and helps in carrying out financial transactions. It helps in analyzing the existing portfolio, provides advice for investment and direct to Aditya Birla's investment

platforms for the purchase stocks etc. A superior digital experience helps in building good relationships with the customers and steers them towards other premium offerings. (MyUniverse, 2016).

iv. Engaging the Customers: E zone concept may be used as alternate for contact centers and telephone banking. Customers feel more associated and contented interacting with a bank assistant, rather than interacting with an individual over phone. Skype and other video chat application must be integrated with bank mobile apps. The banking mobile app as a means of customer interaction, as opposed to one-way communication, is a fertile space, beginning to be explored by industry players. The sales force with the technology to carry out customer requirements such as payments, scanning and applying, go a long way in creating niches in one's customer's brand impression and improve the chances of recall, loyalty and referrals. Equipping the bank staff with digital connectivity will help in reducing the transaction handling cost and time and will improve the service quality. Connected conversations could enable deeper relationship with customers, assist in customer retention and better business and profitability for banks. Fully engaged customers tend to spend a significant share of their wallet in investments, deposits, credit cards, loan, payment options etc. While using multiple platforms to communicate with one's customer improves the reach, it may not be the most optimum strategy. Using analytics to study channel consumption trends and applying predictive modelling to identify communication routes that provide greater success, are techniques that have become more common today. Fully engaged customers bring as additional revenue per year to their primary bank compared to disengaged customers (Hughes, Jon and Youra, Betha, 2014). IndusInd Bank has launched 'Video Branch', a service available through the bank's website and via a mobile phone app. It allows customers to talk to bank representatives through a video call. The app leverages the ever increasing popularity of digital video calling made popular by services such as Skype and FaceTime. Positioned as an alternative option to phone banking, and especially attractive to its NRI clients, the app is a smart move in establishing the bank's digital brand. (IndusInd Bank, 2016).

v. Digital Payment Solutions: With the evolution of a digitized economy, the multi-channel delivery has become vital. Pay orders and demand drafts are on the verge of superannuation and might extinct like telegram. As we enter in an era of digital revolution, payments made through cash and card is paving the way for payments through digital channels. RTGS and NEFT facilitate maximum fund transfers while payment using IMPS, mobile payments and other payment platform are catching speed. This transformation is not only triggered by a revolution in mobile technology but also by the rising awareness about digital payments and an increase in the preference for hassle-free transactions. As per Ken Research, India's payment market is expected to reach INR 8,172.70 billion by 2019. The payment industry in the country is composed of various segments, mobile wallet, mobile banking, mobile point of sale (MPOS), bill payments and online payment gateway, with each segment comprising of a number of players. Each of these segments is being dominated by different players, for example, mobile banking is dominated by banking institutions, mobile wallets by partnerships between financial institutes and mobile operators and mobile point of sale (MPOS) by new players such as technology companies. ICICI bank provides 'Cardless Cash Withdrawals' all that is needed is a mobile number and provides payments through banking app by the name of 'Pocket' on Facebook (ICICI, 2016).

DISCUSSION

The payments industry has become a center for innovation with new players wanting to upstage the traditional ones and dominate the market quickly. They come from varied industries

ranging from start-ups, telecommunication companies, card companies, supermarket chains, technology companies and de-nova banks, offering simpler functionality through an exciting digital experience that appeals to everyone including the millennials. A number of these players offer everything from debit cards, digital wallet, savings accounts, and money transfers to small business lending outside of traditional banking.

The Indian banking industry has also undergone several transformations from manual ledgers to computerization, core banking, ATMs, internet banking, kiosks, SMS banking, telebanking and mobile banking (Annex 3). Some of these have lured customers away from the physical to the digital channels. Emergence of smart phones and internet connectivity has given the consumers a power of connectivity at their doorstep and at their convenience. There were 453 million unique subscribers with sim connections in 2014 which is estimated to go up to 734 million in 2020.

There were 149 million smartphones in 2014, 185 million in mid-2015 and it is anticipated to increase to 690 million by 2020. There were 85 million mobile internet connections in 2010 which is expected to reach to 592 million in 2020 (PwC & ASSOCHAM, 2015; GSMA Intelligence, 2015, MXV, 2015) (Annex 4&5).

With India ranking 3rd in terms of smartphone users after US and China (IAMAI, 2015) and ranking 2nd in terms of internet users (in the second half of 2015) only after China (eMarketer, 2014: Annex 6), it is imminent that there will be further tectonic shifts in consumer migration to the digital channels.

As diverse industry players are trying to influence the financial service marketplace in the backdrop of a rising customer preference for greater self-service, in an increasingly integrated digital and physical world. Banks will have to rush to extensive digitization in case they wish to avoid the risk of being relegated to back-office utilities. Banks will have to: (1) consolidate their existing strength and capabilities; (2) enhance rural and overseas outreach using digital media;(3) offer innovative prepositions through digital platforms; (4) digitize business processes; (5) help consumers to make optimum decisions; (6) enhance customer experience through dedicated innovation and strategic alliances; (7) facilitate mobile cheque deposit; (8) introduce digital currency and (9) redefine cross-border remittances through a sophisticated virtual engine.

CONCLUSION

As sizeable number of people in India, rarely have access to banking services, despite their heavy dependence on remittances. There is a pressing need for the development of effective payment and remittance platforms. Mobile networks operators and technology companies have taken a lead as major financial service providers, bypassing the sparse network of traditional retail banks. Technological advancements have led to the emergence of innovative and disruptive payment models, which will shape the industry`s future. As consumers show their preference for hassle free and convenient transacting through mobile and internet, anywhere and anytime, it is for banks in India to rise up to the occasion and delight their customers in this new digital age. By taking up the digital routes banks would certainly be able to encompass the large number of financially excluded living within in the country and will also be able to connect with the diaspora living across the different nations.

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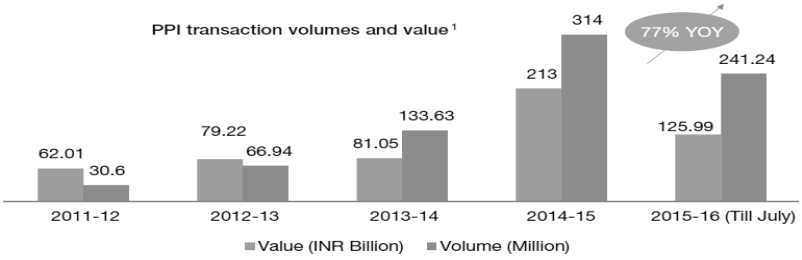
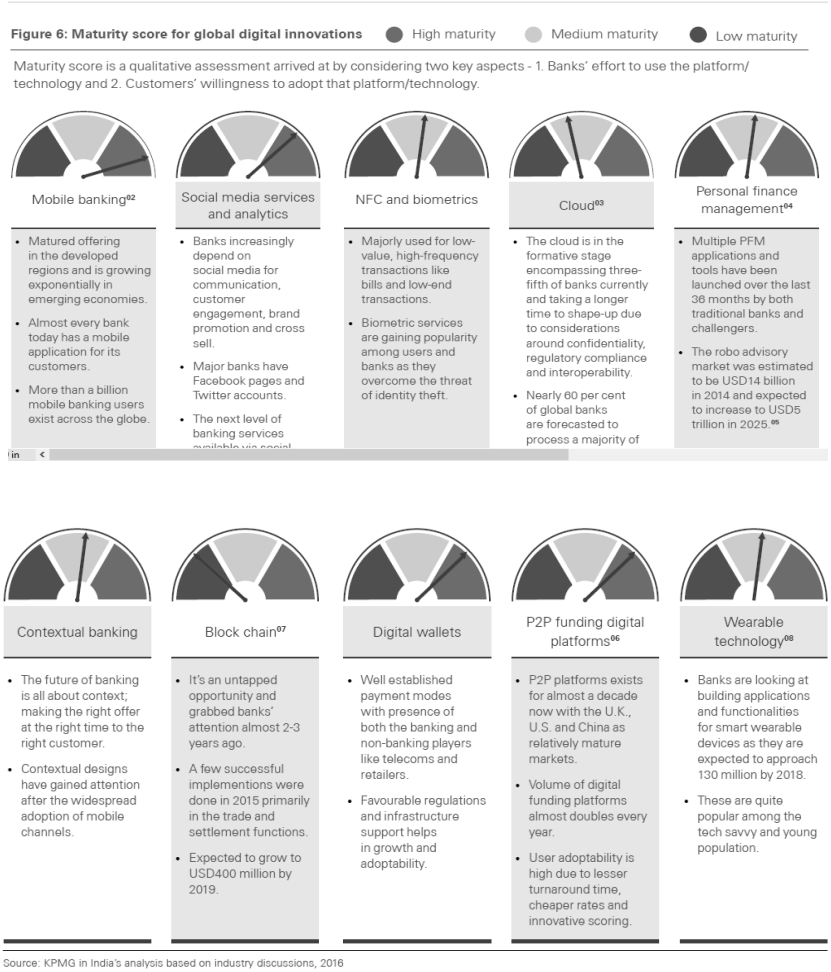
Annex 1

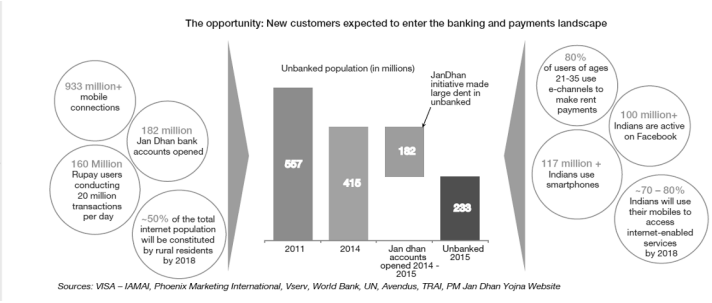


Source: PwC | IAMAI | PCI (2015)

Annex 2



Annex 3



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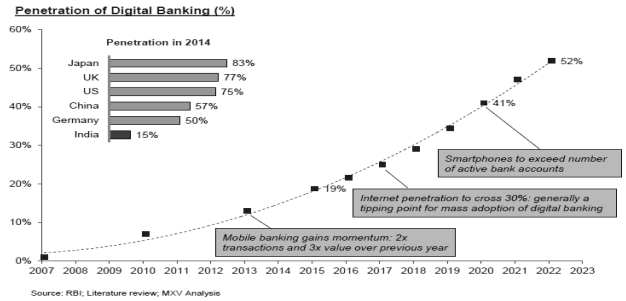
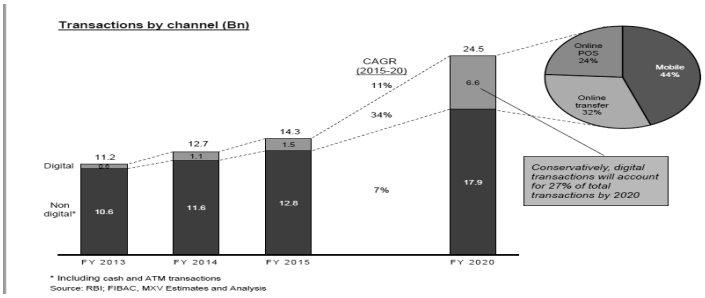
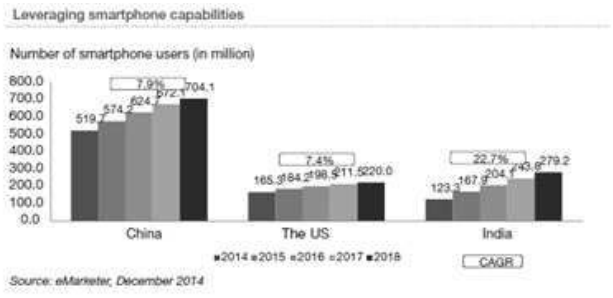


Annex 5



Annex 6



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