



The next banking evolution in Bangladesh

Driven by digital transformation

May 2023



Message from Bangladesh Bank

We are currently in an era of innovation where technology has become integral to our daily lives. Commercial banks are embracing digital technology to enhance customer experiences and ensure their satisfaction. The impact of the COVID-19 pandemic has further accelerated the expansion of digital banking services, highlighting its power and potential for growth.

The imminent arrival of the 4th industrial revolution presents the banking industry with new opportunities and challenges. To improve customer service, the banking sector is adopting innovative technologies such as artificial intelligence, machine learning, robotics, the Internet of Things, quantum computing and more. This technological revolution is radically transforming the banking industry.

As professionals in the banking industry, we are responsible for providing customers with convenience, faster service, and full proof security. Bangladesh Bank plays a vital role in facilitating innovation in the banking sector. The central bank has spearheaded introducing technology-enabled banking services such as Bangla QR, FX clearing through RTGS, and Binimoy.

I thank Association of Bankers, Bangladesh Limited (ABB) and PwC for their valuable contribution to releasing an exceptionally relevant report titled “The next banking evolution in Bangladesh: Driven by digital transformation”.

Let us unite and expand the reach of digital banking services to realise the vision of a ‘Smart Bangladesh’ as envisioned by the government.



Abdur Rouf Talukder

Governor, Bangladesh Bank

Message from PwC

Bangladesh's National Financial Inclusion Strategy (NFIS) 2021–26 aims to improve the access, usage and quality of financial services (FS) for all customer segments by promoting digital and financial literacy, scaling up digital financial services (DFS) via modes such as mobile financial services (MFS) and FinTechs, strengthening the policy governance and regulatory environment, and other strategies.

Leading South and Southeast Asian economies have demonstrated that the right mix of ecosystem drivers and necessary action from policymakers and regulators to drive DFS can lead to significant improvement in financial inclusion. In addition to supportive regulatory interventions, the Bangladesh FS industry has the necessary ecosystem drivers in place to facilitate DFS growth and positively impact such financial inclusion efforts. The growth of internet usage, smartphone penetration, expansion of mobile money wallets, digital payments adoption, and collaboration between banks and FinTechs are some of the key enablers of the next wave of digital banking in Bangladesh.

To further accelerate the speed of adoption of DFS, the industry needs to focus on native digital business models beyond banking ecosystems and create open platforms and data networks to embed FS in the day-to-day life of consumers and business operations.

FS companies and regulators have a shared responsibility to provide access to affordable, easy-to-operate and safe FS solutions that are suited to the needs of the entire population. Digital banking has emerged as the main foundation for all services, financial or otherwise, in today's connected world. The increasing adoption of digital processes will also lead to innovation and economic development.

This report begins by evaluating the key trends driving the current state of DFS in Bangladesh. It then explores some of the regional and global best practices and case studies to provide recommendations to facilitate the next level of DFS transformation in Bangladesh.



Joydeep K Roy

Partner, India Financial Services Advisory Leader and Global Health Insurance Practice Leader

Message from Association of Bankers, Bangladesh Limited (ABB)

Recent years have seen Bangladesh's FS sector undergo a rapid transformation, propelled by the adoption of FinTech models and the proliferation of digital payment platforms. This positive development has been further bolstered by regulatory initiatives, strategic partnerships and business innovations by various incumbents in the FS industry, and ecosystem enablers like MFS and FinTechs. These efforts have expedited the impact of digitisation on the banking value chain.

Despite such progress, a significant portion of the population in Bangladesh remains underbanked and underserved, highlighting the untapped potential for FS providers in the country. All ecosystem partners must collaborate towards the common goals of improving financial inclusion and driving sustainable economic progress to ensure the continued expansion and growth of Bangladesh's DFS landscape.

This comprehensive report, jointly prepared by ABB and PwC, sheds light on the key trends driving the growth of DFS in Bangladesh, analysing the strategies adopted by banks in the country to navigate this rapid digital transformation. The report also delves into the existing policy and regulatory frameworks that impact the FS landscape and provides recommendations for industry players, ecosystem enablers and policymakers on the way forward.



Selim R.F. Hussain

Chairman, ABB Limited

About the ABB Digital Transformation Survey 2023

The ABB Digital Transformation Survey 2023 was conducted by ABB and PwC from March to April 2023 to analyse the digital transformation strategies being adopted by banks in Bangladesh. The survey aimed to assess the current and future priorities of Bangladeshi banks in terms of their DFS strategies and technologies they are looking to leverage to overcome their current challenges. In addition, it sought to explore the use of ecosystem strategies (for instance, partnerships) by Bangladeshi banks as well as areas where interventions by regulators and policymakers could be impactful.

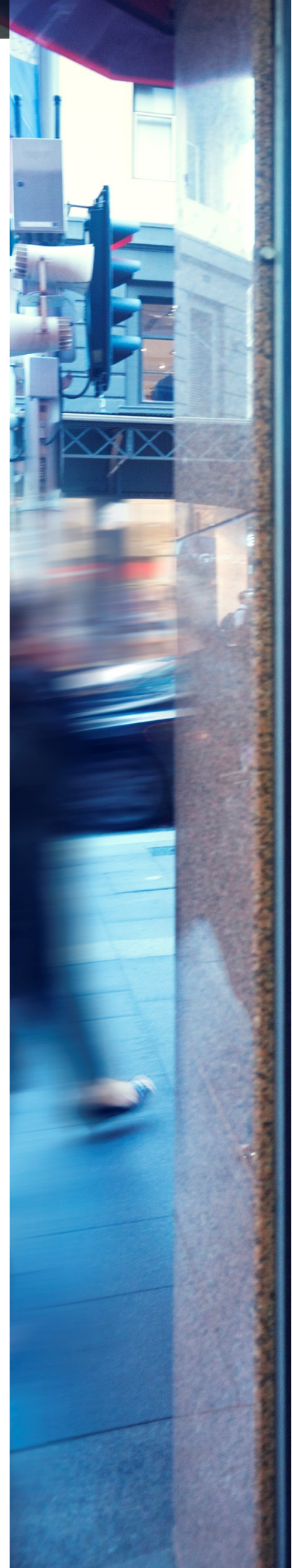
CXO-level executives from 39 banks participated in the survey. Based on the year of establishment, the survey responses have been categorised into four segments – first-, second-, third- and fourth-generation banks:

	Total	First-generation banks (year of establishment: 1971–1990)	Second-generation banks (year of establishment: 1991–2000)	Third-generation banks (year of establishment: 2001–2010)	Fourth generation banks (year of establishment: 2011–present)
Number of banks	39	11	17	1	10
Number of respondents	97	20	46	3	28

This report discusses the findings of the survey.

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US

GB

EUR

NZD

JPY

HKD

SGD

TWD

INR

IDR

MYR

PHP

FJD

CAD

ZAR

CHF

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0.5118

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1.0621

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5.8350

0.9903

25.6920

N/A

9217.90

2.8305

32.4760

1.4961

0.9220

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0.8

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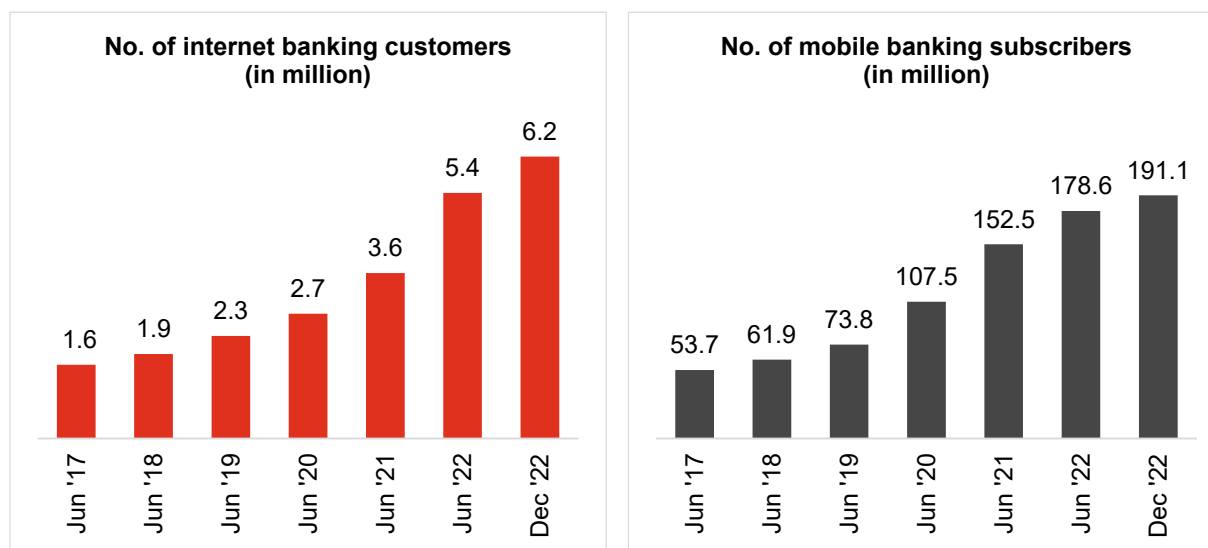
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1. The current digital financial services (DFS) landscape in Bangladesh



Financial inclusion in Bangladesh has increased in the last five years, with wider access to microcredit and growth in DFS adoption and product alignment. With Bangladesh having invested significantly in its digital infrastructure, wider use of mobile phones and increasing access to the internet, citizens have begun adopting DFS such as mobile and internet banking, digital payments, branchless and agent banking. As per latest insights from a2i, the multinational digital organisation founded by the Government of Bangladesh, financial inclusion has risen from 31% to 50%.¹

Figure 1: DFS trends in Bangladesh



Source: Bangladesh Bank (Monthly Economic Trends – February 2023)

According to the 'Monthly Economic Trends – February 2023' report by the Bangladesh Bank, as of December 2022, the number of internet banking customers has crossed 6.2 million, seeing 40.83% growth over December 2021.² On the other hand, the number of mobile banking subscribers grew by 12.57%³ over the same period, crossing over 191 million as of December 2022.



While the central bank has been actively promoting digital banking initiatives for a long time, COVID-19 accelerated the adoption of different financial technologies at an unprecedented rate. Mobile financial services (MFS) has been at the forefront of this digital transformation.

With 61 scheduled banks, five non-scheduled banks, 35 non-banking financial institution (NBFIs)⁴ and over 700 microfinance institutions (MFIs),⁵ Bangladesh is well-poised to deliver on its next growth chapter. As close to 68%⁶ of the population resides in rural areas, proper penetration of financial services (FS) is crucial to enhance financial inclusion. However, as physical branch presence requires costly investments, rural areas remain underbanked, thus fuelling the rise and appetite for DFS.

¹ <https://a2i.gov.bd/a2i-missions/digital-financial-inclusion/>

² <https://www.bb.org.bd/pub/monthly/econtrds/etfeb23.pdf>

³ Ibid.

⁴ <https://www.bb.org.bd/en/index.php/financialactivity/bankfi>

⁵ Microfinance in Bangladesh (Annual Statistics), 2022 - <http://www.mra.gov.bd/site/page/2f639723-7e4d-4cac-aa14-539c10af3284/>

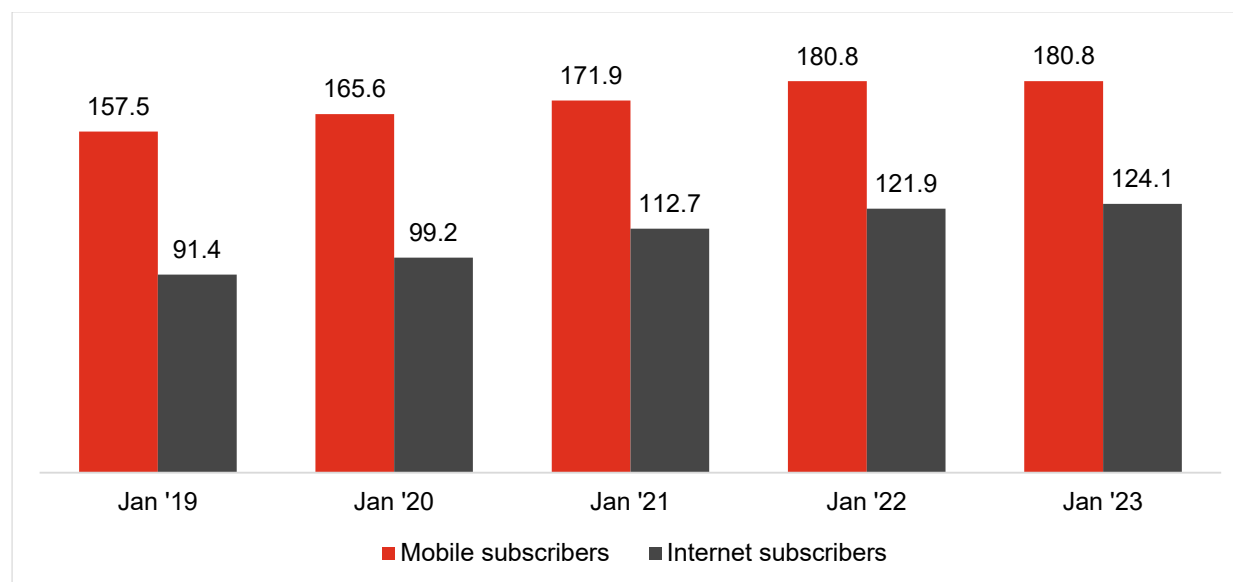
⁶ Preliminary Report on Population and Housing Census 2022 - <http://www.bbs.gov.bd/site/page/b588b454-0f88-4679-bf20-90e06dc1d10b/>

Key drivers enabling the DFS industry

Growth of mobile, internet and smartphone usage:

One of the key trends driving the growth of DFS in Bangladesh is the increasing use of smartphones and internet access. As per a joint survey conducted by the Bangladesh Bureau of Statistics and Information and Communication Technology (ICT) department in November 2022, around 39% of Bangladeshis use the internet and around 90% use mobile phones, out of which around 31% use smartphones.⁷ These trends indicate a potential opportunity for players in the DFS market to innovate and expand their offerings in order to reach new customers. Moreover, Bangladesh's relatively young population could be a significant factor behind subscriber growth.

Figure 2: Mobile and internet subscribers in Bangladesh (in million)



Source: Bangladesh Telecommunication Regulatory Commission

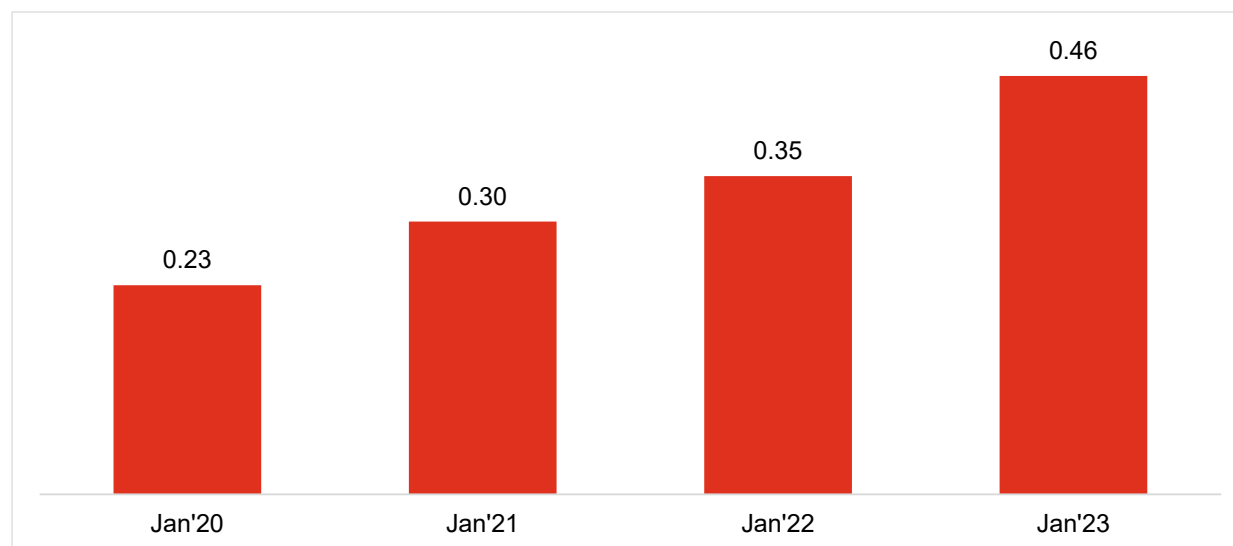
Expansion of mobile money and digital wallets:

Mobile money has emerged as a key driver of financial inclusion in Bangladesh, with MFS platforms gaining significant traction. According to the e-Banking and e-Commerce Statistics Unit of Bangladesh Bank's Statistics Department, the total number of MFS agents and personal accounts was 194,125,137 as of January 2023 compared to a mere 67,670,468 in December 2018 (amounting to an approximate CAGR of 30% over the period).⁸

⁷ <https://www.dhakatribune.com/bangladesh/2022/12/29/internet-users-in-bangladesh-39-smartphone-users-31#:~:text=According%20to%20the%20Bangladesh%20Bureau,of%20which%2030.9%25%20use%20smartphones>

⁸ https://www.bb.org.bd/econdata/fin_digitalstat/tab8.pdf

Figure 3: Volume of MFS transactions (in billion)



Source: Bangladesh Bank (Mobile Financial Services)

Mobile money players as well as banks have seen a spike in digital remittances in recent years. Some MFS providers have entered into partnerships with foreign banks and money transfer operators (MTOs) to facilitate cross-border transactions. With the growing remittance inflow into Bangladesh, which stood at USD 21,031.68 million in the first six months of FY 2021–22 (an increase of 2.5% from the same period in the previous year),⁹ there is potential for MFS providers to further partner with cross-border payment solutions providers for convenient and cost-effective remittance disbursement.

Mobile money and digital wallets are becoming integral to the connected infrastructure of smart cities evolving across the globe. Digital payments enable an accessible and secured payments ecosystem, facilitating citizen-to-government (C2G) payments like tax, toll and transit, utility bills, healthcare and social services, public convenience, as well as government-to-citizen (G2C) payments like scholarships and subsidies.¹⁰ With the country having adopted a 100% cashless economy as a goal under its Smart Bangladesh Vision 2041, the time is ripe for MFS providers in Bangladesh to develop innovative payment mechanisms for smart cities by collaborating with incumbents and FinTechs.

Digital payments adoption:

Over the last three years, digital payment channels have seen significant traction, including the adoption of QR codes, mobile banking apps and digital wallets. As more merchants and consumers embrace these channels, it could help accelerate the transition away from cash and promote greater financial inclusion.



Key initiatives contributing to digital payments in Bangladesh

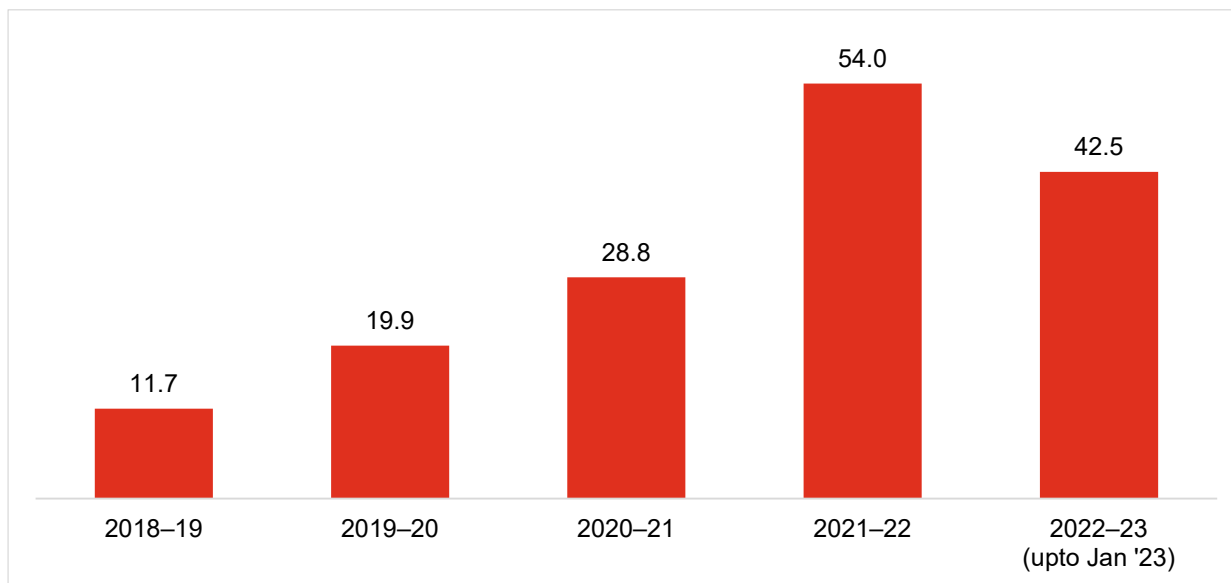
- Interoperable 'Bangla QR' pilot was launched by the Bangladesh Bank in January 2023, enabling users to pay via mobile banking apps, MFS and payment service providers (PSPs).
- Launch of Interoperable Digital Transaction Platform (IDTP), 'Binimoy', in November 2022, an electronic/digital payment system, through which all the banks, MFS and PSPs can be connected.
- National Digital Payments Roadmap 2022–2025 was unveiled in 2022. It provides a high-level plan to expand the adoption of responsible digital payments in a way that is agile and inclusive.
- Cash recycling machines have been introduced to facilitate faster deposits and withdrawal services.

⁹ <https://www.bb.org.bd/pub/monthly/econtrds/etfeb23.pdf>

¹⁰ <https://www.pwc.in/assets/pdfs/consulting/financial-services/fintech/point-of-view/pov-downloads/payments-newsletter-creating-smarter-cities-through-digital-payments.pdf>

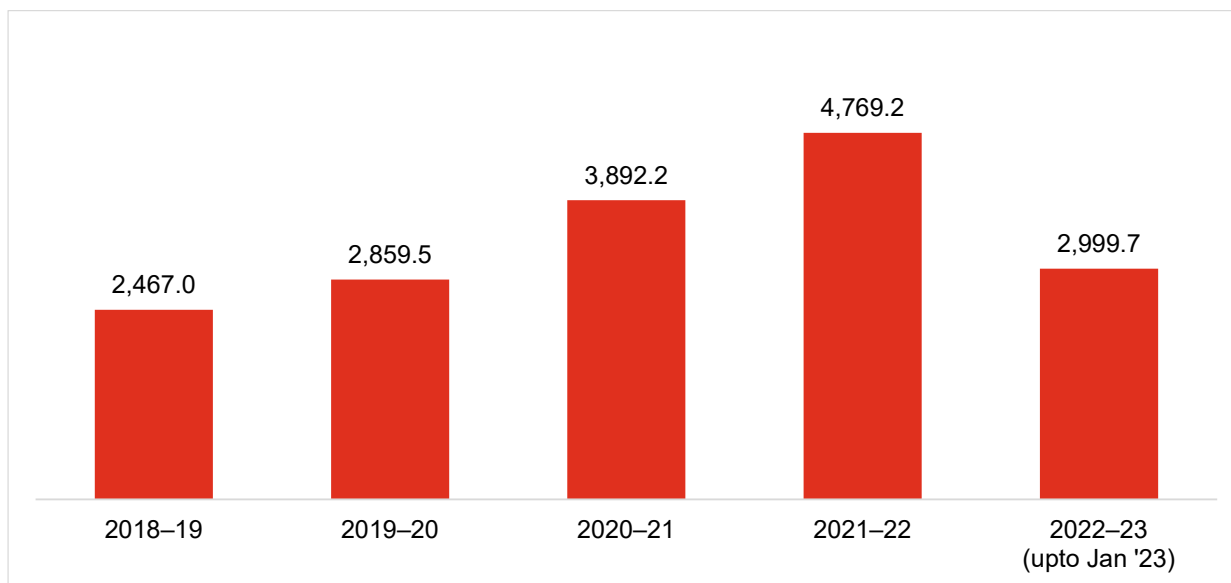
According to a report by Bangladesh Bank, the total value of transactions made through internet banking channels in 2022 was BDT 2,249,580 million, which is an increase of 123% compared to the previous year.¹¹

Figure 4: Number of internet banking transactions (in million)



Source: Monthly Economic Trends, Bangladesh Bank

Figure 5: Number of mobile banking transactions (in million)



Source: Monthly Economic Trends, Bangladesh Bank

¹¹ <https://www.bb.org.bd/pub/monthly/econtrds/etfeb23.pdf>

87% of the survey respondents have witnessed greater adoption in payments via digital channels compared to credit cards and current account and savings accounts (CASA).¹²

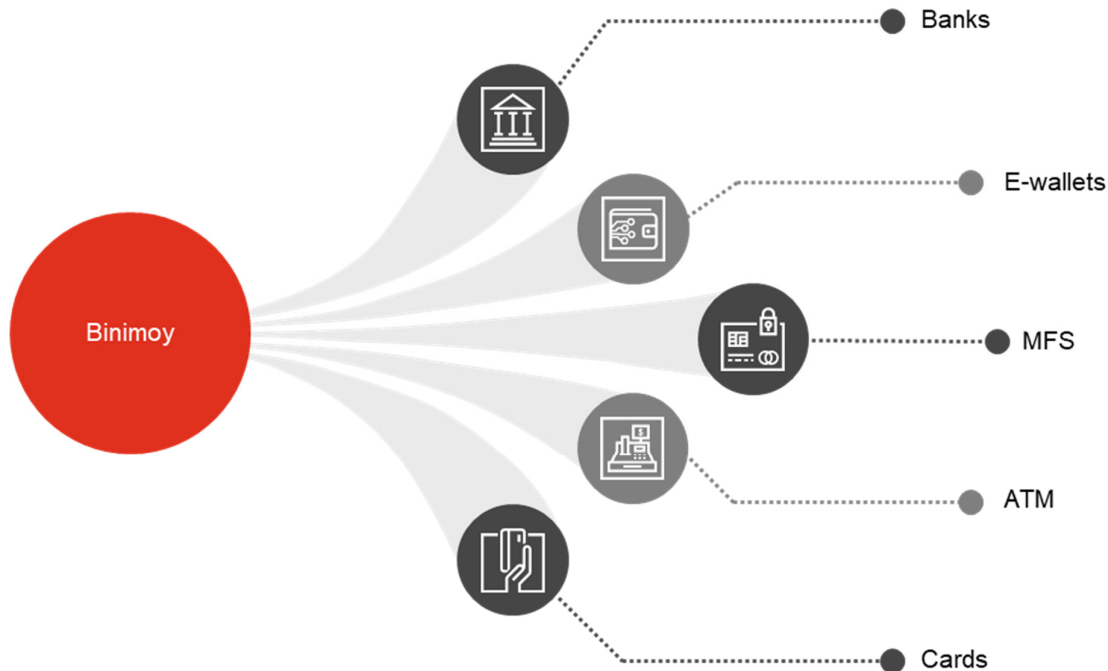


Collaboration between FinTechs and banks:

As FinTechs and MFS players continue to innovate and disrupt the Bangladesh FS landscape, banks have also looked to transform digitally through partnerships. In the ABB Digital Transformation Survey 2023, **77%** of respondents mentioned that they were actively partnering with MFS players.

FinTechs have been contributing innovative ideas to the start-up industry, while banks have been supporting start-ups with customer base access and their regulatory expertise. In November 2022, Bangladesh Bank launched an interoperable digital transaction platform (IDTP)¹³ to make transactions across banks, MFS players and payment service providers seamless, and boost digital financial transactions. Initially, the application incorporated three MFS operators, one wallet, one state-owned commercial bank and nine private commercial banks.

Figure 6: Interoperability among DFS



Source: PwC analysis

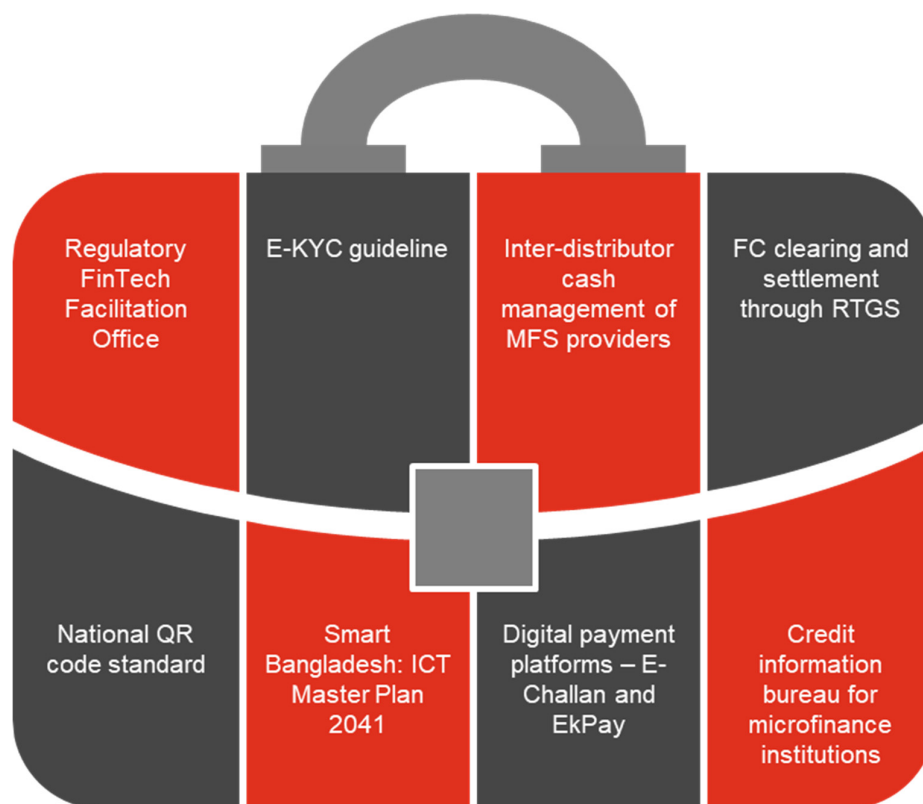
Such collaborations could help to bridge the gap between traditional banking and DFS and accelerate the pace of innovation in the industry.

¹² ABB Digital Transformation Survey 2023

¹³ <https://www.thedailystar.net/business/economy/news/money-transfer-across-mfs-platforms-finally-reality-3168601>

Regulatory developments:

Figure 7: Major regulatory developments in recent years



Source: Smart Bangladesh: ICT Master Plan 2041

Realising the potential of the digital banking and FinTech industry, Bangladesh Bank has taken several steps to encourage the growth of DFS, such as launching a Regulatory Fintech Facilitation Office (RFFO) in October 2019¹⁴ to facilitate digital financing initiatives in the country. The Central Bank's Financial Intelligence Unit (BFIU) introduced e-KYC guidelines in 2020 to enable the digital onboarding of customers by banks and NBFIs. The Government has also developed digital payments infrastructure that enables disbursement of social safety net payments through platforms like E-Challan and EkPay.¹⁵

In January 2021, Bangladesh Bank published the 'National QR Code Standard for Retail Payments in Bangladesh' to make QR code-based transactions interoperable and cost-efficient at the retail level.¹⁶ The initiative has already begun to see adoption by MFS players – for instance, a Bangladeshi MFS operator has distributed more than 500,000¹⁷ QR codes to small merchants for accepting digital payments.

The initiative to establish a Credit Information Bureau for Microfinance Institutions (MF-CIB) through joint collaboration between the Microcredit Regulatory Authority (MRA) and Bangladesh Bank is at its last stage now. Once implemented, the MF-CIB will help mitigate credit and operational risks of MFIs.¹⁸

Other noteworthy initiatives in 2022 include the introduction of foreign currency (FC) clearing and settlement through the real-time gross settlement (RTGS) system to allow inter-bank cross-currency transactions and the launch of inter-distributor cash management of MFS providers to facilitate e-money and cash funds transfer during weekends and public holidays.¹⁹

¹⁴ <https://www.bb.org.bd/en/index.php/financialactivity/paysystems>

¹⁵ <https://a2i.gov.bd/wp-content/uploads/2023/03/Smart-Bangladesh-ICT-Master-Plan-2041-Draft-PDF-1.pdf>

¹⁶ https://www.bb.org.bd/pub/annual/fsr/financial_stability_report2022.pdf

¹⁷ <https://www.thedailystar.net/business/news/pilot-kicks-digital-payment-qr-code-3223756>

¹⁸ https://www.bb.org.bd/pub/annual/fsr/financial_stability_report2022.pdf

¹⁹ https://www.bb.org.bd/pub/quarterly/finstab/fsar_jul_sep2022.pdf

With various developed and developing countries worldwide already implementing digital banks, Bangladesh Bank is also formulating regulatory guidelines for the establishment of full-fledged digital banks in the country.²⁰

As is evident from some of the trends summarised above, Bangladesh has the relevant demand- and supply-side drivers in place to facilitate the next wave of digital transformation in the FS sector. This transformation will be an essential component of the country's overall development and financial inclusion agenda, namely "to achieve 100% financial inclusion by 2025, by providing at least one regulated financial service account for all adults' under the Smart Bangladesh: ICT Master Plan 2041."²¹ The Government has also identified innovation and digitalisation as the key pillars of a sustainable and impactful financial inclusion.

Overall, the next wave of DFS in Bangladesh is likely to be driven by a combination of technological advancements, regulatory developments, and changing consumer behaviours. As the DFS landscape continues to evolve, it will be important for players across the ecosystem to collaborate and innovate to deliver greater financial inclusion and economic growth.

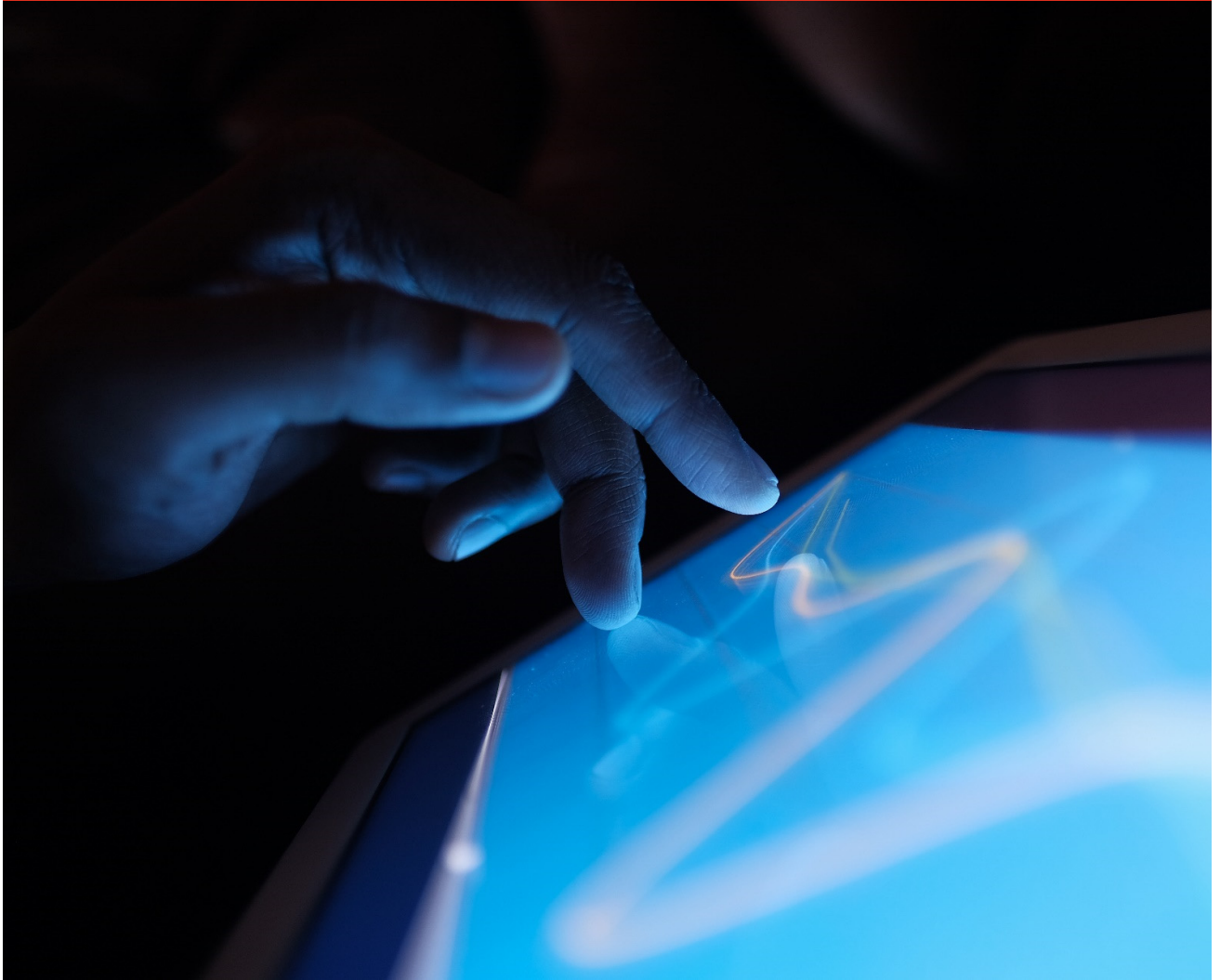
This report highlights the various digital disruption use cases across the banking value chain which could be enablers of driving sustained growth, profitability and value, as well as innovation and financial stability. Moreover, the report discusses the core capabilities banks need to develop while navigating digital change and the role of policymakers in facilitating the next wave of digital transformation in Bangladesh.



²⁰ <https://www.dhakatribune.com/business/2022/04/06/government-prepares-issuing-digital-bank-licences>

²¹ <https://a2i.gov.bd/wp-content/uploads/2023/03/Smart-Bangladesh-ICT-Master-Plan-2041-Draft-PDF-1.pdf>

2. The next wave of digital disruptions impacting the FS space



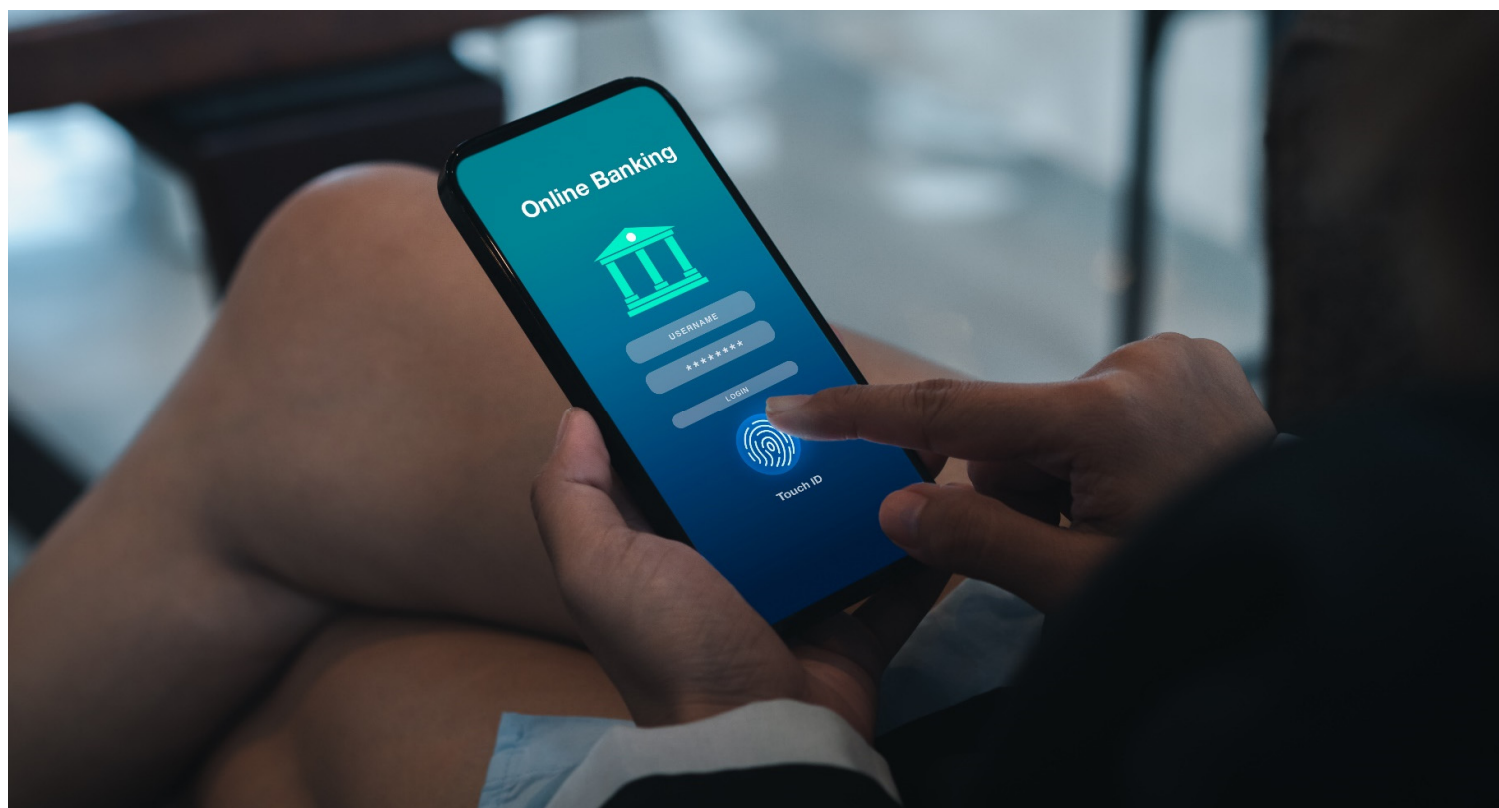
To ride the next wave of digital disruptions, FS players in Bangladesh are striving to create innovative and technology-driven business models to improve unit economics, open avenues for new revenue streams, and build offerings that enable them to compete with FinTechs, MFS and other emerging DFS players.

As per the ABB Digital Transformation Survey 2023, in the past three years, 86%²² of survey respondents have focused significantly on process redesign and digitisation in retail banking, followed by corporate banking and SME. Further, 67%²³ of the respondents believe that increased process digitisation has helped them achieve retail business growth.

Banks have witnessed digital disruptions across the value chain in areas such as customer acquisition (in the form of digital distribution partnerships and sales assist models), customer servicing via digital channels, risk management and underwriting via alternative data strategies as well as innovations in product design and middle/back-office operations. From a value chain standpoint, customer acquisition is the area in which Bangladesh's CXOs have invested the maximum time and effort to bring about digitisation (42% of respondents).²⁴

Furthermore, it is interesting to note the different technology strategies (see the detailed discussion in [section 3](#)) banks in Bangladesh are adopting to seize the available growth opportunities. When asked to rank the most important technology area that they plan to invest in in the coming years to transform digitally, 43%²⁵ of the respondents selected API-enabled integration platforms as the top priority. The next priority differed by generation – respondents from banks that started operations prior to the 2000s (first- and second-generation banks) considered omnichannel platforms as their next most common top priority (35%),²⁶ whereas respondents from banks that started operations post-2000 (third- and fourth-generation banks) considered upgrading digital channels (internet and mobile banking) as their next most common top priority (23%).²⁷

It is apparent from these insights that banks in Bangladesh are aware of the digital disruptions that the industry is witnessing and have developed clearly defined technology strategies to ride the next wave of digital transformation. The next section highlights some key innovations and disruptions happening across the banking value chain that could be considered by Bangladesh's FS sector.



²² ABB Digital Transformation Survey 2023

²³ Ibid.

²⁴ Ibid.

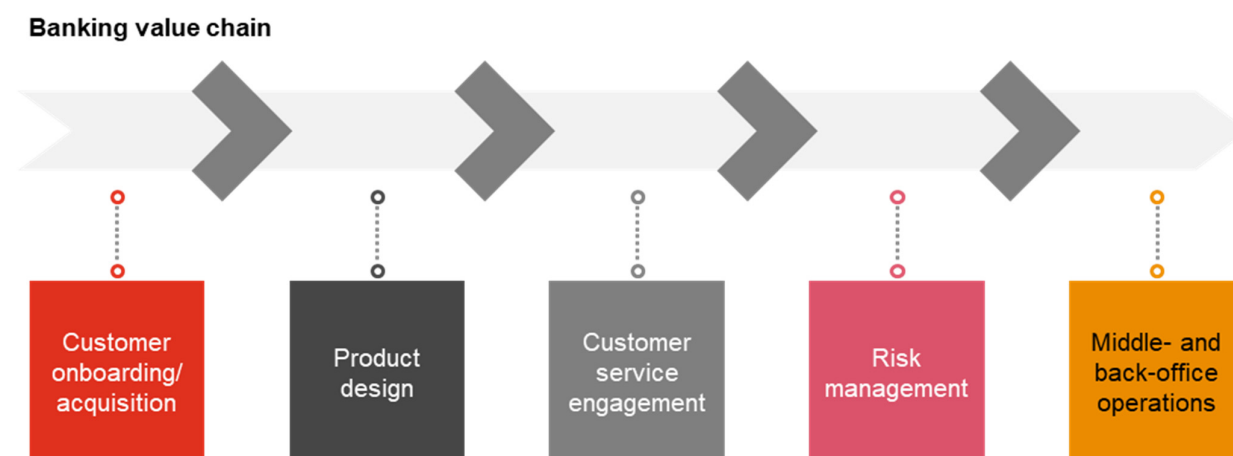
²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

2.1. Digital disruptions across the banking value chain leveraging technology and analytics

Figure 8: Banking value chain and its components



Source: PwC analysis

2.1.1. Customer onboarding/acquisition

Acquiring customers in a cost-effective manner and ensuring stickiness on acquisition are key challenges that FS players face today. In the digital era, a customer acquisition strategy that is data-driven, robust, effective and focused on offering a seamless, quality customer experience could help banks and other financial

institutions (FIs) differentiate themselves and stay competitive. **57%** of the survey respondents believe that their digitisation initiatives have led to increased customer acquisition through digital channels in the last 2–3 years.²⁸

As consumer needs evolve and digital channels become the preferred modes of interaction across particular customer segments, banks would need to focus on delivering intuitive and consistent digital experiences that continue to meet customer expectations. Onboarding experiences with minimal information entry, intuitive UX and real-time decision making are essential and can be achieved through digital channels. Banks could foster seamless onboarding experiences by integrating KYC solutions, fraud analytics and digital verification into their technology strategy objectives.

86% of the survey respondents consider mobile and web-based applications to be the most successful digital approach for disrupting their customer acquisition process.²⁹



While banks continue to develop digital modes of customer acquisition, they must also take into account the preferences of certain underserved customer segments. Low financial literacy and heavy dependence on physical modes of interaction due to lack of trust in financial products along with low digital adoption are some of the key challenges that FIs need to overcome when dealing with these segments.

²⁸ ABB Digital Transformation Survey 2023

²⁹ ABB Digital Transformation Survey 2023

In terms of key challenges faced with respect to the rural population **44%** of survey respondents believe it is lack of financial literacy, while **40%** say it is low adoption of technology.³⁰

Given these challenges, it is important for banks to focus on simplified, intuitive and transparent onboarding experiences for these customer segments as well as consider phygital modes of interaction to build trust and knowledge while also managing the cost of acquisition. For example, banks could create digital sales assistance platforms to equip alternative channels that are traditionally trusted and relied upon by such customer segments (mobile recharge shops, mom-and-pop stores, etc) to distribute FS. These platforms could provide relevant financial knowledge as well as simplify application processes to onboard these customers efficiently.



Key technologies:

- E-KYC (identity and video based)
- Optical character recognition (OCR)
- E-signature
- Artificial intelligence (AI) for fraud/fake identity detection and early warning signs (EWS)
- Sales assistance, banking-as-a-service (BaaS) platforms



Case in point:

In January 2021, a private commercial bank launched an instant digital customer onboarding solution in line with Bangladesh Bank's e-KYC guideline. The solution follows a customer-centric approach and focuses on CASA for driving deposits both by new and existing customers.

Any Bangladeshi national with a valid National Identity (NID) Card has the flexibility to open a bank account instantly, anytime by uploading a photograph and the necessary e-documents. The solution utilises liveness testing to ensure customer security and privacy.

Post-COVID, as the economy started to revive, the demand for credit increased, leading the bank to shift its focus to term deposits. With complete digital onboarding of its retail customers via instant banking services, the bank reported 21% year-on-year growth in the number of accounts opened during that period.



Other examples:

- An Indian NBFC has provided 200,000 grocery stores with banking technology and applications to act as distribution points for biometric-based transactions for cash deposits, utility bill payments and withdrawals, thus increasing penetration within customer segments that do not themselves utilise digital channels.
- A digital software solution platform assists its partner FIs such as banks, FinTechs and other FIs with video-based e-KYC and multi-channel onboarding capabilities.

³⁰ Ibid.

2.1.2. Product design

For banks to effectively reach their targeted customer segments, there is a need for more hyperpersonalised product offerings. It is important for banks to explore the base FS and non-FS needs of their customers in order to design products that complement these needs.

Such customisations could range from parameterising different product characteristics based on customer micro-segments to designing FS products for non-FS customer experiences. For example, some players have looked to modify loan tenure, ticket size and repayment cycles based on the needs of their specific customer segments; design specific payments, credit and insurance products for specific use cases and microtransactions (virtual cards, mobile recharge loans, bicycle insurance); and offer platforms to procure raw materials with embedded credit solutions.

In order to develop such customised products and offerings, banks would need to lean on advanced analytics models that consume data from traditional and alternative data sources. These models would help banks segment customers, understand their unique needs and provide insights for designing relevant product parameters. Further, such models would need to have machine learning (ML) capabilities to continue monitoring the efficacy of products and recommend tweaks and changes in design to increase customer adoption and consumption.



Key technologies:

- AI/ML for product recommendations
- API technology for easier data sharing, integration and embedding
- Content-driven mobile/web app products for improving digital and financial literacy, especially for certain underserved customer segments



Case in point:

In 2022, a leading NBF in Bangladesh launched a consumer financing platform for white goods, enabling cardless digital financing solutions in Bangladesh. It allows customers to avail the buy now pay later option through an EMI facility. The platform, which is integrated with external wallets, automates the NBF's e-commerce and lending business and connects merchants with the consumer base. The end-to-end digital EMI facility operates on a smartphone application-based platform where salaried clients with a minimum monthly net income of BDT 20,000 (after any existing loan instalments) can avail of the credit facility and repay in affordable instalments over a period of 3 to 24 months. An initial down payment is required and the subsequent EMI payments are automatically withdrawn from the client's bank account or can be paid through mobile wallets or online transfers.



Other examples:

- An Indian MFI that caters to underbanked women entrepreneurs offers customised products as well as literacy and training initiatives. The lender allows customisation of different aspects of its loan product – such as flexible repayment options (weekly and monthly collection schemes).



Other examples:

- A contactless payment solution company based in India supports voice-based UPI payments for last-mile feature phone users. The interactive voice response system (IVR) aids its customers in carrying out financial transactions by entering their UPI PIN. Designed for rural India, the system enables non-smartphone users to transfer funds, pay their utility bills, and recharge their mobile and FASTag balance.
- Wealth management is seeing a fundamental shift from a human-/individual-driven advisory model to an AI/robo advisory assisted approach. There are multiple digital wealth management platforms in Asian economies which enjoy strong capital markets, and the young working age population is leveraging them for wealth generation. These apps provide conventional as well as primary and secondary market driven wealth creation instruments through a simple and intuitive digital interface. Further, personalised offerings such as dashboards are powered by users' transactional behaviour and life goals, and allow users to track and measure their progress towards these goals.

2.1.3. Customer service engagement

Customer service engagement is a focal point that can have a direct impact on customer satisfaction, retention and loyalty. Banks can interact with their customers across multiple channels to differentiate themselves and enhance their brand reputation. This can in turn enable banks to cater to different customer segments with experiences that are tailored to them.

As customers grow used to digital experiences that offer easy access to information and enable instant decision making and 24/7 service across various non-FS domains (e.g. food ordering, ride booking, e-commerce), they will similarly expect the same level of service from their FS providers.

- For example, a number of FS players have started to explore new-age digital channels such as chatbots and generative AI to delivering information instantly at any time of the day.
- FS players are utilising data and analytics and **omnichannel digital platforms** to monitor and ensure a consistent experience across different channels and interaction points with customers.
- Banks are leveraging **embedded finance and open banking channels** through APIs to allow third parties to provide basic financial information to their customers, thus creating customer delight (e.g. a personal finance management platform that provides details of account balances and holdings).
- As FS players continue to develop their customer experience (CX) capabilities, partnering with start-ups and FinTechs that have a competitive advantage in this arena, has been a lucrative strategy.

30% of the survey respondents say that their purpose of partnering with MFS is superior CX and servicing.³¹



³¹ ABB Digital Transformation Survey 2023



Key technologies:

- Multilingual chatbots to replace traditional customer service channels
- Omnichannel platform with ML capabilities to track and manage customer servicing across channels
- API-enabled platforms to facilitate embedded finance and open banking offerings for contextual service and information delivery



Case in point:

To facilitate an improved customer servicing experience, a Bangladeshi NBF1 launched a chatbot on its website in 2021. The chatbot provides 24/7 virtual assistance to the NBF1's customers in 2021, enabling them to access information such as their account balance; download credit card statements and online application forms for deposits and loans; recharge mobile balances; and explore the bank's product offerings and features³



Other examples:

- An Indian digital solution company offers chatbot services to its underbanked clients which assist in educating customers about relevant FS available to them, loan eligibility criteria, etc.
- A US-based FinTech company has deployed an open API platform for instant card (physical or virtual) issuing and payment processing. It provides BaaS to clients to manage transaction amounts and enables payment network providers to develop innovative payment models for customised payment solutions.

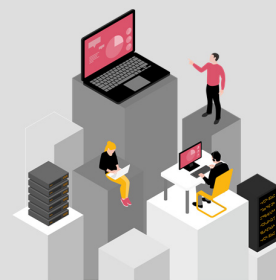


2.1.4. Risk management

Risk management is a crucial aspect of the banking value chain which ensures that banking and financial operations are conducted securely by testing their reliability and resilience. Typically, risk management in banking consists of three types of risks: credit risk, market risk and operational risk.

1. **Credit risk** includes the exposure that banks have to defaults on receivables and asset products and requires proactive risk assessment, monitoring and management. For instance, when it comes to credit risk related to loan portfolios, banks can mitigate such risks at the time of onboarding through the assessment of parameters such as ability, willingness to pay, collateral available, capital possessed by the customer and purpose of loan. A number of FS players have adopted strategies that combine advanced analytical capabilities with alternative data integration and partnerships to assess credit risk more accurately and at a granular level. These strategies also open up opportunities to acquire customers that are traditionally underserved.

29% of the survey respondents say they utilise alternative data partnerships to enhance their credit risk scoring models.³²



Similarly, loan portfolio monitoring systems employ advanced analytical capabilities to assess ongoing risks and develop EWS strategies. All these analytical models also use ML techniques to ensure continual efficacy upgrades.

2. **Market risk** refers to the sensitivity of a financial institution's (FI's) earnings to different economic and market factors (such as interest rates, exchange rates, commodity prices, equity prices). Given the nature of these risks, banks deploy complex value-at-risk (VaR) analytical models to track and monitor the impacts of changes on economic value. A key dependency for such models and processes is the availability of relevant information that may be qualitative and unstructured (e.g. geopolitical/socioeconomic scenarios from news reports and articles). Hence, a number of players have started to use smart data integration, advanced analytics, AI/ML and natural language processing (NLP) capabilities to translate such unstructured data into actionable insights. Such technologies have not only streamlined operational activities and reduced the turnaround time (TAT) but have also improved the efficacy of VaR models.
3. **Operational risks** are the losses that arise out of processes and systems that are not running as per expectations or are inadequate in achieving their objectives. These could include inefficient internal processes, human errors, unforeseen events, poor legal and compliance monitoring, and technological and automation-based risks. While banks have already constituted a number of operational risk-mitigation strategies, a number of technology interventions are playing a key role in making such risk mitigation more robust and efficient:
 - One technology strategy being adopted is automating processes that could otherwise be prone to human error with the help of automation technologies such as robotic process automation (RPA) and intelligent automation (IA).
 - Another key area where technology is playing a significant role is in improving the efficiency of audit processes through analytics platforms that can identify anomalies and perform reconciliation comparison to unearth potential issues.
 - Many FinTechs offer services that utilise data integration and analytics to perform efficient and streamlined verification and detect fraudulent patterns and potential risks.

³² ABB Digital Transformation Survey 2023



Key technologies:

- ML and advanced analytical models for robust credit risk assessment
- Alternative data partnerships and API integration to improve the efficacy of risk models
- Advanced analytics based EWS systems for portfolio management
- Use of AI/ML and NLP to translate unstructured data into insights for VaR models
- Use of big data and advanced analytics to capture the wider transaction behaviour of customers and detect fraud in real time by assessing alternative data points
- Advanced analytics based anomaly detection and reconciliation platforms to improve the efficiency of audit processes
- Use of RPA technologies to automate key operational activities and reduce operational risks



Case in point:

In 2021, the non-performing loans of a commercial bank in Bangladesh stood at 4.9%, while the industry average was around 8–9%. With a specialist understanding of retail credit and a focus on minimising credit costs, the bank launched a nano lending product in collaboration with an MFS provider in December 2021.

A global FinTech company used consumer data and behaviour patterns to complete the credit scoring process for MFS users. Financial modelling was utilised to determine customers' creditworthiness. By leveraging predictive analytics and automated processes, the scope of errors in the credit rating process was minimised.

This model underwent rigorous testing in a year-long pilot from 2020–2021. After successful completion of the pilot, the digital nano loan service model was launched by the commercial bank with the central bank's approval, enabling eligible customers of the MFS partner to apply for loans from the commercial bank ranging from as little as BDT 500 to BDT 20,000 through the MFS app. The loans were instantly transferred into their MFS wallets and loan repayment was carried out in three EMIs via their MFS accounts.



Other examples:

- A UK-based analytics solution company offers fraud prevention solutions to FIs and insurance companies. Through its behaviour analytics platform and ML software, it aids the FIs in detecting anomalies and identifying risks, and assessing frauds in real time.
- An American FinTech firm provides technological solutions to banks for market risk assessment through balance sheet management for evaluating market risk, asset liability management (ALM) metrics, liquidity risks, etc. Leveraging analytics and software development frameworks enables risk calculation for the asset class, calculating parameters such as VaR, stress scenario and sensitivity analysis. Additionally, its software development kit (SDK) facilitates the financial algorithms and customisations required to add new models to its platform.



Other examples:

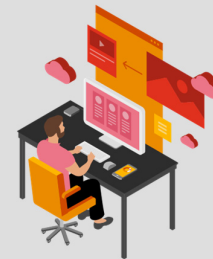
- An American cloud-based fraud detection company provides solutions to identify risks in real time and also offers an adaptive decision-making platform for FIs. Through technological capabilities such as big data, AI/ML, fraud analytics and detection tools, the platform facilitates risk management, effective decision making and fraud mitigation.

2.1.5. Middle- and back-office operations

Middle- and back-office operations are essential components of the banking value chain in terms of supporting overall business processes. These functions ensure efficient and quick processing of applications, transactions, and service queries, etc., apart from managing operations for products and support functions such as legal and compliance, IT and regulatory reporting.

In order to enhance internal processes, analyse competitive advantages, eliminate manual errors and accelerate customer response times, banks have been leveraging business process management (BPM) as an automated software solution. Not only do BPM solutions streamline the business process flow, but they also add agility and flexibility to banking services.

73% of survey respondents employ BPM to improve their middle- and back-office transformation.³³



Below are some of the possible ways in which banks could gear up for digitally transforming their middle- and back-office operations:

1. **Operations management:** Banks are utilising various digital technologies to enhance their operational capabilities. For example, they could employ digital technologies such as OCR tools for translating physical documents into digital ones, thus improving operational processes. Some banks are also leveraging RPA IA to automate repetitive tasks requiring minimal manual intervention, thus increasing the overall efficiency of processes by reducing manual errors and TAT.

Apart from BPM digital solutions, **17%** of survey respondents (first- and second-generation banks) are looking to leverage RPA to improve their middle- and back-office transformation.³⁴

2. **Compliance and data access:** One of the major areas that banks have sought to rationalise is their cost of compliance, driven by reporting and tracking stipulated by regulators. Utilising robust data governance principles to build banking data models facilitated through multi-system integration by API and enterprise service buses (ESBs), banks have been able to automate a number of standard regulatory and internal reporting requirements. Such an integrated data model approach also gives rise to other use cases such as internal enterprise chatbots to easily access relevant information across the organisation. A comprehensive data governance framework would ensure the management of data access, integrity and cleansing to facilitate secure and efficient sharing of data across the organisation.

³³ ABB Digital Transformation Survey 2023

³⁴ Ibid.

3. **Due diligence:** To facilitate a seamless and intuitive due diligence process, banks can utilise OCR tools to convert hard copies into searchable digital documents for analysing unseen, semi-structured data that does not adhere to a standard template. This would help banks to reduce their TAT, eliminate tedious data entry and also validate extracted data from documents. Additionally, AI learnings would aid them in improving for future scenarios and ease their process of retrieval. For example, a number of FinTechs are aiding the legal departments of banks to utilise AI and OCR platforms for streamlining their contract management operations.



Key technologies:

- RPA and IA
- API and ESBs
- AI and OCR



Case in point:

In 2020, a private commercial bank in Bangladesh launched an API-based solution software integrating all liability-based operational software and core banking on one platform. The purpose of the deployment was to streamline all the central processing centres and service outlets. The company's branches operating on this API infrastructure utilise the solution for the transfer of funds, account opening, service, maintenance, and processing of products such as cheque books and debit cards and other assets such as government bonds.

The API solution has enhanced the effectiveness of conducting banking operations, reducing the TAT and facilitating improved customer experience and better retention. Additionally, the software has aided in data regulation and risk management by eliminating the process of transferring hard copy files, which also has reduced the time, effort and costs involved.



Other examples:

- A Brazilian wholesale bank has employed an RPA solution for generating automated reports as part of incorporating automation into its workflows, which significantly reduces human effort. Additionally, this solution assists the company's compliance team in processing suspicious activity reports (SARs) by using NLP capabilities (for reducing the effort involved in reading long documents).
- An American cloud-based solution start-up offers OCR tools for banks to draw actionable insights from unstructured data. The tool assists in converting digital or handwritten text images of documents such as contracts, invoices and receipts into machine-readable text.
- An Indian FinTech provides AI solutions to the banking, financial services and insurance (BFSI) sector to automate their compliance functions for back-office operations. With the capability to process 3.5 million³⁵ application documents in a day, it utilises AI for decision making and back-office tools, thus not only reducing the TAT but also insulating the processes from manual errors.

³⁵ <https://economictimes.indiatimes.com/small-biz/startups/features/signzys-computer-vision-engine-can-process-3-5-million-documents-a-day-banks-are-impressed/articleshow/73025359.cms?from=mdr>

2.2. Digital FS ecosystem strategies

The last five years have seen significant digital transformations and disruptions in allied sectors and ecosystems across the globe. Across different developing nations, sectors such as agriculture, health, and education and customer segments such as micro, small and medium enterprises (MSMEs) have witnessed significant developments in terms of digital platform disruptions. This has in turn changed digital consumption behaviours and made stakeholders in these different ecosystems digitally accessible through such platform economies. Accordingly, FS players have gained significant opportunities to access certain underserved customer segments of these ecosystems by building partnerships with various ecosystem digitisers and platform players. Under the ambit of the Smart Bangladesh Vision 2041 and other efforts, Bangladesh has also witnessed similar digitisation and platform economy growth, driving innovations and new business models in areas such as shared mobility, food delivery services and other gig economy related segments.

As many of these ecosystem digitisers now provide their customers with digital platforms and journeys for service delivery and consumption, this gives banks an opportunity to deliver customised products that are contextually relevant. The strategy is for banks and ecosystem digitisers to develop joint value propositions that deliver both non-FS and contextually associated FS services.

26% of surveyed respondents from first- and second-generation Bangladeshi banks say that in the next three years, their key priority from a digitisation perspective is to bring in ecosystem partners such as MFS and FinTechs to enable digitisation in bank processes.



The two-pronged digital ecosystem strategy that FS players have looked to adopt is as follows: partnering with ecosystem digitisers with easier distribution and access or building joint value propositions with ecosystem digitisers by providing customised FS products.

Figure 9: Digital ecosystem strategy



Source: PwC analysis

84% of surveyed respondents from third- and fourth-generation Bangladeshi banks say that they are partnering with MFS players, with superior **customer experience** and **servicing**, co-creating **products** and acquiring **underserved customers** being the top three reasons for these partnerships.³⁶



³⁶ ABB Digital Transformation Survey 2023

In order for this digital ecosystem strategy to be impactful, banks can either look to integrate with ecosystem digitisers on their platforms or look at building a digital platform of their own that hosts the services of the ecosystem digitiser partners to cater to the core FS and non-FS needs of the target customer segments.

Figure 10: Types of digital ecosystem strategy channels



Source: PwC analysis

1. Integrate with external platforms:

This channel strategy involves the identification of different ecosystem partners and integrating the bank's products and solutions on the ecosystem partner platform. The ultimate objective is for banks to be able to maximise new customer acquisition and product adoption.

$$\begin{aligned}
 &\text{Number of converted leads/transactions from external partnerships} = \\
 &\quad \text{Number of external partners} \\
 &\quad \times \\
 &\quad \text{number of customers per partner} \\
 &\quad \times \\
 &\quad \text{favourability of customer conversion (dependent on customised products)}
 \end{aligned}$$

In order for this to happen, banks need to focus on

- a. partnering with multiple ecosystem digitisers
- b. choosing partners with larger captive customer bases and transaction volumes
- c. providing customised products that have a higher likeliness for customer adoption. If the bank and ecosystem digitiser create a joint value proposition where the customised FS product is contextually relevant in the digital user journey on the ecosystem digitiser's platform, then the probability of customer adoption is maximised.

26% of surveyed respondents from third- and fourth-generation Bangladeshi banks say that the purpose of their MFS partnership is to co-create innovative products.³⁷



³⁷ ABB Digital Transformation Survey 2023

For example, the agri ecosystem has seen the advent of the AgriTech revolution where stakeholders across the value chain have started gaining access to digital services. For instance, a number of AgriTechs now provide farmers with digital platforms to connect to suppliers and access information and markets. Banks could utilise such AgriTechs as distribution channels to cater to the farmer segment in a cost-effective manner and could also look to develop joint value propositions with these AgriTechs – for instance, access to raw materials via the AgriTech platform with a linked credit line from the bank to finance such purchases on the platform itself.

Thus, such digital ecosystem strategies allow banks to acquire customers at lower costs via the partner's digital platform and also co-create customised products that will be contextually relevant and therefore have higher adoption. Moreover, such ecosystem partnerships provide opportunities to access data that banks could utilise for customer segmentation, product insights and risk management.

2. Build an in-house platform:

In this channel strategy, banks could develop their own digital platforms which host both FS and non-FS services, thus creating a composite value proposition that attracts different customer segments of an ecosystem. This could be achieved by developing digital platforms that have the ability to integrate quickly with non-FS service providers that provide the relevant non-FS components of the composite value proposition, while banks customise their products and solutions to fit the same context.

$$\begin{aligned} &\text{Number of converted leads/transactions from } \mathbf{\text{bank digital ecosystem platforms}} = \\ &\text{Number of } \mathbf{\text{new leads}} \text{ (dependent on bank's marketing efforts + captive customer bases of partners)} \\ &\quad \times \\ &\text{favourability of } \mathbf{\text{customer conversion}} \text{ (dependent on composite value proposition)} \end{aligned}$$

While the key objective of maximising new customer acquisition and product adoption remains the same, the strategies to achieve this are slightly different when the digital platform is owned by the bank:

- a. develop effective digital marketing campaigns that reach the target customer segments through channels that allow customers to seamlessly access the digital ecosystem platforms
- b. choose partners with larger captive customer bases
- c. create FS + non-FS joint value propositions that holistically meet the core needs of the target customer segments
- d. ensure that all the non-FS and FS offerings are intuitively accessible on the same digital platform.

For instance, a bank creates an MSME digital ecosystem platform that provides MSMEs with non-FS offerings (through partnerships) such as market access, accounting software, accounts receivable, accounts payable management, taxation payment capabilities, and reporting, and also embeds contextual FS offerings such as working capital loans and payment facilities. Apart from utilising the captive bases and acquisition capabilities of its partners, the bank also gets access to data and consumption behaviour of its customers across the different non-FS and FS services, thus providing opportunities for product customisation, more robust underwriting and real-time decision making.



Case study:

In 2021, a Bangladeshi private commercial bank launched its mobile banking app to provide easy and convenient banking services and redefine the banking experience for its customers. Within a year, customer growth on the digital platform went up by 30% and the bank saw 36% conversion from manual to digital channels transactions.

In January 2023, the bank incorporated lifestyle solution features into the app, transforming it into Bangladesh's first digital banking super app. The new iteration of the app blends banking solutions with lifestyle services to enhance customer convenience. It also includes an OTT entertainment platform, music and podcast platform, religious services, a digital banking learning platform and a travel solution catering to the diverse needs of customers. Consequently, the bank has added features such as, rewards points management, fund transfers, insurance premium payments, credit card management, and mobile and utility bill payments.



Other examples:

A Chinese digital super app employs payments as an entry point into a vast ecosystem of online and offline products and services. The platform incorporates multiple apps catering to services such as retail, mobility, municipal services, entertainment, utility bill payments and bookings. Customers can access these services through the mobile app and carry out payments, avail discounts and share referrals. The super app leverages the data generated from the customer's point of interaction to serve the FS and the retail industry. Typically, the app sends the transactional and social data generated via interaction with these services to its FS arm, which utilises the data to develop a credit-rating system for merchants and consumers to offer business and personal loans.



3. Setting up for digital FS – core capabilities for banks to develop



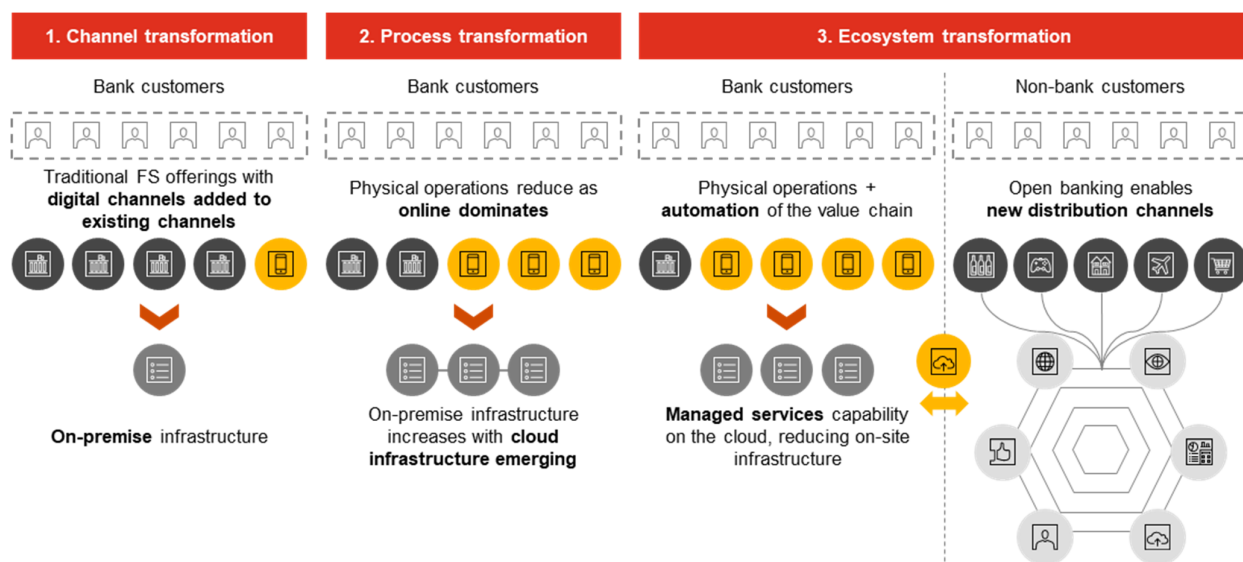
As organisations look to evolve and expand into digital FS, there are inferences they can draw from the success stories of various FinTechs, MFS, start-ups and other FIs in terms of operations such as lean organisation structures, agile mindset, quick decision making, technology, analytics-driven insights, leveraging customer and operational data for developing differentiated value propositions (for both FS and non-FS), and co-creating value-added products and services.

42% of the respondents from third- and fourth-generation Bangladeshi banks feel that the key challenge to their digitisation initiatives is competing with FinTechs in terms of agility and innovation. They feel that they will need to transform in order to keep up in the FS landscape.³⁸



In line with the finding that 86%³⁹ of the respondents have focused significantly on process redesign and digitisation in retail banking in the past three years, it is essential for banks to assess their level of digitisation while considering the future roadmap for digital transformation. Based on their maturity level, banks could look at the following three parallel digital transformation strategies:

Figure 11: Digital transformation strategies



Source: PwC analysis

1. Channel transformation:

The channel transformation strategy is where a bank creates a digital channel in addition to existing channels such as branches and phone banking:

- This digital channel acts as a new channel (product and service) to interact, acquire and service customers.
- It sits within the larger channel strategy of the organisation.
- Automation and digitisation of back end operations are required to complement legacy technologies and align with these channels.

³⁸ ABB Digital Transformation Survey 2023

³⁹ Ibid.

2. Process transformation:

The process transformation strategy involves the creation of end-to-end digital products and value propositions with complimentary digital processes across the front, mid and back office:

- This strategy has implications for the development of direct digital-first products and value propositions.
- It would involve the replacement of traditional systems with advanced, nimble, integrable, cloud and software as a service (SaaS)-oriented solutions.

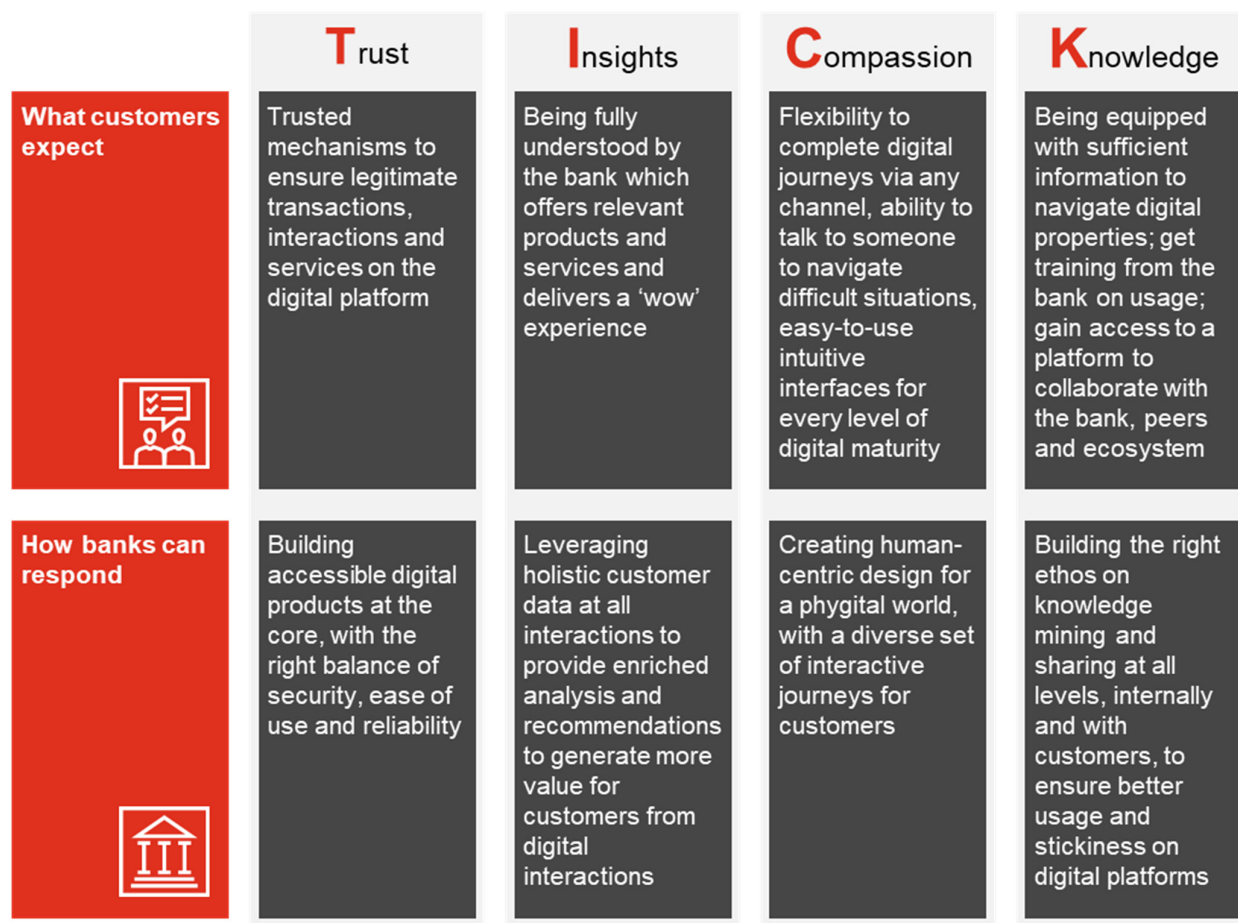
3. Ecosystem transformation:

Broadening the bank's digitisation purview through its partner network, an ecosystem transformation involves identifying, onboarding and collaborating with partners to co-create solutions, serving as a key business driver and strategy for increasing customer conversion:

- The focus is on ecosystem strategies to identify holistic value propositions co-delivered with partners.
- There is a shift towards frictionless, embedded product/service delivery through partners and digital platforms.
- Cloud, APIs, analytics and partnerships drive customer acquisition and lead to new business models/propositions.

Regardless of which transformation journey banks adopt, they will need to ensure that customer expectations are met:

Figure 12: Meeting customers' needs through the TICK framework



Source: PwC analysis

As the above figure shows, banks will need to focus on trust, insights, compassion and knowledge when it comes to meeting customer expectations and needs.

For achieving any of these **transformations** and **customer strategies**, banks should identify the core capabilities needed. The business, experience and technology (BXT) framework applied below elaborates on how banks could identify and gear up with these core capabilities required for achieving success in business.

I. Business

1. Business strategy and product

The banks' strategy and product teams would need to be aligned with their transformation strategies, and require capabilities such as:

- clear visibility on customer micro-segments as well as research and insight on their core needs/requirements (both FS and non-FS)
- the ability to build holistic composite value propositions (both FS and non-FS)
- the ability to design relevant products for FS that could be further aligned with a digital-first customer experience through creating and validating effective customer journeys, revised processes to ensure that the turnaround time (TAT) is minimal
- the means to identify and select the right partners to develop sustainable go-to-market (GTM) strategies.

2. Ecosystem capabilities

Banks could create dedicated ecosystem teams to identify, manage and review partners in order to support different digital GTM strategies. Such teams would need to:

- possess knowledge of different service provider options so as to identify all relevant vendors/service providers for each service category/use case in a customer journey
- work with legal and compliance functions for due diligence to define streamlined vendor selection frameworks and vendor onboarding processes that encompass issues related to technology, data and regulatory compliance
- have the ability to manage partner onboarding and provide post-onboarding partner support, manage partner queries and enable partner tracking.

II. Experience

As banks witness the digital transformation journey through various modes of interactions and operations, nurturing a digital brand becomes essential in order to foster trust and transparency among customers and other stakeholders. This could be achieved by enabling a digital-first approach, focused towards building multi-channel experiences with different form factors in terms of interaction, communication and engagement.

Having the right design and digital marketing strategy are crucial to delivering differentiated experiences and creating digital brand associations. Thus, to enable the same, the product and marketing teams must have the ability to:

- create a comprehensive marketing plan for the product launch
- design intuitive, contextual and simple customer experiences to maximise engagement and adoption
- create and manage digital campaigns and social media handles.

III. Technology

1. Technology capabilities

35% of survey respondents from first- and second-generation Bangladeshi banks believe that rapid changes in technology make it difficult to keep up, which is posing a challenge to their digitisation initiatives.⁴⁰



To keep up with the rapid technological advancements, banks could develop some of the following capabilities:

- track and maintain knowledge of the latest technology options
- work with product, business and operations teams to define platform specifications and architecture for new digital products, processes and channels
- create solution architecture, design and development plans for quick and seamless integrations
- perform tech management, implementation, tracking, maintenance and troubleshooting.



⁴⁰ ABB Digital Transformation Survey 2023



How banks can adopt cloud as part of their technological capability

Banks should approach their cloud strategy similar to how they approach any consumer-oriented technology. They must start with the customer and their experience and then work backwards to the processes and technology capabilities underneath. Cloud computing is the enabler of crucial technology pillars and important for delivering a winning CX.

In 2021, PwC conducted a benchmark study with 30 global banking leaders,⁴¹ with most of the leaders being positioned in the upper part of the exploration phase – i.e. 5–20% of the compute capacity in the cloud. Only a selected few leaders were advanced enough in the adoption phase – i.e. 40–50% of the compute capacity in the cloud.

These statistics highlight two main insights. First, it is still relatively easy to catch up and close the gap in cloud adoption. Second, very few large universal banks reach the all-in phase in terms of cloud adoption (i.e. above 70% capacity in the cloud).

Banks begin their cloud journeys with varying levels of readiness.⁴² However, given the highly regulated nature of banking, the elements – where they are typically more mature from the start – are security and compliance. Global studies reveal that the migration plan is typically a living document. Moreover, rather than creating an elaborate migration plan from the start, it is more important to provision resources that gradually execute low-level analysis of applications and progress in batches.

PwC's benchmark study⁴³ also shows a clear path for cloud adoption, which can be roughly broken down into the following phases:

- learning the low-risk use cases
- improving IT infrastructure and security measures
- setting up data and analytics
- revamping channels and products
- migrating other areas.

Organisationally, cloud adoption requires four key elements:

- cloud enablers
- transformation programme structure
- target operating model (TOM)
- an upskilling programme.

While all of the above-mentioned are equally important, **cloud TOM** requires the most effort,⁴⁴ as highlighted below:

- a set of described roles and responsibilities (at team and individual level)
- division into two phases, for the interim and target states
- a decision on the preferred funding model for the transformation.

⁴¹ PwC study on a sample of 30 global banking leaders - large universal banks, excluding digital challengers (2021)
https://www.pwc.pl/pl/pdf-nf/PwC_Report_2022_Cutting_through_the_noise.pdf

⁴² PwC analysis

⁴³ PwC study on a sample of 30 global banking leaders - large universal banks, excluding digital challengers (2021)
https://www.pwc.pl/pl/pdf-nf/PwC_Report_2022_Cutting_through_the_noise.pdf

⁴⁴ PwC analysis

2. Analytical capabilities

A bank's data and analytics team would play an essential role in the success of any digital transformation efforts, as such transformations would offer opportunities to access new forms of data and develop analytical insights. Some of the significant capabilities of the same would include:

- creating a sustainable data architecture and data governance mechanisms
- ensure secure, controlled and seamless data access
- building data models to incorporate both internal data across the organisation and external data from different partners
- leveraging AI or ML and advanced analytical techniques to build customised analytical models for different use cases for front-, mid- and back-office transformations (e.g. customer segmentation models, credit risk underwriting, market risk management and fraud detection).

As banks look to develop such capabilities for digital transformation, they can either continue to incorporate these changes incrementally, or look at developing separate teams or functions – depending on the type of transformation.

80% of surveyed respondents from first-generation Bangladeshi banks affirm the need for having a distinct vertical or team separate from the traditional organisation to implement a digital-first FS model.⁴⁵



⁴⁵ ABB Digital Transformation Survey 2023

4. Role of policymakers and regulators: Paving the way for the next wave of transformation in Bangladesh



Bangladesh has made significant strides towards its goal of becoming 'Digital Bangladesh' through various initiatives in e-governance, e-commerce and e-banking. Various government services have been digitised, financial transactions have become easier, and internet and mobile usage has become more prevalent. The digital financial inclusion landscape has also undergone significant improvements, making people accustomed to digital FS, agent banking, cashless transactions and mobile money. The launch of Bangladesh's first National Financial Inclusion Strategy (NFIS) 2021–26 is a huge step towards achieving financial inclusion for all.

Policymakers play a crucial role in creating an enabling environment for financial progress by formulating policies, defining new business models, incentivising partnerships and creating platforms to drive growth. Bangladesh Bank's directive to bring the marginalised and financially excluded population under formal FS through no-frill accounts in 2010⁴⁶ is one such example. These no-frill accounts require individuals to maintain a negligible (BDT 10/50/100)⁴⁷ initial deposit and follow simple KYC norms, and offer very basic banking services to the marginalised and underbanked.

In December 2022, there was 5.06% year-on-year growth in the number of no-frill accounts. The total deposits in these accounts reached BDT 35.65 billion, providing access to formal banking services for the low-income population.

A key aspect of Bangladesh's financial strategy is the modernisation of its financial infrastructure. AI, ML, API connectivity, FinTech tools like e-KYC, and data archiving tools are helping FIs in their transformation journey and making the banking process more streamlined. Building on the vision of Digital Bangladesh, the government is now moving forward to implement its 'Smart Bangladesh' vision by 2041. The transformation of the financial sector to smart systems is an integral part of the same.

For the expansion of DFS, significant investments have been made towards enhancing the digital infrastructure, which has led to Bangladesh Bank issuing cloud computing guidelines for FIs in March 2023.⁴⁸ For a robust and scalable infrastructure, FIs worldwide have turned to cloud computing as a way to modernise their IT infrastructure and enhance customer experience. Though Bangladesh is still catching up with its global peers, initiatives in the domain of cloud technology solutions are being introduced as well. A recent agreement to set up a cloud data centre through joint collaboration of an IT service company and a state-owned data centre is a significant step towards the country's digital transformation, which could benefit the banking sector as well.⁴⁹

Although multiple initiatives have been taken and impressive progress has been made in digitisation efforts, various challenges still exist in the financial landscape.



In 2021, 23% of the population in Bangladesh aged above 15 didn't have a bank account because of geographical barriers.⁵⁰ Though the no-frill accounts have proved to be an effective medium to provide FS to the traditionally unbanked masses, infrastructural and access barriers – particularly in remote rural areas – are hindering the full potential of this policy.

If, however, no-frill accounts can be linked to MFS accounts, users can easily receive disbursed government subsidies and credits from refinancing schemes. With the growing popularity of MFS, the government can take an initiative to analyse the possible interoperability between the no-frill and MFS accounts and leverage digital technology to make FS more accessible.

⁴⁶ https://www.bb.org.bd/pub/quarterly/financial_inclusion_report/jun2020.pdf

⁴⁷ Ibid.

⁴⁸ <https://thefinancialexpress.com.bd/trade/central-bank-issues-cloud-computing-guideline-for-financial-sector>

⁴⁹ <https://www.thedailystar.net/tech-startup/news/meghna-cloud-bangladeshs-first-cloud-data-centre-3214921>

⁵⁰ <https://databank.worldbank.org/reports.aspx?source=1228>



In Bangladesh, credit access to the low-income segment of the population is limited. In 2021, only 16.3% of the population aged above 15 had borrowed any money from banks or other formal FIs.⁵¹

One of the reasons behind this is the reliance on traditional credit scoring models on historic data, which are not able to provide financial insights for the unbanked, putting them at a disadvantage while availing loans. One way in which this can be alleviated is by developing channels of access to alternate data sources including device data, utility bills, salary data from employers and e-commerce platforms. While this data is available with a number of private players, accessing this data in a fair, transparent and consent-driven manner would require public digital infrastructure to enable such sharing. For example, the account aggregator framework that has been set up in India provides the relevant public digital structure specifications in terms of who can share data, what data can be shared in what format and how can consent be captured. Similarly, the Open Credit Enablement Network (OCEN) initiative in India has developed a framework to facilitate collaboration and data sharing between different digital platforms and lenders, thus opening up new opportunities for providing credit to underserved segments. Bangladesh regulators could look at similar models to facilitate such data access for a more robust credit underwriting, and thus unlock credit access to underserved segments.



As banks look to continue their digital transformation journey, a key impediment is the existence of legacy systems and processes which may not be efficiently aligned with these new ways of working.

Therefore, banks can consider setting up distinctly separate business units or teams that solely focus on these new digital products and ways of working with their own tech stacks and processes – loosely independent of the traditional organisation. As mentioned, 80% of surveyed respondents from first-generation Bangladeshi banks affirm the need for having a distinct vertical or team, separate from the traditional organisation, to implement a digital-first FS model.⁵² The digital banking unit (DBU) approach suggested by the Reserve Bank of India (RBI) provides some illustrative direction on how regulators could encourage such digital transformation approaches.



Another area requiring policy intervention is initiatives to improve the adoption of cloud-based services in the banking sector. Mandates for data localisation in Bangladesh Bank's cloud computing policy guidelines – such as restrictions to host customers' financial and other sensitive data in cross-border public clouds – are well founded and specifically added for customer data protection. These may also, however, inadvertently have implications on the ability of FIs to fully explore the potential of such technologies.⁵³

The exception clause in the recently formulated cloud computing policy may benefit from further clarifications. The regulator may further elaborate on the scope of this exception, in order to facilitate a better understanding among stakeholders to navigate the policy requirements more effectively.

⁵¹ Ibid.

⁵² ABB Digital Transformation Survey 2023

⁵³ <https://www.bb.org.bd/mediaroom/circulars/brpd/mar162023brpd05.pdf>

18% of surveyed respondents from Bangladeshi banks feel that intervention from policymakers/regulators in the form of regulations focused on facilitating cloud adoption would be most impactful.⁵⁴



Going forward, there could be further policy and regulatory developments to spur innovation and investment in this sector. For example, the government or regulator could introduce new policies and platforms that promote the adoption of digital payments or provide incentives for companies to expand their offerings to the underserved population. One approach could be to utilise the National Payments Switch Bangladesh (NPSB) of Bangladesh Bank (which has an in-built capability to support instant payment scheme overlay) to build a domestic instant payment scheme like UPI in India. Efforts in this direction have been initiated through the launch of an instant payment collection solution via a collaboration between NPSB and a multinational bank. Another possible approach is the development of a digital platform for sending and receiving remittances across dedicated corridors to or from other countries via a unique and standard identifier. For instance, a global payment network corporation unveiled a cross-border money transfer platform to tap into Bangladesh's fast-growing market for sending remittances through formal channels.

Clear and transparent regulations can also help to foster consumer trust in digital FS, which is crucial for long-term success. Similarly, programmes, platforms and frameworks from regulators and policymakers that encourage collaboration and partnerships between incumbents and FinTech companies would be beneficial.

37% of surveyed respondents from Bangladeshi banks feel that intervention from policymakers/regulators through the establishment of public digital infrastructure and rails would be most impactful.⁵⁵



Overall, the digital FS industry in Bangladesh could be promoted with a supportive regulatory environment, secure and scalable public digital infrastructure, financial product innovation, and financial inclusion. Furthermore, banks should work in collaboration with industry stakeholders to facilitate growth and inclusive development.

⁵⁴ ABB Digital Transformation Survey 2023

⁵⁵ ABB Digital Transformation Survey 2023

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Data Classification: DC0 (Public)

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GG – May 2023 - M&C 28005