Emerging Trends in Digital Banking

in collaboration with

Capital Banking Solutions
EXPERIENCE INNOVATION

IBSintelligence
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Introduction

Digital banking or Digitalization of a bank has radically altered the landscape of banking in the last few years. Digital technologies which were initially limited to banking channels, now encompass the entire banking spectrum. So, whether it is back-end operations or customer facing channels, digital banking delivered through new-age technologies is the way forward for all participants in the financial service industry.

Evolution of Digital Banking

Banking sector has undergone three distinct phases of digital transformation in the last few decades. The first transformation was a conversion to electronic operations leading to an efficiency and automation led model that made banking more transactional and technology-centric. Banks started focusing on improving customer convenience through the use of ATMs, call-centres, telephone banking.

The next wave was fuelled by a range of SMAC technologies (Social, Mobile, Analytics and Cloud) that currently has a visible influence in the banking services and products of today. These technologies allowed financial institutions to move from being just an efficient enabler to a more personalized provider of banking services.
The current wave of digital transformation is being driven by newer technologies such as Artificial Intelligence, Robotic Process Automation, Blockchain, API Banking, and Internet of Things which have the potential to dramatically alter the banking landscape. These technologies, when harnessed together, will be able to provide much deeper levels of personalization and enhanced customer experience, transform the banking operations, changing the very essence of how the banking industry operates today.

The importance attached by bankers to digital banking and the accompanying technologies is reflected in the industry estimates that 40% of the total IT spend by banks by 2020 will be for digital transformation, up from 27.5% in 2017. The disruption due to digital banking is already visible in the altered banking landscape. It has spawned new kinds of banks such as challenger banks (providing digital only service), pushed existing banks to launch digital only banks to react quickly to the changing dynamics and driven traditional behemoths to rapidly adopt digital technologies. Physically, this has resulted in reduction in the number of branches globally as customers move online.

In this whitepaper, IBS Intelligence in collaboration with Capital Banking Solutions has identified emerging trends in digital banking that have the potential to define the future of banking. These trends cut across the entire banking spectrum, indicating that there won’t be any area of banking that will remain unaffected by this new era of digitalization.
IBS Intelligence has mapped the impact of these emerging trends on financial outcomes, customer centricity, process optimisation and organisational impact in the accompanying table.

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Source: World Bank Group
The trends, which range from customer centricity to efficient operations, new initiatives to industry collaborations, data security to organisational structures have been detailed below.

**Trend #1: Uptake of new-age technologies**

The new-age influential technologies such as robotic process automation (RPA), artificial intelligence (AI), Internet of Things (IoT), blockchain and shared infrastructure are set to drive profound changes in the banking landscape. These are the forces that will power the banking industry and reshape how financial institutions operate for the foreseeable future.

While these Digital components come of age, financial institutions (FIs) remain in a value-discovery phase, conducting multiple trials and experiments, some of which are generating value across the financial services industry. Global assets under management by AI-driven robo-advisory, for example, will total USD $8 trillion by 2020, according to some estimates. These technologies are primed to be widely used in all areas of banking as the below examples illustrates:

**Benefits Delivered by New-Age Technologies**

- **To cut down on loan-servicing mistakes, JP Morgan launched its COIN (contract intelligence) programme.** This machine learning technology is used to review and interpret commercial loan agreements and is capable of cutting an estimated 360,000 hours of human work done by lawyers and financial loan officers.

- **Santander has started a pilot programme among 6,000 staff to use blockchain to record international payments, and it will start rolling out the service to customers in late 2018.** Its aim is to make the transfer of money faster, more accurate and more transparent. Santander estimates that the technology may eventually allow banks to settle an estimated annual US$26 trillion of international transactions almost instantaneously.

- **Studies by the London School of Economics suggest RPA can deliver a potential return on investment of between 30 and 200 per cent just in the first year.**

- **Citibank has installed beacons at several of its Manhattan bank branches to enable customers to use Bluetooth technology on their personal devices to receive cardless entry into ATM lobbies after operating hours.**

- **BBVA offers a product by Ormsby Street through API to its customers which allows the management of payments and loan repayments, specifically, to know at all times how much it would cost to request and pay for a loan for the outstanding amount while waiting to receive it when payments are delayed.**

Source: IBS Research
Trend #2: Improving Customer Experience

One of the most critical areas that Banks are trying to improve through digital banking is customer experience. The customer expectations for digital services are continually being shaped by experience provided by tech companies like Google, Apple, Facebook, Amazon among others and they are expecting similar experiences from their financial services providers. While the digitally savvy Millennials are responsible for the enhanced service expectations, it is by no means restricted to them. The wide-spread use of digital technologies across various industries has meant that even the older generations are behaving like pseudo-millennials, making it imperative for banks to be on top of their service delivery.

Singapore based bank OCBC has started allowing voice-based commands for iPhone users, enabling them to do basic transactions such as checking bank accounts, credit card details and making e-payments via Apple's virtual assistant Siri. The transactions are authenticated using biometrics such as facial-recognition and fingerprints, thus providing a great customer experience.

As banking products get standardised, drivers for customer loyalty have changed with customers increasingly considering "service" as a key factor in selecting their financial services provider. These institutions have realised that they can no longer be attractive to new and existing customers by simply providing functional service. They need to focus on the next stage of customer experience to achieve true differentiation. Banks will be competing with nimble fintech start-ups as they endeavour to deliver frictionless interaction for their services across the multiple devices used by their customers. This is in-line with the wider trend where businesses, including financial services, need to meet the customers on their terms. Banks have started on this path, using biometrics like voice and fingerprints for easy access to banking services through mobile devices. In the next stage of evolution, there will be increasing use of services like Siri and Google Assistant or devices such as Amazon Alexa to do basic banking services including checking balances and bill payments.

Banks previously used to personalize their interaction through the branches, but as digital banking has increased they have had to identify other means to maintain that personal touch. Digital banking has meant banks now possess a large amount of data for each of their customers, and with the use of predictive analytics, artificial intelligence and machine learning they will increasingly personalize their offering for the customers. Banks will shift their focus from simply selling products and services to providing relevant and contextual financial advice. This will lead to hyper-personalization as banks start treating each customer as a segment of one.
Trend #3: New Interactive Banking Channels

Over the years, banking channels have undergone significant change. This is illustrated by the 32% drop in branch visits compared to 2011 and continuing closure of branches. Financial Institutions are re-looking at the role of branches, moving from providing just a transactional service to a wholesome banking experience by moving them to key locations, investing in video-chat services, self-serve kiosks and meeting areas with an emphasis on personal touch, all of which is enabled through digital technologies.

Financial institutions have realised that customers like to have a choice and hence offer them a full range of channels. They will offer the customers the option to check their balance on a mobile app, pay their bills online and speak to an adviser about a loan with near 24/7 availability. Customers now use multiple devices simultaneously hence banks will invest in technologies that allow seamless hand-offs between different channels such as webchat, mobile, ATMs and contact centre to improve customer experience.

Financial institutions will continue to invest in newer channel technologies to increase convenience to the customer with the aim of bringing the bank to the customer. Some of the technologies already in use as a channel and expected to grow in the future are smart assistants such as Amazon Alexa. Pilots are already being run to include Internet of things applications to act as a channel such as Smart TVs and Smart Cars.

Trend #4: Optimising Back-end Processes

An industry estimate finds that 69% of the bank back-office leaders consider back-office operations serviced by legacy technology infrastructure as an impediment in the digitalization of the banks. Banks are having to reevaluate the traditional role of the back-office operations.
The back-office of the future will have multiple functions, graduating from being a pure cost-centre to a hybrid structure, where it is capable of contributing to the bank's top-line growth. The traditional function of the back-office, which is to improve efficiency, will be positively impacted by technologies such as robotic process automation (RPA) to reduce the dependence on manual processes. Increased automation leading to complete straight through processing (STP) which would be enabled using digital labour is the end goal that banks are working towards. With the rapidly evolving technology, there will be significant improvement in efficiencies in back office processes which is expected to lead to significant cost saving for banks.

Another function where the back-office of a bank will have an impact is in improved customer experience. It processes almost all the customer data making it a goldmine of customer information. Banks will increasingly start leveraging this data using advanced analytics to deliver insights on customer behaviour and transactions.

**Trend #5: Overhauling the System Architecture**

Banks have traditionally grown aided by acquisitions and organic growth. This has resulted in banks ending up with a complex web of legacy systems that are not suited for a digital economy. The enormous investment required, and the threat of rapidly changing technology has meant that banks must look at alternate means to upgrade their legacy infrastructure.

A trend that is emerging here is for banks to use their legacy as a system of record, while the systems critical for digitalization such as customer interaction and analytics systems are integrated into a data-layer that sits on top of their legacy systems. This has resulted in banks being able to upgrade their legacy systems in a systematic and cost-efficient manner, at the same time introduce systems that allow the banks to offer cutting edge technology to their customers.

The robustness of the cloud platform coupled with reduced security concerns will result in banks progressively moving their data on to the cloud, providing additional flexibility and agility. The emergence of cloud-based banking-as-a-service is expected to take off as more banks opt for these solutions as they move from a capex heavy investment to an Opex investment.

**Trend #6: Emergence of Open Banking**

Open Banking allows financial institutions to share anonymized data of their customers through a set of secure application programming interfaces (API) to affiliated third-party organisations. Open Banking and
API have been actively propagated by Government organisations to increase competition in the market by driving innovation in the quality of products and services that customers receive. Some of these organisations are Competition and Markets Authority (CMA) in the UK with its open banking initiative, Eurozone with the revised payment service directive (PSD2).

This explosion in open banking from a few API exposed by banks a decade ago to the thousands now is expected to dramatically change the financial services landscape. The use of API’s will allow financial institutions and fintechs to offer innovative ways for improved customer service and enhanced convenience. Traditional institutions will increasingly see open banking as a way to differentiate themselves, with some even opting for specialised banks to offer these services in their push for open banking. Financial institutions attitude towards open banking, which can potentially add 20% in revenue, will be seen as a barometer for customer centricity and digital transformation, hence will be a major focus area for these institutions.

**Trend #7: Increased Collaboration between FIs and Fintech**

Fintechs along with other related “techs” such as Regtech, Paytech that have attracted multibillion-dollar investments in the last few years have had a significant impact on the financial services landscape from both customer expectation and technology related standpoint. However, unlike in the past, the incumbent financial institutions have responded pro-actively and positively to the challenge posed by these start-ups. These institutions have either acquired fintech start-ups or collaborated with them to extend these services to their customers.

Dough, an Australian fintech firm has collaborated with Choice Financial (USA) to develop a mobile banking app powered by an AI platform that analyses users’ spending habit and advises them to better manage money. The data for the AI platform is sourced from all the user’s accounts through open banking API.

These partnerships and collaborations when seen in the context of Open Banking means, banks have essentially started behaving as a platform to offer value-added services to remain relevant to their customers. This trend of shared innovation will continue for the future as traditional financial institutions ready themselves to face the threat of big tech companies such as Amazon, Apple, Tencent and others.
**Trend #8: Renewed Importance of Data Security**

The drive towards digitalization has meant that financial institutions now have data on their customers that they have never had access to before. According to a survey by EMC, by the year 2020, about 1.7 MB of data will be generated for each human every second. This amount of data generation combined with the convenience provided by these institutions to allow the customers to access services from multiple devices has meant that the whole network is now much more vulnerable. The number of end points and systems exposed are on the rise meaning data can no longer remain confined to a data center, making it susceptible to security threats and hacks as illustrated by “wannacry” virus and SWIFT hack. Along with these potent risks increasing regulation around the world on the lines of GDPR (General Data Protection Rule) has meant that Data security is one of the highest priority areas for Financial institutions.

““As banks move towards increased digitalization, they need to be protected at all levels for which data and IT security is of paramount importance”

- Ghada Abboud, Head of IT, Bank Misr Lebanon

Financial Institutions will increase their investment in digital security systems as they try to tackle fraud, data breach, system vulnerabilities and at the same time try to maintain the enhanced customer experience. Banks already leverage multi-factor authentication such as biometrics for transaction verifications and the next move will be towards risk-based authentication. The use of cognitive computing and analytics utilising machine learning-based risk engine that uses big data will be the way forward for user identification and data securitisation. Financial institutions will increase their investment in cyber security systems as well look at other means such as insurance products to mitigate financial risk arising out of this to meet regulatory requirements and to tackle increased sophistication of hacks and fraud.

**Trend #9: Rapid Product Innovations**

The intense competition in the banking market due to the rise of start-ups and entry of technology giants has meant that the traditional products offered by financial institutions has changed drastically. Financial institutions must be agile and respond quickly to the changing market dynamics. One area which is seeing a major disruption is payments with the introduction of digital wallets and other alternative payment channels. Financial Institutions are introducing new products that put an emphasis on customer convenience and this has resulted in the rise of invisible payments. New products that will start becoming more commonplace in the future are global onboarding, universal wallet, universal card and financial services marketplace.
Barclays Bank is investing in a new product delivered through the Barclaycard called “Grab+Go”, which transforms a shopper's smartphone into a ‘pocket checkout’. This allows the customer to scan the items they want to buy as they pick them off the store shelves, initiating a mobile payment and leaving the store without needing to go through a check-out line.

Trend #10: Organisational Structure Transformation

To achieve true digital transformation, financial institutions will have to significantly change their organisation functions. These organisations will have to promote the "digital first" thinking throughout the organisation. The digital maturity levels of financial institutions currently dictate how the organisation is structured and how it needs to change. The digital maturity has evolved through three stages right from the unorganised agenda at the first level of maturity to a true digitally transformed one at the third level of maturity where most organisations aspire to reach.

The first level of maturity is where a few digital evangelists in individual departments drive the digital agenda, leading to the creation of siloed products that seem incoherent at the organisation level. This is typically true in smaller credit unions and mid-level banks.

The second level of maturity is where organisations have a centralised structure with the digital banking head leading a team of digital experts who try and create a digital organisation with focus on both, creating a better and uniform customer experience and creating a digital ready workforce. Most of the bigger financial institutions fall in this bucket allowing for a functional need-to-have digital transformation.

The third level of maturity that will be emerging is a largely decentralised structure where the digital resources are embedded in each business function with the agenda being driven by the CEO or the board. This structure will shift the focus of financial institutions from managing the digital touch-points to achieving an end-to-end digital agenda. This is the maturity attained by a few digital – only banks and the aspirational level for these institutions to be attained.
Conclusion

Financial institutions are currently operating in a market that is in constant flux. These institutions are having to deal with rapid disruption which is being driven by primarily non-traditional companies that are providing the competition. While the survival of traditional financial institutions is not under immediate threat, these organisations will have to up their game to not turn into dinosaurs.

Financial institutions are recognising the importance of digitalisation with 85% of institutions citing digital transformation as a business priority. This is manifested in the emerging trends which indicate a rapid change in the operating environment, right from increased customer expectations, to improved processes and back-end technology, newer operating models to organisational changes. The amount of change dictates that “business as usual” can no longer be an answer. Financial institutions will have to evolve to respond to these changes and think of themselves as technology companies that deliver financial services.

One thing is for certain, digital transformation is a truism that financial institutions cannot shy away from. They will have to whole-heartedly embrace it if they want to remain competitive in the next decade.