Global Payment Systems: A Critical Review

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ABSTRACT

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The Banking system is known as the lifeblood and an important base of the economy. It plays a vital role in the economic development and GDP of the country. The Banking System across the globe has improved to a larger extent in the last two decades with the rapid digital wave, globalization, and privatization which encourages more competition resulting in a balanced ecosystem.

The world of payments is going to be fundamentally transformed between now and then. It will be reshaped by technology and redefined by regulation, the emergence of new economic powers, and changes in the global currency landscape. Most importantly, payments will be refocused from a commoditized proposition to a strategic, value-adding solution; one that is offered with a greater focus on the broader commercial and transactional context within which payment (or a transfer of value) takes place. In all of this, commercial banks can remain key players, but only if they respond quickly enough and with compelling value propositions.

Keywords: Banking System, Economy, Economic Development, GDP, Globalization, Privatization

Introduction

There is a substantial literature available in the global payment, however, the objective of this research is to understand the payment system in leading countries like the United States of America and Russia; and where India stands in comparison with the developed countries.

The lockdown period, the last few months of 2020 in the majority of the countries, has altered how people transact, driven by lifestyle changes. In India, while the top and middle segment household people were largely at home, the bottom segment faced numerous challenges in fulfilling their needs.

Across the spectrum, people were finding ways to live, work, transact, and discover the uses of digital transactions. A lot of people, who never used online payments, started using them during the COVID-19 pandemic. With this shift, innovation holds the key and AI has a role to play in the banking system across the globe.

The Review of Literature:

The global payments' landscape is in a state of fundamental transformation. Banks, in particular, will need to move swiftly if they are to take advantage of the opportunities on offer in the global payments' business or risk losing out to the number of competitors.

Both traditional and new types of payment providers are already being reshaped by the market. Conspicuous amongst these are new non-bank competitors, some of whom are already well established. For example, PayPal is servicing a fast-growing number of customers across the globe for payments and is now also entering the lending market. Large technology and social media companies such as Amazon, Google, and Facebook are seeking entry into the payments' market. At the same time, new electronic currencies such as Bitcoin offer payment options independent of government control [1].

<u>Role of Federal Reserve and the payment system in the United States of America:</u>

The Federal Reserve Act of 1913 (FRA) established the Federal Reserve as the central bank of the United States and prescribed the general banking powers of the Federal Reserve. The Federal Reserve has responsibilities that encompass:

a) Issuing notes;

b) Providing payment services;

c) Acting as the fiscal agent and depository of the United States;

d) Supervising and regulating banking institutions and conducting monetary policy.

In the United States, the money balances used by consumers and non- financial businesses to effect transactions are generally held as transaction deposits at deposit-taking institutions. Payment instruments used are:

a) Paper cheques;

b) ACH credits & debits;

c) Fund transfer over Fedwire & CHIPS;

d) Card Payments.

1. Credit cards;

2. Debit cards [2].

Role of the Bank of Russia and the payment system in Russia:

According to the law "On the Central Bank of the Russian Federation (Bank of Russia)", one of the main aims of the Bank of Russia's activity is to ensure the effective and smooth functioning of the payment system. To that end, the Bank of Russia performs the following functions:

a) It establishes the rules for effecting settlements on the territory of the Russian Federation.

b) It has the exclusive right to issue cash, and it organizes cash circulation.

c) Lender of last resort for credit organizations, providing refinancing facilities for them.

d) Issues rules that are binding on federal-state bodies, state centralized bodies of members of the Russian Federation, and local self-governing bodies.

The Civil Code of the Russian Federation were effected in the forms stipulated by the Cashless payments in the territory of the Russian Federation, which refers to payments by payment orders, letters of credit, a collection, and cheques, as well as by other forms stipulated by law, by banking rules established under the law, and by normal business practice in banking

a) Payments by payments' orders.

b) Payments by letter of credit.

c) Payments by collections:

1. Payment claims.

2. Collection orders

d) Cheque payment

e) Payment cards [2].

Role of the Reserve Bank of India and the payment system in India:

The Reserve Bank of India is the regulatory body of banking in India and it has played a vital role over the years, in creating an institutional framework for the development of a safe, secure, sound, and efficient payment system for the country. It has also initiated a variety of institutional, procedural, and operational measures to strengthen and refine the payment system such as Remittance Facilities Scheme, Clearinghouse regulations, The Board for Payment and Settlement Systems, Payment and Settlement Systems Act, 2007, an umbrella organization for retail payments the National Payment

Corporation of India (NPCI), Reserve Bank's initiatives for electronic payments and banking. Below are a few key roles of RBI:

a) The issue of notes;

b) The Banker to Government;

c) Bankers Bank;

d) Controller of credit;

e) Custodial of foreign reserves;

f) Forming monetary policy;

g) Supervision of the financial system.

Payment and settlement systems in India are used for financial transactions. They are covered by the Payment and Settlement Systems Act, 2007 (PSS Act), legislated in December 2007 and regulated by the Reserve Bank of India and Board for Regulation and Supervision of Payments & Settlement Systems. Both gross and net settlements systems have multiple Payments & Settlements in India. A wide range of payment options such as:

a) Real-Time Gross Settlement (RTGS);

b) National Electronic Fund Transfer (NEFT);

c) The Cheque Truncation System (CTS);

d) National Automated Clearing House (NACH);

e) Aadhaar Enabled Payment System (AePS) [4];

f) Immediate Payment Services (IMPS);

g) Unified Payment Interface (UPI);

h) The Bharat Bill Payment System (BBPS);

I) National Financial Switch (Debit & Credit Cards).

Research Methodology:

The data have been suitably rearranged, classified, and tabulated according to the requirements of the study.

a) Research Design: The Research was explanatory. It was conducted to study the global payments in top countries like the United States of America & Russia; and how India's payment system can compete with developed countries.

b) Conceptual framework: The study is based on the assumption that there is a significant difference between payment systems across countries and the Indian payment system over the period has evolved to compete with the developed economies.

c) The Source of Information: Data collected is secondary data and the source is websites & journals.

d) Limitation: This study is based on the secondary data which was available in the public domain, hence, the findings of this study may not be adequately generalized.

e) Future scope of the study: This largely depends on the innovation in payments and the adoption of digital payments in the unorganized sector.

Data Analysis and Interpretation:

Under data analysis and interpretation, non-cash digital transactions volumes have been collected for the past 6 years for each of these countries i.e. the United States of America, Russia & India.

The idea behind data analysis and interpretation is to compare the volumes of developed countries such as the United States of America & Russia with India.

I) Non-cash digital transaction volumes of United States of America (Volume in Millions)

Years	Checks	ACH Recurring Payments	Card Payments (Credit/Prepaid/Non-Prepaid)
2019	25,000.00	66,100.00	7,980.00
2018	25,800.00	64,150.00	7,080.00
2017	26,930.00	60,130.00	6,370.00
2016	28,050.00	56,110.00	5,870.00
2015	29,180.00	52,080.00	5,520.00
2014	28,530.00	50,100.00	5,220.00

Source: The 2019 Federal Reserve Payments Study [5]. Please note that forecasted volumes are taken for 2019 due to the non-availability of actual numbers.

Non-cash payment methods such as checks, ACH debits, ACH credits, Credit cards, Prepaid Cards & Non-Prepaid cards are broadly summarized into three main categories i.e. checks, ACH recurring transactions & card payments. The majority of the transactions are performed under ACH recurring payments which included B2C space, whereas, on the retail payment segment, volumes are comparatively

II) Non-cash digital transaction volumes of Russia:					(Volume in Millions)
Years	Payment & Bank Orders	Recurring Payments	LOC	Cheques	Fund Transfer
2019	3,819.55	199.42	0.55	0.000118	655.20
2018	3,387.29	143.80	0.44	0.000000	773.56
2017	3,038.43	104.94	0.27	0.000006	900.70
2016	3,241.56	92.38	0.20	0.000002	1,034.82
2015	3,279.59	77.37	0.12	0.000007	1,141.84
2014	3,284.75	84.63	0.12	0.000026	1,257.88

Source: Payment carried out by the organisation, by payment instrument [5].

Non-cash payment methods like payment orders, bank orders, payment claims, collection orders, cheques, LOC, and fund transfer are broadly summarized in four categories i.e. Payment & Bank orders, Recurring payments, LOC, cheques & Fund Transfer.

It is observed that payment & bank orders hold maximum non-cash transactional volumes in Russia.

III) Non-cash digital transaction volumes of India: (Volume in MN.)				(Volume in Millions)
Years	Fund Transfer (NEFT/RTGS/ IMPS/UPI)	NACH- Recurring Payments	CTS- Cheques	Card Payments (Credit/Debit)
2019	16,039.43	3,698.87	1,039.20	7,301.20
2018	7,735.67	3,035.18	1,112.11	6,176.90
2017	3,406.33	2,503.46	1,184.12	4,748.60
2016	2,122.07	1,425.08	1,111.88	5,450.10
2015	1,531.13	340.17	958.47	2,707.30
2014	1,074.58	86.50	965.22	1,737.70

Source: Reserve Bank of India Annual Reports & National Payments Corporation of India [6]

Non-cash payment methods such as NEFT, RTGS, IMPS, UPI, NACH, CTS, Debit & Credit cards are broadly summarized into four categories i.e. Fund transfer, Recurring Payments, Cheques & Card payments.

It is observed that retain payment has been significantly picked in India. Further, the unique part of India is that it has a wide range of payment products that cater to different parts of the country and make it user- friendly.

Aadhaar Act: An Act to provide for, as good governance, efficient, transparent, and targeted delivery of subsidies, benefits, and services, the expenditure for which is incurred from the Consolidated Fund of India to individuals residing in India through assigning of unique identity numbers to such individuals and for matters connected therewith or incidental thereto.

Aadhaar Number/UID: It means an identification number issued to an individual under subsection (3) of section 3, & includes any alternative virtual identity generated under sub-section (4) of that section of Aadhaar act.

A persistent underlying digital DNA to government programs such as Digital India, Jan Dhan Yojna, the PM SVANidhi scheme for street vendors, DBT release, mandating NETC FASTag for tool plaza, etc. further brought problem-solving to the grassroots. The government's significant benefits outlay is also needed to reach the right target segment. RBI set the enabling tone by releasing guidelines on V-KYC, contactless payments, online payments, recurring payments on cards and UPI, standardization of QR, and expanding BBPS categories. Banks, Fintech's, Payment providers, and Business Correspondents played a strong role in extending the basic banking facility to the underserved.

	(Volume in Millions)
Month	Aadhar Based Payments
April - 20	694.95

Source: National Payments Corporation of India - website [7]

More than 100 million customers received Direct Benefit Transfer (DBT) as a subsidy benefit from Government, this means that the Aadhaar which is the unique identity of a resident has turned out to be an efficient mode for disbursing subsidy payout to the citizens of India.

The households are divided into three groups, Bottom (40%), Middle (40%), and Top (20%)

Sample households	Rural/Urban Split (The % age of households living in respective areas)		Average Income* of household/yr. (Rs.)
	Rural	Urban	
Bottom (40%)	80%	20%	110,000.00
Middle (40%)	60%	40%	180,000.00
Top (20%)	45%	55%	360,000.00

Source: Digital Payment Adoption in India [7]

Status of digital payment adoption among the Indian households

% of the households in each income group	Income Group			Total
	Bottom (40%)	Middle (40%)	Top (20%)	
Never used it	72%	20%	39%	59%
Used in the past but stopped	4%	40%	12%	9%
Use now	**24%**	**34%**	**49%**	**32%**
Never used it but would like to use	16%	14%	9%	14%
Potential User Base				
"Desire to use" are converted	40%	48%	58%	46%
"And past users brought back"	44%	61%	70%	54%
Have smartphones	57%	72%	90%	68%

Source: Digital Payment Adoption in India [7]

DBT transfer to eligible households:
(Base: All households who say they are eligible for DBT*)

% of households eligible for DBT who say...	Income Group			Total
	Bottom (40%)	Middle (40%)	Top (20%)	
Received pre lockdown	79%	86%	93%	84%
Received post lockdown	91%	83%	77%	85%

Source: Digital Payment Adoption in India [7]

Digital payments: India pips China, the US, others in 2020; leads the global tally with this many transactions:

India's digital payments' market led by Paytm, PhonePe, Pine Labs, Razorpay, BharatPe, and others has surged during the pandemic even as incentives such as cash backs, rewards, and offers have helped businesses to attract more customers. Amid the Covid-19 pandemic, India was home to the highest number of real-time online transactions in 2020 ahead of countries such as China and the US. 25.5 billion Real-time payments transactions were processed in the country followed by 15.7 billion in China, 6 billion in South Korea, 5.2 billion in Thailand, and 2.8 billion in the UK. Among the top 10 countries, the US was ranked ninth with 1.2 billion transactions. The transaction volume share for instant payments in India, among real-time transactions, was 15.6 % and 22.9 % for other electronic payments in 2020, according to a report by the US-based payments' system company ACI Worldwide. Importantly, paper-based payments continued to have a considerable share of 61.4 % in India. However, Volume shares for instant payments and other electronic payments are likely to grow to 37.1% and 34.6 % respectively be expected to change by 2025. Consequently, the share of paper-based transactions would contract to 28.3 %. Moreover, the share of real-time payments' volume in overall electronic transactions will exceed 50 % by 2024.

"India's journey of creating a digital financial infrastructure has been characterized by collaboration between the government, the regulator, banks, and fintech. This has helped to advance the country's goal of enabling financial inclusion and also provided rapid payments digitization for citizens," said Kaushik Roy, VP and head of product management, Asia, ME and Africa, ACI Worldwide in a statement. Moreover, policy frameworks such as Pre-Paid Instruments (PPI), Universal Payment Interface (UPI) by the NPCI apart from Aadhar, and the launch of BHIM-app have driven the financial inclusion and improved the payment acceptance infrastructure in the country in the past few years. According to another report by the Indian Private Equity and Venture Capital Association (IVCA) and Ernst & Young, digital payments in India is expected to grow at 27% CAGR during the FY20-25 period from Rs. 2,153 lakh crore transactions in FY20 to Rs. 7,092 lakh crore in FY25. UPI transaction value witnessed a growth of 18.7 % month-on-month to Rs. 5.05 lakh crore in March 2021 from Rs. 4.25 lakh crore in February 2021, while transaction volume rose by 19 % to 2,731.68 million from 2,292.90 million during the said period, according to data released by the National Payments Corporation of India (NPCI). Source: Digital payments: India pips China, the US, others in 2020; leads the global tally with this many transactions [7]

Conclusion:

There is a very strong consumer momentum in favour of digital payments and online banking driven by a very well-developed ecosystem globally. Consumers are also able to perceive the advantages and disadvantages of digital payment products available, signalling a well-developed consumer environment as well.

A high-quality push towards empowering users (as opposed to extolling product features or generic advantages of digital payments), with specific "how to use" knowledge, helplines for learning as well as problem-solving, and safeguard features which help the user 'stay safe', can make India race towards being a less-cash society and compete with the developed countries. It is today well past the early adopter stage and the mainstream majority is adopting it. What is even more heartening is that the lower- income group is also a part of this movement to digital.

India has created the infrastructure and the RBI vision of Digital India has gained significant importance. Households in rural India are also able to enjoy the benefits of digital banking by doorstep banking, thanks to AePS the products created under the Aadhaar act.

Yes, there is a significant difference between payment systems across countries, and the Indian payment system over the period has evolved and it can compete with the developed economies.

Indian Banking System will see a major change in time to come because RBI has proposed an NUE retail payments body to boost digital transactions in India. Major players like Facebook, Amazon, etc. are keen to set up NUE in India that will be a profit-making organization considering India the fastest emerging economy.

References:

The 2019 Federal Reserve Payments Study. (2019). Trends in Noncash Payments, by Number, 2000–18. https://www.federalreserve.gov/paymentsystems/2019-December-The-Federal-Reserve-Payments-Study.htm

Digital payments: India pips China, US, others in 2020; leads global tally with this many transactions. Financial Express. https://www.financialexpress.com/industry/banking-finance/digital-payments-india-pips-china-us-others-in-2020-leads-global-tally-with-this-many-transactions/2226074/

Global payments 2020: Transformation and convergence - BNY mellon. (2020). BNY Mellon. https://www.bnymellon.com/content/dam/bnymellon/documents/pdf/articles/global-payments-2020-transformation-and-convergence.pdf

Leeladhar, V. (2008). *The payment and settlement system in India*. Deputy Governor, Reserve Bank of India. https://www.bis.org/review/r080808b.pdf

National Payment System | Bank of Russia. (2022). (Updated). https://www.cbr.ru/eng/statistics/nps/

Payment systems in Russia. (2003). CPSS. https://www.bis.org/cpmi/publ/d56.pdf

Payment systems in the United States. (2003). CPSS - Red Book - 2003. https://www.bis.org/cpmi/paysys/unitedstatescomp.pdf

RBI Annual Report. (2020). Reserve Bank of India. https://rbi.org.in/Scripts/AnnualReportMainDisplay.aspx