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A Study of Virtual Banking System and Fintech Services and Its Growth in India

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ABSTRACT

Physical cash transactions today are risky. Money transactions through banks provide safety, security and record keeping. Government and institutions disbursing the money to their beneficiaries through grouped transactions i.e., bulk payouts, mass payment, or batch processing. This resulted that each and every person use multiple transactions using mobile lead to voluminous transactions which cannot handled by humans but technology. hence, banking services are necessity of the life. People need faster, cheaper and self-centred banking services. In view of this, people find no time to visit branch. Technology supports the intentions of the people by providing fintech services. Therefore, the present study has been taken up to find the level of transactions carried in India without visiting the branch. The present study found that 97 percent of the total transactions and 24 percent of the total value of transaction have been carried out by using technology orientation. This result confirmed the necessity of financial technology services in achieving virtual banking system.

Keywords: Financial technology, fintech, virtual banks and banking services.

Introduction

Physical cash transactions today are risky. Money transactions through banks provide safety, security and record keeping. Government and institutions disbursing the money to their beneficiaries through grouped transactions i.e., bulk payouts, mass payment, or batch processing. Therefore, banking services are necessity of the life. People need faster, cheaper and self-centred banking services. In 90's, city and urban branches of banks carried their services with rush hour in the branches. This is true even today in rural areas where older people trust in branch-oriented services. But people with mobile flexi use to opt banking services in virtual banking system. Way back in 1994, Bill Gates stated that "banking is necessary, banks are not." Hence, banking services now transformed from relationship-based banking services to transaction-based banking services.

Objectives of the Study

The present study carried out with the objectives of (i) the services which are carried out with the branch or with the help of branch and (ii) the services which are not required to visit the branch, their volume and the value and its share of overall services.

Review of Literature

Today, banking service is essential. Physical cash transactions are vanishing and digital transactions are taking place. People use mobile for their domestic transactions and even transferring money to their

friends and family members. As a result, the volume of transaction is growing. Therefore, one needs cheaper, faster and better services. This led to the enhancement of virtual banking system via fintech services.

Salmony (2014) observed that use technology creates numerous business models. But the ease of use positively affects the adoption of technology (Davis: 1989; Cudjoe et al., (2015). Arner et al (2015) opined that fintech covers the entire scope of services and products traditionally provided by the financial services industry. Khraim et al., (2011), observed the rapid growth in the adoption of FinTech services. Fintech services are growing in such a way that it is expanding its services to the existing customers as well as unserved people. Fintech has two-sided effect: modernizing financial architectures and coordinating consumer and market behaviours in providing financial services (Nicoletti: 2017). On the other hand, Anne (2019) observed that fintech is characterised by hybrid and cross-industry business models. Fintech services are the digitisation of financial services, mainly driven by technology innovation, process disruption and service transformation (Gomber et al., 2018). People feel that it offers as greater transparency and improved risk management resulting in adoption of fintech services. Therefore, fintech has become an important and interesting topic today (Ryu: 2018).

Fintech services often face the reliability issues in consumers. Davis (1989) believed that online transactions via mobile banking would be effortless (Chansaenroj and Techakittiroj: 2015; Kim et al.: 2016). Kim et al (2016) observed that mobile-centered IT technology improves service provisioning. Consumers prefer mobile banking services when it associated with connection speed, secure systems and easy transaction method are offered (Sadi & Noordin, 2011).

Various factors affect the fintech services on consumer. These may be summarized as: trust (Balasubramanian et al :2003); financial costs (Singh et al: 2010); trust and dissatisfaction (Manrai and Manrai: 2007; Maier: 2016); usefulness; price value, personal innovativeness, security concern and perceived enjoyment (Wen: 2016). Rationale and behavioural trust (Bofondi and Gobbi: 2017) and data privacy and sharing (The Clearing House Survey: 2018). It is also observed that households with good financial education, preference for transparency had a higher probability of adopting fintech services. On the whole, mobile increased digital banking services (Liu et al: 2017).

Ernst & Young (2016) opined that institutions use advanced technologies and innovative models to provisioning, enhancing and distributing financial services. Payment services and loans, among others—are now offered by fintech firms. Junger and Mietzner (2020) found that fintech services and online financial intermediaries would increasingly affect traditional business areas, resulting in lower customer loyalty and higher customer migration. Therefore, it is advised to traditional banking service providers to increase customer satisfaction and market share through better service and offerings (Maie: 2016). Hence, fintech services are paramount interest in view of essentiality of banking services.

Need for the Study

Now-a-days, people use mobile for day-to-day activities. They use mobile for purchase, payment, transferring and receiving money. In the background of review of literature, it was observed that people use technology for banking services and finding no time to visit the bank branch. People are now accustomed to quick, easy, low-cost financial transactions. Fintech offers consumer centric services which requires regulatory framework otherwise regulatory initiations. Development of technological services poses reliability and trust issues. In this background, the present study has been taken up to investigate the growth of fintech services opted by the banking consumers at India level.

Research Methodology

The present research carried out with the aim of how for the Indian banking system adopted the virtual banking system. For this purpose, the study used secondary date provided by the Reserve Bank of India (RBI) for the year 2024-25 and 2025-26. The first reason for selecting these two year is because, the RBI provided complete date for all the types of services. The second reason is that the services like UPI, IMPS, NETC, NFS, AePS, BBPS statics available from April 2024 released by the RBI. Hence, the study conducted for the year 2024-25 and 2025-26. The data released by the RBI on monthly basis and the study aggregated for the year.

The study carried out with three dimensions: (i) Instrument oriented transactions; (ii) Mobile-based transactions and (iii) Bank-oriented transactions.

1. **Instrument-based transactions:** Instrument-based transactions were transactions carried by using instruments such as debit card, credit cards and PPI Wallet (Pre-Payment Instrument). These instruments perform transactions when there is a credit balance in our account. In case of credit cards, the transactions performed is up to the credit limit sanctioned.
2. **Mobile-Based Transactions:** The transactions which can be performed by using mobile are mobile-based transactions. These are: Mobile banking: using the application developed by the bank through mobile, UPI: Unified Payment Interface, IMPS: Immediate Payment Service, NFS: National Financial Switch, BBPS: Bharath Bill Payment System, AePS: Aadhar Enabled Payment System, NETC: National Electronic Toll Collection.
3. **Bank-Oriented Transactions:** These transactions were carried out by the bank itself when we visit the bank. These transactions are: RTGS: Real Time Gross Settlement, NEFT: National Electronic Fund Transfer, CTS: Cheque Truncation System. Today, banks are providing services through their application in such a way that the consumers can handle RTGS and NEFT by mobile also.

ANALYSIS AND INTERPRETATION OF DATA

The analysis and interpretations of data have been carried out under (i) Number of Banks giving different types of services, (ii) Banking Services Based on Operation: Volume of Transactions; (iii) Banking Services Based on Operation: Value of Transactions, and (iv) Banking Services Based on Operations: Average Value of Transactions.

Table 1

Banks and Financial Institutions Providing Different Types of Banking Services In India

Types of Services	Number of Banks Providing Services	
	2024-25	2025-26
Instrument Based Transactions		
Credit Card/ Debit Card	171	186
PPI Wallet	146	175
Mobile Based Transactions		
IMPS	891	948
UPI	629	687
NETC	36	37
NFS	1204	1201

AePS	129	127
BBPS	66	72
Mobile Banking	127	132
Bank Oriented Transactions		
NEFT	236	234
RTGS	247	245
CTS	1548	1546

Source: RBI Reports.

Table 1 presents banks and financial institutions giving different types of banking services for the year 2024-25 and 2025-26. The banks providing instrument-based transactions was increased. The number of banks providing services based on mobile operation was also increased except NFS and AePS. It was interesting to note that the banks providing branch-based transactions was reduced slightly indicating the movement towards virtual banking system.

Table 2
Volume of Banking Transaction

Types of Services	2024-25 (Fig. in Cr)	2025-26 (Fig. in Cr)
Instrument Based Transactions		
Credit Card	477	603
Debit Card	762	661
PPI Wallet	706	974
Total	**1945**	**2238 (15.06)**
Mobile Based Transactions		
IMPS	562	494
UPI	18587	24162
NETC	421	449
NFS	357	317
AePS	119	124
BBPS	254	310
Mobile Banking	17570	22267
Total	**37870**	**48123 (27.07)**
Bank Oriented Transactions		
NEFT	963	1010
RTGS	29	37
CTS	61	56
Total	**1053**	**1103 (4.74)**
Grand Total	40868	51464 (25.92)

Source: RBI Reports.

Table 2 depicts the volume of transaction served by the banks and financial institutions. Instrument based, mobile based and bank-oriented transactions were grown up by 15.06, 27.07 and 4.74 percent for the year

2025-26 over the previous year. Total number of transactions including instrument, mobile and bank-oriented transactions increased by 25.92 per cent over the year 2024-25. It was interesting to note that mobile based transaction accounts for 92.66 percent of the overall transactions followed by instrument-based transaction 4.76 and 2.57 percent for the year 2024-25. This indicates that the banking customers use mobile based banking operations more compared to other transactions.

Table 3
Banking Services Based on Operation: Value of Transaction

Types of Services	2024-25 (Rs. In Trillion)	2025-26 (Rs. In Trillion)
Instrument Based Transactions		
Debit Card	35.43	33.04
Credit Card	21.14	23.67
PPI Wallet	2.28	2.92
Total	**58.85**	**59.63 (1.32)**
Mobile Based Transactions		
Mobile Banking	392.06	455.58
UPI	260.57	314.23
IMPS	71.39	76.70
NFS	15.56	14.41
BBPS	10.14	15.51
AePS	3.04	3.31
NETC	0.73	0.84
Total	**753.49**	**880.58(16.87)**
Bank Based Transactions		
RTGS	2,013.88	2,273.73
NEFT	444.61	502.26
CTS	71.13	71.48
Total	**2529.62**	**2847.47(12.57)**
Grand Total	**3341.96**	**3787.68(13.34)**

Source: RBI Reports.

Table 3 portrays the total value of transaction carried out during the study period. During 2024-25, the total value of transactions carried out by all banks and financial institutions in India worth Rs. 3341.96 trillion compared to 2025-26 worth Rs.3787.68 leading to an increase of 13.34 per cent over the previous year. The instrument-based transactions were increased by 1.32 percent over the previous year, whereas bank-oriented transaction increased by 12.57 per cent. Mobile based transactions were increased by 16.87 per cent which indicated that banking customers preferred mobile based transactions compared to instrument based and bank-based transactions. During the year 2024-25, the total value of transaction was Rs.3341.96 trillion out of this amount, bank-based transaction included worth Rs. 2529.62 trillion which accounts for 75.67 percent and the same case during the year 2025-26.

Table 4
Banking Services Based on Operation: Average Value of Transaction

Types of Services	2024-25 (Fig. in Rs.)	2025-26 (Fig. in Rs.)
Instrument Based Transactions		
Debit Card	4,650	4,999
Credit Card	4,432	3,925
PPI Wallet	323	299
Average Transaction Value	**3,135**	**3,074**
Mobile Based Transactions		
Mobile Banking	2,231	2,046
UPI	1,402	1,301
IMPS	12,692	5,516
NFS	4,358	4,547
BBPS	3,990	5,002
AePS	2,558	2,657
NETC	173	186
Average Transaction Value	**3,915**	**3,036**
Bank Based Transactions		
RTGS	69,44,403	61,45,207
NEFT	46,170	49,729
CTS	1,16,701	1,27,913
Average Transaction Value	**23,69,091**	**21,07,616**

Source: RBI Reports.

Table 4 shows average value of transaction during the study period. The average value of transactions carried out through instrument-based transaction stands at Rs.3,135 during 2024-25 reduced to Rs.3,074 during 2025-26. Mobile based transactions stand at Rs.3,915 during 2024-25 reduced to Rs.3,036 during the same period. Bank based transactions were also reduced from Rs.23,69,091 to Rs.21,07,616. Overall, all the three dimensions of transaction values were reduced during the study period. It is interesting to observe that instrument based and mobile-based transactions were less in value from rupees three thousand to four thousand seem to be personalized transactions or domestic transactions or retail business transactions. Whereas bank-oriented transactions were large in value and average transactions were Rs.23,69,091 and 21,07,616 for the year 2024-25 and 2025-26 seems to be individual high value transactions, business to business transactions, or corporate transactions.

Conclusion

The present study carried with the objective of investigating the consumers behaviour of handling the banking transaction without visiting the branch. It was observed that the consumers preferred to use instrument based and mobile based transactions than visiting the branch. Banking customers used mobile for banking operations was confirmed by the volume of transactions increased via fintech services. The study also confirmed that people use mobile and QR code for domestic expenses, bill payment like water

bill, electricity, housing tax etc. toll fee, payment using Aadhaar and person to person transferring money. On the other hand, customers visited bank or opted the requirement of interference of banking personnel for transactions involving large amount. Finally, 97 percent of the transactions is been carried out by using technology orientation rather than visiting the branch which accounts only 3 percent. Whereas, 24 percent of the total value of the transactions have been carried out through technology orientation and 76 percent of the total value of transaction have been carried out with the help of banking personnel or visiting the branch. Therefore, it may be concluded that people use technology for banking operations.

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