



THRIVING IN A DIGITAL WORLD: NON-BANKS HAVE CHALLENGED RETAIL BUSINESS OF BANKS

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Introduction

The post crisis global markets have begun to show signs of meaningful recovery but it was pulled back by a few major global events, such as tensions in Russia, slowdown in China, the Syrian refugee crisis in Europe, the unexpected Brexit in June 2016, the fall of one of the oldest Italian banks and the historically low oil prices. However, a number of global banks and financial service companies have managed to churn out stellar deals and impressive performance¹. It is believed that digitization and adoption of the state of the art systems have been the driving forces behind these achievements. Against this background, banking and financial services industry (BFSI) is undergoing massive changes on several fronts. These changes have the potential to shake the traditional foundations on which BFSI had been built and operating so far, and it is alluded mostly to the emergence of changed consumer expectations driven by digital technology. Retail business of banks has been one key area which has adopted significant changes while facing a continuous threat from the non-banks. Digitization to meet customer demands and expectations, especially from the tech savvy younger generation is undoubtedly a challenge to banks.

This article seeks to highlight some of the digitized products and services banks can offer to their clientele, challenges faced by banks due to competition from non-bank service providers (NBSPs), including Financial Technology companies (FinTechs) and to provide a balanced view of banks' adjustment to digitization. The content is organized into four main rubrics covering: (i) the customer preference for digitalized financial services and the capture of present and future generation customers; (ii) global digital business, technology trends and new opportunities for banks; (iii) the entry of NBSPs- challengers and disruptors into retail banking; (iv) mind-set change

¹ The Banker-May 2016, Defining Banking Trends to Watch Out for in 2016 and Beyond

* I am very grateful to Mr Dhammike Amerasinghe, Advisor to the Minister of Special Assignments for reviewing this article and providing valuable editorial comments.



for banks—coordination and cooperation with NBSPs; and (v) concluding remarks and a forward looking strategy for banks in Sri Lanka.*

Section 1: Customer preference for digital financial services

Digital adaptation started off as an option but due to rapid globalization, it has now evolved into a necessity in every bank's agenda around the globe as their end-clients, such as, consumers, businesses, and governments are quickly adopting digitization. With the emergence of digitally-savvy generations, the manifestations of the rapidly evolving technological changes across all aspects of banking business and the entry of NBSPs into the banking landscape have posed serious challenges to banks, while forcing them to come out of the comfort zone and retain their traditional business segments. Despite their internal and in country troubles, most global banks are determined to win the digital retail banking battle.

The digital revolution in banking has just begun². Today, most traditional global banks offer their customers high-quality web and mobile sites/apps and partly meet customer demands. With this experience, branches of global foreign banks operating in other countries attempt to be ahead of the local banks in such countries. As an alternative, banks can also work out a strategy where digitization becomes not merely an additional feature but a fully integrated mobile experience in which customers use their smartphones or tablets to do the full range of banking services, from opening a new account, making card/ bill payments and third party payments, all without visiting a bank branch. As one of the service providers to end-clients, transaction banks that provide basic banking services are seeing an increasing demand for digitization, but they have a long way to go to reach the full scale. In the meantime, several alternative service providers who are already adopting technology trends, have gained mainstream relevance, especially from the end-clients' perspective. The financial world is waiting to see how both traditional banks and emerging NBSPs are reacting to fill the digital gap.

Both wholesale and retail customers demand speedy digitized services

During the past couple of years and even now, the focus of banks has been largely on retail customers and digital banking is still being attributed to the end- customer. Banks have spent significant sums of money and resources on retail sector innovation. Due to changing customer expectations, they demand speed and transparency of services—real time, anytime— anywhere. Moreover, the retail sector payments are spilling over to the wholesale or large value transactions and the still remaining difference between retail and wholesale is that the wholesale transactions demand speed, control and visibility, whereas the retail customer prefers service anytime anywhere. The tech innovation would move banking beyond retail customers and offer digitized services to their whole sale and corporate clients. For example, the corporates too are not willing

² Sonia Barquin and Vinayak HV in Building a digital-banking business, April 2016, Extracts from surveys conducted by McKinsey & Company



to accept 5 day payment cycles. There is a sense of discomfort with the corporate customers that they are being pushed to the bottom of the pyramid on innovation despite being up on the volume of business they conduct. Banks such as the US BankCorp have already reacted positively to these demands by launching mobile payment apps for its General Aviation customers, which enables pilots to pay for fuelling and other services directly from their phone. Citigroup is having its commercial innovation team work with their consumer counterparts to improve the commercial apps.

Generational difference and changed digital environment

As reported by Deloitte³, in an era of digitisation, the rise of digital natives of different generations provide the logic for digital environment. For example, if generations X and Y are compared, generation X is the first cohort to grow up with the constant presence of computers at home and with access to over 250 cable television channels. The generation Y enjoys high access to technology from birth and is even more accustomed to the lifelong use of communication and media technologies such as the internet, instant messaging, different apps and mobile. As generation Y comes of age, these two demographic cohorts are likely to demand ubiquitous access to digital products and services. With Generation Y becoming increasingly digitally-savvy, the majority of the population is expected to be technologically-adept by 2025. Similarly, the spending power among the generations is also a significant contributory factor for digitalization⁴. In this context, like all other service providers it is important for banks also to capture digital demands of different generations by digitizing their existing businesses. This is especially true in fast-growing emerging markets where customer demands are not satisfactorily met by current banking and financial offerings.

In this regard, banks must first try to understand the level of digital adoption of their end-clients prior to designing a new digital banking model. Deloitte categorises the three types of end-clients and their digital adoption levels as follows:

- *Digital insular*: Businesses which have been slow in implementing or adopting digital solutions
- *Progressively digital*: Businesses which are gradually adopting digital solutions or are in the process of digitising their products/services
- *Digitally enabled*: Businesses with digitised products or services, or building their business models with digital capabilities.

The use of data analytics and understanding consumer needs

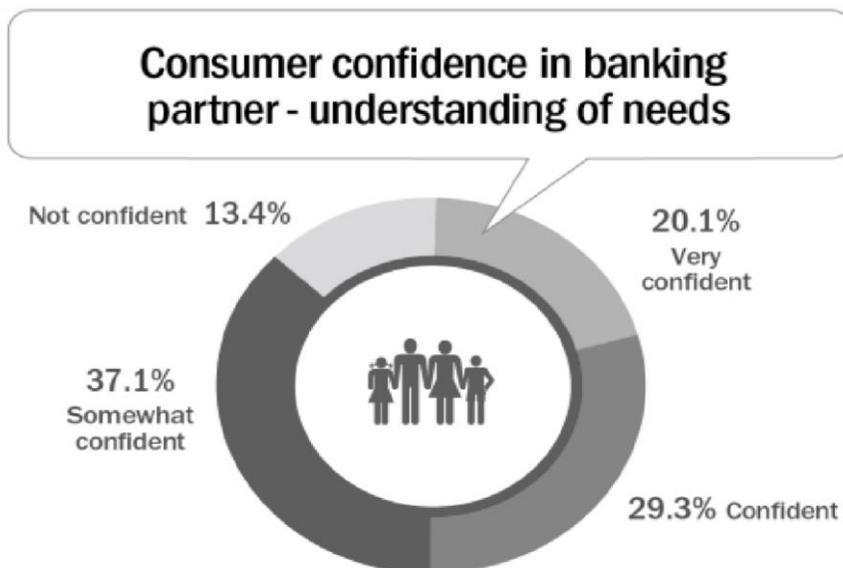
Capturing and using consumer insight can be an important differentiator for banking and financial institutions that are shopping to build digitized banking clientele and solidify the existing relationships. Despite this potential to leverage data to understand and serve consumers, only

³ Deloitte Tech Trends Study-2014

⁴ Deloitte Study- Deloitte Tech Trends 2014



one-fifth of respondents to a survey from NGDATA⁵ felt very confident that their financial institution understood them. More than 50% of those surveyed were only somewhat confident or not confident at all that their bank or credit union understood their needs (Exhibit 1)



Source: NGDATA- www.NGDATA-2015, *The Financial Brand*

A new model: Digital-only banking businesses

Creating a new digital-only banking business can meet the expectations of an evolving set of customers quickly and effectively. The functionality of digital offerings is limited, and consumers frequently highlight low customer service at branches as a key pain point. With respect to digital-led changes in end-client ecosystems, transaction banks in the region have been largely perceived to be focused on improving existing solutions internally. However, this internal focus may not suffice in addressing the end-clients' demand for digital functionality and cost-efficiency moving forward. Pursuant to the global technology trends for the banking sector, these trends have resulted in an evolution, and sometimes disruption, of its IT capabilities, business operations and business models. To capture the future business opportunities, the financial services industry, businesses and governments are increasingly reorienting facilitation and provision of products/services based on the technological needs of the digitally-savvy generations. Banks need to be ahead in this race to meet the demands of their end-clients and the end-client ecosystems that illustrate the interactions between transaction banks, the government and businesses. Within each player in the ecosystem, there are unique segments with differentiated characteristics,

⁵ NGDATA- www.NGDATA-on 2015, *The Financial Brand*



preferences and exposure to digital trends. Today, traditional banks offer their customers high-quality web and mobile sites/apps. An alternate approach is one where digital becomes not merely an additional feature but a fully integrated mobile experience in which customers use their smartphones or tablets to do everything from opening a new account and making payments to resolving credit-card billing disputes, all without ever setting foot in a physical branch.

More and more consumers around the globe are demanding digitized banking facilities. Among the people McKinsey & Company Home surveyed in developed Asian markets, more than 80% said they would be willing to shift some of their holdings to a bank that offered a compelling digital-only proposition. For consumers in emerging Asian markets, the number was more than 50%. Many types of accounts are in play, with respondents indicating potential shifts of 35 to 45% of savings-accounts, 40 to 50% of credit-card balances, and 40 to 45% of investment balances, such as those held in mutual funds. In the most progressive geographies and customer segments, such as the United Kingdom (UK) and Western Europe, there is a potential for 40% or more of new deposits to come from digital sales by 2018⁶.

Despite the urgent need to serve new generation customers and many advocacies for full digitization of banking services, banks should be cautious in adopting “digital only model” as banks would lose the well-established good relationships with some of their valuable client segments especially in the Asian region where relationship banking is prominent. Keeping long standing customers completely out of a branch could frustrate senior citizens, moderately tech savvy customers and also poorer groups. At the same time, banks might lose their interest free current accounts and low interest bearing savings accounts which together account, on average, for about one third of the loanable funds of banks. On the other hand, the younger generation who are born with IPADS and mobile apps will continue to demand trendy and fashionable digital products but they may not be interested in building long term relationships with banks, nor have they accumulated long term funds. They are opportunity seekers and belong to “hop and stop” categories. They may change their preference according to new trends and their whims and fancies. Against this background, should banks build up digital only banking models to retain these younger generation clientele? Will banks be beholden to their IT officers or to outsourced software companies who will make maximum use by providing trendy products? What is the prudent ratio to be maintained among client groups? Are the shareholders of banks willing to meet the full range of capex and opex to establish and maintain sophisticated digitized solutions? Are banks willing to part with their customer data to an externally maintained vendor hosted operation? How will banks handle customer secrecy when customer data bases are outsourced to digital service providers? Given the fact that banking is a highly regulated industry and a stronghold of conservative corporate culture, there are tremendous internal complexities and critical issues that need to be addressed prior to going for solo digital models. Banks have to be selective and decide on the segments which require highly digitized banking services and introduce newer technology

⁶ Sonia Barquin and Vinayak HV in Building a digital-banking business, The surveys conducted by McKinsey & Company Home



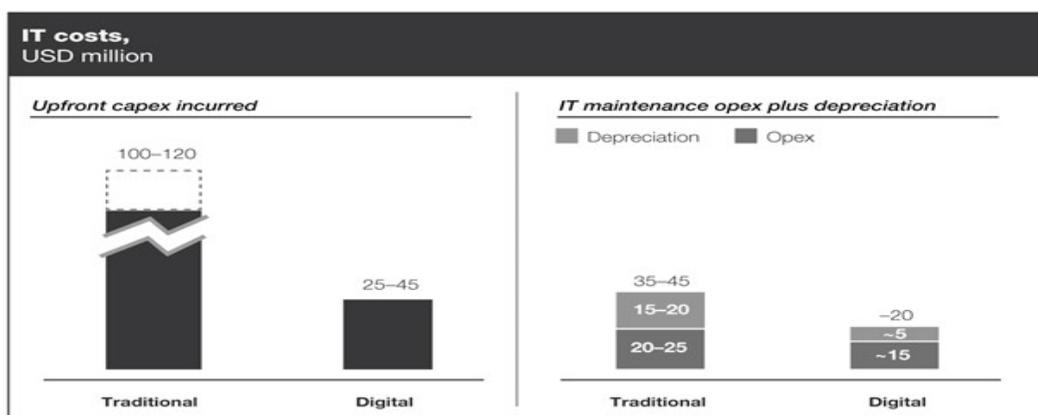
to cater to such segments and not to the denial of non-digitally savvy traditional customers. There are compelling reasons for banks to do so, as they have come to stay despite being necessary evils.

“Digital only” banking models include the micro level calibration of risks to existing businesses and the need to foster a different, more agile culture to enable the incubation and growth of an in-house “start-up.” It is feasible to build a new digital bank at substantially lower capex and opex per customer than for traditional banks (Exhibit 2) because of the absence of physical branches; simplified up-front product offerings; and more streamlined processes, such as the use of vendorhosted solutions and selective IT investment that reduce the need for expensive legacy systems. The IT capex and opex is expected to be significantly lower to set up the digital model compared to the traditional operating model.

The transaction banking space holds great potential and it is anticipated that the space to develop at an intense pace would result in an increase in the number of ubiquitously digitised products and offerings. In 2016, and over the years to come, retail banking will lean on user experience to design more than a ‘mobile first’ model. Experienced architects and practicing bankers should rethink what a bank is and what it means to digital-first and mobile-only customers, prior to designing an entirely new set of products that will lead to new types of relationships.

Exhibit II shows that- IT capex and opex is expected to be significantly lower to set up the digital model vs. a traditional operating model.

Exhibit II



Source: McKinsey Quarterly

Section II presents briefly some of the key global technology trends that appear to have the greatest impact on the financial services industry now and in the future. These trends have been based on perspectives from industry practitioners and subject matter specialists; research by



alliance partners and industry analysts as well as crowd sourced ideas and examples from Deloitte's global network of practitioners⁷.

Section II- Global digital business, technology trends and new opportunities for banks

Global technology is gradually gaining prevalence throughout the Asia Pacific countries. However, the industries which are much quicker in jumping on the digital bandwagon and adopting the technology trends are the Consumer Business, Life Sciences & Health Care, and Technology, Media & Telecommunications Industries, of which many are perceived to be highly digitised in comparison to others. These can be attributed to the combined factors of change in end-consumer expectations and cost pressures, as well as the nature of the industries. In particular, end-clients have been heavily investing in servicing their IT debts, while some are taking active steps to virtualise their internal functions and data migration towards the cloud. It is also evident that businesses are embarking on Omni-channel brand engagement through digital avenues and social media. Industries are also catching up in big data analytics using in-memory technology. In response to the end-clients' constant change and adoption of technology, various alternative service providers have surfaced to meet this new demand. Given the current rate at which technology is evolving, transaction banks will need to constantly invest in their digital agenda. Banks in different regions possess varying digital capabilities and maturity of transaction banking solutions, resulting in the need to adopt different digital strategies. However much banks try, they will not be able to compete with NBSPs, especially the new breed of FinTechs. They have no fiduciary obligations or long established customer relationships and tend to adopt smart "Kangaroo Approaches". Where business matters, these FinTechs move to different geographical locations and greener pastures.

There are two main solutions used to address the transition of banks to digital adoption in retail banking business. They are Digital Inside-Out and Digital Outside-In strategies. Digital InsideOut is defined as initiatives by financial institutions that are internally driven. Most banks in Asia, including Sri Lanka are still focused on investment in internally-driven digital initiatives to better provide traditional banking solutions. User interface (UI) enhancements technology or system upgrades are two categories of Digital Inside-Out strategy. UI improvements and multi-channel access are key areas that involve websites, mobile banking platforms, secure web-based linkages and ability to interoperate diverse business processes through an integrated server-to-server connectivity for end-to-end "straight-through" transaction processing. China Merchants Bank, Kasikorn Bank, Bank of Beijing, Bank of China, China Construction Bank, and Korea Exchange Bank have implemented IT Blueprint projects for their overseas branches, with these key features including system standardisation and database centralisation. At present, most banks offer digital services such as, integration of e-commerce trading platform into businesses; online banking

⁷ Deloitte's Tech Trends -2014, Global Network of Practitioners



platforms; providing an avenue for distribution of products; trading; credit financing and financial planning tools; upgraded technology platforms to meet the growing volume of SWIFT traffic payments; trade finance, treasury, integration of personal and business banking; customisation of e-banking solutions based on size and needs of clients; online focused solutions in cash management and structured financing.

Digital Outside-In: At the same time, a number of financial institutions are already exploring externally driven initiatives in an effort to augment their digital capabilities. Many of these ventures are on the retail banking side and banks are keen to pursue them to compete with NBSPs. For example, Bank of China and the Royal Bank of Scotland have partnered with Bolero (a cloud-based platform FinTech that provides a different way to implement multi-party trade solutions through web-based solution) to utilise electronic presentation of documents executed via straight-through processing, which helps speed up transaction turnaround time for all parties. Many financial technology players are already taking advantage of FinTechs that are offering cloud based simplified banking services at lower costs or with less hassle or paperwork. Some start-ups are providing entirely new services, such as the US Start-up Digit, which allows customers to find small amounts of money they can safely set aside as savings⁸

Transform digital dinosaur under E-Government/Smart Government projects.

Governments of some countries have become digital dinosaurs as the central government and its departments are working in silos due to highly manual processes. The digital dinosaur is a prime customer of government owned banks and the long-time taken by governments to adjust to digital transactions has delayed the digitization process of such banks. E-Government projects that promote digitization of government activities are in transition towards digital processes and going scrippless, with increased cross-functional flow of data or information. Those who have embarked on Smart Government projects are aiming for seamless integration of functions and flow of information, enabling execution of citizen centric policies and processes. Sri Lanka embarked on an E-Government Project (E-GovP) in 2005 under the 'E-Sri Lanka National Development Project'. The on-line portal under the E-GovP, offers A-Z web indices, 108 e-services for citizens, 51 e-services for businesses and 10 non-residence related e-services. The portal also offers extensive mobile and SMS services, an e-participation portal, easily accessible government forms, and a developed open data portal with data available in various formats⁹. The ranking of the E-GovP in Sri Lanka has climbed 41 places from the 115th position in 2012 to 74th position in 2014, out of 192 countries, according to the report titled 'United Nations E-Government Survey 2014'. Sri Lanka is in a commanding position in the E-Government Development Index (EGDI) in South Asia, surpassing second ranked Maldives (94) and third ranked India (118). According to the report, the country's percentile ranking is 38.5 % which means that Sri Lanka is in the top 40% of the countries in the world that are engaged in implementing robust e-government programmes.

⁸ Banking 2016: next generation banking., Accelerating growth and optimizing costs in distribution and marketing overview

⁹ Indika de Zoysa, "the Rise in Sri Lanka's E-government Services", The Island, 10-Sep-2014



Sri Lanka is globally ranked at the 37th place among top online service delivery countries and securing sixth place within its income group¹⁰ and is expected to move onto Smart-Government applications in the second phase.

Explore modern financing methods: crowd-funding

Crowd-funding (a form of crowd sourcing) is the practice of funding a project or venture by raising monetary contributions from a large number of people and is often performed via internet-mediated registries, but the concept can also be executed through mail-order subscriptions, benefit events and other methods. In other words, crowd-funding is a form of alternative finance, which has emerged outside of the traditional financial system and the model is based on three types of actors: the project initiator who proposes the idea and/or project to be funded; individuals or groups who support the idea; and a moderating organization (the “platform”) that brings the parties together to launch the idea. According to Massolution Crowd-Funding Report -2015, in 2013, over US\$5.1 billion was raised via crowd-funding world-wide, which increased to US\$16 billion in 2014 and was estimated at over US\$34 billion in 2015.

Further, Massolution Report adds that the consistent growth in 2014 was due to a spike in crowd-funding projects from Asia. The Asian crowd-funding volumes increased to \$3.4 billion raised from various projects. This puts Asia ahead of Europe with \$3.26 billion as the second-largest region by crowd-funding volume. North America took the lead position in the world in terms of crowd-funding volumes, growing by 145% and raising a total of \$9.46 billion in 2014. Business and entrepreneurship were the most popular crowd-funding category, collecting \$6.7 billion in 2014. It is predicted that by geographic location, the USA will continue to represent the largest segment of the crowd-funding industry (Exhibit III). USA is also likely to pick up crowd-funding by Market Share, “P2P Lending,” or “Marketplace Lending,”

Exhibit III
Growth by Crowd-funding
Region Prediction for 2015 in millions of
USD (Research based estimate)

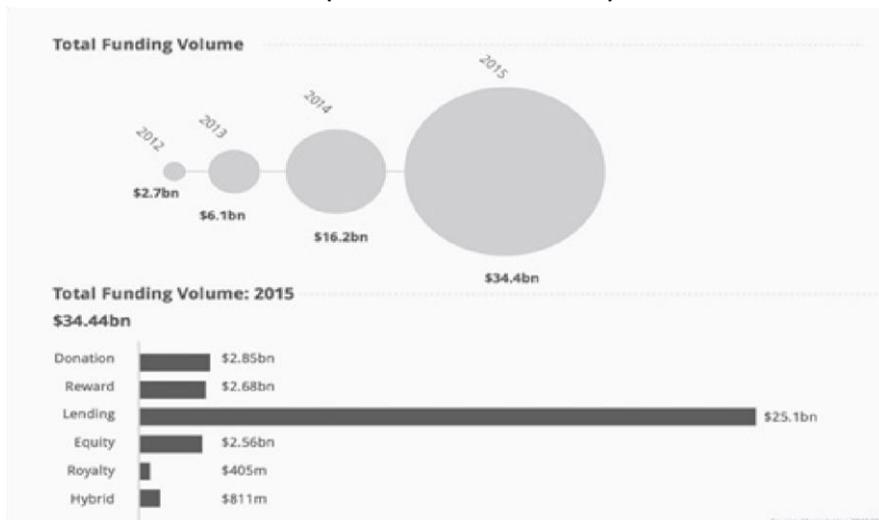
¹⁰ <http://www.dailymirror.lk/51974/the-rise-of-sri-lankas-e-government-services#sthash.uqLH6qjm.dpuf>



Source: Massolution Crowd-Funding Report -2015

As shown in Exhibit III-the world map above, the region-wise spread of crowd-funding indicates that in volume terms, USA (\$17.2 Bn) is in the lead followed by Asia, (\$10.54B). In terms of annual growth percentages however, Asia (210%), Africa (101%) and Europe (99%) have recorded higher collections.

Exhibit IV Growth by Crowd-funding Model Prediction for 2015 in millions of USD (Research based estimate)



Source: Massolution/Crowdsourcing.org 2015- Crowd-funding Industry Report



The “Real Estate” category is likely to move up several notches on this ladder with an explosive growth in 2016. According to Massolution Real Estate Crowd-Funding Industry Report-2015, the real estate based on crowd-funding in the years to come is expected to be a lucrative business.

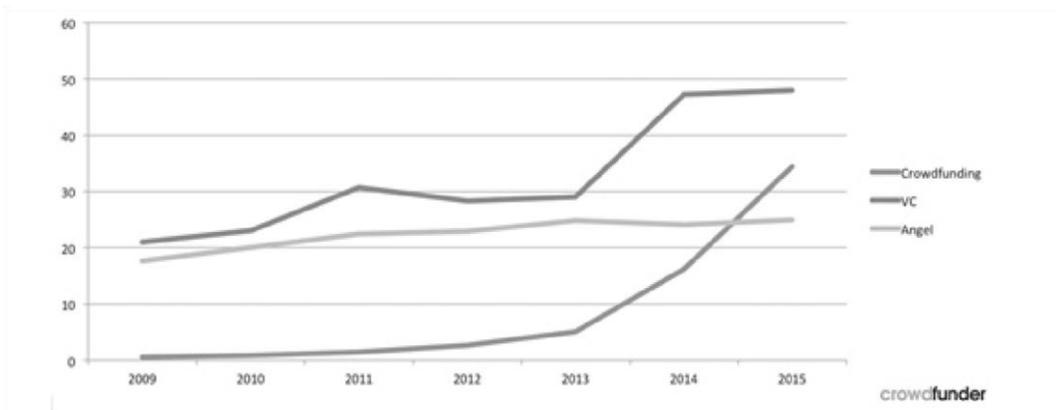
- Real estate crowd-funding is predicted to be \$2.5 Bn Industry in 2015, making it one of the fastest-growing industry segments of crowd sourcing
- Real estate crowd-funding grew 156% in 2014, just breaking the \$1 Bn mark, with campaigns ranging in size from less than \$100,000 to over \$25 million.
- In 2014, the USA stood as the largest region by funding volume at 56% market share, compared with Europe at 42%.
- In 2016, the U.S. commercial and industrial property crowd-funding expects to see a 250% increase.

The market share for equity investments is expected to rise as a result of the new regulations passed in the USA (The Jobs Act) and by it, it is predicted that the industry breakdown by category will continue to remain consistent as has been in the past couple years. Growing investor interest in crowd-funding platforms is proving crowd-funding to be a legitimate source of funds as compared to traditional banking. Though crowd-funding is a relatively new investment practice, existing businesses, individuals, and start-ups are increasingly looking to raise funds through this method.

On the equity crowd-funding sector, a Forbes Analysis claims that venture capital averaged to roughly \$30 billion per year; and in 2014 it accounted for about \$45 billion in investments, whereas Angel Capital averages roughly \$20 billion per year invested. Equity crowd-funding was opened to the public in the U.S on September 2013, under the Jobs Act. But, it was restricted to ‘accredited investors only’; even then there was a \$1 billion investment made online through equity crowdfunding while 2015 is estimated to have over \$2.5 billion in total crowd-funded equity investments.

Exhibit V

Annual Funding (Billions): VC vs. Crowd funding vs. Angel



Source: Forbes Analysis

Industrialised crowdsourcing enables enterprises to harness the power of the crowd and dynamic sources from anyone, anywhere and at any time, to achieve cost, speed and scale advantages. By engaging with the crowd, businesses will be able to expand their reach and source of ideas while banks can actively participate in crowd-funding transactions

Sri Lanka is yet to explore crowd-funding prepositions as a digitized innovative source of financing. The present legal and regulatory system in Sri Lanka and even in India may not be conducive for this type of funding sources. However, crowd-funding can be useful in catering to large scale corporate customers due to their long duration projects and large funding requirements. The participating institutions in a crowd-funding should be aware of the pros and cons of this type of innovative funding solutions and engage on a few small scale pilots to clearly understand the operational issues and the commitment of participating institutions. Although the concept is not caught up yet in Sri Lanka, there is potential for banks to think about it as pooled funds by a large group that would drive volumes and diversify risks. This is an area where banks should first discuss the subject in detail with the regulator before embarking on crowd-funding pilots.

Exhibit VI Equity Crowd-funding Investments



Source: *Alternative Finance Industry report, (2014-UK), Interest,*

Banks in Sri Lanka should be cautious as crowd-funding is not without its share of drawbacks and problems. According to AltFi Data and law firm Nabarro, in the UK (Interest, www.interest.co.nz/business/77866/three-to-five-equity-crowd-funding), one in five companies that raised money from equity crowd-funding platforms between 2011 and 2013 have failed. A look into the 'Companies House records' of 367 businesses that sought investment via UK's five major crowdfunding platforms during the 2012-2013 period revealed that £18m investments were made in total, but 20% of those businesses are not trading any more today due to a number of reasons.

Adopt technological advances: Block- chain/the Distributive Ledger Technology (DLT)

The DLT facilitates the maintenance of a ledger of digital records or transactions that are accessible to all computers running the same protocol. The Bitcoin transactions were based on Block-chain that offered a unique cryptographic number for the allocation and distribution of Bitcoins. During the first six months of 2016, Block - chain has demonstrated its potential for innovation in new retail financial products but also as a test case for a broader financial services ecosystem. The World Economic Forum estimated that by 2019, banks' annual spending on Block -chain to be around USD 400 mn. Block - chain technology can also be applied for correspondent banking as it would allow a process or an asset to be shared more securely, with full certainty of its validity between several parties. Like other Block-chain developments underway, it seeks to generate huge cost savings by creating one sole verified record or contract and giving all parties access to it. The currency trade system using Block-chain is to go live in 2017. At present, multiple currency trades have to be created for buyer, seller, broker and clearer and third parties and then continuously reconciled across multiple systems. The initiative also comes at a time when banks



are trying to redesign many of their internal business models, including what were previously cashcow forex franchises, in the face of higher capital requirements and regulation.

According to latest reports, Barclays Bank and an Israel-based start-up have carried out the world's first Block-chain trade transaction, cutting a process that normally takes between 7-10 days to less than 4 hours¹¹. The potential to use Block-chain for retail transactions by banks appear to be more promising than centralized settlement of payments. Realizing this potential, NBSPs and FinTechs are investing today for future gains. More recently, DLT technology has been a hot topic of the BFIs, on the expectation of its capabilities to enhance retail banking business. Block-chain based transactions are all digital and DLT technology provides an electronic record keeping and transaction processing system, which lets all parties to track documentation through a secure networks and requires no third party verification. It does not require manual processing, nor authentication via intermediaries. Moving to paperless export and import trade will be a major breakthrough in supporting the supply chain through reduced costs, error free documents, and faster transfer of original documents to customers world-wide. Proponents of Block-chain indicate that it would lead to increased transparency, reduce errors and greater transaction automation, leading to a decrease in cost and ultimately fees for the holder.

While addressing KYC and CDD requirements, Block-chain also addresses rising cost and operational risk due to its decentralised ledgers¹². The Block-chain technology is also facing a number of implementation issues, mainly the links between Block- chain and settlements with central bank money. But some of them can be settled once industry standards are developed for application of Block-chain technology. Although this technological advancement has not yet caught up in Sri Lanka, banks need to understand the merits of DLT and identify a few trades that would bring in cost efficiencies if effected through it.

Move towards Real Time Payment Platforms and adoption of ISO-20022 Standards (Universal Messaging Framework)

For some time, the world has been looking for a standard messaging system for real time payments. "At present, UK is using ISO 8583 standards for its Faster Payment Platform (2008). ISO 8583 is good at choreographing the exchange of messages and letting people know that their money has been sent and is available within seconds. However, it is far inferior to ISO 20022

in messaging terms" (Craig Tillotson)¹³. ISO 20022 would be useful for correspondence banking and remittances. Singapore, Sweden, Denmark and Poland have already opted to use ISO 20022 to support their real time payment infrastructure.

¹¹ Reuters-London, Barclays conduct first Block-chain based trade finance deal, as reported by Daily FT Financial Services, 13-19-2016

¹² The banker-July 2016-Correspondent Banking Reimagined on Block chain –Paula Roles and Bradly (Deutsche Bank) and Lonnen- market management , Institutional cash management

¹³ Craig Tillotson, Chief Executive of Faster Payments, UK, Payments and Standards Forum, SIBOS-2015, Singapore



Singapore's Real Time Payments Platform (RTPP) was implemented over the course of 2015 and ISO 20022 was chosen primarily because of its ability to support rich information flows alongside the transactions themselves) and that the would give a bigger advantage to banks over NBSPs. The adoption of ISO 20022 would be a stepping stone for banks in the rest of Asia who wish to go ahead with newer standards. Retail customers are no longer willing to pay extra fees for real time payments. "Our vision is to be an electronic payments society- a society that spurs innovation in payments technology that gives consumers maximum convenience and confidence in making payments. Monetary Authority Singapore (MAS) will streamline existing money changing, remittance and payment system laws into one single piece of legislation to govern both traditional and innovative payment businesses." (Ravi Menon, Managing Director, MAS).

The move towards a RTPP adoption of ISO 20022 is a key area of activity for Sri Lanka too, especially because the country is aspiring to become a regional financial centre based on new technology platforms. Customers who are used to "near real time services", such as E-mail, ondemand entertainment and same day delivery from on-line retailers, payment processes that take longer than a day, become a potential liability. It is also notable that RTPP can be used for cross border retail payments along with the adoption of ISO 20022 for interoperability across different locations and payment instruments. Real time payments can also go along by convincing customers that the banking industry is fit for the 21st century.

It is imperative for Sri Lanka to discuss these important subject areas at the national payments council (NPC) which was set up under the patronage of the CB. The NPC which was expected to lead the market participants in preparing a forward looking National Payments Strategy for Sri Lanka, in line with government policy has not been able to make any significant contribution to the Payments Industry over the last several years. As also recommended in the Budget Speech -2015, NPC needs to be re-activated as early as possible and it should address present and future national payment issues, including the adoption of international standards/best practice. NPC should deliberate them with all market participants and payment system stakeholders while liaising with the Real Time Payments Group (RTPG) in the UK which has been in existence for over a year now. RTPG will coordinate and collaborate with the other 50 plus payment organizations prior to preparation of industry standards. Sri Lanka should gain experience from the early adopters of digitized retail banking services, of which retail payments is a key. LankaClear should be commended for its commitment to establish the Common Switch (National Payment Switch) which aims to clear retail payments on a 24x7 basis using the state-of the art technology. The NPC and all other payment stakeholders should support this endeavour as the establishment of a Common Switch would be a significant landmark infrastructure development in Sri Lanka's payment industry and stepping stone for a combined real time settlement platform for retail and large value payments.



Section III: Entry of NBSPs –digital disruptors and challengers

During the last decade, NBSPs have turned into full-fledged digital challengers to banks. Hence, banks may not have much time to debate on it or a choice in enhancing investments in their digital agenda. While banks may take comfort in their incumbent advantage, technologically-enabled NBSPs are more attuned to embrace ubiquitous products more efficiently or modify them to suit customer taste, compared to banks. The new competition from NBSPs, like FinTechs is a big challenge for banks. Such NBSPs in the retail sector are being encouraged by the regulators too because of the need to increase financial inclusion through the payments industry as traditional banking channels have failed to deliver last mile services. Last year, venture capitalists had poured around US\$250 million on NBSPs with a focus on improving the consumer banking experience and providing digital services. Many such NBSPs are now turning up to be digital challengers to banks, a few of them, by converting themselves into full-fledged banks. The impact is high in UK and could possibly spread to the rest of the world. The UK regulators have already approved licenses for several start-up banks like Fidor, Tandem and Mondo. Their processes combined with cutting edge technology would make them a premier choice for the future generations to bank with.

The emergence of alternative NBSPs also presents considerable opportunities for transaction banks to leverage enablers' digital capabilities and address disruptors' revolutionary business offerings. Sensing a quick shift in the client's growing demand for technological capabilities, emerging NBSPs, such as FinTechs are beginning to transform the financial sector by revamping offerings and solutions in the new digital landscape; some creating sustainable disruption practices while others enabling their clients to do more with less. FinTechs can be categorised into two broad categories- Enablers and Disrupters; and into four sub-categories: Facilitator, Expediter, Differentiator and Game Changer.

FinTech Enablers

support incumbent financial institutions by delivering digital solutions for existing offerings by means of their strength in technology-driven software, platform and infrastructure. Enablers are usually focused on features enhancement rather than product or solution specific augmentation. As digital capabilities/solutions providers, FinTechs usually focus on a smaller or specific spectrum of transaction banking products.

FinTech Disruptors

are changing business dynamics, with strong differentiation in offerings or revolutionary business concepts. Disrupters are usually focused on delivering specific products or solutions, with the potential of disintermediating incumbent financial institutions in the process. They can provide seamless integration of multiple transaction banking solutions using advanced/developed digital platform/solutions and new concepts/products/services that could potentially replace traditional



transaction banking solutions. For example, FinTech disruptors could potentially displace traditional transaction banking solutions using relatively mature digital platform/solutions.

As mentioned above, both enabler and disruptor FinTechs are making inroads to wholesale and retail banking businesses and have impacted on banking solutions, such as cash management, trade services and trusts and securities. It is noted that most transaction banks in South Asia are still very focused on improving existing digital capabilities and products with less attention towards future growth opportunities, adopting the Digital Inside-Out strategy and staying in the 'Core' box of the matrix. On the other hand, alternative FinTechs are mapped outside the 'Core' box and they work to actively address the digital-led changes in the end-clients ecosystem.

Digitalization, disintermediation and potential resounding impacts by NBSPs: FinTech Invasion

The emergence of FinTechs has been one of the most dramatic changes in the payments services industry¹⁴ which has also challenged the banks in delivering the last mile service. The FinTech service providers claim that they are catering to a demand which has not been fulfilled by banks all this time and that they meet niche demand by providing a speedy and better service. They are undoubtedly catalysts for change as their emergence has forced banks to rethink about their traditional delivery mechanisms and lack of investment in newer technology which is in demand by the customer. Although banks have their own strengths in terms of capital, regulatory know-how, manpower, liquidity, branch networks, liquidity support from regulators, and capacity, banks find it difficult to match the faster service, meeting customer pain points and last mile delivery, compared to FinTechs and mobile operators. The FinTech invasion thus forces banks to be alert and also collaborate and work together riding on each other's strength.

FinTechs are now focusing on areas, where they can easily change the business model and disintermediate the banks. The incumbent banks are in danger of being left to deal with the complex, paper-intensive parts of the business, as well as regulatory burden such as anti-money laundering, KYC/ CDD regulations and FATCA requirements etc. According to Liz Oakes, Leader in KPMG's Global Payment Practice, banks' initial reaction to FinTech disruptors has been that the latter are competitors and as a result, banks should build their own technology innovation labs and revolutionize internal processes. Many banks now feel that they do not have the resources, the necessary speed and the know-how to innovate, compared to FinTechs which are much faster in their inventions. This attitude of banks is changing fast and banks are now looking to acquire some of the FinTechs or working with them, as competing with them is found to be ineffective. For example, by partnering with FinTechs such as Currency Cloud for cross border payments, the banks would benefit as banks can now build an app or front end service much faster than before¹⁵. The Accenture research charts the systemic shift from competition to collaboration by banks, primarily in the USA (60% of total investment pool for technology) and a slower move (14 and

¹⁴ The Banker-July 2016-Correspondent Banking Reimagined on Block chain –Paula Roels –Head of Market Infra structure and Bradly Lonnen-Market Management and Institutional Cash Management (Deutsche Bank) and
-A shifting Response to FINTECH Correspondent Banking Reimagined on Block chain. Liz Oakes 15
The Banker-July 2016- Todd Latham, Chief marketing officer, Currency Cloud.



16%) by Europe and Asia. FinTechs can also navigate easily with regulators than banks especially at start-up operations. Despite these win-win advantages, some banks still believe that FinTechs are future rivals and they would snatch away their retail banking business. Banks certainly need a more mature and collaborative approach to survive in the global digital environment. Banks should also give up their idea of digitizing only the front end operations in the belief that it would attract customers. They forget that the end-to-end speedy delivery of services matter in the current environment and will be more so in the future.

Mobile Service Providers: Your phone is your wallet, just tap-to-pay

The idea that your mobile phone could replace your payment cards has been around for several years. However, recent developments are about to make that a reality. NFC chips have been embedded in most Android phones for around two years. These allow phones to work like a contact-less card. Furthermore, Android 4.4 (also known as Kit-Kat) has supported host card emulation (HCE) for a year now. This is a change in how the security of the NFC chip is managed and means that banks should mainstream Android banking apps to support tap-to-pay in 2016 and beyond. There are early bank adopters rolling HCE out in New Zealand and Australia.

More recently, Apple announced the availability of NFC chip in the iPhone 6, as well as a payment method called Apple Pay - which will allow one to make payment by tapping the phone and authenticating by swiping card holder's fingerprint. This simultaneously offers the banks the opportunity to have tap-to-pay on their iPhone apps and competes with Apple-Pay.

Perspectives of end-clients and NBSPs

The advent of payment technologies via smart watches and the high adoption rate of wearable technology have enabled alternative FinTechs to create innovative payment solutions, changing the mobile payment landscape. This increases the supply gap between FinTechs and transaction banks. For example, the Contactless Payment Technology (CPT) in Australia in 2013 accounted for 60% of CPT users and 40% of frequent users. Similarly, Australia accounted for 20% of micro-payment value of 2013, while payment value above USD 35 (USD 42 billion per annum) accounted for 80% of total payment value.

Clearly, the transaction banks will need to change their digital investment focus from one that is largely internal, to one that is externally-driven. Alternative service providers, such as FinTechs, undoubtedly pose a tough challenge to the banks' stronghold, but perhaps they can be formidable allies too. By actively pursuing external partnerships and alliances with these players, banks can leverage on their partners' digital capabilities while bringing their extensive industry knowledge and experience to bear. Beyond technical competencies, banks will also need to pay close attention to the needs of their client segments. In particular, the emerging cohorts of Generations X and Y appear to have atypical preferences and behaviours, which banks will need to take into account. Banking is, after all, about the consumer.



More and more consumers around the globe are demanding digitized financial services. Several survey findings indicate that in developed Asian markets, more than 80% said that they would be willing to shift some of their holdings to a bank that offered a compelling digital-only proposition. In this context, banks which don't have a strategy to build authentic relationships with the digitally native customer segment will continue to feel pressure as such customers leave their branches and move for online services¹⁵. For consumers in emerging Asian markets, the number was more than 50%. Many types of accounts are in play, with respondents indicating potential shifts of 35%

to 45% of savings-account deposits, 40 % to 50 % of credit-card balances, and 40% to 45 % of investment balances, such as those held in mutual funds.¹⁶ The most progressive geographies and customer segments, such as the UK and Western Europe, there is a potential for 40% or more of new deposits to come from digital sales by 2018. To defend their position against new players and enhance the overall experience, banks must drive towards a cohesive, integrated 'Digital Banking Ecosystem' embedded in the organization's culture, serving customers and empowering staff¹⁷.

Many financial-technology players are already taking advantage of these opportunities, offering simplified banking services at lower costs or with less hassle or paperwork. Some startups are providing entirely new services, such as the US start-up Digit, which allows customers to find small amounts of money they can safely set aside as savings. Banks in advanced countries have begun to use cost effective technologies with a view to providing low cost banking services.

The following are some of the methods used by such banks. Global banks have begun to use digitized analytics, wearable, and cloud connectivity, social and community start-ups at an increasing scale. In addition, banks use digitized methods to better understand customer preference and future demands. A few examples of such digitized methods are set out below:

Cognitive computing and analytics (rise of the algorithms)

Cognitive analytics is a new approach to information discovery and decision-making, inspired by the way the human brain processes information, draws conclusions and codifies instincts and experiences into learning. The application of the cognitive analytics is relevant across various industries including health care, finance, retail, and the public sector. Most of the back office processing (KYC, client on-boarding/screening), investment advisory services (Robo Advisors), tech/first Line customer support is expected to be automated to a greater extent to ensure that significant cost reduction is achieved. In order to cut costs and increase the operational efficiencies, banks have been resorting to massive adoption of simplification and cognitive

¹⁵ Josh Reich, CEO and Co-Founder of Simple, <http://www.simple.com>

¹⁶ Banking 2016: next generation banking., Accelerating growth and optimizing costs in distribution and marketing overview

¹⁷ Tom Greenfield, writer for Forbes- William Sullivan.



technologies. The regulatory pressures has increased the cost of operations and has taken a toll on the operating margins of banks.

Digital engagement and wearable industry: Wearable technology users in Australia, UK and US are on the rise and they are more receptive to adopting wearable technology than their international counterparts. Banks will have to adopt new technology and embrace digitization to compete with non-banks and retain their fair share in business at least with the digitally savvy clientele. The reluctance on the part of banks to adjust will not only leave them behind but may also make them lose their clientele due to belated action. Examples of popular wearable technology include health and fitness monitors, glasses, watches, clothing, and cameras. In Australia, the retail of wearable technology shows a striking compound annual growth rate (CAGR) of 247% in the forecast period. By 2018, the wearable industry in Australia is expected to account for 8% of total retail volume in digital electronics. Apple has been leading the way with wearable, launching the Apple Watch 2015 and shifting an estimated 12 mn units in the first year¹⁸.

Social activation start-ups

Given the country's high inclination towards social activation, many Malaysian businesses have continued to invest in social technologies and e-commerce. Transaction banks who are looking into enhancing B2B collaborations, product development and relationship-building with customers and employees should also invest in social media for greater engagement and activation. The advent of technology trends has enabled alternative FinTechs to create innovative payment solutions, increasing the supply gap between FinTechs and transaction banks by moving toward the different dimensions in the matrix. It is important for banks to narrow the supply gap, possibly through leveraging on FinTech capabilities. For example, Samsung Smart watch allows immediate, contactless payments to be made with enhanced security while, Samsung PayPal allows access to bank account statements as well as transaction history and payment transactions to be performed via voice command. "The digitally-savvy generations are expected to be key drivers of economic growth in Australia, Hong Kong, Malaysia and Singapore by 2025, with a combined spending power of close to USD 2 trillion. Indeed, if the development of their counterparts in the West is anything to go by, then Asia Pacific banks will need to catch up¹⁹.

Cloud orchestration

Hong Kong has been an early adopter of cloud computing technology, with most businesses rapidly adopting the use of cloud, or with plans to do so. It is estimated that approximately 84% of companies in Hong Kong have adopted cloud computing, and of the balance 16% of businesses which have not yet done so, 82% have cited plans to do so in the next few years. In 2010, the government of Sri Lanka piloted the GovCloud initiative to leverage cloud to support common e-government system services such as the Electronic Information Management for shared use by all

¹⁸ Chris Skinner- Payments will hold the key to the Internet of Things –comment, The Banker, June 2016

¹⁹ Deloitte's global network of practitioners. Digital-led changes in end-client ecosystem



departments. This initiative and a number of standalone cloud connections that are prevalent in Sri Lanka should work towards more cost effective cloud connectivity and services which would enable cost savings.

Handling cyber threats in a digital environment

Cyber attackers have broadened their focus from client side to server side exploits, avoiding detection and maximizing potential damage and profits²⁰. For example, as reported in the Cisco 2016 Midyear Cyber Security Report, Adobe Flash vulnerabilities continue to be one of the top targets for advertising and exploit kits. In the popular exploit kit, Flash accounted for 80% of successful exploit attempts. Most banks in Asia, including Sri Lanka may not be aware of these findings nor are keen to address these potential threats with the assistance of security system devising agencies and with peer support. Defenders, especially big data users like BFI, with their limited resources and aging infrastructures, are struggling to keep pace with attacker adversaries. Many BFIs in Sri Lanka do not seem to pay much attention to the network hygiene, such as deploying patches and timely upgrading, segmenting the network, next generation firewalls and next generation IPSs, partly because cyber threats are also regarded as IT departments' responsibility.

The more critical challenge for banks world over is to mitigate risks of cyber-attacks and deal with cyber wars as well. The turn of events with respect to cyber wars are more worrisome than isolated cyber-attacks. Criminals have always targeted banks and are now using the new technology, which has become an intolerable menace and with significant risks. Cyber security in the finance industry has been mostly focused on attacks conducted by groups or individuals with criminal motivations. But, says Mark Clancy, Chief Information Officer at the US financial services firm, Depository Trust and Clearing Corporation (DTCC), "in the past two years we have started to see some activities that cannot be explained by criminal motivation²¹ and it is believed to be not isolated cyber-attacks but part of the cyber war. The 2012 hit on the US banks and the 2013 "Dark Seoul attack" on South Korean banks are said to be examples for cyber wars. Today, even the small BFIs which have not had such dramatic attacks are now having wake up calls. In whatever the source and form is, the attackers are now using speedy innovative digitized techniques and banks will have to match the capabilities of those who are looking to harm banks' operations. Unfortunately, this comes at a time when banks are on the innovation path –with limited budgets to invest in their systems- and are struggling to keep up with the regulatory demands that are being placed on them.

The attraction to target banks more than others is the valuable information attackers can get from the data bases of banks, the client account details and information needed for "economic espionage". It is estimated that by 2017, public-private spending on cyber security with rise to

²⁰ The Cisco 2016 Midyear Cyber Security Report- new tactics emerging to maximize profits – Reported in the Daily FT 01-08-2016

²¹ The Banker, Cyber Attacks: Is your bank safe? Mark Clancy, Cover Story, Cyber Security, September 2014,



approximately USD 120 bn, double from its estimate in 2011²². Unlike in cyber-crime, the cyber war is being played by countries for political and economic reasons. The war is escalating with technological advances and each country which can afford to join the war have joined while some others are trying to take part as early as possible.

The most difficult task for banks is to identify the source of attack, whether it is political and economic based cyber war or a cyber-attack by data hungry rival groups who wish to disrupt the banking business. In this context, banks which think that attacks may not have such serious repercussions will fool themselves²³ Similarly, banks which adopt **“I say no evil, I see no evil and I hear no evil”** will repent if they do not realize the gravity of the problem and get ready to deal with it in their small way. Although information sharing is accepted to be a way to deal with the issue, there are limitations to this approach as the information sharers themselves can advertently or inadvertently leak out clues to the attackers. Unsupported and unpatched core banking systems are more vulnerable as they create more opportunities for attackers to easily gain access, remain undetected and maximize damage while enhancing their profits. It is important therefore for banks as well as financial service providers to understand the newer tactics of cyber attackers prior to looking for remedies. While worrying about the digitization models, banks should concentrate on some of these potential threats relating to cyber wars and attacks.

Section IV: Mindset change for banks

Partnership and collaboration is a win- win situation

There appears to be a systematic shift from competition to collaboration. As stated earlier, this is proven by the fast growing investment by banks in FinTechs rising from 29% of the total investment pools in 2014 to 44% in 2015. The collaboration is advantageous to the FinTechs as well as for other NBSPs as they get access to data on bank clients which is a rare opportunity for NBSPs. Banks should learn to give up their mistrust on newer technology, digitalization in particular, and the march forward by NBSPs. Although banks try to test newer digital technologies like Block Chain Technology and see how best they can use it by themselves rather than by leaning against FinTechs, the outcomes are yet to be evaluated. According to Vandenreydt²⁴ some banks have already realized their mistake and are looking for opportunities to collaborate with FinTechs and other NBSPs. Banks must gradually transfer the trust of traditional client relationship to the virtual world, while chief information officers or the equivalent in different banks should develop new partnerships, internally and externally.

²² Stockholm International Peace Research (SIPRI)-2013 Report

²³ FedrikHult, The Banker, and Cyber Attacks: Is your bank safe? , Cover Story, Cyber Security, September 2014,

²⁴ Digital Banking Report entitled, '2016 Retail Banking Trends and Predictions,



Tips for banks

Given below is an excerpt of the yet to be released Banking 2016 Report²⁵, with insights from a crowd-source panel of close to 100 global financial services leaders.

New approaches to data storage:

“Banking will use data initially for improved targeting of specific user segments for marketing, and eventually to provide advice and drive engagement. Banks that move first will see the greatest advantage – but, soon this level of targeting will simply be table stakes.”²⁶ Having access to data and the ability to process this insight is not enough. Consumers expect their financial institution partners to be able to provide real-time recommendations based on changes in their financial profile. The Internet of Things is a significant opportunity for the entire financial services industry and the key message is that banks together with other stakeholders should get it right. It is essential to get data management right, with more data being collected and more powerful tools being developed to analyze and interpret them. “Banks should ensure that data is clean, efficiently aggregated and intelligible, machine readable as well as machine usable to better understand evolving client needs”²⁷. This is a long neglected area by banks and they should no longer depend only on IT depts. for data cleansing. The task may be assigned to a senior officer who could verify such data from different business segments. Tap-to pay will be the trend: Banks should be leaders

At present, the global banks focus on their core retail banking app as the core platform. But as they begin to move from just using digital banking as a replacement low-cost channel, to using it as a competitive differentiator, they may start to think about deploying niche apps aimed at customer acquisition. As an example, the global remittance industry dominated by cash-to-cash players like Western Union and Money Gram are now moving inexorably online with players like Xendpay, Transfer Wise and Xoom entering the market and winning substantial market share by being more convenient and significantly cheaper. Banks can easily bundle this functionality into their standard banking app. They could also use it to acquire new customers with a targeted money transfer app and digital marketing campaign.

Some building blocks are already in place. For example, Singapore has established a 24/7 instant payments platform based on ISO 20022 message standards which delivers services from 19 banks. Fast and Secure Transfers (FAST) is already mobile, instantaneous and ubiquitous. Its use of ISO 20022 means the proliferation in afoot to make it even more convenient.

²⁵ Banking 2016 : Three new banking models that will spur growth

²⁶ Banking 2016: Next-generation banking Accelerating growth and optimizing costs in distribution and marketing
Building a digital banking business

²⁷ Ravi Menon, Pleaneries- Sibos Issues19- SIOBOS, 2015, Singapore



Omni-channel banking

Omni-channel banking is a combination of branch banking and digital banking. There are countless interesting scenarios that merge the customer experience of both of these channels to a seamless, integrated one. If a customer had made several card purchases and spent much more than in previous months on clothes or consumer electronics, banks can consider it is a good time to offer an unsecured loan, provided the customer is creditworthy and banks are within the regulations set out by relevant authorities. It sounds intrusive, but the customer should be able to click on a button on the app or web site requesting information the next time he entered a branch.²⁸ All banks make efforts to characterize their customers and there would be profiling in trying to predict which customers would like this type of merged experience. Whether banks will be using this information to offer specific products and services is an issue. Some banks already are, via targeted advertising on platforms like Google Ads, Facebook Ads, LinkedIn, etc. It is not a huge leap of imagination to begin to do the same via their own web sites and apps. For example; if a customer wishes to be at home and logged on to internet or mobile banking for more than 10 minutes and had paid a few bills, deleted a couple of standing orders and/or moved a significant amount to or from his/her savings account banks, the bank officers should encourage this type of digitized services from their branch network. Bank staff face three critical decision making issues and in providing this type of digitized services: retaining customer trust, defending their payments business from new entrants and avoiding consumerism. Accenture's Banking 2016 Report highlights the steps that banks must take to win these challenges and achieve next-generation banking: They are, The "Intelligent Multichannel" bank, The "Socially Engaging" bank and "The "Financial/Non-Financial Digital Ecosystem" bank.

The information technology (IT) function is the backbone of a bank and is the most critical facilitator/enabler of digitization. Banks therefore have a responsibility to ensure that they have taken all precautions to safeguard the resilience of the IT systems prior to deciding on digitization. The digital needs of customers and their ecosystems should be clearly understood by the business segments and the IT system should review their capabilities in catering to end to end customer requirements. It is also important to note that the historically held view that IT segment should enable technology transformation is being challenged as the business segments have begun to have their own IT units and digitized products. "More IT is now being done by the business itself, and the role of IT is not so much about doing the technical work, but helping businesses to build the apps and the customer experience they need"²⁹

²⁸ Nabendu Misra-Digital Banking Manager, Global Digital Banking, Featured in:
Banking & Finance, India, Mobile, Technology Future of Digital Banking 2016

²⁹ Maes, Patrick, the Big Issue Debate –Internet of things, SIBOS Issues, Wrap up Edition, SIBOS, 2015 ,
Singapore



Section V- Concluding remarks

Digital banking is in its infancy and, if banks are smart, they should attempt to learn from the experience of industries like retail business, gaming, news and entertainment. The digital trends are clear: Disruption by FinTechs would prevail; Everything retail and P2P in the traditional banking model will continue to be challenged; Telcos have already taken a substantial part of the retail business of banks; Threats and risks will continue due to inward looking initiatives by banks; Hackers, cyber-attacks and cyber wars will continue; and FinTech Startups, and new Wearable and Virtual Reality Based Businesses will grow. All these will be formidable challenges to banks. To tide over the situation, most of the major retail banks now offer banking apps for smart phones and progressively-designed web banking. In addition, banks also have realized the missed opportunities behind the scenes that digitization could bring, especially in areas such as in-branch productivity, customer analytics and digitized banking³⁰.

Sensing a quick shift in the client's growing demand for technological capabilities, emerging NBSPs and FinTechs are beginning to transform the financial sector by revamping offerings and solutions in the new digital landscape, some creating sustainable disruptive practices while others enabling their clients to do more with less. Banks should be smart to adopt a collaborative and coordinated approach and use the strengths of NBSPs to improve banks' retail business and in that banks may enter into joint operations with NBSPs and use their already tested technological platforms or let NBSPs to manage technological platforms. If seen as viable business propositions, banks may look for opportunities to buy NBSPs and retain retail business. Banks should be cautious in agreeing to in- house development of digital software and opt for well tested off- the -shelf packages or get FinTechs or NBSPs to provide such services. While it is apparent that the presence of FinTechs poses huge threats to transaction banks by providing differentiated or revolutionary solutions, it is also worth noting that such companies have the enabling factors that can help transaction banks capitalize on market opportunities by augmenting their digital capabilities. The move could help transaction banks progress from the traditional Digital Inside-Out Strategy to seize opportunities and addressing threats outside of existing clients and products. The verdict is clear: the reluctance on the part of banks to adjust will not only leave them behind but may also make them lose their clientele due to belated action.

The analysis presented in the previous sections indicated that the retail payment industry is undergoing a period of rapid transformation, dominated by three major trends: changing customer expectations; new competition from NBSPs, including Fintechs; and channel convergence, and adoption of standards. In this environment, banks can either seek to gain the first-mover advantage, or remain on the side-lines and be forced to catch up eventually. In understanding the key elements of digital phenomenon and designing it to suit banking landscape, it is necessary to identify the key global technology trends; changes to the end-clients' ecosystems;

³⁰ Nabendu Misra, Digital Banking Manager, Global Digital Banking, featured in: Banking & Finance, India; Mobile, Technology; Future of Digital Banking 2016



the different degrees of trend prevalence; and maturity across key industries. It is also important to conduct self assessments of the current status of the incumbents and NBSs' advancements and to take a more practical view in the journey ahead.

Bank digitization should not be supply driven. As technology continues to advance and consumers' demands become more sophisticated, the winners will be the ones who keep themselves one step ahead. The privileged access and relationships that traditional transaction banks currently enjoy with their institutional clients have been challenged. Banks need to realize that the challengers and disruptors have been ramping up their capabilities in a significantly faster pace and are notably stronger. While banks should be aware of these developments, they need not join the race in a fully "digitized kit" opting to adopt all technological advances that are being marketed on a daily basis. It is critically important for banks to be selective and pick what is most relevant to their different client segments.

In this regard, banks in Sri Lanka should design a simple **Accept-Adopt- Advocate (AAA)** Strategy. The "Triple AAA Strategy" would include the following key elements:

- defining a vision for future scenarios and opportunities;
- taking stock of the end client expectations and their digital demands;
- deciding on the segments that require urgent digitization and ensuring a clear focus on the digital applications;
- creating a digital lab to test and learn social, mobile and digital innovations and avoid total dependence on vendors;
- developing an appropriate sourcing strategy to enable scale and deliver required capabilities at speed; and
- deciding on, and announcing a time target for delivery, say in 2025.

Banks in Sri Lanka may take into account the following steps in formulating and implementing the AAA Strategy for selective digitization:

- Fully understand the digitization of retail banking, while assessing the potential impacts of the initiatives from incumbents, challengers, FinTechs and regulators. **Accept** the need for change, apparent threats from challengers and disruptors and the merits of selective digitization of banks. Banks need to assess the end-to-end client ecosystem and client preferences for digitization from their perspective rather than from bank officials' point of view. The foregoing analysis pointed towards the need to cater to the rising demand from the younger generation while also preserving the existing non-tech savvy customers of banks whose long term relationship is valuable.
- **Accept** that retail business is highly connected to retail payments and that NBSs are acting fast in fulfilling the growing digital needs of end-clients and that banks have to **Adopt** a simple strategy to seize the opportunity and establish their credentials. FinTech disruptors/challengers have already captured a part of retail payment business through simple mobile



Apps. In this context, banks should: review the use and efficacy of Apps to withstand competition from NBSPs and FinTechs; adopt new digitized systems and processes selectively, aiming at producing marketable products and services and; avoid stand-alone digitization for cost effectiveness. Digital technology adoption should be end- to- end and not confined to “front office gloss ups”.

- Collaborate and coordinate with the NBSPs, payment industry stakeholders and discuss common payment issues focusing on retail payments. **Adopt** a changed mindset in moving forward towards digitization and learn to coordinate and cooperate with peers. In Sri Lanka, such a coordination could best be handled by the NPC or the Sri Lanka Bankers Association.
- Being large data users, banks must **accept** the potential threats and risks of cyber-attacks and cyber wars and **adopt** digitized safeguards to match innovative instruments that would be used by cyber attackers. In this regard, banks should improve network management, network health and conduct cyber- audits to ensure resilience and robustness of their core banking and other systems. It would also be necessary to measure time to detection by insisting on fastest time available to uncover threats and take necessary action to mitigate them. The preparation of cyber laws is a must and it is best done by collaborating with the CBSL, Lanka-Cert, Information and Communication Technology Agency and other authorities which have already embarked on the preparation of cyber laws and regulations. For purposes of business continuity, banks should make alternative arrangements to test critical core banking functions and conduct business from secondary sites. Given the challenges of digitization in a cyber- crime environment, banks should also be concerned about the lack of qualified and trained professionals to deal with cybercrimes. HR policies of banks should be geared to enhance capacity of professionals dealing with digitized technology and those who safeguard data and information of banks.
- Ensure leadership and guidance at the bank board and senior management level as their support would be critical for successful implementation of an AAA type digital strategies. The bank boards should be aware of the merits of digitization and challenges of the present and future, and guide the staff rather than getting advice from outsourced agencies and vendors. The bank boards must **accept** that IT officers of banks are only enablers or facilitators and not initiators of digitization. A clear mindset change is called for at the board and senior management levels. There should be at least one or two tech savvy board members at bank boards and technologically oriented senior staff who understands the digitization demands made by business segments and the process of selective digitization.

The digital revolution is fast reaching new heights and is impacting all industries, including banking. It is impacting the way consumers decide on their choices; access their products; the delivery of products and services; the financial market infrastructure; and the method of payments. It is no longer adequate to wait until the customer walks into a branch or decides to purchase a new product on-line or via a Smartphone. Instead, banks must engage customers at



every stage of their purchase journey. **Advocacy** by banks themselves at all levels and an open dialogue between technology and business functions is critical to achieving digitization of banking services. Similarly, Banks should also handhold non-tech savvy customers through **advocacy** while gradually promoting their preference towards digitized banking products and services.

Advocacy at regional level is essential for cross border digitization, some of which are done on “hope its safe basis” as South Asia, SAARC or the ASEAN financial service providers have not yet addressed, nor have the consensus in dealing with the major digitization issues. No one country can do everything and regional collaboration and cooperation is vital to ensure appropriate level of digitization of banking services. At one time, the Central Bank of Sri Lanka spearheaded and provided good leadership and **advocacy** to develop the regional payments and settlement systems through the SAARC Payments Council, set up in 2008, under the patronage of the SAARC central banks. Due to effective **advocacy**, today, a majority of SAARC countries, with heavy payment volumes have established well running and secure Real Time Gross Settlement Platforms for domestic transactions. As digitization is seamless and is much more prominent in cross border transactions, it is vital that Sri Lanka brings back old glory and provide **Advocacy** and leadership to promote digitization of banking services in the SAARC region as well as with other groups that are keen to promote regional digitation.

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