

Impact of Mobile Financial Service on Financial Inclusion of Bangladesh: A case study on bKash

By

Md. Zubayer Jamil

20364005

A case study report submitted to the BRAC Business School in partial fulfillment of the requirements for the degree of Master of Business Administration

Graduate School of Management

BRAC Business School

BRAC University

November 2022

© [2022]. BRAC University

All rights reserved.

Declaration

It is hereby declared that

- The case study report submitted is my/our own original work while completing my degree at BRAC University.
- The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
- I have acknowledged all main sources of help.

Student's Full Name & Signature:

Md. Zubayer Jamil
Student No – 20364005

Supervisor's Full Name & Signature:

Dr. Md. Kausar Alam,
Professor,
BRAC Business School

Letter of Transmittal

Dr. Md. Kausar Alam,
BRAC Business School
BRAC University
66 Mohakhali, Dhaka-1212.

Subject: **Submission of Case Study Report.**

Dear Sir,

With immense pleasure, I am submitting my case study report on “**Impact of Mobile financial service on financial inclusion of Bangladesh: A case study on bKash**”. I have found this report informative, beneficial as well as insightful. I have tried my level best to prepare an effective & creditable report.

The report contains an overview of the organization, benefits analysis, and findings and recommendations based on the analysis. I have gathered information through various sources such as annual reports, business cases, and actual gains from field data.

Hence, I hope that you will be kind enough to receive this report for analysis.

Sincerely yours,

Md. Zubayer Jamil
20364005
BRAC Business School
BRAC University
Date:

Acknowledgment

This case study report has been prepared through continuous study for 2 months period. As this work would not be possible without the cooperation and guidance of some generous hands. I would like to thank Reaz Ahmed Diganta, Territory Manager of bKash for his proper direction and support regarding my case study report. He has given a lot of guidelines in coordinating the whole report. Without his time and guidelines, preparing such an analytical report would not be possible.

I would also like to give special thanks to Dr. Md. Kausar Alam & Dr. Md. Mizanur Rahman, for the guidelines to prepare this case study report.

Executive Summary

bKash is a subsidiary of BRAC Bank Limited that was launched in 2010 through a joint venture between Bangladesh and London's Money in Motion. The Bill & Melinda Gates Foundation and the International Finance Corporation are both shareholders in the company. bKash has pledged to increase the number of individuals with access to financial services, thereby achieving the goal of financial inclusion for the greatest number of Bangladeshis by 2022. Due to the fact that bKash is an app-based financial services provider, its information system is crucial to the company's success. As just one-third of the population uses bKash, the company processes reams of data every day, and transactions involving billions of rupees occur daily. A corporation such as bKash must have a reliable information and database system in order to function effectively. Every second, bKash is accessible due to the effective operation of information systems.

Table of Contents

Declaration	1
Letter of Transmittal	2
Acknowledgment	3
Executive Summary	4
List of Tables	7
List of Figures	8
Chapter -1 Introduction.....	10
1.1 The Context	10
1.2 Role of MFS in Financial Inclusion	12
Chapter 2 Project Plan	14
2.1 Background of the study	14
2.2 Literature review	15
Financial inclusion definitions.....	15
The significance of financial inclusion.....	15
Prospects of financial inclusion.....	16
Factors that influence access to financial services	16
Definitions of Mobile Financial Services.....	17
The corelation between financial inclusion and mobile financial services	19
Literature gap.....	19
2.3 Scope of the study	20
2.4. Problem statement	20
2.5 Objectives of the Report.....	20
2.6 Methodology	21
Research nature of the study.....	21
Data collection.....	22
Data type.....	22
Data Sources for secondary data	23
Methods of statistical analysis used in the study.....	23
2.7 Limitations of the study.....	23
Chapter 3 Data analysis, and findings.....	24
3.1 Quantitative data analysis.....	24
3.1.1 A study on bKash's financial inclusion metrics alongside Bangladesh's overall	24
3.1.2 Parameters of bKash's financial inclusion: an examination of recent trends	28

3.2 Discussion and analysis of qualitative data.....	35
3.2.1 Nano loan project.....	35
3.2.2 Incorporating RMG into a sustainable ecology	36
Chapter 4 Recommendations, Suggestions and Conclusion.....	39
4.1 Recommendations/policy implications	39
4.2 Suggestions.....	39
4.3 Conclusion.....	39
References.....	41

List of Tables

Table 1 Industry wise information.....	11
Table 2 Product wise information.....	11
Table 3 % of bKash to Total agents of Bangladesh.....	25
Table 4 % of bKash against overall number of mobile financial services.....	26
Table 5 Figure of additional users of bKash from 2017 to 2021	30
Table 6 Expansion in active customer users of bKash	31
Table 7 Progress in total transactions of bKash subsequent years.....	33
Table 8 Growth in daily average transactions of bKash from 2017 to 2021	34

List of Figures

Figure 1 % of bKash to Total agents of Bangladesh	25
Figure 2 bKash against overall number of mobile financial services users of Bangladesh.....	27
Figure 3 Number of agents of bKash from 2017 to 2021	28
Figure 4 Number of merchants of bKash from 2017 to 2021	29
Figure 5 Figure of additional users of bKash from 2017 to 2021	30
Figure 6 Expansion in active customer users of bKash	32
Figure 7 Progress in overall transactions of bKash subsequent years	33
Figure 8 Growth in daily average transactions of bKash from 2017 to 2021	34

List of Acronyms

MFS	Mobile financial services
BRAC	Bangladesh rural advancement committee
BD	Bangladesh
NID	National identity card
IFC	International Finance Corporation
SDG	Sustainable development goals
RMG	Ready-made garments
E-KYC	Electronic knows your customer
SME	Small and mid-size enterprises
BTRC	Bangladesh telecommunication regulatory commission.

Chapter -1

Introduction

1.1 The Context

As stated in the preceding section, the expansion of mobile banking financial services will be the primary contributor to the increase in financial inclusion in Bangladesh between 2014 and 2021. Financial services available via mobile banking have empowered the underprivileged population of Bangladesh to create transaction accounts and complete all operations via mobile applications. Numerous companies in Bangladesh offer mobile money transfer services, all of which are dedicated to expanding financial opportunities for underserved populations and boosting Bangladesh's economy as a whole.

bKash is now one of these mobile financial service providers in Bangladesh. They are one of the earliest and most influential pioneers in the digital revolution of financial services. Kamal and Iqbal Quadir, brothers, founded bKash. The Quadir brothers decided to introduce mobile banking to Bangladesh after witnessing its success in the Philippines as well as other developing nations. In 2011, money in motion and BRAC bank partnered with Fazle Hasan Abed, the founder of BRAC bank, to develop bKash as a joint venture.

The Bangladesh Bank established the first Mobile Financial Service (MFS) Guidelines in 2011, which were replaced by the Bangladesh MFS Regulations in 2018. MFS has expanded rapidly in Bangladesh in a relatively short time span. In July 2022, the total amount of MFS transactions was estimated to be BDT 94,293 crores, a 2.5-times increase from July 2018's which is 33,213.12 crores. In 2021, there will be over 181 million registered account holders, compared to less than 54.43 million in 2017. The number of active account holders, defined as those who have used their account at least once in the past three months, has increased to 32,818 million from approximately 14,420 million in 2017. The average number of daily transactions is 15.39 million, while their value exceeds one billion Bangladeshi taka. In other words, MFS has significantly deepened the financial sector and developed products with enormous potential in a quickly developing nation like Bangladesh, which is undergoing a huge structural and demographic upheaval. There have been various market diversifications to include public and private payments involving wage and

school stipend disbursement, as well as payments to merchants, suppliers, and utility companies, both online and offline (Table 1).

Consequently, bKash (a subsidiary of BRAC Bank) and Rocket (owned by Dutch-Bangla Bank) are the two leading MFS providers. These two represent around 94% of the market. All other operators account for the remaining percentage, including Sure Cash, which has a large concentration in a narrow market, particularly the government's Primary Education Stipend Program.

Table 1 Industry wise information

Description	June 2022	June 2018	% Change
No. of Banks currently providing the Services	13	18	-27.78
No. of agents	1,467,738	829,783	76.88
No. of registered clients in Lac	1,785.17	618.63	188.57
No. of active accounts in Lac*	642.97	272.05	136.34
No. of the total transaction	461,609,837	192,594,506	139.68
Total transaction in taka (in crore BDT)	94,293.70	33,213.12	18.91
No. of the daily average transaction	15,386,995	6,419,817	139.68
Average daily transaction (in crore BDT)	3,143.12	1,107.10	183.91

Table 2 Product wise information

Description	June 2022	June 2018	% Change
Inward Remittance	306.97	28.34	983.17
Cash In transaction	27,419.52	13,311.55	105.98
Cash Out Transaction	26,692.13	12,629.82	111.34
P2P transaction	24,520.62	5,148.77	376.24
Salary Disbursement (B2P)	3,315.41	669.23	395.41
Utility Bill Payment (P2B)	2,058.97	292.87	603.03
Merchant Payment	3,138.28	302.59	937.13
Government Payment	3,508.8	475.43	638.03

Source: Bangladesh Bank website.

For many years, Bangladesh has struggled to improve the general public's access to financial services. Financial inclusion in Bangladesh has been a struggle despite the government's best efforts until mobile banking became available via bKash in 2011. bKash is a free mobile money transfer service that enables people in rural areas, women, and adults to do financial transactions. bKash has been growing at a faster rate than even the largest conventional banks in recent years, and it now serves a larger percentage of the world's population that does not have a bank account. This might be attributable to a number of factors, including the convenience of not having to visit a physical bank office, the necessity for lower levels of literacy to complete transactions, the relative ease of managing an account, etc. The obvious role that bKash plays in the expansion of Bangladesh's financial infrastructure cannot be overstated.

1.2 Role of MFS in Financial Inclusion

In 2017, just 5.3% of individuals in the developing world (aged fifteen or older) had a mobile money account, according to Global Findex data (World Bank). This is as high as 72.9% in Kenya and as low as 50% in Uganda. In contrast, the similar rates for Bangladesh and India are 21.2% and 2%. While access to financial services enables individuals to save, borrow, pay bills, remit funds, and manage risk, mobile financial services (MFS) use mobile phone technology to facilitate these actions. Rapid growth in mobile phone ownership and accessibility in developing countries has enabled the proliferation of mobile financial services.

However, ownership of a mobile device does not guarantee access to mobile banking services (or vice versa). However, the rapid development of mobile phone ownership has also created opportunities for MFS expansion (Jack and Suri, 2018). Access to mobile financial services, along with access to financial institutions such as banks and MFIs, is regarded as a component of financial inclusion, since it reflects how individuals save, borrow, make payments, and manage risk. Accordingly, it is included in the World Bank findex data definition of financial inclusion. According to the 2017 findex figures, 61.3% of the global population had a financial account in 2017, with 5.3% having a mobile financial account. MFS coverage is significantly greater in developing regions, particularly Sub-Saharan Africa (SSA), although the converse is true for financial institution accounts. Additionally, South and East Asia have joined the MFS revolution.

The benefits of MFS can be realized through savings in (a) service fees, travel expenses, time

saved, and better security, and (b) minimizing consumption and production risks caused by natural or manufactured variables. MFS has the potential to induce behavioral changes as it can re-align the risk and coping environment faced by individual men and women in households, leading to measurable effects on variables such as health and education expenditures, labor market participation, in-country money transfers, and women's empowerment.

Chapter 2

Project Plan

2.1 Background of the study

In a country like Bangladesh, where citizens lacked easy access to financial services, financial inclusion became a critical concern. Bangladesh Bank is at the forefront of the struggle for financial inclusion in the late 2000s. The main objectives of financial inclusion were to stimulate small and micro businesses, reduce poverty, improve household welfare, and encourage people to save more money (especially for women). It is now one of the strategic tools used by the Bangladeshi government to accomplish the SDGs and the objectives of its five-year plan. Every conventional bank in Bangladesh was the main objective of this campaign's initial phase. All banks were instructed by the top authority to move their services and branch sites into the tightest spaces possible. Even a few banks took this action. The expansion of financial inclusion did not, however, achieve its anticipated apex. Bangladesh's inadequate infrastructure, the distances between branches, the lack of knowledge and literacy regarding banking practices, and, most crucially, the fact that impoverished and underprivileged areas are not catered to by banks in terms of their operations and services, may be the root causes. A business model leveraging technology and designed to serve impoverished populations was necessary to increase financial inclusion based on Bangladesh's infrastructure. And by the end of the 2010s, mobile financial services—a notable example of this business model—had evolved. In order to enhance customer usability and service delivery, financial services businesses are integrating mobile technologies into their products. With the debut of bKash and Dutch Bangla mobile banking, the path to financial inclusion was made simpler and more effective. Following the establishment of both businesses, Bangladesh's rate of financial inclusion rose from 36.76 percent in 2004 to 77 percent in subsequent years. The Bangladesh Telecommunication Regulatory Commission (BTRC) estimates that 172 million individuals in Bangladesh have mobile phone access to financial services. The extensive agent and merchant networks that these companies provide also play a vital role in the spread of access to financial services. The infrastructure of Bangladesh must allow for the simple opening of accounts and participation in financial services by farmers, women, uneducated groups, and small companies from any location in the country using a mobile phone. This study focuses on bKash, the fintech business in South Asia with the quickest rate of growth. bKash has just been on its journey for ten years, yet it has already given Bangladesh's mobile service providers the most.

They hold a 48% market share, with the remainder controlled by other MFS. According to several studies, bKash has so far helped Bangladesh's economy grow by 28%, by increasing per capita income by 28%, and by increasing household remittances by 60%. Women using bKash accounts are twenty times more financially included than women without bKash accounts and their engagement in income-generating activities has risen by 1.1%. bKash is used for transactions by more than 14% of rural inhabitants, and it is used by 50.6% of rural residents who have mobile financial service accounts. It is obvious that bKash and other mobile banking services significantly contribute to financial inclusion in Bangladesh. This research is done to learn more about bKash's function, background, activities, and potential futures. At the end, it is also discussed what this study's scope and limitations were.

2.2 Literature review

Financial inclusion definitions

Financial exclusion has been a major concern for academics and policymakers in both poor and developed countries, as reported by Chakravarty and Pal (2013). Financial inclusion has been characterized in diverse ways by different academics. Ramji (2009) defines financial inclusion as "a system in which all members of a country's population have access to a full range of financial services, from basic savings and loans to sophisticated products like pensions and insurance." Having access to high-quality financial services that are widely available is what the United Nations means when they talk about financial inclusion. "Financial inclusion," as defined by Sarma and Pais (2010), is the process that ensures everyone in an economy can access, use, and benefit from the financial system. The term "financial inclusion" was defined by Yoshino and Morgan (2016) as the extent to which individuals and businesses, especially those with lower incomes and smaller enterprises, have access to financial services. So, all people in the economy, rich or poor, should be able to use financial services. This idea is at the heart of the concept of financial inclusion.

The significance of financial inclusion

Hannig and Jansen (2010) state that financial inclusion, alongside conventional pillars such as fiscal and monetary policy and other regulatory goals such as customer protection, has emerged as a significant policy priority in recent years. Several studies have found a positive and direct link

between poverty reduction and access to formal financial services. Ozili (2018) argues that financial inclusion may also be used as a tool to address systemic issues like "poor." One way to combat poverty and boost the economy is to open up opportunities to those who were previously shut out. The expansion of sectors other than the economy, such education and health care, benefit more from financial inclusion as well. Sarma and Pais (2010) argue that appropriate allocation of productive resources is facilitated by financial inclusion, leading to lower capital costs and less reliance on informal exploitative borrowing. Sharma A, and Kukreja (2013) argue that although financial inclusion is crucial to economic and social development, so too are the roles of government officials, the financial system, and the general public. Park and Mercado (2015) looked examined the correlation between financial inclusion and poverty in 176 economies (including thirty-seven in Asia) and found that it helps to reduce both poverty and income inequality. Therefore, it is possible to draw the conclusion that financial inclusion is crucial for a country like Bangladesh's economy.

Prospects of financial inclusion

The benefits of financial inclusion are supported by several research findings. According to Ozili (2018), financial inclusion can provide substantial benefits for the underprivileged. It affords them the chance to save their extra cash in a legitimate financial institution. These institutions accumulate and mobilize large funds for the deficit sector of the economy in the future. According to Han and Melecky's (2013) research, savings offer the poor part of an economy with a protective barrier against adverse situations such as unexpected job loss or unemployment, future income loss due to an unplanned emergency or terminal illness, etc.

Factors that influence access to financial services

Numerous research has uncovered the factors that influence financial inclusion. Uddin, Chowdhury, and Islam (2017) used data from Bangladesh's financial indicators between 2005 and 2014 to draw their conclusions about the factors that promote or inhibit financial inclusion. A supply side and a demand side are the two sides of every market. The availability of financial services, or the supply side, is often reflected in the number of individuals who have access to them, while the demand side reveals the number of people who actually make use of such services, or the demand side.

Definitions of Mobile Financial Services

Mobile financial services, as defined by the Bangladesh Bank (2017), allow banks to deliver a variety of services directly to consumers' mobile devices. It increases the possibility for banks of all sizes to attract new clients at low cost. The following are definitions of some of the most important terms in the field of mobile financial services:

- **Mobile money**

Mobile money, as defined by the Bangladesh Bank (2017), is a form of electronic cash that may be accessed by means of a mobile phone. Robi, Banglalink, Grameenphone, etc. are examples of mobile operators that also handle mobile money and user phone account management. Its popularity stems from its widespread use in countries with large populations that lack access to conventional financial services.

- **Mobile banking**

Mobile banking, as defined by the Bangladesh Bank (2017), is accessing, and managing a conventional bank account using a mobile phone. These tasks can range from seeing account details to actually making purchases through a mobile banking app. It is provided by all the traditional banks in a developing nation, and it requires the use of a mobile app to ensure the highest level of security for your transactions.

- **Family household**

Family households, as defined by Bangladesh Bank (2017), consist of many generations of a single-family living under a single roof and sharing a common kitchen.

- **Mobile payment**

Mobile payment, as defined by the Bangladesh Bank (2017), is the process of making monetary transactions (such as those for services and purchases) via a mobile device. Transactions may be made using either conventional banking systems or mobile money apps.

- **Small and medium enterprises**

In accordance with the national industrial policy order, 2010 by BB, industrial enterprises classified as small enterprises have fixed assets worth less than 1.5 million taka and fifty

employees, while industrial enterprises classified as medium enterprises have fixed assets worth more than twenty million taka and 150 employees.

The following is a list of the literature related to the services offered by all mobile financial service providers:

- **Cash in**

The first step in cash in is notifying the MFSs agent's office that users intend to do so, as stated by Bangladesh Bank (2017). In order to open an account with the agent, the customer must first tell the agent, who will then assign an account number and need a cash deposit. After signing up, the agent will receive the funds and deposit them into the customer's account. Mobile service providers will send a confirmation text message to verify the purchase.

- **Cash-out**

The cash-out process is similar to the cash-in process, as per Bangladesh Bank (2017). The mobile financial services customers must record the number and deposit the necessary money into the agent's register. The customer then enters cash-out-related information such as PIN, transaction amount, agent number, etc. The operators will send confirmation SMS to both the agent and the consumer. The representative will then send the required amount of money to the designated consumer.

- **Agent**

According to Chang (2009), an agent is any third party who interacts with clients on behalf of a financial institution.

- **Mobile network operator**

Operators, as defined by Sultana (2014), are businesses that have been granted permission by the government to provide telecommunications services via mobile devices.

The literature linked with mobile banking business models is provided below:

- **Bank and non-bank-based model**

According to Chang, a client who uses two diverse types of mobile financial services

has an agreement that includes both the bank and the non-bank financial service providers, and both are entitled to supply financial services (2009).

- **Bank and non-bank-led model**

When it comes to handling customer relations, marketing, branding, etc., for these mobile financial service models, it is the banks and non-banks who take the lead, as stated by Sultana (2014).

The correlation between financial inclusion and mobile financial services

The US Federal Reserve concluded in 2012 that mobile banking and mobile payments held the greatest potential for increasing access to financial services for the unbanked population by decreasing transaction costs and broadening product availability. Technology advancements over the past few decades have aided the spread of financial inclusion, as recognized by Cheston (2016). Mishra and Sahoo (2013) claim that one of the main differences between the mobile banking system and the traditional banking system is that the account holder does not need to physically visit a bank office to complete transactions. Because of this, the inconvenience of limited storage space is reduced, and the account holder's time is used more effectively. For this and other reasons, it is crucial to broaden access to mobile banking services in order to broaden people's access to banking services. To increase the number of Bangladeshis who have access to formal financial services, the Bangladesh bank recommended MFS activities in 2011. Mobile banking, according to Uwamariya, Loebbecke, and Cremer (2019), has shown tremendous potential in bringing financial services to the homes of the poor. Small and medium-sized enterprises (SMEs) make up a disproportionate share of economic output in many developing countries. Mobile financial services have allowed SMEs to better serve their present customers while attracting new ones at cheaper costs.

Literature gap

Although mobile banking has the potential to increase financial inclusion, there is a lack of relevant study. Although research into financial inclusion is scarce, Bangladesh is an exception. The importance of banking on the go increased in 2011. Thus, there is a lack of data on the efficacy of mobile banking in Bangladesh. Furthermore, there is extraordinarily little study done on the topic of financial inclusion on a global scale. Consequently, there is a void in the existing literature on

the subject.

2.3 Scope of the study

Bangladesh has an excess of mobile financial service providers. However, the horizon of this study is limited to bKash. There are numerous bKash domains that can be researched. According to the study's title, its scope is limited to its involvement in Bangladesh's financial inclusion. This report does not examine the profitability, cost, or other administrative components of bKash because they are unrelated to the study's title. The study also demonstrates bKash's past contribution and potential for future development. In addition, the study addresses how bKash can progress in the future by addressing its current shortcomings.

2.4. Problem statement

Financial inclusion is one of Bangladesh's primary objectives for future sustainable growth and development. Financial inclusion has a significant impact on the achievement of SDGs in Bangladesh as well. According to a poll, over 52 percent of Bangladesh's adult population will remain unbanked in 2020. Still, there is cause for optimism, as financial inclusion has grown exponentially in recent years. In the past eight years, the rate of financial inclusion has climbed by 28 percent. It is assumed that the expansion of mobile banking financial services in Bangladesh is responsible for this revolutionary increase in financial inclusion. \$10 billion worth of transactions are processed through these mobile banking companies, surpassing many of Bangladesh's largest banks. bKash is the oldest and largest player in the mobile banking industry, with 48% of the market share among MFS providers by itself. They are also accountable for financial inclusion (40%) due to the fact that there are over 250,000 agents in the country. This report, was undertaken to learn more about this phenomenon and to address the following questions:

- Financial inclusion & the effect of expanding access to banking services on Bangladesh's economic development.
- bKash's contribution to financial inclusion.

2.5 Objectives of the Report

The primary purpose of this research is to present an overview of bKash's role as a mobile financial

service provider in Bangladesh's financial inclusion from both micro- and macro-centric perspectives.

In short -

- Determine the contribution of bKash to overall financial inclusion in Bangladesh.
- Assess each bKash's role in relation to the use and accessibility of financial services.
- Analyze bKash's financial inclusion growth tactics.
- Identify issues with the expansion of financial inclusion in general.

2.6 Methodology

The methodology is an essential component of any study since it describes the methods and procedures that will be used to conduct the study or research. It also includes a full overview of the research's design, requirements, data collecting, analysis, etc. The methodology of the study also refers to the entire procedure utilized to collect data or information in order to make insightful and correct business decisions. This procedure involves research articles, and numerous other research tools. Additionally, historical, and present data can be incorporated into the study's methodology. By coordinating their efforts in approach, a team can create a single conceptual idea. Organizational research is an excellent method for utilizing logical strategies to discover the truth about the marvels of business. These activities may involve business opening characterization, the generation and evaluation of ideas, and the observation of the execution of business procedures.

Research nature of the study

The analysis in the study is purely descriptive. Given that "financial inclusion and bKash's influence on Bangladesh's financial inclusion" is the main topic of this paper. Moreover, the report is descriptive in nature, since its authors set out to assemble and analyze data descriptively.

- **Descriptive research**

The main goal of descriptive research is to describe the characteristics of the population or phenomenon being studied. It is used when researchers are looking for answers to "what" questions rather than "how" or "why" ones. Since the study's variables are changed by the research process itself, it is also known as the observational research approach. The word observational refers to the fact that the researcher has no influence over the characteristics

of the variables. This study is quantitative since gathering and statistically analyzing data is its main goal. The fact that such study may be carried out utilizing a range of data gathering techniques is its main advantage.

Data collection

Following is a breakdown of the two primary categories of information contained in the study's data:

- **Quantitative data**

Data of this kind focus on numerical quantities or counts. All that can be measured and computed are numbers.

- **Qualitative data**

This information is categorized and can be represented by any symbol or name. This data collection approach allows for observation but not measurement.

Data type

Quantitative and qualitative information have been used and presented in the study. Quantitative data measured bKash's contribution to financial inclusion, while qualitative data revealed the most up-to-date practices used by bKash.

Secondary sources were used extensively throughout this report's investigation.

- **Secondary source**

The data presented here were collected by other researchers, not by the authors themselves. Important secondary sources include government websites, papers, books, journals, and articles by other authors

Data Sources for secondary data

The following works served as secondary sources for this report:

- The most recent surveys from the International Monetary Fund.
- The results of studies published by the Bangladesh Bank.
- Statistics on the economy and mobile banking from the Bangladesh Bank.
- BRAC Bank's Annual Reports (Data of bKash is included in the report as a subsidiary section).
- Global Findex Database.
- Publications open to the public written by other authors.
- Content from well-known Bangladeshi periodicals and newspapers.
- bKash's official website.

Methods of statistical analysis used in the study

The quantitative data in the study are analyzed using trend analysis. A look at trends over the appropriate time frame reveals that mobile banking, and in particular bKash, has increased financial inclusion in Bangladesh. Also demonstrated is the role that bKash plays in expanding access to banking services in Bangladesh. Because of this, the report is packed with visual aids, such as charts and graphs, for all relevant studies.

The statistical analysis is done with Microsoft Excel.

2.7 Limitations of the study

- Due to harder communications with peers on bKash, primary data collection was impossible.
- Due to bKash's data privacy, a significant amount of information regarding the utilization of financial indicators could not be included in the report.

Chapter 3

Data analysis, and findings

To determine how significant bKash has been in expanding financial access in Bangladesh, this article will analyse several relevant indicators. One way to illustrate bKash's effect on Bangladesh's financial inclusion is to compare some of its financial inclusion metrics to those of Bangladesh as a whole, which is what the analysis section does to start. The effect of bKash on financial inclusion will be presented in detail by first analysing the evolution of key factors related to financial inclusion and then displaying the resulting trend.

3.1 Quantitative data analysis

3.1.1 A study on bKash's financial inclusion metrics alongside Bangladesh's overall

There are usually two types of indicators for measuring financial inclusion.

- Access to financial services
- Usage of financial services

The supply side is typically represented by people's ability to gain access to financial services, while the demand side is depicted by people's actual use of those services.

Access to financial services indicators

Below is a percentage breakdown of the total number of agents in Bangladesh vs the number of bKash mobile agents who have registered with the company.

Table 3 % of bKash to Total agents of Bangladesh

Year	Total agents in Bangladesh	Total agents of bKash	% Of bKash against Total
2017	772,109	178,322	23.71%
2018	840,196	207,462	22.67%
2019	942,648	230,944	23.40%
2020	1,003,005	271,981	23.77%
2021	1,141,743	269,936	25.69%

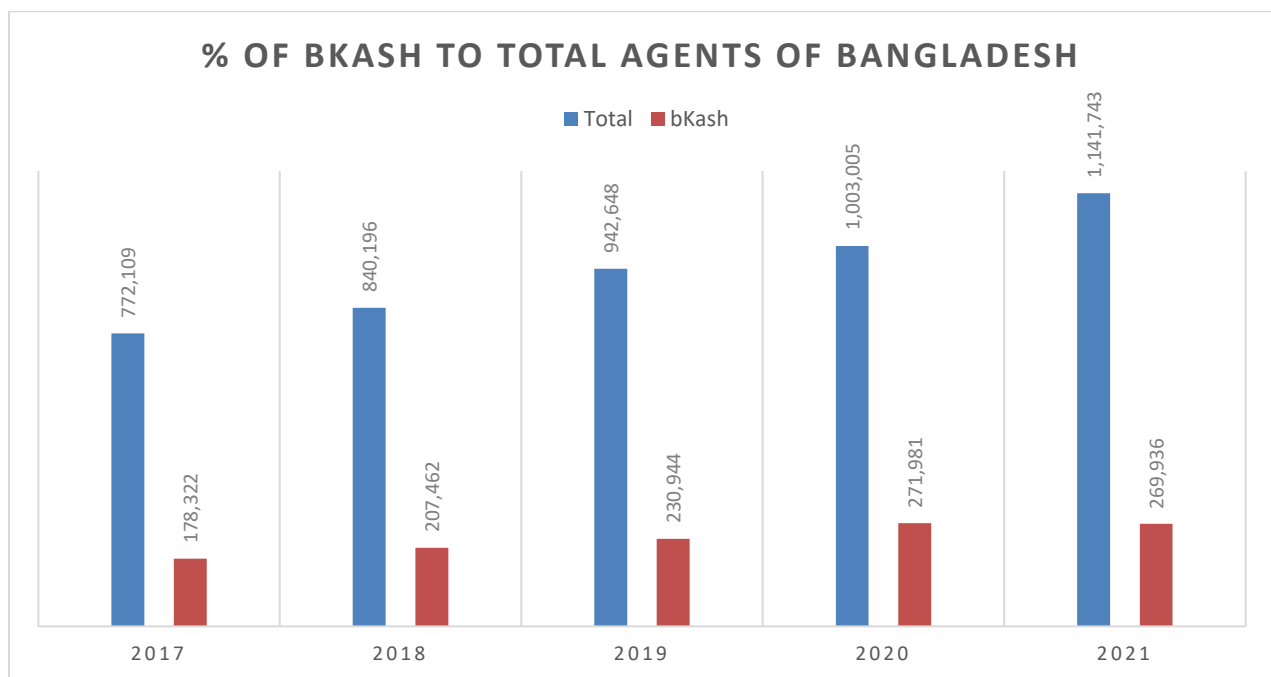


Figure 1 % of bKash to Total agents of Bangladesh

Source: Bangladesh Bank website & BRAC bank AR reports.

Any transaction, including cash-in and cash-out ones, is carried out on behalf of users by a mobile money agent. They oversee serving clients, educating them about mobile financial services, and registering millions of inexperienced users every day in addition to converting actual cash to digital currency. In a way, they act as the modern-day equivalent of conventional bank branches. The

presence of agents in remote and difficult-to-access areas has boosted financial inclusion globally. Because bank branches cannot be used to obtain mobile financial services, they are included in the metrics of access to financial services. Therefore, the more agents are employed, the more financial inclusion may be accomplished.

The graph above shows that over the past five years, there had been a significant growth in the number of mobile agents who are registered in Bangladesh and with bKash. Consequently, both access to mobile financial services and financial inclusion is on the rise. The percentage of bKash, however, is not particularly noteworthy. Although it increased in 2019, 2020, and 2021, the percentage of bKash is increasing slowly. Therefore, bKash's position in Bangladesh's financial inclusion is diminishing from the demand side of financial services.

Usage of financial services indicators

Following is a breakdown of the number of registered bKash users in Bangladesh as a proportion of all mobile financial services users in Bangladesh:

Table 4 % of bKash against overall number of mobile financial services

Year	Total users of bKash in millions	Total mobile financial service users in Bangladesh in millions	% Of bKash to total
2017	28.80	54.43	52.90 %
2018	30.95	64.05	48.32 %
2019	38.14	73.09	52.18 %
2020	50.49	92.57	54.54 %
2021	57.59	181.00	31.82 %

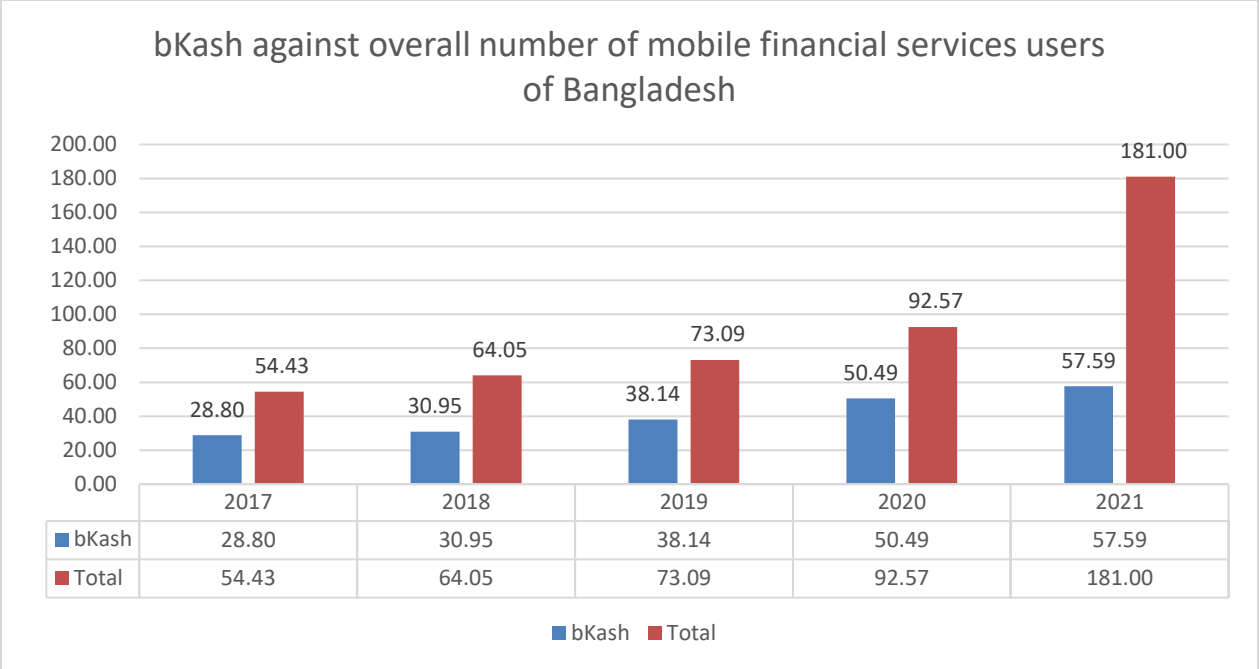


Figure 2 bKash against overall number of mobile financial services users of Bangladesh

Source: Bangladesh Bank website & BRAC bank AR reports.

The utilization of mobile financial services is a crucial element of financial inclusion. They should be included in the financial services category. Therefore, the number of mobile financial services users is used to measure indications of financial services consumption. In the table and graph given below, it can be seen that, despite the fact that the number of users rises each year, a greater proportion of users are now utilizing financial services. In Bangladesh, however, the number of bKash users is dropping. In Bangladesh, the percentage of bKash users relative to the overall number of users was 52.90 percent in 2017, however it has steadily decreased over time. It only increased in 2019 (52.18%) but was unable to exceed the 2017 level. In 2020, it climbed marginally, but in 2021, it dropped dramatically to 31.82 percent. As a result, bKash's contribution to Bangladesh's financial inclusion is shrinking as its user base shrinks. Previously, bKash accounted for 54.54 percent of Bangladesh's financial users; however, this number has reduced to 31.82 percent, which is not especially notable. Therefore, from the demand side of financial services, bKash's significance in Bangladesh's financial inclusion is declining.

3.1.2 Parameters of bKash's financial inclusion: an examination of contemporary trends

Agents of bKash

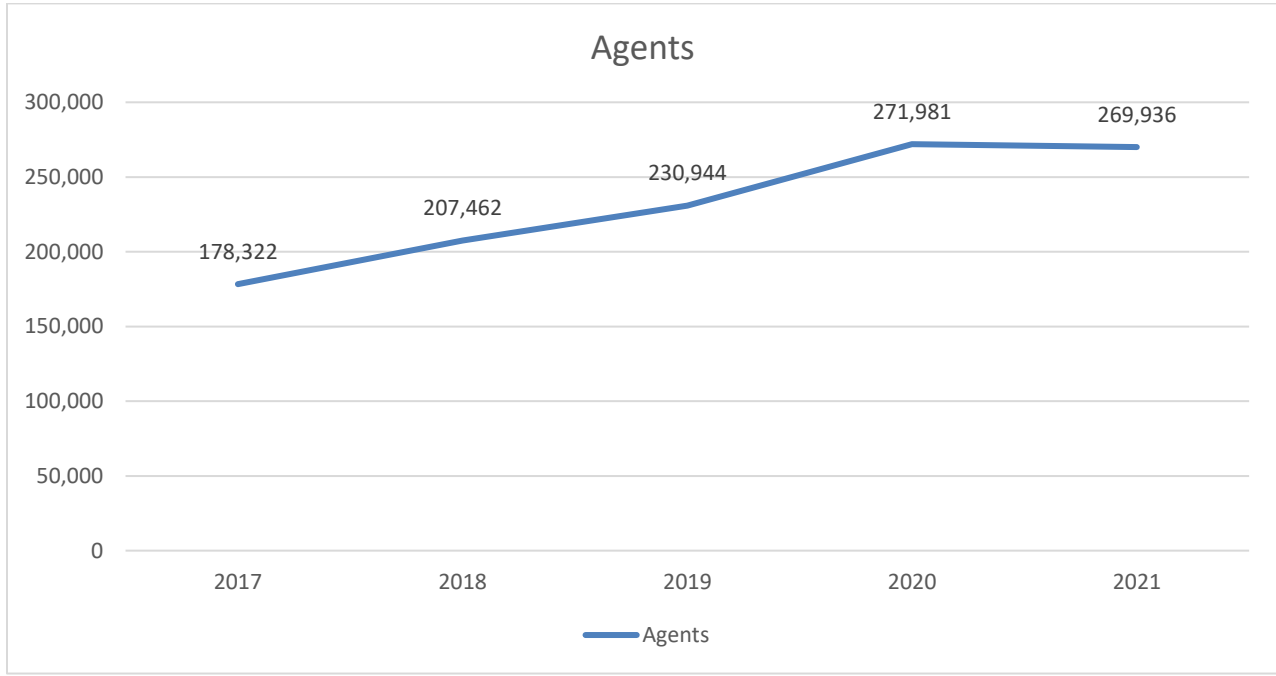


Figure 3 Number of agents of bKash from 2017 to 2021

The graph above demonstrates how the number of bKash agents has grown over time. There were around 178,322 agents in 2017, however, 207,462 agents were present in 2018. Thus, the next year saw the hiring of 29,140 agents. There were 230,944 agents in 2019, 271,181 agents in 2020, and, conservatively, 269,936 agents in 2021. There were 271,981 agents in 2020, although that number fell in 2021. It can be said that bKash works to grow the number of its agents each year in Bangladesh so that more individuals in rural and conservative regions have access to financial services.

Merchants of bKash

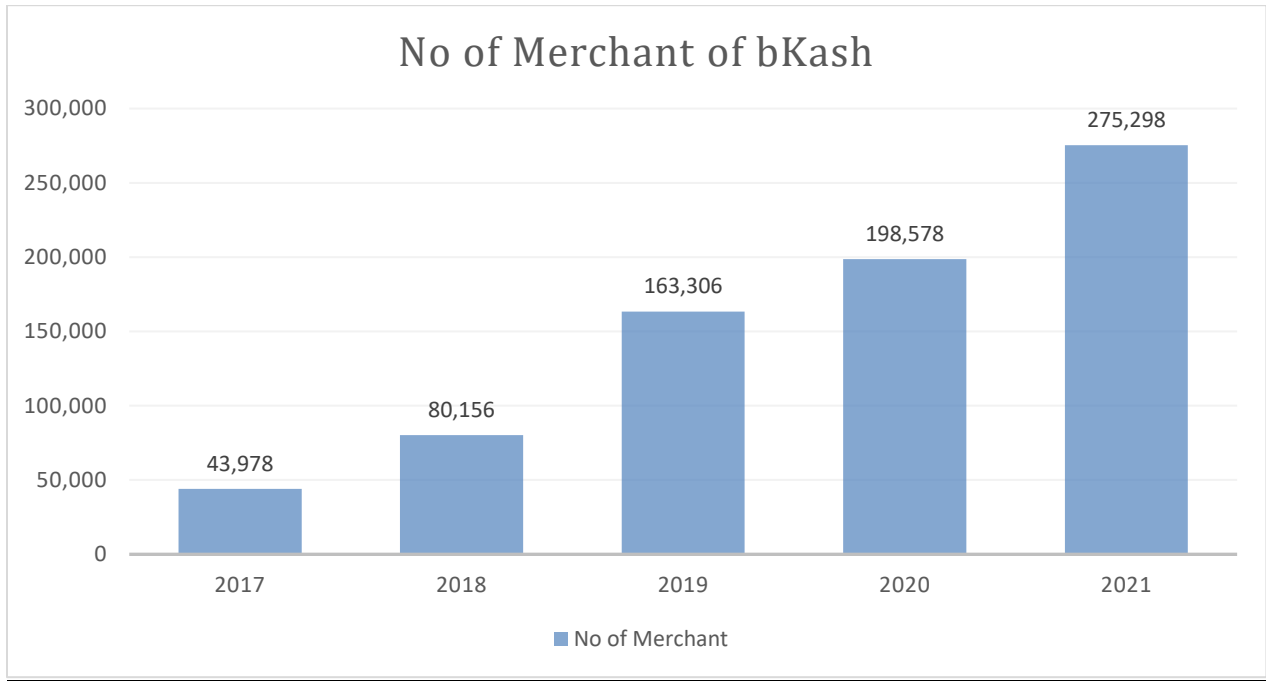


Figure 4 Number of merchants of bKash from 2017 to 2021

Additionally, merchants are catalysts for the bKash distribution network. Additionally, merchants conduct or facilitate transactions for the company's users. Both merchants and agents are agency accounts that organizations may utilize to build a delivery network that ensures services reach the last mile. Users of bKash can simply transfer funds from their accounts to local merchants. Therefore, merchants also contribute to financial inclusion because they provide access to financial services for Bangladesh's underserved populations.

As observed in the preceding graph, the number of bKash merchants increased between 2017 and 2021. In 2017, they had a total of 43,978 merchants. In 2018, the overall number of merchants increased to an astounding 80,156, which was significantly greater than the previous year. In 2019, the number of merchants doubled to 163,306. In 2020, bKash's number of merchants climbed to 198,578 and in 2021 it increased to 275,298 merchants. Therefore, it is apparent that bKash is expanding its sales distribution network to provide all users with improved, expanded, and more convenient access to financial services.

New bKash users

Table 5 Figure of additional users of bKash from 2017 to 2021

Year	Figure of financial service users	New user addition relative to later years
2017	28,796,213	2.7 million
2018	30,949,622	2.15 million
2019	38,136,999	7.18 million
2020	50,485,829	12.3 million
2021	57,586,610	7.1 million

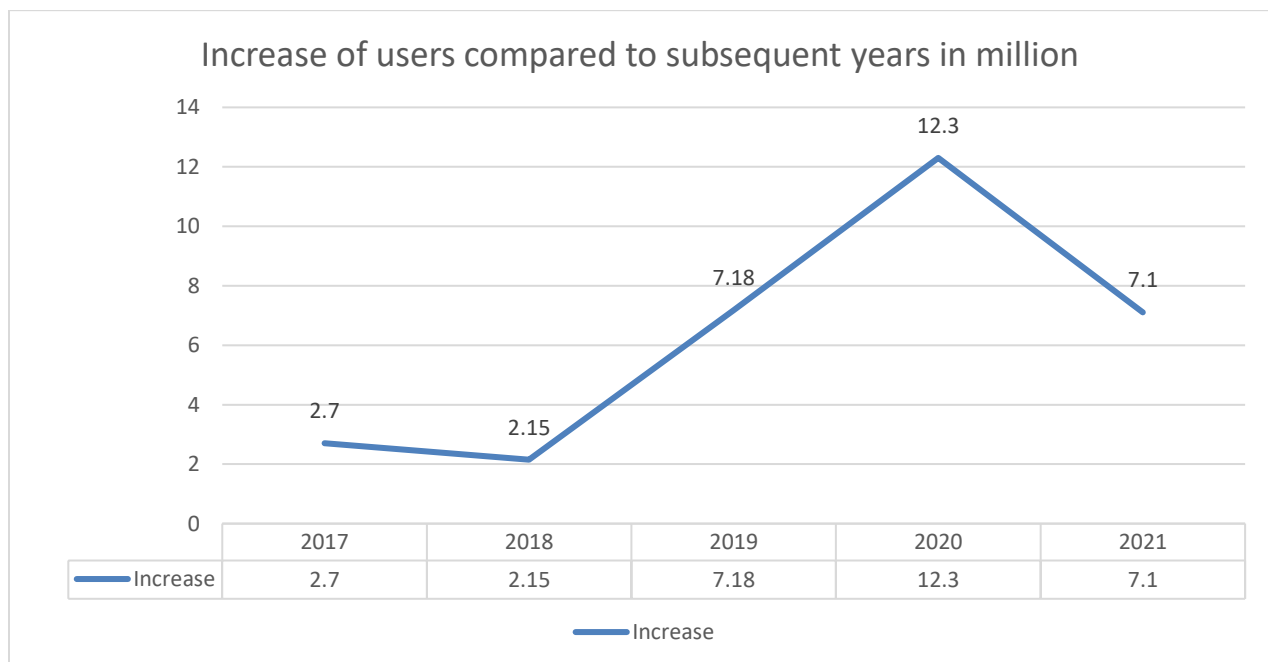


Figure 5 Figure of additional users of bKash from 2017 to 2021

Source: Bangladesh Bank website & BRAC bank AR reports.

Bringing a sizable portion of the population under the protection of financial services each year is the goal of financial inclusion. It simply refers to luring inexperienced users or customers to their services from the perspective of a mobile service provider. Mobile banking is the most practical and cost-effective way to access a variety of financial services, and bKash has been a pioneer in

this field. They continued to act in the same way as they had in the earlier time frame (2017-2021). In 2017, they had about 28.79 million users, which was 2.7 million more than the year before (2016). This implies that they oversee providing financial services to more than 2.7 million people. Over 30.95 million people used bKash in 2018, which is 2.15 million more than in 2017. It indicates that they brought an additional 2.15 million people into financial inclusion. The growth rate from 2018 to 2019 is significant because they were able to include more people in the financial system as they did in 2017. The growth was 7.18 million. In 2020, they were only able to attract 12.3 million inexperienced users to their services. In 2019 & 2020, the growth rate reversed dramatically and climbed by about fourfold. In 2021, the growth rate increased even further to a total of 57.26 million. Despite economic upheaval caused by Covid, bKash was able to acquire a total of 57.26 million users. This is a 7.1 million increase over the previous year. This indicates that they were able to include more than 7.1 million individuals in the banking system. By adding additional users to its services throughout the years, bKash has contributed significantly to the growth of financial inclusion as an independent institution.

Growth in active customers

Table 6 Expansion in active customer users of bKash

Year	Number of active financial service users	Expansion in active financial services user
2017	14,415,001	2.30 million
2018	18,694,365	4.28 million
2019	22,261,567	3.57 million
2020	27,554,130	5.29 million
2021	32,817,527	5.26 million

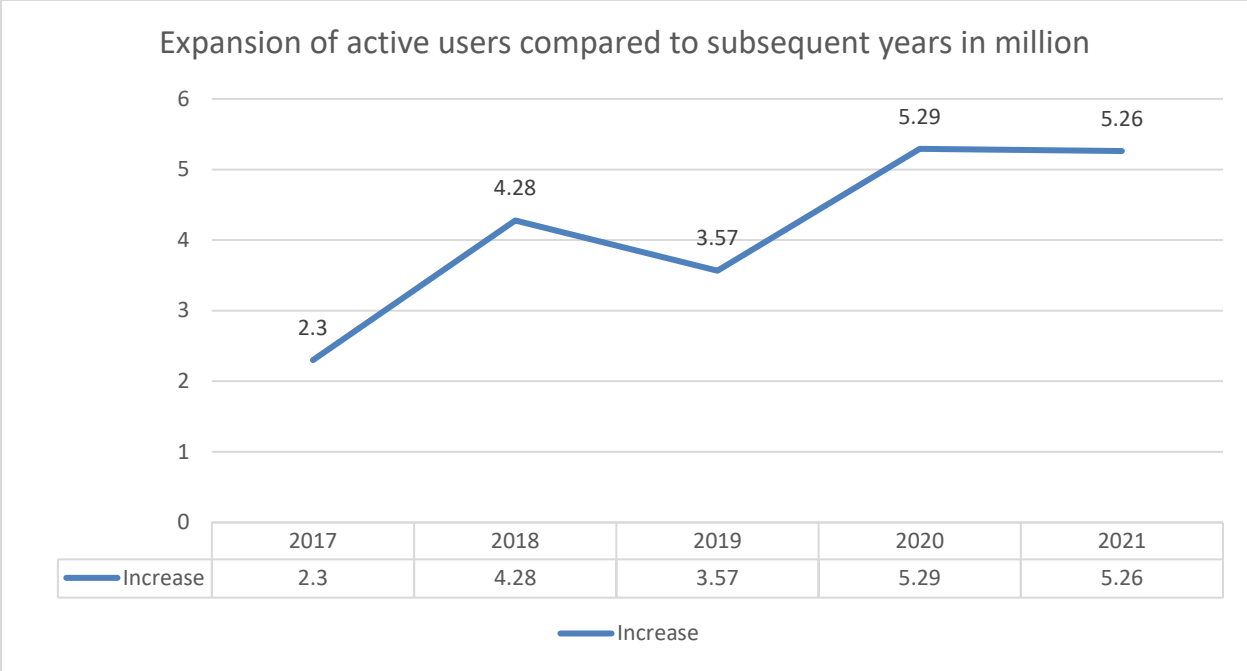


Figure 6 Expansion in active customer users of bKash

Source: Bangladesh Bank website & BRAC bank AR reports.

Customers that have completed at least one transaction in the last 90 days are considered active. Financial inclusion involves not only promoting the usage of financial services but also ensuring that customers make only necessary transactions and utilize them efficiently. Therefore, it is vital to monitor the consumers' transaction consumption every 90 days. As observed in the above graph, the trend peaked in 2017, 2020, and 2021, but it declined in 2019. The number of active bKash customers climbed by 2.30 million between 2016 and 2017. It climbed by 4.28 million in 2018, indicating that more people have become active and are attentively utilizing services. In 2018, 4.28 million additional users became active, indicating bKash's efforts to attract more customers to its financial services. In 2019, there were just 3.57 million users. Referring to a decline in user engagement with financial services. The number of active consumers climbed to 5.29 million in 2020 and 5.26 million in 2021. Therefore, it is apparent that bKash is not limited to simply growing the number of users; it is also attempting to boost the engagement and utilization of all financial inclusion consumers.

Progress in total transactions

Table 7 Progress in total transactions of bKash subsequent years

Year	Total transactions in BDT in bn
2017	2,173.5
2018	2,703.1
2019	3,332.8
2020	4,310.6
2021	5,862.1

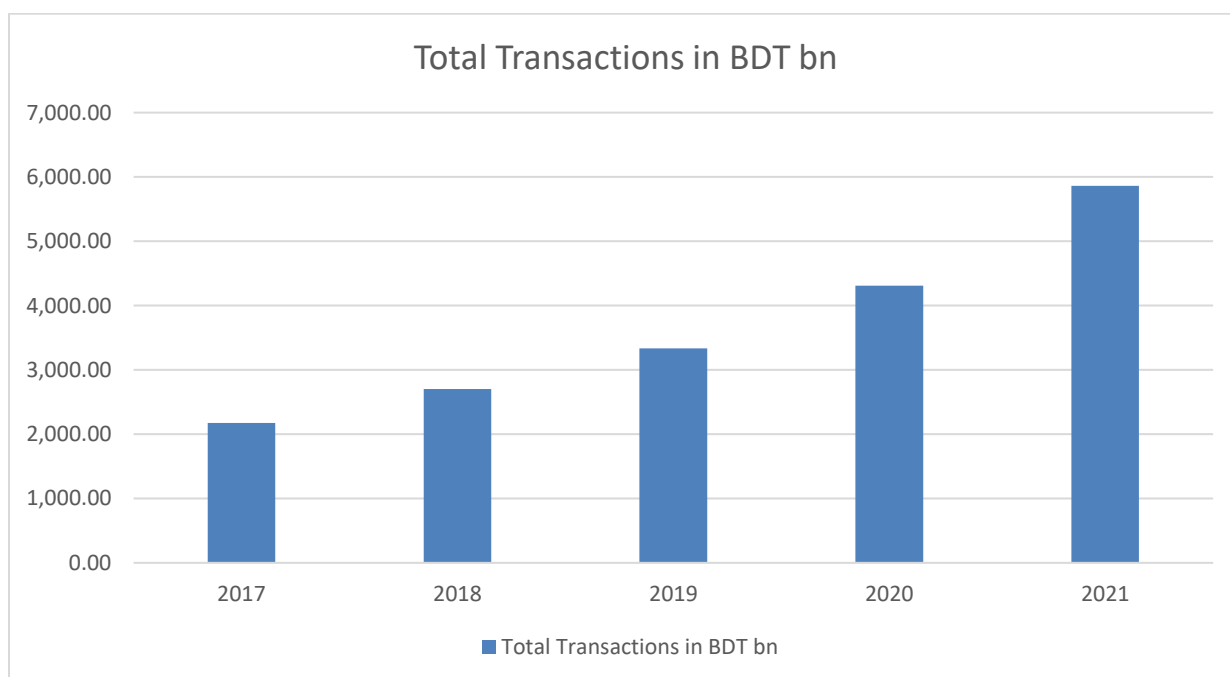


Figure 7 Progress in overall transactions of bKash subsequent years

Source: Bangladesh Bank website & BRAC bank AR reports.

The number of transactions is an additional metric for gauging financial inclusion. More financial inclusion is assured as everyday transactions increase. Financial inclusion uses indices to reflect this fact. Increasing bKash transactions indicate that more people are utilizing bKash's services

and gaining access to financial services. As noted in the above table and graph, there were around 2173.5 billion annual transactions in 2017, which climbed to 2703.1 billion in 2018. The expansion proceeded over the subsequent three years. As it climbed to 3332.8 billion, 4310.6 billion, and 5862.1 billion respectively in 2019, 2020, and 2021. As more transactions are made on bKash annually, it follows that more users are becoming financially included as time goes on. As a result, the rising trendline is more proof that bKash is helping to increase financial inclusion in Bangladesh.

Growth in daily average transactions

Table 8 Growth in daily average transactions of bKash from 2017 to 2021

Year	Daily average transactions count
2017	4,327,308
2018	5,309,919
2019	6,141,542
2020	7,786,236
2021	9,529,947

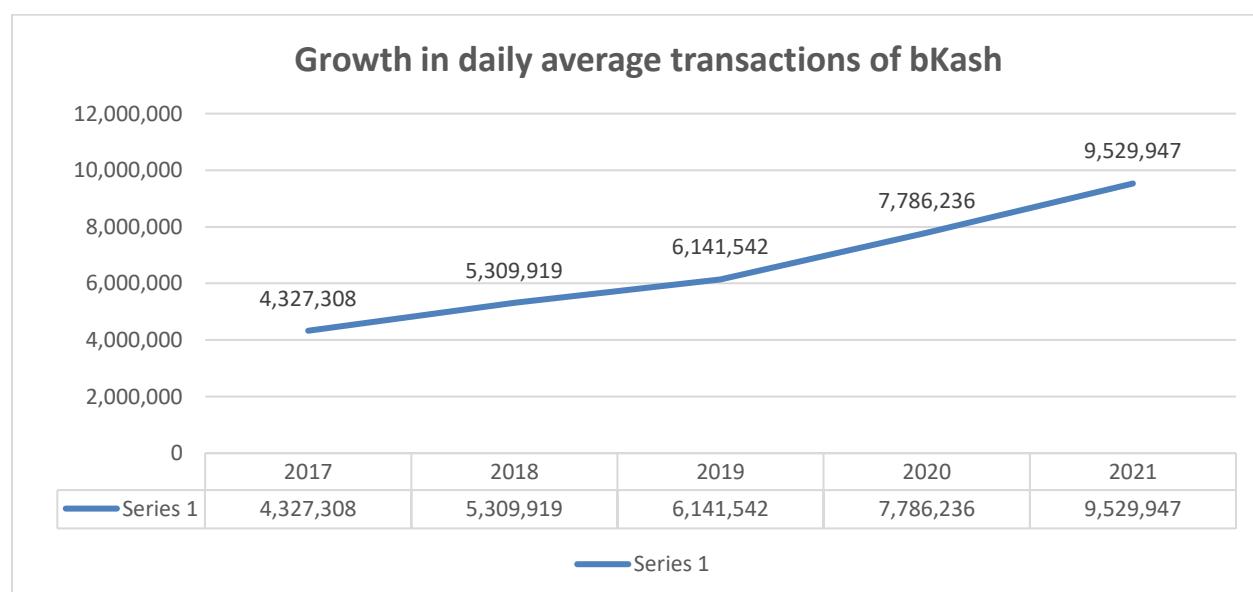


Figure 8 Growth in daily average transactions of bKash from 2017 to 2021

Source: Bangladesh Bank website & BRAC bank AR reports.

Average daily transactions show how frequently typical transactions take place or how many individuals utilize financial services on a daily basis. The trend line is growing, which can be seen in the table and graph above. It shows that the number of transactions per day on average is rising yearly. There were 4.33 million registered transactions in 2017. The increase of one million led to 5.31 million transactions the following year. Later, it increased to 6.14 million transactions. In the years that followed, the growth became much further. In bKash, there were 7.79 million and 9.53 million transactions per day, on average. More individuals than ever before are able to perform millions of transactions every day using bKash because it offers a hassle-free and user-friendly platform for doing so. Again, this is a testimony to bKash's mobile banking services, which enable all of these possibilities and significantly contribute to Bangladesh's financial inclusion.

3.2 Discussion and analysis of qualitative data

In this section, the qualitative contribution of bKash to Bangladesh's financial inclusion can be evaluated.

3.2.1 Nano loan project

In December 2021, following the start of a one-year pilot program, City bank offered an instant digital Nano loan for bKash users. The bKash app allows users to seek loans between 500 and 20,000 TK. Loans must be repaid in three equal installments.

Procedure of availing nano loan

1. Users of bKash must choose the "loans from financial institutions and banks" icon.
2. Specifying a loan amount inside the city bank's predefined range.
3. Loan monies are deposited into the borrower's bKash account when they provide their PIN (if the user qualifies for the loan).

Nano loan Project's Influence on Bangladesh's Financial Inclusion

- More bKash customers are motivated to apply for this loan due to the lack of collateral. Financial inclusion aims to make financial services available to an increasing number of people. This endeavor will unquestionably increase the need for financial services in the near future.

- The loan will incur an annual interest rate of 9% per the Bangladesh Bank's regulations. Consequently, the unbanked populace may access bKash wallet 24/7 at a lower interest rate than traditional commercial banks.
- Microfinance institutions are the primary lenders for disadvantaged groups. However, they charge around 18.40% for 28-29 thousand takas, which is far more than these segments can handle. bKash's digital Nano loan, however, reduces the interest rate to 9%. Consequently, bKash loans are now accessible to individuals who previously could not afford them. As a consequence, more individuals will have access to financial services.
- The loan can be accessible through a digital credit assessment, which eliminates the typical lengthy application process, hence encouraging the unbanked population to utilize this service.
- Neither a loan processing charge nor a fee for the early settlement of a loan is indicated by City bank at this time. The cost of loans inhibits individuals from obtaining bank loans. Consequently, our study has the potential to significantly lessen this despondency.

If the provided initiative is successful in the near future, the Bangladeshi government's goal of developing a digital Bangladesh will advance by one step. Users will not require a bank account in order to borrow money. They will be eligible to apply for the loan and pay it back without putting up any security. Additionally, this will lead to a growth in the commercial sectors. Up till now, population transfers and deposits of digital currency have been the main components of financial inclusion in Bangladesh. But it seems like the strategy is changing with this endeavor. Therefore, it is clear that digital Nano loans will increase Bangladesh's reach.

3.2.2 Incorporating RMG into a sustainable ecology

The RMG sector in Bangladesh is expected to employ 4.22 million people altogether. Viyellatex was the first retailer to use bKash's modern digital payroll system for Bangladesh's RMG sector in 2015. To provide RMG employees with a stable financial environment, bKash launched its digital payroll system in November 2021.

The roles that bKash played in this project stated below

- Introducing a new automated process for paying employees in the simplest, fastest, and most transparent way possible.
- Facilitating improved digital administration of workers' finances by ensuring that bKash salaries are utilized appropriately.
- Establishing a "Sulov Bazar" on the grounds for workers to purchase everyday necessities at a discount.
- Developing research and workshops to educate factory employees on the topic of fiscal management.
- Establishing retail nodes in and around high-population centers where bKash may be used to purchase food and other necessities.
- Providing extra support to workers by establishing customer service centers in high-population-density urban locations. Customers that use the electronic Know Your Customer (e-KYC) form will also have immediate access to digital lending and savings options.

The Project's Influence on Bangladesh's Financial Inclusion

- Women predominate in the RMG sector. According to a recent poll, there are 41:59 more men than women working in the RMG sector. In contrast, the 2017 global index survey revealed that around 60 percent of adult women in Bangladesh remain financially excluded. Because they will have a digital account thanks to bKash's digital payroll solution, more women will have access to financial services. The training sessions would also help people understand money management, improving both men's and women's financial literacy. Bangladesh's financial inclusion is also hampered by financial illiteracy. Therefore, raising financial inclusion will result from lowering financial illiteracy.
- Sulov Bazar would encourage RMG employees to start using bKash as it is a more practical and cheap option. All of them will get started with the opening of a bKash account, which will improve how people use financial services in general. Financial inclusion will increase as a result.

- Gateways to financial services include merchant networks and customer care centers. The global findex survey from 2017 found that 22% of persons who are economically excluded attribute their exclusion to the distance to access locations. Therefore, in order to achieve financial inclusion, more access points must be offered. Factory workers can access financial services without traveling far thanks to bKash's developing merchant networks and other hubs. By using these services, employees will be inspired to participate in financial inclusion.

Chapter 4

Recommendations, Suggestions and Conclusion

4.1 Recommendations/policy implications

- Because the number of bKash users relative to all consumers in Bangladesh is decreasing every year, the firm should expand the quality and scope of its services to attract new customers and include them within financial inclusion. In exchange, they can reduce transaction costs and boost agent locations.
- bKash may increase the range of services it provides by adding more insurances and deposit-saving choices like Fixed Deposit. More consumers will be drawn to these services as their market penetration increases, and they will be classified as financial services.

4.2 Suggestions

- To increase their active clientele, bKash can either concentrate on building brand ties with consumers as well as make investments in innovative support and services.
- In addition to the RMG industry, bKash can set up payroll services and sustainable ecosystem projects in industries like pharmaceuticals, agriculture, etc.

4.3 Conclusion

In recent years, one of Bangladesh's top priorities has been financial inclusion. Since bKash has become available, there are now more choices for the poor to obtain financial services, the problem seems to have been resolved. They first provided cash-in and cash-out services, but they have now grown to include lending options. Even if the Nano loan initiative with City Bank and the building of a sustainable environment for RMG sector initiatives are expected to improve financial inclusion in Bangladesh, they must exert additional effort on their respective duties. Since the agent and user numbers decrease annually compared to Bangladesh as a whole. As a mobile service provider, they will not be able to meet all of the public's expectations unless they offer an increasing number of financial services, such as insurance and savings or deposit account facilities. The introduction of additional financial services with features to improve financial literacy among the populace may help to facilitate the planned growth of bKash's role in Bangladesh's overall financial inclusion. This will ensure the creation of a sustainable eco-ecosystem throughout

Bangladesh and also enhance the part of bKash throughout Bangladesh's overall financial inclusion.

References

- BRAC Bank. (n.d.). Retrieved November 7, 2022, from <https://www.bracbank.com/en/investor-relations>
- Bangladesh Bank, 2022. Bangladesh Mobile Financial Services (MFS) Regulations, 2022. Payment Systems Department, Bangladesh Bank.
- Bangladesh Bank. (n.d.). Retrieved November 7, 2022, from <https://www.bb.org.bd/en/index.php/financialactivity/mfsdata>
- Sultana, R. (2014). Mobile Financial Services (MFS) Business and Regulations: Evolution in South Asian Markets. *Available at SSRN 2524220*.
- Company Profile - About bKash | bKash. (n.d.). Retrieved November 7, 2022, from <https://www.bkash.com/about/company-profile>
- Saha, K. K. (2021). An analysis of adoption of blockchain technology in the private banking sector of Bangladesh (*Doctoral dissertation, Brac University*).
- Sarma, M., & Pais, J. (2011). Financial inclusion and development. *Journal of international development*, 23(5), 613-628.
- Hannig, A., & Jansen, S. (2010). Financial inclusion and financial stability: Current policy issues.
- Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, 18(4), 329-340.
- Sharma, A., & Kukreja, S. (2013). An analytical study: Relevance of financial inclusion for developing nations. *International journal of engineering and science*, 2(6), 15-20.
- Han, R., & Melecky, M. (2013). Financial inclusion for financial stability: Access to bank deposits and the growth of deposits in the global financial crisis. *World Bank policy research working paper*, (6577).
- Park, C. Y., & Mercado, R. (2015). Financial inclusion, poverty, and income inequality in developing Asia. *Asian Development Bank Economics Working Paper Series*, (426).
- Uddin, A., Chowdhury, M. A. F., & Islam, M. N. (2017). Determinants of financial inclusion in Bangladesh: Dynamic GMM & quantile regression approach. *The Journal of Developing Areas*, 51(2), 221-237.
- Cheston, S. (2016). *The business of financial inclusion: insights from banks in emerging markets*. Institute of International Finance.

Mishra, S. K., & Sahoo, D. P. (2013). Mobile banking adoption and benefits towards customers service. *International Journal on Advanced Computer Theory and Engineering*, 2(1), 78-83.

Uwamariya, M., Loebbecke, C., & Cremer, S. (2020). Mobile banking impacting the performance of microfinance institutions: A case study from Rwanda. *International Journal of Innovation and Technology Management*, 17(01), 2050001.