

# Bangladesh toward Digital Financial Inclusion: FinTech Experience

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## Abstract

Digitalization in financial services, in another way financial technology or FinTech, has drastically extended financial intermediation while customers are experiencing and engaging with the development of new digital products and competencies. Nevertheless, over two billion people worldwide remain out of accessing financial services that make financial inclusion an equally important concern for all economies, including Bangladesh. Over the last few years, a good number of academic literature has been made on FinTech covering how essential it is to serve the unbanked and underbanked countries. This study tries to provide an inclusive survey of relevant literature on FinTech and its potential to disruptive financial intermediation globally and nationally. Therefore, a descriptive research design has been adopted entirely based on secondary resources and mostly relying on the Global Findex database, International Monetary Fund (IMF) releases, and Bangladesh Bank reports. It has been evident that digital financial inclusion is connecting more and more people to the financial system at a growing pace resulting in substantial welfare benefits throughout the nation. Even if the active use of mobile money systems, digital banking, especially internet banking, is reshaping our bank. However, there is much work to be done compassing the challenges and the threats of FinTech as important policy issues for the existing financial

landscape. In conclusion, this study provides an insight into the country's digital financial system and contributes to further study in relevant disciplines.

**Keywords:** Financial inclusion, Financial Services, Digital Finance, FinTech, Bangladesh.

## 1. Introduction

With the dramatic advancement of technology, financial systems worldwide have been experiencing a remarkable change in providing a wide range of financial services aiming towards the improvement of economic environments. A rapid change in the area of digital technology, in particular, usages of online platforms or websites, enables financial service providers to change their business models and provide new revenues and value-producing opportunities emerging outside the traditional financial system (Makina, 2019). Along with the services provided by the brick-and-mortar branches, mobile wallet, payment apps, cloud, analytics, artificial intelligence, cryptography, crowdfunding and many other forms are available nowadays that modernize and facilitate the financial services to attract the unbanked as bankable clients as means of subsiding financial exclusion and resulting in an inclusive economic growth (Casanova et al., 2018; Makina, 2019; Pramanik et al., 2019). As a result, consumers can access cost-effective means of managing their financial activities together with spending, borrowing, saving, investing, and protecting their financial well-being through insurance, termed as sustainable finance or financial inclusion, one of the center policies of World Bank and significant development organization (Arner et al., 2020; Patwardhan, 2018).

Financial inclusion in this digital age triggers the achievement of all the United Nations Sustainable Development Goals (UN SDGs) by eradicating barriers in accessing various financial products and services for the entire population. To advance the steadiness of the financial system and to minimize the inclusion gap, digital finance has become a key solution by ensuring essential formal financial services to be accessed at a reasonable cost with the help of technological innovations. The merger of financial services with modern technologies builds and develops applications or platforms where individuals can even apply for online personal loans, business loans etc. (Kandpal & Mehrotra, 2019). In short, 'FinTech,' such financial technologies, has gained popularity worldwide since 2014 (Lai & Samers, 2020).

Bangladesh, a country in south-east Asia, is the fastest-growing economies in this region with the highest economic growth of 8.2 percent in 2019 (Note 1) and is projected to be the twenty-eighth biggest economy in the world by 2030 (Bhuiyan et al., 2020). It is a matter of distress that the context of financial inclusion in Bangladesh is far from achieving its journey with the Maya declaration in 2011 (Note 2). As reported to Global Financial Index 2017 (Note 3), around 59 percent of the population aged 15 or above has no account with financial institutions, although it was 71 percent in 2014 (Demirguc-Kunt et al., 2018). The major part of the adult population remains excluded from access to formal finance due to low income, minimum balance requirement, inadequate financial literacy and awareness, lack of technological infrastructure, especially in suburban and rural areas. At the same time, from the supply side, lack of resources in physical, human capital and firm capabilities of service providers are lingering financial inclusion gap.

Moreover, bank-led institutions get competitive advantages in terms of resources and operational advantages compared to their non-bank peers (David-West et al., 2018; Sapovadia, 2018). In these recent years, Bangladesh Bank (BB), the central bank of Bangladesh, has pronounced a good number of initiatives, especially for poor, marginalized and some specific underprivileged groups, to bring them into the formal financial platform through major channels such as agent banking, mobile financial services (MFS), digital financial services along with branch banking (Bangladesh Bank, 2020). Bangladesh Bank issued a draft guideline particularly for MFS and granted permission to 28 banks to provide mobile finance under a bank-led structure.

Focusing on the innovations of financial technology to minimize financial exclusion, this study aims to contribute to rising streams of literature. The existing literature of FinTech so far has discussed evolutionary context (Arner et al., 2015; Casanova et al., 2018; Lai & Samers, 2020), pinpointing its role in transforming overall financial systems from the theoretical background (Allen et al., 2020; Arner et al., 2020; Bates, 2017; Kavuri & Milne, 2019; Thakor, 2020) as well as from empirical framework (Friedline et al., 2020; Gupta & Xia, 2018; Kandpal & Mehrotra, 2019; Yermack, 2018). Although there have been extensive studies on FinTech in the last five years, the area remains uncovered in Bangladesh. Research has been done on specific modes of digital financial services; mobile financial services (MFS) issues (Bilkis & Khan, 2016; Kabir et al., 2020); automated teller machine (ATM) issues (Saha & Rahman, 2018); the prospect of internet banking (Alam et al., 2007); adoption of e-banking (Hasan et al., 2010) or policy implication for e-banking (Rahman, 2009).

A few studies discuss the use of innovative technology in a country's financial sector in specific such as the use of regulatory Sandbox to promote digital finance innovations (Azim, 2019), the role of Chatbot in banks customer services (Sarbabidya & Saha, 2020), opportunities of Islamic FinTech (Ahmad & Al Mamun, 2020). This article attempts to describe the FinTech experience Bangladesh has and highlights challenges in achieving digital financial inclusion- an issue that has not been addressed in the literature. Insights from this comprehensive study, national policymakers can understand the contemporary issues associated with the rapid development of digitalization in financial services and the risks involved in digital financial inclusion.

The rest of this paper is structured as follows. Section 2 outlines the concept of financial inclusion and the role of FinTech to minimize the exclusion gap. Section 3 presents digital financial inclusion so far. Bangladesh has experienced followed the challenges in Section 4. Section 5 concludes the study with a discussion.

## **2. Background Literature**

Financial inclusion and the role of technologies to drive financial inclusion have become a central issue of discussion in many studies. So it is essential to review the academic literature and research works published in this field. This section provides (1) a conceptual review of financial inclusion literature focusing on different countries and regions, (2) the evolution of digital finance and FinTech phases, and (3) the benefits of digitalization in delivering financial services to foster inclusive growth.

### *2.1 Financial Exclusion versus Financial Inclusion: How to Minimize Gap?*

Financial exclusion is defined as the unavailability of a full suite of financial services to the disadvantaged section of society. A person is financially excluded when he does not have access to services, partially or entirely, offered by mainstream financial institutions (Sapovadia, 2018). European Commission published *Financial Services Provision and Prevention of Financial Exclusion* report in 2008 that defined financial exclusion as

*"a process whereby people encounter difficulties accessing and/or using financial services and products in the mainstream market that is appropriate to their needs and enable them to lead a normal social life in the society in which they belong."*

The essential services to which all individuals of any society should have access are transaction banking, savings, credit and insurance. Financial inclusion means having universal services provided by sustainable institutions at an affordable price, particularly for unbanked and underbanked consumers and businesses. They use alternate channels for meeting their financial needs and face excessive pricing (Patwardhan, 2018). For example, the informal arrangements made by local suppliers of credit like money lenders, pawnbrokers are extending small loans at high interest rates periodically and entrapping unbanked in the vicious cycle of borrowing (Saxena & Puneekar, 2020).

Vo et al. (2020) suggested financial inclusion as a lubricant for the entire economic system after examining its contribution to macroeconomic stability by expanding savings and investments using bank-level data of 3071 banks across countries in Asia from the year 2008-2017. It is also evident from their study that financial inclusion facilitates stability in the financial sector by providing households and small and medium enterprises (SMEs) with timely and appropriate solutions and products. When unbanked have access to financial services, the country can drive development and reduce poverty by facilitating health, education, and businesses (Demirguc-Kunt et al., 2018). Besides, greater financial inclusion also enables poor households to handle income shocks over sudden disasters like illness or loss of employment (Ozili, 2018).

However, physical access, affordability and eligibility are the three dimensions that measure the aspects of financial inclusion for an economy encompassing indicators such as the number of financial institutions' branches or automated teller machines (ATMs) by landscape or adult population, percentage of adults having at least any deposit or loan account etc. (Mialou et al., 2017). Among various determinants, (Uddin et al., 2017) identified that the financial literacy of users significantly influences financial inclusion while the size of the banks, its efficiency, and the interest rate it charges directly impact it. The study also shows that larger banks' greater size and diverse product portfolios can reach a more diverse set of customers and positively contribute to financial inclusion.

Sahay et al. (2020) emphasized financial access and financial deepening that support macroeconomic growth and lower income inequality. Their empirical work examined the drivers of real GDP growth over eight years (2011-2018) for a sample of 52 countries to compute digital financial inclusion indices, using standard cross-country OLS regressions. They identify stronger associations between payment services with the inclusive growth driven by financial technology.

2.2 Digital Finance and FinTech: What Do We Know?

Digital finance means delivering financial services using digital technology via mobile phones or the internet as these channels have become universal and actively use for financial products. Such a mode of financial services expands access, drives down costs, and increases the convenience of transactions for underserved segments of society (Patwardhan, 2018). In another way, FinTech is defined as the innovations and usage of technology in providing financial services to its end customers to create a financial system that sustains the economy, the people and the planet itself (Salampasis & Mention, 2018). Another study (Krivosheya, 2020) identified a significant positive effect of various financial innovations over the frequency of cashless payment after using a representative sample of 1500 individuals from all Russian regions. The study also highlighted the importance of empirical evaluation of the effects of innovations on cardholder behavior

Focus areas for FinTech have been banking-related technologies by innovating to provide user-friendly products mostly revolve around SME and retail customers in payment, lending, personal finance, money transfer, digital currency, and software (KPMG, 2017).

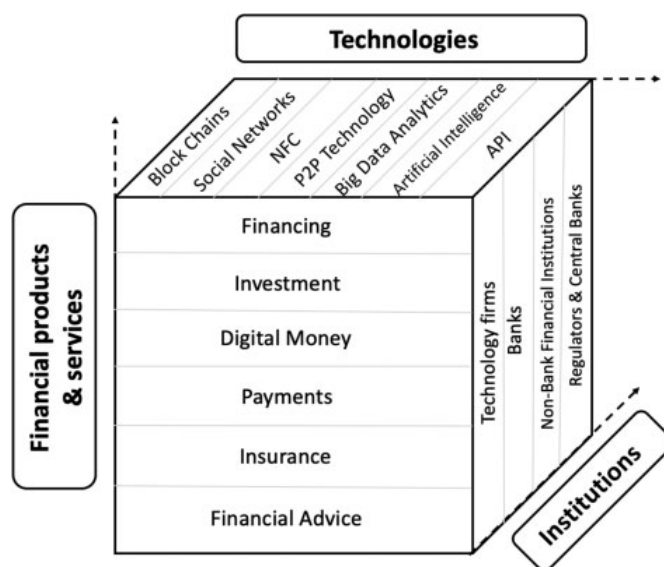


Figure 1. FinTech Cube- dimensions of financial services, technologies and institutions  
Adapted from 'Towards an economic geography of FinTech' (Lai & Samers, 2020).

Arner et al., (2015) and Bates, (2017) described the phases of financial service industry as early adaptors of new technology into three main eras; FinTech 1.0 (1866-1967) when finance transformed from analogue to digital with the invention of communication technology (Telegraph, 1844) and usage of specialized computer in managing money (Automated Teller Machines); FinTech 2.0 (1967-2008) when technologies were deployed to deliver financial services with the introduction of electronic payment and clearing system such as (ATM, 1967), Bankers' Automated Clearing Services (BACS, 1968), Clearing House Interbank Payments System (CHIPS, 1970), and Society of Worldwide Interbank Financial Telecommunications (SWIFT, 1973); FinTech 3.0 (2008-Present) when established

technologies have been shared by disruptive new start-ups like software programs to communicate and interface in payment and financial services (Application Programming Interfaces, API), to manage large volume of information (Big Data Analytics), use of online network (cloud computing), to transmit contactless payment information (Near-Field Communication, NFC), fast payment system using mobile phones (Person-to-person, P2P), distributed ledger technology (Block chains) and many more (CPMI & World Bank, 2020). (Patwardhan, 2018) documented the increasing importance of the smartphone in digital financial services for the next generation because of its cheaper, innovative pricing models and data-ready mobile networks. Real-time payment and prompt credit decisions are possible for cloud computing while payment data and financial data have been stored in the cloud (Allen et al., 2020).

In recent years, technology companies, known as BigTech or TechFins, have been entering into the existing provision of digital financial services and are proliferating. Frost et al. (2019) performed econometric models on monthly statistics of Mercado Libre platform (Argentina) and Alibaba's trading platform, Taobao (China), to have a better understanding of credit screening of potential borrowers. Their study led to one of the findings that BigTech firms can lend more in countries with less competitive banking sectors and less rigorous regulation because lenders have an information advantage in credit assessment relative to a traditional credit bureau.

However, a higher mobile phone penetration rate, particularly smartphones, plays a vital role in developing mobile payment systems, mostly in developing countries. Mobile payments generally relate to generic and universal services, which can be performed by related service providers other than banks or financial institutions because of convenience, cost efficiency, socio-economic condition, etc. Hundreds of mobile payment services have been operating around the world. In addition with Iman (2018) argued on the relevance of mobile payment with FinTech era based on the attributes of industry infrastructure while the multinational operators govern essential platforms, for example, telecom firms.

### *2.3 Digital Financial Inclusion: Why Do We Need It?*

Digital Finance plays three distinctive vital roles to achieve sustainability and financial inclusion related to UN SDGs. At first digital finance redirects and enhances the allocation of financial resources globally through business models, incentives, policies and regulations to support sustainable development. Secondly, FinTech allows the expansion of resources in the financial system through savings, investment, and inclusion, resulting in large amounts of new money available. Finally, using new technologies to design a better financial and regulatory system (RegTech) improves financial stability and inclusive growth (Arner et al., 2020).

Financial services have recently been focused on electronic money transfer and mobile technology to accelerate financial inclusion to the unbanked, and the real benefits are now available beyond payment, savings, and micro-credit. Digital financial inclusion can provide suitable products to assist when other support arrangements are unavailable (Koh et al., 2018). With the immense support of technology, poor households to SMEs can have access to accounts, transactions and credit, thereby opening opportunities for wider sections of the

population to participate in formal economic activities. Hence the promise of digital financial inclusion is enhancing economic growth and reducing poverty (Sahay et al., 2020). As Beyene Fanta & Makina (2019) described, technology is the significant driver of financial inclusion in its effect of delivering financial services to people whenever they are and when they need them. Their study based on a database covering 168 countries to measure financial inclusion depending on information and communication technology (ICT) components-telephone, mobile phone, ATM and internet, concluded that ATMs and internet technologies significantly affect financial access and using financial services. In contrast, mobile and telephone subscriptions are related positively.

Income inequality can also be driven down with the advantage of technological innovations. Demir et al. (2020) studied a panel of 140 countries using the Global Findex database for 2011, 2014 and 2017 and explored an interrelationship between FinTech, financial inclusion and income inequality. It has been evident that FinTech reduces income inequality indirectly through its effects on financial inclusion.

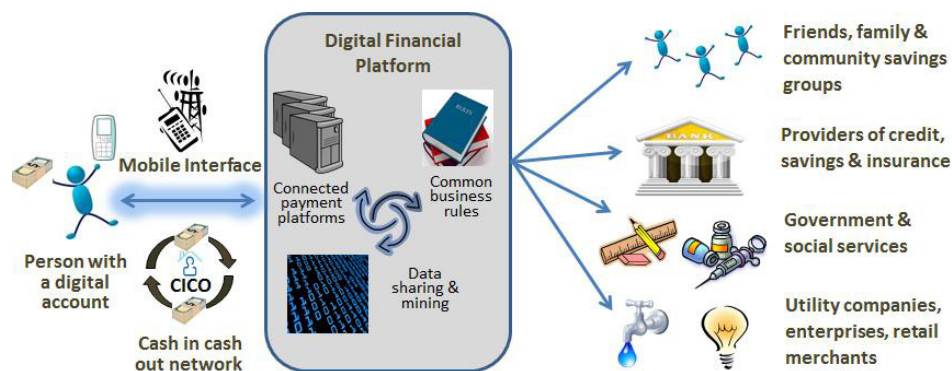


Figure 2. Digital financial platform connecting poor people to their peers and a range of providers

Adapted from 'A Digital Pathway to Financial Inclusion' Radcliffe & Voorhies, 2012.

Abdullahi (2015) highlighted financial inclusion and a cashless economy in a newer context. After a cross-sectional survey of 230 working-age adults in Nigeria, the study showed that financial inclusion of the working-age adults is influenced by awareness, customer value and infrastructure- the variables of cashless economy. Although countries have different experiences in FinTech perspective, Pazarbasioglu et al. (2020) described its potential to lower costs by maximizing economies of scale, increasing the speed, security and transparency of transactions and allowing more personalized financial services.

Saxena & Punekar (2020) have investigated the usefulness of mobile payment service characteristics in daily financial needs and transactions of the urban economically weaker population from the three regions of India using the financial diary approach. The study draws a concluding remark on mobile money and mobile payment, not just technology artifacts but has socio-economic context highlighting their perceived ease of use.

The online lending platform started operating in the mid-2000s and became popular to use after the global financial crisis in the form of P2P lending that might help to overcome

systematic biases in financial services regardless of geographies, genders; enhanced the speed, customer service and convenience of providing capital; lowering the cost of intermediation and widen the pool of loanable fund resulting higher market competition (Casanova et al., 2018).

### **3. Perspective of Financial Inclusion in Bangladesh**

Financial inclusion has been considered an effective policy to the policymakers and the government of Bangladesh to eradicate poverty and achieve inclusive growth and sustainable economic development. Bangladesh committed to developing an inclusion strategy in 2014 as a participant in the Maya Declaration. As a part of it, the country's first financial inclusion strategy, National Financial Inclusion Strategy (NFIS), was drafted and awaited approval in 2018. According to NFIS, the commitment to the financial inclusion of all citizens will be confirmed by 2024. The central bank has been taken different initiatives to bring financially excluded people under the umbrella of formal financial services.

#### *3.1 Financial Inclusion through Conventional Channels*

##### **3.1.1 Branch Banking**

After BB's circular on expanding the bank-branch network, banks are permitted to maintain a ratio of 1:1 for setting new branches in the urban and rural areas from 2011. As per Financial Access Survey (FAS) (Note 4), the number of commercial bank branches per 100,000 adults was 9 in 2019. Meanwhile, 192 new bank branches were opened during the fiscal year 2020 and stood a total of 10,588 bank branches. Banks are also opening sub-branches and bank booths like agri-branches, SME branches or collection booths with limited scale banking services under the supervision of nearby branches (Bangladesh Bank, 2020).

##### **3.1.2 Agent Banking**

Agent banking system enables the commercial banks to ensure limited-scale financial services through engaged agents to the remote areas. As of June 2020, 23 banks are actively engaged in agent banking through 8,764 agents aiming to mobilize deposits, disbursing credit and, most importantly, distributing foreign remittance in rural areas of Bangladesh (Demirguc-Kunt et al., 2018). Hence banks can increase customer volume, lower operating costs, increase deposit volume and improve the overall financial outlook.

#### *3.2 Financial Inclusion Using Digital Modes*

In this fourth industrial revolution, since the world is experiencing more flexible product lines, more efficient use of resources, increased productivity with the adoption of disruptive technological tools and cyber-physical systems (artificial intelligence, robotics, the internet of things (IoT), nanotechnology, biotechnology, quantum computing etc.), Bangladesh is also moving toward a cashless economy with a surge in digital transactions (Bhuiyan et al., 2020).

##### **3.2.1 Automated Teller Machines (ATMs)**

Since the country's first introduction in 1993, ATMs are contributing to branchless banking and deepening financial inclusion. In South Asia, a bank teller is commonly used for cash



withdrawals, and this practice was reported by 78 percent of account holders in Bangladesh while 56 percent in the region (Demirgüç-Kunt et al., 2015). Hence, based on IMF data, the number of ATMs per 100,000 adults is 9.39 in 2019 that is higher than the number of bank branches for the same population (Note 5).

### 3.2.2 Electronic Payment Services

Bangladesh has experienced much of its technological development in payment services surging the speed of money and reducing the significant time required for making interbank transactions. Bangladesh Bank introduced Bangladesh Automated Cheque Processing Systems (BACPS) in 2010, Bangladesh Electronic Funds Transfer Network (BEFTN) in 2011, National Payment Switch Bangladesh (NPSB) in 2012 and Real-Time Gross Settlement System (RTGS) in 2015. As the usage of these services increases, the cost of payment reduces and induces financial inclusion. Bangladesh government has become an early adopter of Electronic Funds Transfer (EFT) network because around 2.5 million government payments are made through this network for government officials' salaries and various social safety payments. Additionally, a wide range of credit transfers such as salary payment, foreign and domestic remittances, interest and principal payment of Sanchayapatra, company dividends, retirement benefits could be settled through EFT credits. In contrast, utility bill payments, loan repayments, insurance premiums, corporate to corporate payments could be accommodated in EFT debits (Bangladesh Bank, 2020).

### 3.2.3 Mobile Financial Services (MFS)

The extensive use of the mobile phone has become common among the people of Bangladesh since the total number of mobile phone subscribers has reached 173.357 (Note 6) million at the end of February 2021, an increase of more than a million within a month. As a part of technological innovation, it is considered a crucial medium for deepening financial inclusion, especially for developing countries where unbanked people can have access to mobile financial services (Kabir et al., 2020). Mobile money enables users to undertake several financial transactions like bills payment, money transfers, savings, loan acquisition, and products and services (Senyo & Osabutey, 2020). Based on IT infrastructure and country-wide reach of mobile operators' networks with internet facilities, MFS has brought the opportunities of access to finance and payments, especially for the underserved, unbanked or under-banked and low-income groups. Bangladesh Bank permits only bank-led MFS providers to operate in the country. Accordingly, fourteen banks and a bank subsidiary got permission to provide MFS as of June 2020. Among the contestants, bKash has become the leading pioneer. Similarly, Nagad, a digital wing of Bangladesh Post Office, has received permission from the central bank to operate as a full-fledge MFS provider and has become the fastest-growing MFS since its inauguration in 2019 (Note 7).

More than two hundred million transactions have been done via permitted MFS each month covering services like Cash-in and Cash-out, person-to-business (P2B) payments, business-to-person (B2P) payments, person-to-person (P2P) payments, business-to-business (B2B) payments, government-to person (G2P) payments, person-to-government (P2G) payments, online and e-commerce payments, disbursement of foreign remittance collected by

banks, disbursement of loans to vendor payments and many more (Bangladesh Bank, 2020). Since the outbreak of novel coronavirus across the country, MFS has become a key trade tool and keeps the payment ecosystem active and uninterrupted.

### 3.2.4 Operations of PSOs and PSPs:

To foster and ensure a secure digital payment service in the country, BB issues licenses to FinTech entities in two broad categories; Payment System Operators (PSO) and Payment Service Providers (PSP). At present, four PSO institutions and three PSP operational are facilitating e-commerce and inter-bank transactions under "Bangladesh Payment and Settlement Systems Regulation-2014 (BPSSR-2014)". PSPs provide e-wallet services while PSOs provide merchant aggregation, payment gateway and switching solution services. Customers or merchants can perform all types of digital transactions through these modes.

### 3.2.5 Internet Banking:

The growth of internet banking in a country entirely depends on reliable and secure information infrastructure and ICT penetration in the financial sector (Alam et al., 2007). Commercial banks in Bangladesh promote different kinds of digital financial services, including internet banking, to attract potential clients. Bangladesh Bank data shows an upsurge in internet banking transactions in recent months. In January 2021, the highest number of transactions were recorded, with BDT 8543.4 crore (Note 8). Banks have recognized the importance of such banking services and customer experiences regarding security and advance tech adoption.



Figure 3: Top 5 bank's internet banking mobile apps in Bangladesh in features and functionalities

### 3.2.6 Peer-to-Peer (P2P) Lending

Peer-to-peer (P2P) lending, sometimes referred to as marketplace lending (MPL), is an emerging channel of financing that connects investors (funding supply) and borrowers (funding demand) directly to facilitate the transaction. It has become an appealing platform for consumers and small-scale businesses that cannot have credit from traditional banks (Allen et al., 2020). 'Shadhin' is the first P2P lending platform in Bangladesh, connecting people and businesses with potential sponsors to achieve their financial goals. It has been founded to make financial inclusion in a viable solution since 2018 and is serving low and medium-income groups and underbanked people by leveraging technology and following rigorous credit underwriting standards.

#### 4. Digital Financial Services: Issues and Challenges

The financial sector around the globe has been undergoing a financial revolution powered by mobile phones, technological innovations, and access to new data, along with the changing mindsets of financial service users. The emergence of mission-driven and profit-oriented FinTech players focuses on enabling greater financial inclusion (Patwardhan, 2018). The growth of FinTech start-ups that are separated from banks results in market penetration. According to disruptive innovation theory, Phan et al. (2020) concluded that new market entrants with innovative technology could deliver accessible and more cost-effective services and can result in intense market competition. The growth of such start-ups in the market hinders bank performance while state-owned banks are affecting more than private banks. By speeding up and easing cash transfers between banks in response to financial market performance, these aggregators could also increase volatility induced by compassionate investors to market news (Fung et al., 2020).

Casanova et al. (2018) highlighted some specific risks of online lending platforms like informational disadvantages, adverse selection, insufficient due diligence, lack of liquidity, cyber theft and platform failures. Furthermore, lending platforms regulate bank regulation in some countries and need a banking license to operate. In addition, Mild et al. (2015) argued that lenders in peer-to-peer lending markets fail to assess borrowers' creditworthiness effectively. Unlike banks, they are unable to price default risk accurately. Rewarding high-risk projects with low prices for capital could lead to excessive risk-taking, which undermines financial stability. Finally, as many FinTech activities rely on third-party service providers (such as cloud-based financial services) and these providers could link to multiple systemically important financial institutions, their failure could pose a systemic risk to the financial system.

Bangladesh has enormous possibilities in promoting financial inclusion because of the large number of mobile phone users with a massive presence of youth people, expanding green banking, more involvement of government and corporate sectors in providing staff salaries through MFS and over 10 million foreign remitters (Bilkis & Khan, 2016). With respect to technology adoption, Rahman (2009) argued that the private commercial banks and foreign commercial banks had attained greater success relative to other state-owned banks while their coverage is confined mainly in urban and semi-urban areas. The rural parts of Bangladesh remain outside of their services.

According to Arner et al. (2020) and Zetsche et al. (2019), four pillars of financial infrastructure are a must to support digital financial transformation

- Pillar I: Digital ID and e-KYC (for identification and simplified account opening).
- Pillar II: Open electronic payment systems (for infrastructure and enabling regulatory and policy environment to facilitate the digital flow of funds).
- Pillar III: Account opening and electronic government services (for providing vital tools to access services).

- Pillar IV: Design of digital financial infrastructure and systems (to support value-added financial services and deepen access, usage and stability).

As the modern financial ecosystem requires customer identification and due diligence with minimum possible time, BB introduced e-KYC in 2016. Although digitalization enables easy access of customers even remotely, verification of identity to complete e-KYC is subject to necessary compliance with anti-money laundering and counter financing of terrorism (AML/CFT) regulations. The inability of financial institutions to properly verify prospective clients will lead to financial exclusion. Considering this issue, BB issued a detailed guideline in January 2020 to ensure a reliable identification mechanism and instructed schedule banks to implement e-KYC by December 2020 (Bangladesh Bank, 2020).

## 5. Conclusion

The prime objective of financial inclusion is to ensure convenient financial services to unserved people of the country in a fair, transparent and equitable manner to unlock its inclusive growth potential. It has also been considered an unexplored opportunity for a business involving a large population segment rather than as a benevolent activity or a regulatory obligation (Bansal, 2014). Digital finance is the key way to accelerate financial inclusion and is associated with higher economic growth. Digital financial services are faster, more efficient and relatively cheaper than traditional financial services and, therefore, increasingly reaching lower-income households and small and medium-sized enterprises (SMEs) (Sahay et al., 2020).

Using Global Findex Database and Bangladesh Bank reports, this paper discusses the state of digital financial inclusion mandates around the world and especially for the developing countries like Bangladesh. Although the study provides additional insights into all forms of digital payments those have been increasing in Bangladesh, the mobile financial services industry in particular is notable for its rapid expansion. According to Bangladesh Bank (2020) Government-to-Person (G2P) digital payments have grown significantly, and further digitization of G2P payments are in progress. Currently, about 69% of the value of the payments made by governments are digital.

Table 1. National Payment Switch Bangladesh (NPSB) at a glance

Particulars	January 2020
Number of Debit cards	18,611,681
Number of Credit cards	1,556,448
Number of ATM booths	10,961
Number of POS terminals	60,474
NPSB certified banks for ATM transactions	52 banks
NPSB certified banks for POS transactions	51 banks
NPSB certified banks for IBFT transactions	24 banks

Source: Bangladesh Bank website

However, the limitation of this study includes abandoning the perceived risk factors faced by the country's financial service industry at the age of FinTech. Future research should be extensive to expand and discuss the benefits along with its perceived risk factors in

explaining the use of FinTech in Bangladesh. Besides there is a lack of indicators for measuring the impact of FinTech and DFS on banks' performance, which can be a direction for future research. Lastly, it is necessary to pay attention to operational skills and system functional performance when providing services, because the inadequacy or failure of financial services operation will lead to consumer dissatisfaction and trust, which will lead to barriers to the use of FinTech.

The Vision 2021 implementation of a Digital Bangladesh is one of the priority agendas of the current government. Thus, the government has given immense importance to the adoption of digital technologies. The banking sector has undertaken many projects involving digital technologies, among which New Digital Payments initiatives are on the top priorities. As implemented, these systems will further broaden the depth and breadth of digital payments in Bangladesh and contribute towards establishing a less-cash society.

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