

Fintech-Based Financial Inclusion on Private Commercial Bank's Performance in Bangladesh: A Review Paper

Kazi Ismat Jahan Suvra

Lecturer, Sheikh Hasina university, Bangladesh

ABSTRACT: Financial Technology (FinTech) has become front-page news recently. In its broadest meaning, Fintech is the application of technological innovations to financial services and processes. Recent annual data show global fintech investments of USD\$135.7 billion. However, despite the potential of Fintech to renovate the financial sector, there is a significant need for proper regulation and guidelines for private banks. Due to policies taken by the government and central bank of Bangladesh, cross-border money transfer using FinTech inclusion in private banks is still cumbersome and lengthy. Therefore, the paper aims to investigate the impact of FinTech on the performance of private commercial banks in Bangladesh. A correlational strategy will also be employed in this quantitative research study. The researcher will also use a correlational approach to determine whether or not there is a correlation between variables. The findings of this study implies that fintech inclusion increases bank profitability and risk-related performance. This study also would suggest that as Fintech grows, it competes with banks and takes some share of profits, but it also benefits banks in terms of stability.

KEYWORDS: Banking System, FinTech, FinTech Inclusion, Private Bank, Performance, Financial Technology

1. INTRODUCTION

Policymakers and regulators view Fintech as an opportunity to make the financial system ‘more efficient, effective and resilient[2].’ FinTech “innovations resonate with calls for ‘making a better world with ICTs’ [1], ‘responsible IS research for a better world [3] ‘understanding and tackling grand societal challenges through management research’ [4] because of their potential to enhance financial inclusion for the poor—that is, ‘ensuring access to financial services by vulnerable groups such as weaker sections and low-income groups at an affordable cost [5]. This study advances this noble definition of ‘financial inclusion as the delivery of financial services to the poor, unbanked and marginalized. International development organizations such as the World Bank and the International Monetary Fund have projected Fintech's ability to deliver financial inclusion as an effective approach to poverty reduction [6]. A vision of fintech-led financial inclusion appears to have burst on the global scene, one that takes to heart the United Nations' Sustainable Development Goals (SDGs), especially: SDG1 (no poverty); SDG2 (zero hunger); SDG8 (decent work and economic growth); and SDG10 (reduced inequalities)[7].”

FinTech “innovations have influenced financial planning, financial well-being, and economic inequality via mobile payments, Robo-advising, app-based investment platforms, and online banking solutions [8]. FinTech has the potential to help people improve their financial capabilities [9]. Start-ups and platforms that use technology to simplify personal finance and improve financial planning procedures are developing the next generation of financial tools and promoting and supporting financial literacy [10]. Individuals with improved financial and other (technological, political, and environmental) literacy may better interact with artificial intelligence [11].”

Coetzee [12] “stresses FinTech advances may potentially hurt financial well-being by inducing impulsive consumer behavior when dealing with financial tools and platforms. Mobile applications, for example, may appeal to impulsive and uneducated people who cannot predict

future preferences [13]. Individuals using mobile applications may make poor selections when they are in a 'hot' condition or under sales pressure. In such instances, the shorter delay between the purchase of financial services and their eventual usage is likely to be negative for consumer welfare [14]. According to Yiquan, Leonardo [15], mobile users are more likely to participate in the impulsive purchase and utilize payday loans. Mobile loan products are often too accessible, allowing for the action of ephemeral preferences. This implies that training should be included in mobile applications and platforms

II. FINTECH

The word "Fintech derives from the coupling of two complementary areas: financial services and solutions based on advanced technology. The economic literature does not agree on a single definition of Fintech due to the overall diversity of the business. The word "fintech" has made its way into the Oxford Dictionary as "Computer programs and other technology used to support or enable banking and financial services." Wikipedia defines "FinTech" as: "Financial technology, also known as Fintech, is a line of business based on using software to provide financial services. fintech companies are generally start-ups founded to disrupt incumbent financial systems and corporations that rely less on software [16].

Fintech initiatives cover a wide range of financial areas. Lending Club, one of the world's largest peer-to-peer lending platforms, directly connects borrowers and investors by making credit more affordable, investing more rewarding, and promoting a completely new loan program. Kickstarter, a very large funding platform for creative projects, has strongly lowered the level of accessibility of funds for start-ups or simple projects [17]. Fintech companies are threatening traditional financial services. The former can provide more innovative and customer-centric business models. These disruptive organizations are gradually gaining market share and profits against traditional financial services, which are in serious need of reviewing their business models and changing strategy to be more competitive in the market [10].

III. FINTECH IN GLOBAL PERSPECTIVE

According to Khotinskay [18], two related political economy approaches in economic geography are deployed to theorize the relationship between financial circuits and the "real economy", everyday lived economic practices. The first approach unpacks the (re)production and circulation of money through the capitalistic relationship between money and social relations [16, 19]. The second approach, which focuses on financialization, builds on the first approach by examining the intersection between financial circuits and (re)production of financial subjectivities [20, 21], or technological innovations and new forms of financial products [19, 22]. This paper is positioned within the two related political economy approaches by examining how financial circuits are constitutive of specific forms of (1) lived economic practices (i.e., unbanked and informal economic activities) and (2) technological innovations (i.e., digital finance) in the global South. More importantly, with digital devices (e.g. smartphones, computers) now becoming both object and subject of geographical inquiry, this paper extends geographical knowledge beyond the global North by examining the implications of a specific form of digital finance (i.e., mobile money) on postcolonial economics and financialization of development. Financialization means different things to different people. Financialization as "a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and commodity production [and the key term] 'Financial' here refers to activities relating to the provision (or transfer) of liquid capital in expectation of future interest, dividends, or capital gains." It broadens the definition by

focusing on the processual nature of financialization to involve “the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies.

The growing field of financial technology (Fintech) and the different financial paradigms and technologies that support it in the context of the USA. Fintech is primarily a disintermediation force where disruptive technologies are the drivers. This framework discusses 10 primary areas in Fintech comprising a taxonomy, which categorizes research in the field and also proposes a pedagogical structure. Pitfalls of Fintech are also analyzed. Overall, the great strides made in computing technology, mathematics, statistics, psychology, econometrics, linguistics, cryptography, big data, and computer interfaces have combined to create an explosion of FinTechs.

Moreover, due to recent developments in IT technology, various Fintech technologies composing of finance and technology are being developed. Especially, because of the rapidly growing online market and supply of mobile devices, the need for mobile Fintech payment service that enables easy online and offline payment has increased. According to the 2013 report by market research company Gartner, the purchase-related global mobile payment market size was predicted to grow from \$45.1 billion in 2012 to \$224.3 billion in 2017 with average annual growth of 38%. The study surveyed the recent trends of mobile Fintech payment services and categorized them based on the service forms to suggest requirements and security challenges so that better and more securer services can be provided in the future. First, the study defined existing payment services and Fintech payment services by comparing them and analyzing recent mobile Fintech payment services to classify mobile Fintech payment service providers into Hardware makers, Operating System makers, payment platform providers, and financial institutions to show their common features. Finally, it defined requirements that mobile Fintech payment services must meet and security challenges that future and present mobile Fintech payment services will encounter in the perspective of mutual authentication, authorization, integrity, privacy, and availability. Through the suggested study, it is expected that mobile Fintech payment services will develop into more secure services in the future.

IV. FINTECH IN THE BANGLADESHI CONTEXT

The financial service industry performed a wide range of functions in modern economies to ease financial-economic activity [23]. Financial inclusion was seen as a critical accelerator of socioeconomic resilience throughout the pandemic [24, 25]. Following the advancement in ICT (Information And Communications Technology), financial businesses have transformed over the decades, and this has facilitated a more efficient and inventive service delivery. Developments in digital banking make it possible for vulnerable groups, particularly in developing nations, to access financial resources more efficiently. FinTech has resulted in the advancement of the finance sector by lowering the costs of transactions, and making them more convenient and secure [25, 26].

FinTech, often known as financial technology, is a new industry that renders creative financial services that are ICT-driven (. Furthermore, FinTech comprises a wide range of mobile services, including payments, fund transfers, loan requests, insurance, asset management, investments, and crowdfunding. MFS (Mobile Financial Services) is a means of providing banking services that connect banking with mobile networks and enables customers to conduct banking and other financial transactions using their mobile phones. MFS includes products and services offered by financial institutions to consumers via mobile devices to enhance their

access to financial services and reduce their expenses. The open innovation concept has been further used to increase the ability of organizations to innovate while simultaneously reducing costs.

The FinTech ecosystem is a growing association of industry participants comprising established businesses, start-ups, and consumers. This relationship between participants in the financial industry could never have been achieved without the help of open innovation efforts. As a result, this new strategy enables businesses to effectively leverage their business environment stakeholders to increase their adaptability in response to such changes by shortening development cycles and process automation. In Bangladesh, advantageous rules and policies by the Bangladesh Bank (the central bank of Bangladesh), dependable telecommunications infrastructure and products, as well as numerous mobile banking inclusion programs, all contribute to the widespread usage of FinTech services. Therefore, it can be asserted that open innovation plays a critical role in the development of new financial instruments that boost an organization's capability.

Moreover, Bangladesh has one of the world's quickest GDP growth rates, making it one of the eleven developing markets [27]. The country is gradually heading towards upper-middle-income status, and its conventional industrial sector is giving way to non-traditional industries (Ahmed, 2019). However, Bangladesh's different sectors, including the banking industry, are technologically deficient. Despite its large population, Bangladesh's financial industry remains severely underdeveloped [24, 27, 28]. More than 35 million people get their money through unofficial routes and without having a bank account [29]. Fintech can thus play a critical role in overcoming this barrier with the correct technology.

However, despite the potential of Fintech to renovate the financial sector, there is a significant need for proper regulation and guidelines [30]. Bangladesh is the 9th highest recipient of remittance in the world. However, due to policies taken by the government and central bank of Bangladesh, cross-border money transfer is still a cumbersome and lengthy procedure. In contrast, there has been stunning success around the world to make this system quicker through Fintech [27, 28, 31].

Government agencies have greatly helped the financial sector grow and mature by expanding financial inclusion through strategic plans and policy guidelines [32]. However, gender balance, innovative-use cases, and a complete understanding of mobile financial services (MFS) have not developed in tandem. More people are encouraged to use digital financial services and allow the market to reach its full potential [33]

The digital skills gap means a high percentage of adults resort to over-the-counter transactions (OTC), i.e., they use MFS through another person's account, such as a mobile money agent's account or the account of a relative, and do not have a registered account of their own. According to The Global Findex Database (2017), OTC transactions in Bangladesh comprised an estimated 70 percent of total transactions, even though they are officially not permitted. However, according to more recent informal estimates by DFS (Digital Financial Services) providers and Bangladesh Bank, OTC transactions are now thought to comprise less than 40 percent of total transactions. OTC is difficult to detect, there is no recent complex data to support this assumption [34]. In brief, key challenges faced by FinTech in Bangladesh: a.lack of financial and technological literacy, a. a large unbanked population [24]; b. Most SMEs are not unified under a formal financial system [27];c. Conventional banking systems are mostly not user-friendly [33]; d. The poorly regulated banking industry [35];e. Low VC (Venture Capital) investments [24]; and f. Low interoperability among payment players [36].

V. PROBLEM STATEMENT

In recent years, Bangladesh has been experiencing a great deal of development in the processes of financial inclusions. However, there is a lack of related works on providing a generally accepted definition of what is FinTech. Moreover, researchers identified the public understanding of what is FinTech is very weak [37]. The lack of clear definition and weak public understanding of FinTech had led to many practical problems, for example, this had discouraged potential students to consider relevant FinTech educations, consequently, the pipeline of FinTech talents to the markets has been negatively affected. The shortage of FinTech professionals had also raised concerns at the international level [37, 38]. Therefore, it is timely to examine what factors are responsible for making people financially resilient even though they have financial penetrations through various channels.

Many published studies of financial inclusion have focused on individual socioeconomic characteristics and obstacles, analyzing the effects of financial inclusion on poor populations and the determinants of financial inclusion among countries, economies, and regions. These studies have covered the demand side; until now, there was no evidence on the supply side that enhancing financial inclusion would benefit banks as the main financial services provider. Hence, there is a need for evidence that will encourage banks to enhance financial inclusion by investing in additional branches [11]. Moreover, Dwivedi, Alabdooli, and Dwivedi [11] explain that there is a lack of evidence to establish a clear relationship between FinTech, competitiveness, and performance in the banking industry. Though FinTech plays a vital role in the banking industry of Bangladesh, there is a gap in empirical evidence to identify the crucial factors.

Another major problem identified by the scholars is that there is a scarcity of efficiency models and sound theory that clearly describe the phenomenon. In particular, related to increasing internationalization, contestability, and foreign competition, it is hazardous to transpose best practices in one country/market to another country/market. Apart from this bright side of FinTech, its implementation is time-consuming, and there are high maintenance, upgrading, and training costs for both customers and employees, and the possible risk of failure. Considering the imperative of engaging and building strong relationships to serve the customers best, obtaining a positive culture regarding technology among employees in the competitive environment, and considering the possible investment risks in FinTech, business activities related to FinTech must be handled with care [27]. However, limited studies have been conducted on FinTech-Performance conceptual framework with the ability to measure the FinTech and performance factors.

A key feature of FinTech firms is that they apply innovative technology to perform tasks previously reserved for banks, such as lending, payments, or investments [29, 39, 40]. Recently, FinTech firms have been developing practical applications to improve efficiency in financial services across a range of services, including (but not limited to): contactless and instant payments; asset management services; investment and financial service advice; and information and data management /storage [39]. Non-bank lenders can secure soft information relating to creditworthiness. This service is considered valuable for consumers and small businesses alike, particularly those that are characterized by weak credit history. On the contrary, banks operate on old information technology systems and are perceived to be slow in adopting new technology [41].

Despite the emergence of digital innovation and its perceived effect on the financial industry, the effect of digital innovation and FinTech growth on the financial system are less understood [42, 43]. Moreover, studies on the existence of Fintech in Bangladesh remain primarily

unexplored. Researchers on the Usage of Fintech among bank customers and the factors that influence the adoption are minimal. Even though this study is significant to the Bank performance in Bangladesh, there are limited studies investigating the moderating effect of government support on private bank performance.

Many scholars articulated that Fintech is still at the infant stage in the financial service sector in Bangladesh [28, 32]. Even though investment is increasing, it needs further massive investments to compete with other traditional companies with significant cash assets and political connectivity, especially in developing countries [42, 43]. Therefore, this study investigates the impact of FinTech on the performance of private commercial banks in Bangladesh. Therefore, this research aims to investigate the influence of FinTech inclusion in Bangladeshi private commercial bank's performance.

VI. FINTECH AND PERFORMANCE

According to the Global Fintech Index 2021, Bangladesh ranked 78th among 83 countries. However, the country wants to become a Fintech hub in Asia. The Fintech industry in Bangladesh is mostly represented by mobile financial service (MFS) providers, payment system operators (PSO), and payment service providers (PSP) (the daily star, 2022). Bangladesh Bank has recently introduced a regulatory innovation office for Fintech under its payment systems department. Delivery of state of art quality services using technology in the banking industry enhances customer satisfaction and results in customer retention [40]. It helps the banks in maintaining their competitiveness. Therefore, FinTech adoption improves the performance of the banking industry.

FinTech has completely transformed the banking industry in Bangladesh. So, increasing interest in FinTech services by the customer in Bangladesh resulted in both positive and negative outcomes. The positive impact is the collaboration between FinTech and the banking industry leading to increased efficiency and effectiveness of the banking industry [29]. The transaction cost reduction is due to the collaboration of different stakeholders across the industry results in customer benefits. It also boosts performance and attracts new customers, improves customer engagement approaches, and enhances brand loyalty [29]. This factor boosts the competitiveness of the industry in general on a global scale. With the help of FinTech, banks can increase product and service offerings in the digital world. The unique mobile banking services provided by Bangladesh Bank. Modern channels (e-banking, m-banking) of operations are possible with the help of FinTech in the banking industry to provide quality and convenient services to people [39].

VII. FINTECH: FUNDAMENTAL THEORY AND EMPIRICAL FEATURES

FinTech word is made with the combination of three words; finance, financial services, and technology. Financial Stability Board defines FinTech as “Technologically enabled financial innovations that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services.” The impact of FinTech on the banking and financial services industry is high [31]. Newer technological innovations, recent technological infrastructure development, and technology implementation across the financial and banking industry change the way it operates and result in changing customer expectations [28]. Huge investments are made in the financial and banking industry to reinvent and achieve competitiveness. Several studies have been carried out related to FinTech and competitiveness and performance [31]. The recent work

categorized FinTech into FinTech 1.0, FinTech 2.0, FinTech 3.0, and FinTech 4.0 and linked with achieving competitiveness. The impact of mobile banking, e-banking, agency banking, and process automation is significant on competitiveness in commercial banks in Kenya [27]. [31] explains that financial market institutes performing this function and activating payment system have been considered quite conservative for a long time, as far as business processes, tools and provided services have not been changed for decades and centuries. Meanwhile, at the fundamental level the main products of the financial market, such as information and money, are easily digitalized. This implies that the financial market cannot keep out of the digital revolution. Technologies developed during the last decade thanks to the digital revolution modify the financial market and financial services radically and thoroughly. The economic and political and legal basis is changed, which redefines the financial market. Drivers of these changes (besides the digital revolution) are financial globalization, growth of business competition, and deregulation of financial markets (as regards cancellation of the international Bretton Woods system of monetary management for commercial and financial relations and transfer to Jamaica Monetary System), financial innovations. The scope of quality and quantity changes in the financial market is increased owing to “blockchain” technology and cryptocurrency, which is beyond the government control³ and which undermine central banks’ monopoly of money flow control. In this context, Swiss business magazine “Bilanz” forecasts a general revolution in the financial world and the economy.

FinTech use and adoption in the banking industry has to look from strategic aspects of management of technology as it requires through alignment with business objectives and processes. One of the challenges is the acceptance of the end-users and local citizens. The mobile banking adoption rate is almost 52%, however, still, people have a negative attitude toward FinTech adoption [21]. Further, FinTech is often influenced by the perception of how easy or difficult it would be to use. This is due to the attitude and complex nature of digital banking. Bangladeshi banks need to understand customers’ perceptions first before adopting technology; user-friendliness, reliability, convenience, and value-adding. If customers are not able to access digital banking services through digital platforms, then they are forced to visit physical branches. Adopting more streamlined FinTech-enabled processes is strategically more important [31]. There can be many FinTech-enabled processes that can be provided, such as; advisory services, insurance services, online bank account opening, and signature submissions services (Oracle, 2016). Top management plays an important role in managing technological change and innovation in any industry. All aspects of technology adoption are dynamic. Solid leadership needs to ensure that all stakeholders, systems, and processes are aligned with the FinTech adoption approach. Bangladesh is the role model when strategically managing technological change and innovation in the banking industry [25]. The government of Bangladesh also plays a vital role. The organization plays a major role in ensuring the successful adoption of technological change by employees, existing systems, and processes by effective change management of technology adoption [29]. Training is required for customers, employees, and stakeholders. It increased stakeholder’s flexibility, which is required for FinTech adoption-related changes. The management will be able to determine whether the innovation and technology adoption process will be carried out in phases or a complete project overhaul in favor of innovation and technology. It alludes to a critical aspect in strategically managing change, which is clear and open communication [22]. Poor communication causes resistance to change by both employees in the banking industry and customers, for whom the technology was designed and adopted in the first place.

VIII. THE IMPLICATION OF THE STUDY

This study findings help to understand the Prospects for Mobile Financial Services (MFS) in Bangladesh. Mobile Financial Services (MFS) have the primary advantage of ensuring that all economic transactions are documented. Due to digitalization, the illegal money markets frequently harmful to national economies are becoming almost impossible to monitor. It adds to higher tax income for the government. People profit from Mobile Financial Services (MFS) since the risk of carrying monetary notes and losing hard-earned money is eliminated. Transaction fees, transaction times, and transaction expenses will all be decreased. Shopping, bill payment, and financial transaction scheduling may all be made from the convenience of home, office, or anywhere you are using a smartphone. It also reduces the cost of printing and transporting cash notes. This study intends to focus on the relationship between factors of Fintech and Private banks' performance in Bangladesh, specifically in the Covid-19 pandemic. This study is expected to crystallize the importance of Mobile Financial Services (MFS) related literature.

The effect of FinTech firms on banks can be explained by the consumer theory and disruptive innovation theory. The consumer theory suggests that new services (such as those provided by FinTech firms) by meeting the same consumer demand can replace the old services (such as those provided by traditional banks). Based on the disruptive innovation theory, new entrants who apply innovative technology to provide more accessible and cost-effective goods and services can create competition in the market. The tenets of these theories are relevant to this study where new entrants are FinTech firms and established incumbents are traditional banks. From a practical perspective, this research study will provide important contributions. The empirical models developed from this research study will serve as empirical evidence, that banks and investors can use to evaluate Fintech start-up investment opportunities in financial inclusion. Currently, most banks use qualitative tools and experience to evaluate the investment opportunities in start-ups. The results of this research study will serve as another tool, which is based on actual data, banks can use that to determine whether to invest in new ventures. The Fintech new venture founders should also benefit from this research study since it will provide a framework, they can follow to increase their chances of success. In addition, the empirical model can assist governments and policymakers in how to help banks improve their performance. Finally, the empirical model can be extended to other areas in the financial services sector and other industries, specifically those with similar characteristics and business dynamics such as the banking sectors.

IX. CONCLUSION

Generally, senior managers of Bangladeshi Islamic and conventional banks aim for greater priority to achieve financial success. In this endeavor, auditing standards reflecting for future research, it would be useful to confirm the results of this study by expanding the study geographically to include all economies, principally in the Islamic world, characterized by a dual sector in banking (Islamic/conventional) to investigate and to compare further the role of Fintech on Islamic and conventional banks. In addition, it would be useful to expand the time series both for more current data.

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Corresponding Author



Kazi Ismat Jahan Suvra
Email:suvra_eec@yahoo.com

Kazi Ismat Jahan Suvra is an independent researcher. She has completed her Honors and Masters degrees in Economics with first class from a reputed institution in Bangladesh and she became first in her department. In addition to her being a dedicated student, she serves as a lecturer in a public university in Bangladesh. She is the author and co-author of scholarly publications in international journals.