

# Does Covid-19 a Compelling Force for The Growth of Digital Banking in India?

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## Abstract

The Banking sector in India has been succeeding in implementing IT-enabled techniques for its operation for the last few years. By offering better quality services and products, the banks can able to retain their major customer base and the customers are experiencing feasible banking operations with the help of information technology. The COVID-19 pandemic outbreak has adversely challenged the banking sector in India. Earlier the banking customers used to visit the bank branches to avail banking services. However, during the pandemic period, banks have experienced a shift towards digital or internet banking. The banking sector has been facing a difficult task in understanding the new behaviors to meet the requirements of consumers with relevant products and convenient services and to adapt their business services to social changes related to the pandemic situation. The article throws light on the banking services during the pandemic times and the growth of electronic banking. The general objective of the study is to provide a practical perspective on the impact of COVID-19 on consumer behavior of banking products and services and thereby analyze the growth of digital banking. For this purpose, we have analyzed the total digital payments and settlements in the banking transactions for three years from 2017. The present study highlights the COVID-19 pandemic effect on digital banking and the influence pandemic on digital payments and settlement systems in India.

**Keywords:** The Covid- 19 Pandemic, Digital Banking, Banking Services, Banking Strategies, Consumer Behaviour, Digitalization of Banking Industry

## 1. Introduction

The COVID-19 pandemic has changed the entire world economy and impacted most of the businesses. It caused a transformation in the way people live, interact, and make purchase decisions. Even under these conditions, banks are responsible for maintaining liquidity flows and should continue their duty to finance the economy, continue to lend to individuals and businesses and maintain their customer base. So, banks are trying to transform their strategies that define their future and to rethink their entire flow of activities. The current crisis is an opportunity to change the banking business as well as a rethinking of the development of the bank-customer relationship. These involve not only the digitalization and modernization of the financial activity of banks but also the development of skills and the promotion of a

sustainable bank-customer relationship.

The COVID-19 pandemic has imposed a different approach to banking activity to facilitate its consumers' access to banking operations. It accelerated digitalization in the banking system. Banks noticed a shift in customer approach towards digital or electronic banking. So, banks have provided customers with online banking tools thereby they can perform their simple and convenient operations at anytime and anywhere. Mobile banking allows users to access their accounts, check the status of the services online, timely update and handle transactions, and communicate with banks, anytime, anywhere around the world. Mobile banking wallets have boosted the banking sector and enhanced daily transactions in an efficient and safe mode.

## 2. Literature & Synthesis

Covid-19 threats have imposed many changes in the banking sector of India. To ensure speedy and effective customer services in the banking sector, major banks in India developed a shift in customer approach towards digital or electronic banking. So, banks have developed digital platforms for speedy & diversified services. Simple online banking tools enable even illiterate and technologically backward people to perform simple and convenient operations at any time anywhere banking. Mobile banking and digital platforms allow users to access their accounts, check the status of the services, and help update banking and non-banking transactions and communications with the help of the Internet of Things and Artificial intelligence. Mobile banking wallets have boosted the banking sector and enhanced daily transactions in an efficient and safe mode.

Related studies highlighted the situations and provided the backup for this study, The COVID-19 pandemic adversely hampered Indian banking operations and severely affected all the industries across the world economy [1]. He argued that Governmental intervention is required to take decisions and actions to lessen uncertainty and financial stress in the economy and continuous measures should be taken to enable the smooth functioning of both money and capital markets, the Banking system in India has implemented various measures due to COVID-19 Pandemic to make banking operation smoother and more effective [2]. Based on their study they found that most of the Indian Banks were facing the problems of NPA, non-recovery of loans, customer issues, Bad Loans during COVID-19 situations, and resultant shutdown.

The degree of mobile/internet banking services usage by the respondents has increased during the pandemic in comparison with the period before the pandemic, Daniel, Gardan, and the survey indicates the need to increase the efforts of banks to offer financial education courses to all categories of bank customers [3,4]. points out that due to covid-19 pandemic and nationwide closure, people believe that visiting branches and availing banking services is not safe and secure. As the banks have modernized they have encouraged their customers to avail benefit of online, internet, and mobile banking services. Their study found that most people are using mobile banking services as it is clear that since are saving, cost-effective, reliable, and easier to use than Conventional Banking [1]. in their review all the banking transactions can able to be processed quickly and easily with the help of Electronic banking. It clearly states the numerous assistance and services provided by e-banking to their customers and also the challenges that the customers are facing in the adoption of e-banking.

A review of the literature has shown that several studies have been conducted in the field of Technologically Improved Banking Services to identify the impact of Covid-19. We highlight the Impact of COVID-19 on Technologically Improved Banking Products and Services in India. The present study focuses on the total digital banking payments and settlement system existing in India, basically digital banking services such as Large Value Credit

Transfers, Real Time Gross Settlement (RTGS), digital payments of APBS, IMPS, NACH Cr, National Electronic Fund Transfer (NEFT), Unified Payment Interface (UPI), BHIM Aadhaar Pay, Debit Cards, Credit Cards, and Prepaid Payment Instruments.

## 3. Statement of the Problem

The banking sector which is responsible for all the financial activities in the country and working as a supporting hand to all of the industries has witnessed a great challenge during the pandemic times. Banks were directly affected by the COVID-19 crisis, being forced to rethink their business operations and strategies to revise and analyze the directions of their existing activities. As personal banking is not appropriate during this COVID-19 pandemic, it has forced people to use contactless payments and avoid handling paper money as much as possible. Most of the bank branches encouraged their customers not to visit their branches and make use of digital banking tools and products to carry out their day-to-day banking operations. Thereby COVID-19 has pushed bank consumers towards the use of digital banking products like online and mobile banking. Banks have come up with digital banking services that encourage customers to avail the benefit of online, phone, and mobile banking services as all these services are available at the fingertips of customers instead of branch visits. Thus, technology has altered the banking landscape by increasing non-branch banking which in turn helps to create customer value. Banks must adopt technology in the age of transformation to survive in the ever-changing market. The banking industry changed some of its old methods and is now finding new ways to retain its customer base. This period is of importance for banks, as it creates a modern credible digital interface to digitalize their processes.

Indian banking sector, digital means are getting popular as most of the customers are already much learned toward online banking. This study envisages how the Covid-19 impacts the development of digital banking in India and the growth of technologically improved digital banking services in the banking sector in an overall aspect. And analyze the growth of total digital banking settlements and payments during the pandemic period.

## 4. Significance of the Study

During these pandemic times, banks are concentrating more on value-based services through the means of electronic banking. The evolving way of Internet banking, mobile banking, and information technology-enabled services are replacing the traditional way of banking operations. As a necessity, some bank customers were forced to adopt digital options as a means of transactions, while others moved to digital options for the first time. By adopting the digitalized way of operations, the banking sector provides quality and value-added services to its customers. Banks will need to respond to lasting social change conditions to understand how consumers select products and services, to meet individuals' financial needs.

As decisions on how the banking sector responding to the pandemic challenges and the relevance of the services and products that they

are providing to the customers in a safe and convenient mode, will be the key to successful banking, this study mainly focuses on the emerging phase of digital banking operations through Technologically Improved Digital Banking and analyzing the growth of the new banking trends during the Covid-19 pandemic times.

### 5. Scope of the Study

The present study investigates the ever-changing banking during the COVID-19 pandemic. The scope of the study is to understand the coping mechanisms of banks during the pandemic crises, by comparing it with the pandemic period. This study allows us to outline how banks use their strategies to adapt their digital transformation. The scope of the study is limited to enquire the growth of digital banking in India. The findings of the study will be useful for the Indian banking sector to strengthen digital banking services by formulating suitable strategies to build the customer's trust and loyalty, thereby helping the banks to retain their customer base and assist the bank to reduce their cost of operation, generate substantial revenue from the online banking and e-payment transaction and encourage them to provide more digital banking product and services that will meet the costumer's needs in the future. An analytical study on banking strategies is important to properly support future research in the area of Emerging Technology in Improved Digital Banking Services in the Indian banking sector.

### 6. Objectives of the Study

The present study titled as “Covid-19 - Does a Compelling Force for the Growth of Digital Banking in India has been initiated to attain the following objective.

- To study the emergence of digital banking in India during the period of Covid-19 in terms of value and volume.

### 7. Research Methodology

The present study is an empirical study based on secondary data. Population for the study constitute Public and Private sector banks in India. The study mainly aims to develop an insight into the development of digital banking during the pandemic period.

### 8. Analysis

Financial inclusivity and accessibility are the cornerstones of global economic development, especially in a world that is traversing one of its toughest uncertainties of all time. The global banking and financial services industry have undergone seismic shifts in the post-COVID-19 pandemic period. The larger economic objectives enable accessible and inclusive global banking using fintech and application programming interfaces (APIs). For global banks that are spread across multiple countries and markets, it presents an opportunity to use advanced technology solutions to make improved infrastructure in terms of higher rates of internet and mobile penetration across the world has been a critical enabler of this revolution, which is slated to make global banking industry a \$43.15 billion business worldwide by 2026.

Nearly a quarter of a million people were driven by consumers seeking advanced digital banking services Digital banks are beginning to eat into the market dominance of traditional banks. Thousands of bank customers counting on benefitted from digital banking even in the face of growing challenges presented by the emergence of the Covid-19 Omicron variant [5] and digital-first current account providers continue to attract new customers as “many seek current account providers with high-quality online tools, such as mobile apps”. Digital challengers have won millions of customers, people are changing for non-financial reasons, with the top reasons cited including better online banking facilities (51%), sophisticated mobile or app-based banking systems (41%), and improved customer service (38%).

During the period of COVID-19, the Reserve Bank continued to ensure safe, secure, quick, and affordable e-payment options, with greater competition and customer confidence in the payment ecosystem of the country. NEFT was a significant milestone in reaching out to the customers and excluded sections of society with a bouquet of e-payment options, supported by an efficient regulatory environment and robust consumer protection by next-generation financial messaging systems and wireless technology for banks.

	Volume (Lakh)		
	2017-18	2018-19	2019-20
	1	2	3
A. Settlement Systems			
CCIL Operated Systems	35	36	36
B. Payment Systems			
1. Large Value Credit Transfers – RTGS	1,244	1,366	1,507
Retail Segment			
2. Credit Transfers	58,793	1,18,750	2,06,661
2.1 AePS (Fund Transfers)	6	11	10
2.2 APBS	12,980	15,032	16,805
2.3 ECS Cr	61	54	18

2.4 IMPS	10,098	17,529	25,792
2.5 NACH Cr	7,031	9,021	11,406
2.6 NEFT	19,464	23,189	27,445
2.7 UP	9,152	53,915	1,25,186
3. Debit Transfers and Direct Debits	3,788	6,382	8,957
3.1 BHIM Aadhaar Pay	20	68	91
3.2 ECS Dr	15	9	1
3.3 NACH Dr	3,738	6,299	8,768
3.4 NETC (Linked to Bank Account)	15	6	97
4. Card Payments	47,486	61,769	73,012
4.1 Credit Cards	14,052	17,626	21,773
4.2 Debit Cards	33,434	44,143	51,239
5. Prepaid Payment Instruments	34,591	46,072	53,318
Total – Retail Payments (2+3+4+5+6)	1,56,371	2,44,211	3,52,362
Total Payments (1+2+3+4+5+6)	1,57,615	2,45,577	3,53,869
Total Digital Payments (1+2+3+4+5)	1,45,902	2,34,339	3,43,455

**Note: 1. The Rtg System Includes Customer and Inter-Bank Transactions Only.**

**2. The Figures for Cards Are for Payment Transactions at Point-Of-Sale (Pos) Terminals and Online.**

**3. Figures in the columns might not add up to the total due to rounding off of numbers.**

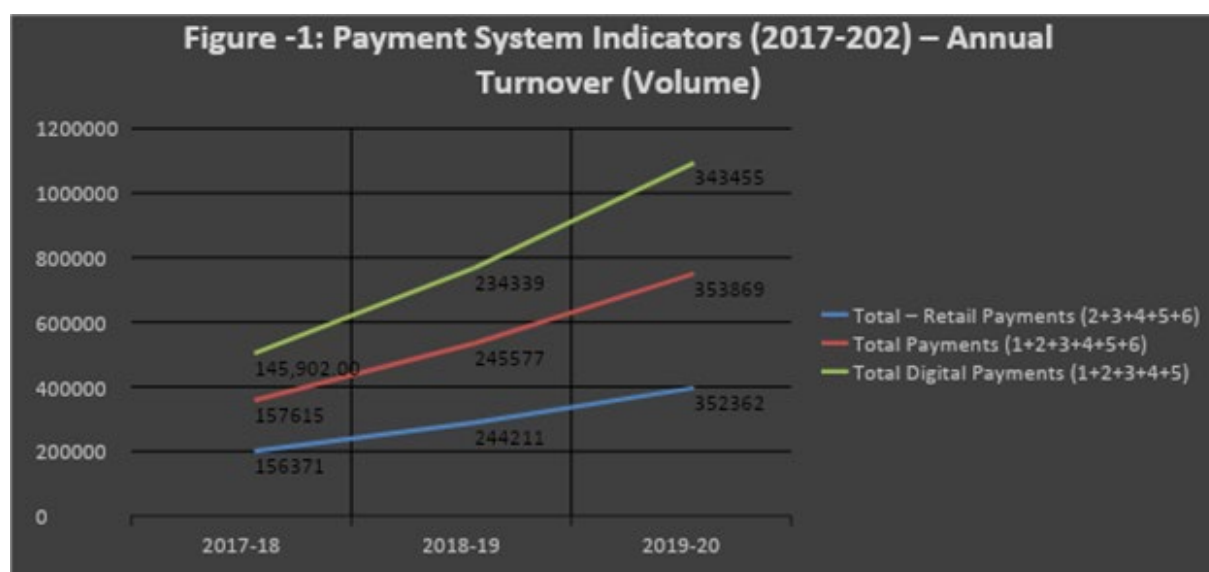
**Source: rbi.**

**Table 1: Payment System Indicators – Annual Turnover (April-March)**

The payment and settlement systems recorded robust growth during 2019-20, growing by 44.1 percent in terms of volume on top of the expansion by 55.8 percent in the previous year. Real Time Gross Settlement (RTGS) system. The share of digital transactions in the total volume of non-cash retail payments increased to 97.0 percent during 2019-20, up from 95.4 percent in the previous year (Table 1). However, the extended period of lockdown arising on account of the COVID-19 pandemic resulted in subdued economic activity and lower discretionary payments, thereby leading to a fall in digital transactions. In digital payments, the retail RTGS volume, which had registered healthy growth since July 2019 due to the waiving of RTGS charges by the Reserve Bank, declined in March (-12.3 percent), April (-52.5 percent), and May (-27.5 percent). While they regained traction in May, transactions through Immediate Payment Service (IMPS) had started declining and the drop became sharper in April 2020. Unified Payments Interface

(UPI) transaction volume declined by 5.9 percent in March 2020 and further by 19.8 percent in April 2020 to slightly less than one billion transactions. However, it recovered as the lockdown was gradually lifted and logged a record 1.34 billion transactions in June 2020. The ratio of RuPay card transactions at e-commerce portals to point-of-sale (PoS) jumped to 237 percent in April 2020 from 76.8 percent in February 2020, reflecting the effect of social distancing. Apart from low demand during the lockdown, the suspension of operations by leading users of digital payments such as e-commerce and BigTechs could have contributed to a decline in small-value digital payments.

The decline in digital transactions during the lockdown period is indicative of the integration of the digital economy with the real economy.



**Figure 1: Total Digital Payments - Payment System Indicators (2017-2020) Annual Turnover (Volume)**

**Source: Reserve Bank of India - Annual Report 2020.**

During 2019-20, the number of card payment transactions carried out through credit cards and debit cards increased by 23.5 percent and 16.1 percent, respectively, Prepaid Payment Instruments (PPIs) recorded a volume growth of 15.7 percent on top of the 33.2 percent year ago. The acceptance infrastructure witnessed substantial growth; the number of Point of Sale (PoS) terminals

increased by 38.2 percent to 51.4 lakh and the number of Bharat QR codes deployed increased by 74.6 percent to 20.28 lakh as of the end of March 2020. Further, during the same period, the number of ATMs increased from 2.22 lakh to 2.34 lakh. (Reserve Bank of India - Annual report -2020).

	Value (in crore)		
	2017-18	2018-19	2019-20
<b>A. Settlement Systems</b>			
CCIL Operated Systems	10,74,80,202	11,65,51,038	13,41,50,192
<b>B. Payment Systems</b>			
1. Large Value Credit Transfers – RTGS	11,67,12,478	13,56,88,187	13,11,56,475
Retail Segment			
2. Credit Transfers	1,88,14,287	2,60,97,655	2,85,72,100
2.1 AePS (Fund Transfers)	300	501	469
2.2 APBS	55,949	86,734	99,448
2.3 ECS Cr	11,864	13,235	5,145
2.4 IMPS	8,92,498	15,90,257	23,37,541
2.5 NACH Cr	5,20,992	7,36,349	10,52,187
2.6 NEFT	1,72,22,852	2,27,93,608	2,29,45,580
2.7 UP	1,09,832	8,76,971	21,31,730
3. Debit Transfers and Direct Debits	3,99,300	6,56,232	8,26,036
3.1 BHIM Aadhaar Pay	78	815	1,303
3.2 ECS Dr	972	1,260	39
3.3 NACH Dr	3,98,211	6,54,138	8,24,491
3.4 NETC (Linked to Bank Account)	39	20	203
4. Card Payments	9,19,035	11,96,888	15,35,765



4.1 Credit Cards	4,58,965	6,03,413	7,30,895
4.2 Debit Cards	4,60,070	5,93,475	8,04,870
5. Prepaid Payment Instruments	1,41,634	2,13,323	2,15,558
6. Paper-based Instruments	81,93,493	82,46,065	78,24,821
Total – Retail Payments (2+3+4+5+6)	2,84,67,748	3,64,10,163	3,89,74,281
Total Digital Payments (1+2+3+4+5)	13,69,86,734	16,38,52,285	16,23,05,934
Total Payments (1+2+3+4+5+6)	14,51,80,226	17,20,98,350	17,01,30,756

**Note: 1. The Rtgs System Includes Customer and Inter-Bank Transactions Only.**

**2. The Figures for Cards Are for Payment Transactions at Point-Of-Sale (Pos) Terminals and Online.**

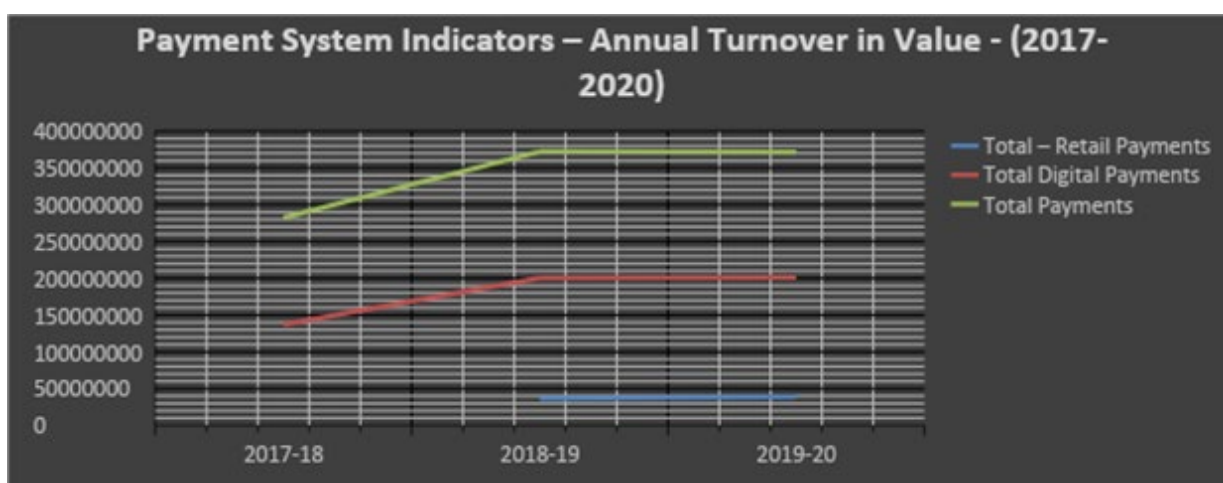
**3. Figures in The Columns Might Not Add Up to the Total Due to Rounding Off of Numbers.**

Source: rbi.

**Table 2: Payment System Indicators – Annual Turnover (April-March)**

Amongst the electronic modes of payments, transactions under the RTGS system expanded by 10.3 percent during 2020, with their value at ₹1,311.6 lakh crore, however, dipping by 3.3 percent from the previous year, mainly on account of a decline in large value transactions of corporates in line with the slowdown in economic

activity. At the end of March 2020, the RTGS facility was available through 1,53,605 branches of 218 banks. Transactions in the National Electronic Funds Transfer (NEFT) system rose by 18.3 percent during the year. At the end of March 2020, the NEFT facility was available through 1,53,687 branches of 217 banks.



**Figure 2: Total Digital Payments - Payment System Indicators (2017-2020)**

Source: Reserve Bank of India - Annual Report 2020.

Total payments in the year 2017-18 were Rs.14,51,80,226 crore in value and in the year 2018-19, it increased to Rs. 1720,98,350 crore. In 2019-20 total worth of digital payments increased to Rs. 17,01,30,756 crore. This proves the steady growth of overall digital transactions in value in the initial periods of the pandemic. However, it dipped by 1.01 percent from the previous year, mainly on account of a decline in large-value transactions of corporates in line with a slowdown in economic activity (Reserve Bank of India Annual Report, 2020).

The Indian banking industry was confronted with an ever-increasing demand from customers to provide innovative digital products and services in a highly competitive market during the COVID-19 pandemic period. Information Technology transformation by using

Application Programming Interfaces (APIs) to simultaneously accelerate technical modernization and enable new business ideas over time. Competitive markets and increasing demand for digital solutions during the pandemic period facilitate end-to-end digital customer journeys such as innovative banking technology, advanced-analytics-based products, and a core-banking -system push cloud adoption. Introducing new digital capabilities such as robotics, smart automation, and advanced analytics helps to generate full business value for the banking System in India. APIs are the core of IT architecture and play a significant role in the digital strategy of banking.

## 9. Implications

The COVID-19 pandemic has led to a diminution in digital

transactions in India. In corroboration, the growth of currency with the public in India accelerated from 11.2 percent on February 28 to 14.5 percent on March 31, to 21.3 percent as of June 19, 2020 (12.8 percent a year ago). At the same time, the cumulative value of digital transactions during January-May 2020 declined by 25.5 percent (y-o-y) as compared with a strong growth of 20.6 percent a year ago. Of this, digital retail transaction value growth contracted by 10.6 percent as compared with an increase of 31.3 percent last year.

However, both these indicators recovered in May 2020. In digital payments, the retail RTGS volume, which had registered healthy growth (y-o-y) since July 2019 due to waiving of RTGS charges by the Reserve Bank, declined in March (-12.3 percent), April (-52.5 percent) and May (-27.5 percent). While they regained traction in May, transactions through Immediate Payment Service (IMPS) started declining in February 2020 and the drop became sharper in April 2020. Unified Payments Interface (UPI) transaction volume declined by 5.9 percent in March 2020 and further by 19.8 percent in April 2020 to slightly less than one billion transactions. However, it recovered as the lockdown was gradually lifted and logged a record 1.34 billion transactions in June 2020. The ratio of RuPay card transactions at e-commerce portals to point-of-sale (PoS) jumped to 237 percent in April 2020 from 76.8 percent in February 2020, reflecting the effect of social distancing. Apart from low demand during the lockdown, the suspension of operations by leading users of digital payments such as e-commerce and BigTechs could have contributed to a decline in small-value digital payments. The decline in digital transactions during the lockdown period is indicative of the integration of the digital economy with the real economy. Empirical analysis for the period 2009-19 supported a statistically significant unidirectional Granger causal relationship from the growth of nominal GDP and private final consumption expenditure (PFCE) to the growth of digital and retail transaction value. (RBI - Annual Report, 2020).

During 2019-20, the number of card payment transactions carried out through credit cards and debit cards increased by 23.5 percent and 16.1 percent, respectively, while the value increased by 21.1 percent and 35.6 percent to ₹7.3 lakh crore and ₹8.0 lakh crore, respectively. Prepaid Payment Instruments (PPIs) recorded a volume growth of 15.7 percent on top of the 33.2 percent a year ago, while transactions value at ₹2.2 lakh crore increased by little more than 1.0 percent. The acceptance infrastructure witnessed substantial growth; the number of Point of Sale (PoS) terminals increased by 38.2 percent to 51.4 lakh and the number of Bharat QR codes deployed increased by 74.6 percent to 20.28 lakh as of the end of March 2020. Further, during the same period, the number of ATMs increased from 2.22 lakh to 2.34 lakh (Reserve Bank of India - Annual Report -2020).

## 10. Findings of the Study

- The COVID-19 pandemic has led to a diminution in digital transactions in India.
- The COVID-19 pandemic has had a direct and positive impact

on the development and introduction of Technologically advanced banking products.

- During the lockdown, the suspension of operations by leading users of digital payments such as e-commerce and Big-Techs could have contributed to a decline in small-value digital payments.
- There has been a steady growth in the value of digital payments, such as APBS, IMPS, NACH Cr, NEFT, UPI, BHIM Aadhaar Pay, Debit Cards, Credit Cards and Prepaid Payment Instruments from 2017 to 2019.
- There is a decline in the value of digital payments, especially in the case of payments like APBS, IMPS, NACH Cr, NEFT, UPI, BHIM Aadhaar Pay, Debit Cards, Credit Cards, and Prepaid Payments in 2021 compared to the previous year.
- In terms of volume total digital payments are also increasing year by year during the pandemic period.
- In terms of value total digital payments are also increasing year by year during the pandemic period except in the year 2020-21.
- The growth of overall mobile internet transactions rapidly developed during the coronavirus period.
- The increasing trend of growth which is seen in the total digital payments volume in the banking sector is also seen in the development of all digital banking transactions.

## 11. Conclusions

Banks are an important pillar of the economy and the strategies they adopt will influence the recovery of the economy after the pandemic times. Digitization remains a priority option for the banks, to offer customers the quality and safest solutions in their current business with the bank. The increasing use of digital transactions during COVID-19 is expected to continue in the coming years, requiring banks to re-evaluate their banking activities. The migration of banks to digital banking has much more importance to the banking sector and it is important to take steps for the development of emerging banking technologies. The new - digital banks need to work harder to increase the level of consumer confidence, digital security, and the value of services. As the customer experience is more essential to banks, only those banks that modernize their IT infrastructure and provide online access to banking products and services will have benefits in the future. The future of banking products and services is a combination of online and offline, to respond to a consumer whose preferences are constantly changing. So, the banking sector in India needs to develop a well-developed strategy for digital technologies to have a long-term benefit.

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