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## A Study on Growth of Electronic Payment System in Indian Banking Sector

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### **Abstract:**

*This paper is based on analysis of secondary data collected and analyzed from various banks in India. Year wise report of four years i.e. from 2019-20, 200-21, 2021-22, 2022-23 collected from annual report-Reserve Bank of India. Author studied performance of digital payment system in that four years. It is observed that, day by day usage of smart phone increase because of that digital payment system enhancing and adopting new services time to time. Thus it is seen that growth of electronic devices for communication as well as for transaction increasing. ATMs, UPI, Card payment system an QR code scanning methods has vast demands in banking sector.*

**Keywords:** Analysis, Digital Payments, Smart Phone, ATMs, UPI, QR code.

### **Introduction:**

Reserve Bank of India continued to increase efficiency, improve customer convenience, expand outreach and ensure safety and security of payment systems. RBI also ensuring the round the clock availability of information and communication technology (ICT). Growth of electronic payment system is based on user experience of customers, empowering payment system operations and service providers, upgraded infrastructure including secured software's and supervision. Cross border payment agreements also helping for enhancing global focus. UPI, CPMI and FSB helps to implement the G20 endorsed cross border payments roadmap.

The digital modes of payments using RTGS increase by 30.5 per cent during 2021-22. Transaction through NEFT system also increased by 30.6 per cent and 14.3 percent in volume and value. During 2021-22 payment transactions through credit cards increased by 27% and 54.3% in terms of volume and value. Transaction through debit cards decreased by 1.9% in volume whereas

increase by 10.4% in terms of value. Further the number of ATMs also increased to 2.48 lakh in 2021-22 from 2.39 lakh as compared to previous year.

**Objectives:**

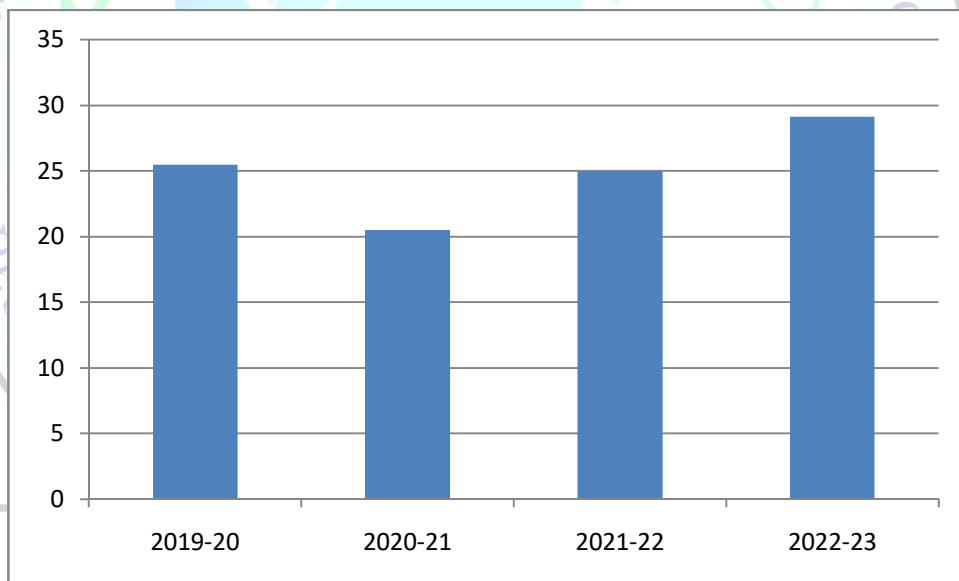
1. To study the growth of RTGS in from year 2019-20 to 2022-23
2. To study the retail segment performance of different digital payment instruments like UPI, NEFT, IMPS etc.
3. To study the growth of card payments, prepaid and paper instruments.

**Data Analysis & Interpretation:**

**1. Large Value Credit Transactions- RTGS (value in Lakh crore)**

SN	Item	2019-20	2020-21	2021-22	2022-23	Total
1	Large Value Credit Transfers – RTGS	1,311.56	1,056.00	1,286.58	1,499.46	5,153.60
2	Percentage (%)	25.45	20.49	24.96	29.10	100.00

*Table 1.1*



*Graph 1.1*

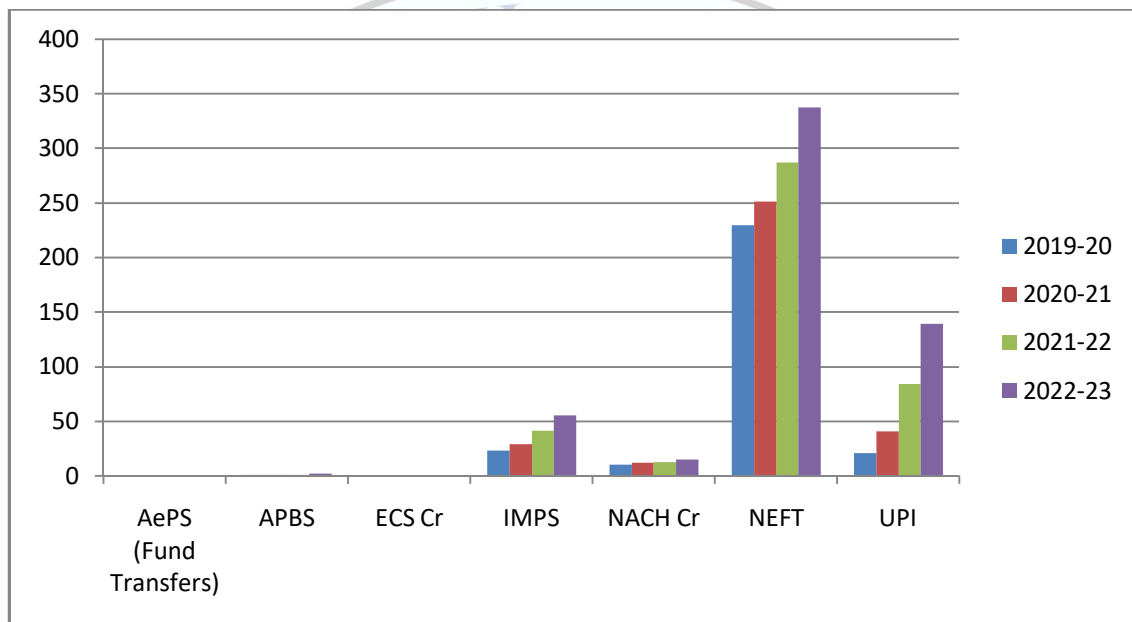
From the above data it is observed that, from 20-19-20 to 2022-23 there is continuous growth in RTGS transactions from 25.45 to 29.10 % . Thus it is depict that, RTGS growth is improving year to year.

**2. Retail Segment(value in Lakh crore):**

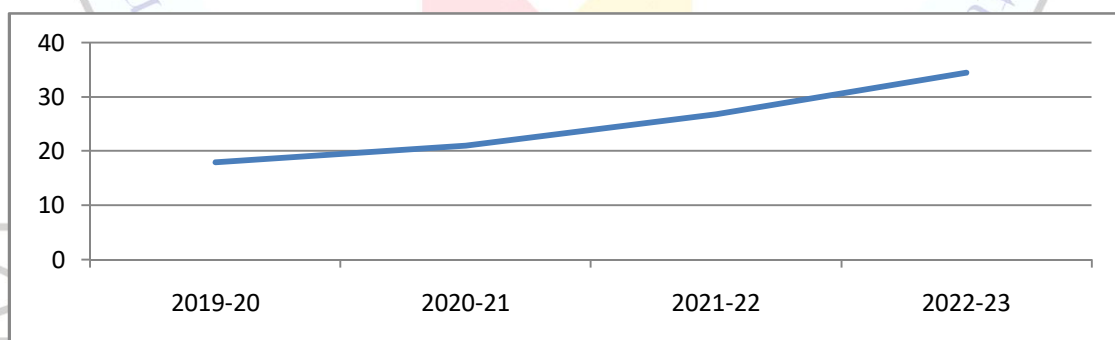
SN	Retail Segment	2019-20	2020-21	2021-22	2022-23	Total
1	AePS (Fund Transfers)	0.005	0.01	0.01	0.00	0.025
2	APBS	0.99	1.11	1.33	2.48	5.91

3	ECS Cr	0.05	0	0	0.00	0.05
4	IMPS	23.38	29.41	41.71	55.85	150.35
5	NACH Cr	10.37	12.17	12.77	15.44	50.75
6	NEFT	229.46	251.31	287.25	337.20	1105.22
7	UPI	21.32	41.04	84.16	139.15	285.67
8	Total	285.57	335.04	427.23	550.12	1597.975
9	Percentage (%)	17.87	20.97	26.74	34.43	100

**Table 1.2**



**Graph 1.2.1**



**Graph 1.2.2**

From Table 1.2 it is observed that, Aadhaar Enabled Payment System (AePS) growth of transaction is declining i.e. users are not solely using this instruments as daily transaction.

Aadhaar Payments Bridge System (APBS), is a special payment system run by the National Payments Corporation of India (NPCI) which electronically transfers government benefits and subsidies into the Aadhaar Enabled Bank Accounts (AEBA) with the Aadhaar number as central key. This type of transaction reflects growth in transactions from 0.99 to 2.48.

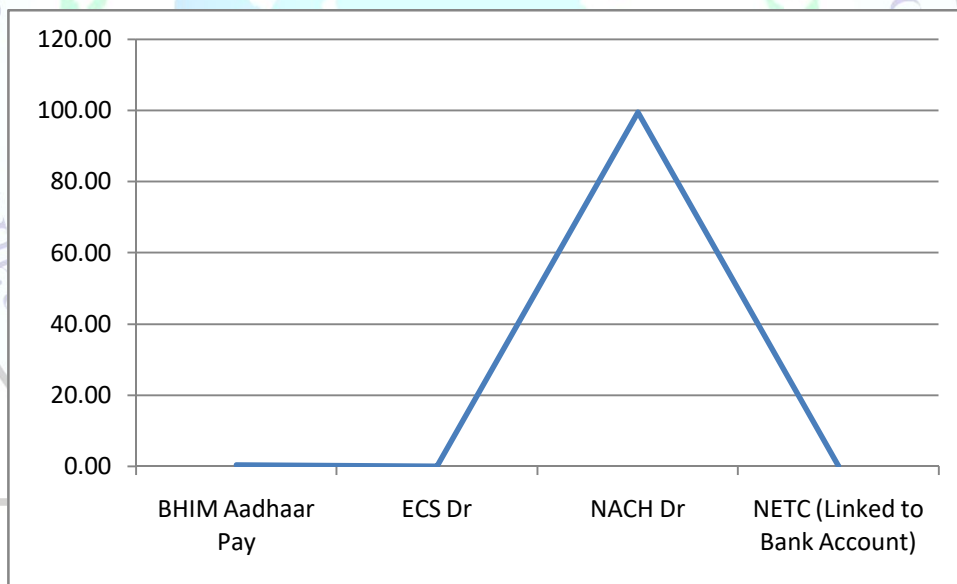
IMPS is second most popular electronic payment system which is showing the growth from 23.38 to 55.85 value in lakh crores.

NEFT plays major role in electronic payment system whose contribution is highest one and growth is from 229.46 to 337.20 value in lakh crores. Graph 1.2.1 and 1.2.2 plots data, which shows in upward pattern from 2019 to 2023.

**3. Debit Transfer and direct debits:**

SN	Item	2019-20	2020-21	2021-22	2022-23	Total	Percentage (%)
1	BHIM Aadhaar Pay	0.01	0.03	0.06	0.07	0.17	0.45
2	ECS Dr	0	0	0	0.00	0	0.00
3	NACH Dr	6.04	8.62	10.31	12.80	37.77	99.39
4	NETC (Linked to Bank Account)	0.002	0.01	0.02	0.03	0.062	0.16
5	Total	6.06	8.66	10.38	12.90	38	100

*Table 1.3*



*Graph 1.3*

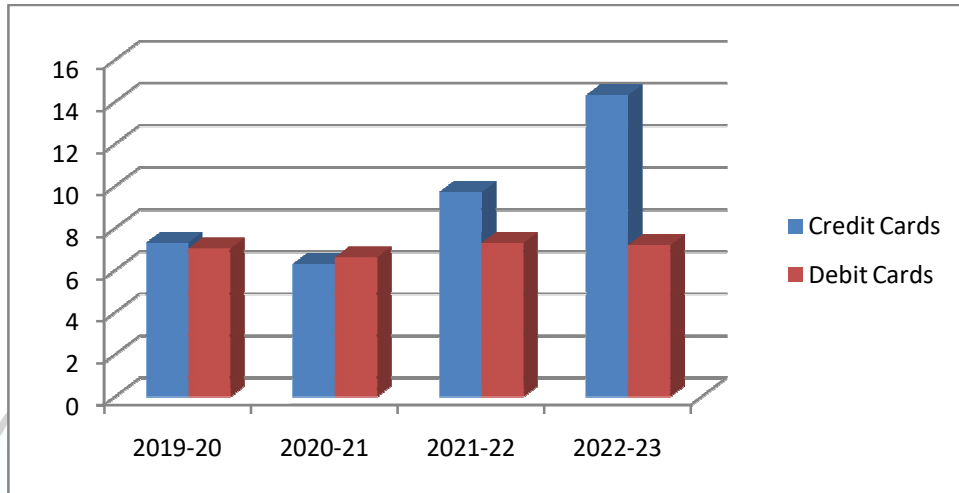
Most popular card type usage by user is debit and credit card. BHIM app usage is growing slowly where as transaction through NACH Dr is most used by users, thus the value in lakh crores increasing from 6.04 to 37.77. Graph showing usage of transactions in lakh crores, lowst is NETC and highest for the NACH Dr.

**4. Card Payments- Debit and Credit:**

SN	Item	2019-20	2020-21	2021-22	2022-23	Total
1	Credit Cards	7.31	6.30	9.72	14.32	37.65

2	Debit Cards	7.04	6.61	7.30	7.20	28.15
3	Total	14.35	12.92	17.02	21.52	65.81
4	Percentage(%)	21.81	19.63	25.86	32.70	100.00

**Table 1.4**



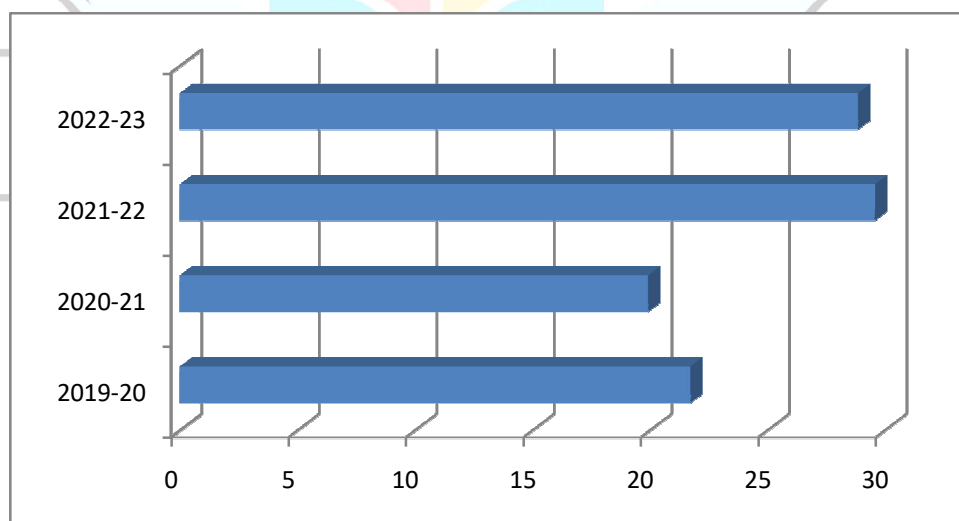
**Graph 1.4.1**

Card payments via Debit and Credit card is popular electronic payment system. Contribution of ATMs also increasing year to year. Users preferring for Credit card as compared to Debit card. From the above data it is seen that, usage of credit card is almost double than debit card.

**5. Prepaid Payment Instruments:**

SN	Item	2019-20	2020-21	2021-22	2022-23	Total
1	Prepaid Payment Instruments	2.16	1.98	2.94	2.87	9.95
2	Percentage(%)	21.71	19.90	29.55	28.84	100.00

**Table 1.5**



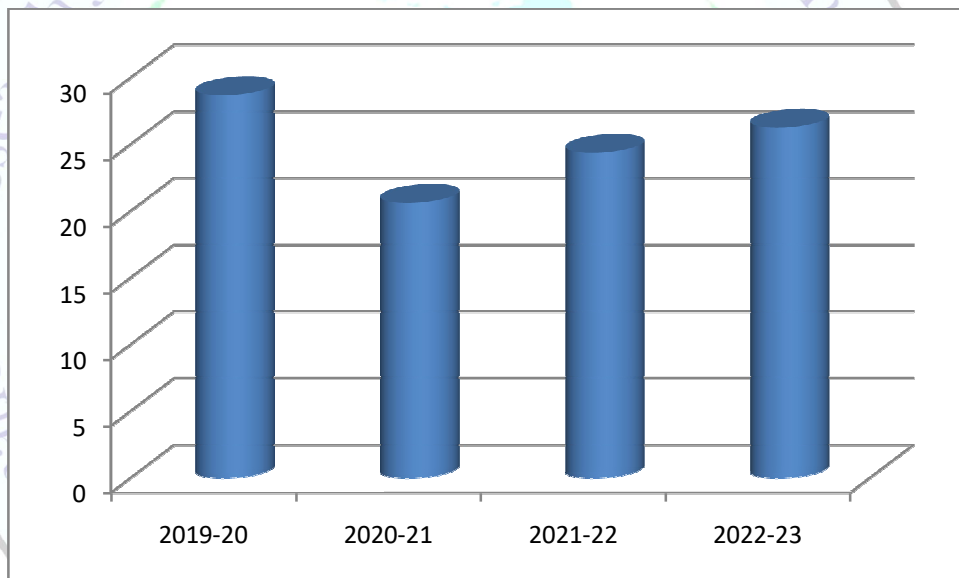
**Graph 1.5**

The prepaid payment instrument includes include smart cards, online accounts, online wallets, paper vouchers, etc. Objectives of these instrument is to get the access for prepaid amounts. In year 2019-20 percentage is 21.71 and in year 2022-23 percentage is 28.84, thus it shows the growth in that prepaid payment instruments. Maximum utilization in the year 2021-22 and least usage in 2020-21 as it time of pandemic situation. It is shown by horizontal bar graph.

**6. Paper based instruments:**

SN	Item	2019-20	2020-21	2021-22	2022-23	Total
1	Paper-based Instruments	78.25	56.27	66.50	71.63	272.65
2	Percentage(%)	28.70	20.64	24.39	26.27	100.00

*Table 1.6*



*Graph 1.6*

Table 1.6 shows the electronic payment instruments through the paper based instruments. Paper Based Instruments includes- travelerscheques, bank drafts/cheque, bill of exchange etc. As data shows there is not continuous growth in year to year. In the year 2019-20 it is 28.70% and in the year 2022-23 it is 26.27%.

**Conclusion:**

On the basis of data analysis, it is concluded that, UPI, IMPS, NEFT, RTGS, Credit Cards NACH Dr. shows the continuous growth in their transaction, whereas ECS Dr. paper instruments shows declining the growth in the electronic payment transactions.

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