# *Anatomy of the Digital Payment Ecosystem in India*

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*The digital payment ecosystem in India has undergone a paradigm change over the last few years. Initially, the growth of the digital payments space in India was led primarily by the purely regulated model between the RBI (as financial regulator) and the banks (as an embodiment of 'trust'). With the gradual entry of the non-banking entities (as providers of customer centric innovations), the digital payment ecosystem has entered the expansion mode basis this "best of both worlds" model with RBI playing the role more of a supervisor of payment systems and of a catalyst/facilitator for the innovations. The purpose of this article is to outline the various initiatives and factors which are contributing towards India's rapid growth in the digital payments space and endeavours to highlight the legal and regulatory issues developing around them.*

*Key words: Fintech, Digital Payments, Technology, Payment System, Interoperability, Cryptocurrency, Regulatory Sandbox, Customer Protection, Privacy and Data Protection*

***"Coping with uncertainty in all its dimensions has been an important part of human evolution. Over thousands of years of radical uncertainty humans have learnt many coping strategies and developed a capacity to make decisions in the face of imperfect knowledge of worlds that they encounter for the first time and may never encounter again."***

- John Kay & Mervyn A. King, Radical Uncertainty: Decision Making for An Unknowable Future

## Introduction

The global economy has been adversely disrupted, like never before, by the world wide "pandemic" caused by COVID-19. Financial markets have plunged globally and although there have been efforts to regain normalcy, but the arrival of 'second' wave of

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*The author is grateful to Mr. Uday Sankar Roy (former MD & CEO, SBI Life Insurance Co. Ltd.) for his expert guidance and constant support which has immensely amplified the value of this paper.*

COVID-19 pandemic which has already caused havoc in many parts of the world, and looming dark clouds of a possible later 'wave', may make India the worst affected economy in the world. Reinstatement of the dreaded 'lockdowns', further slowing down the reopening of civic facilities, public transport, establishments, etcetera and restoring restrictive measures are inevitable in the interest of the global population at large. Initiation of the global vaccination drive (although in a phased manner) has certainly lifted the growth prospects for the global economy from a very bleak projection at −4.4 percent in 2020 to 5.5 percent in 2021. However, fearing the arrival of a new variant of the corona virus, the growth trajectory for the global economy is still in a conundrum (IMF, 2020 and 2021[1]). Undoubtedly, Indian economy will need radical measures to stage a come-back and move on a growth path. Amidst this gloom, however, the silver lining of critical significance is the rapid transformational growth of the digital payment system in India which was rather augmented by the global pandemic and its continued evolution (RBI's Annual Report, May 27, 2021 and Settlement Data of Select Payment Systems, July 19, 2021). In the transition from traditional financial settlements which was the norm up to the 70's and 80's and generations before us were familiar with, to the on-line click-of-a-button age whose ramifications are still emerging, we are trying to cope with a paradigm change that is still unfolding. Humankind is laying the foundations of a new tomorrow on the crises of today.

The rapid transformation and advancement of the predominantly "*cash-driven economy*" towards a '*less-cash economy*' has endorsed the arrival of global Fintech Revolution in India. It is highlighted by the various contributory factors including without limitation, digital innovations or technological advancements like smartphones, financial inclusion of public at large, combined and collaborative efforts by the government (projects like Digital India), the financial regulator (initiatives like Project Financial Literacy) and various financial institutions (DSCI Report, Mar. 9, 2018). Notably, the RBI, has been constantly striving to provide a competitive and efficient ecosystem and infrastructure towards a '*highly digital*' and '*cash-lite*' society, as resonated in its recent '*Payment and Settlement Systems in India: Vision 2019-2021*' document. Over the last 10 years, digital payments in India grew at a compounded annual growth rate (CAGR) of 12.54% (in terms of volume) and 43.01 % (in terms of value) (RBI Payment & Settlement Systems, Jan. 25, 2021). However, it is pertinent to note that within the short span of last five years alone, such digital payments grew at a CAGR of 61% (in terms of volume) and 19% (in terms of value) *vide* RBI's Assessment Report dated Feb. 24, 2020. India's digital payment industry, if enlightened guestimates are to be believed, is set to leapfrog to 1,00,000 crore US dollars by 2023 (Credit Suisse, 2018) and in the next five years, the digital payments will witness a significant rise to 150 crore transactions, worth INR 15,00,000 crore per day[2].

## 1. Fintech: Impact on The Payment Landscape in India

### 1.1 What is Fintech?

In the immediate aftermath of demonetisation, even temporary street-corner vegetable hawkers hung hand-written notices on their carts welcoming payment through Paytm, etc heralding a mindset change to ensure survival.

Fintech refers to such advances in technology which have the potential to transform the financial services to such an extent that it results in significant advances and development of new processes, products, applications and business models (World Bank Group Report, 2020). The impact of emerging technologies providing deeper and cost-effective financial inclusion is visible in the form of a fintech revolution that is truly global, both in scope and extent.

Traditionally, given the demographic, cultural and socio-economic diversity, the financial institutions in India have been facing some perennial issues and challenges like heavily cash driven economy, low penetration, scarce credit history, lack of proper infrastructure and a largely technology averse population. But with the advent of the fintech revolution in India, the financial institutions got a host of workable solutions to address their pain areas. Initially though, fintech significantly, impacted the ***consumer payment landscapes only*** by enabling faster and secured payments & ensuring hassle free commercial transactions However now, gradually and yet steadily, fintech is overhauling the ***business operational models***. Quite evidently, the spectacular growth of electronic commerce is one such instance of a novel ***business operational model,*** which is further pushing the digital payment revolution. Large business houses engaged in a wide spectrum of business activities, are digitalising their sales, data capture and customer facing activities in this environment to develop a new genre of the Fintech industry.

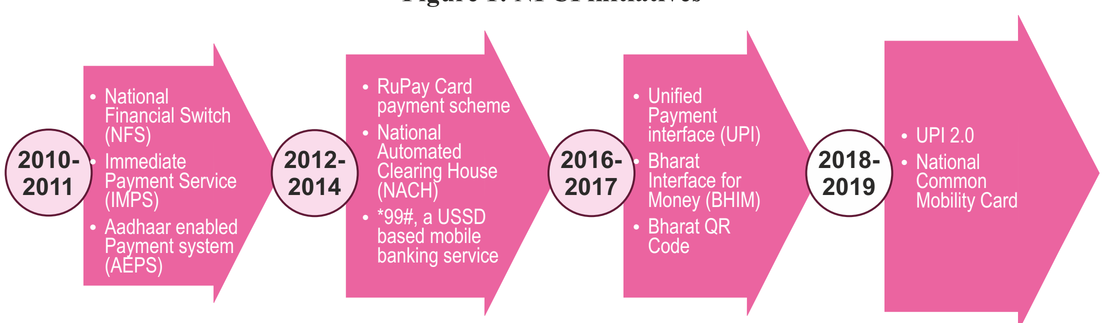
### 1.2 Digital Payment Revolution in India

The RBI, by according timely regulatory recognition to innovation, has harnessed innovations in financial technologies to gradually, yet significantly, impact the financial sector, which responded splendidly by opening up newer, more user-friendly, delivery options. Dynamic regulatory prescriptions helped to revolutionise the financial landscape fast.

Digitalising of financial transactions dates back to 1980s with automation of the paper-based clearing system, and progressed through the 90's with introduction of the electronic fund transfer system and electronic clearing services *(popularly, the ECS system)* alongside the issuance of debit and credit cards by the banks. While the end of the 90's was consumed by the Y2K concerns, the beginning of the 21st century heralded a sharp increase in the interplay of technology and financial services, which became evident with the arrival of the Special Electronic Fund Transfer (SEFT) system in April, 2003, the Real-Time Gross Settlement (RTGS) system in March 2004, the National Electronic Funds Transfer (NEFT) system introduced in November, 2005[3] and later, Cheque Truncation System (CTS).

In 2007, with the enactment of the Payment and Settlement Systems Act, 2007 (the "**Act**"), inter alia firstly, the RBI was recognised as the official authority to regulate and supervise the **payment systems** in India and secondly, the concepts and working of the payment and settlement system in India were firmed up. The payment system, as defined under the Act, essentially **means** a system that enables: (a) payment between a payer and a beneficiary, and (b) operations pertaining to debit/credit/smart card, money transfer and similar operations and **includes** services such as clearing, payment or settlement services but excludes stock exchanges. An advanced and efficacious facet of the payment system is the **digital payment/transaction**, which **means and includes** a payment transaction made without the need of cash (either by the originator's side or beneficiary's side or both) through digital/electronic modes with the purpose of sending or receiving money. It is pertinent to mention that in the year 2008, the Payment and Settlement Systems Regulations, 2008 were enacted under the Act and both these regulations primarily govern digital payments. The RBI next launched the National Payment Corporation of India (the "**NPCI**") in 2008, as a multiple payment system operator. Ever since its inception, NPCI is trying to strengthen its position in the digital payment ecosystem through initiatives illustrated in Figure 1 below.

**Figure 1: NPCI initiatives**

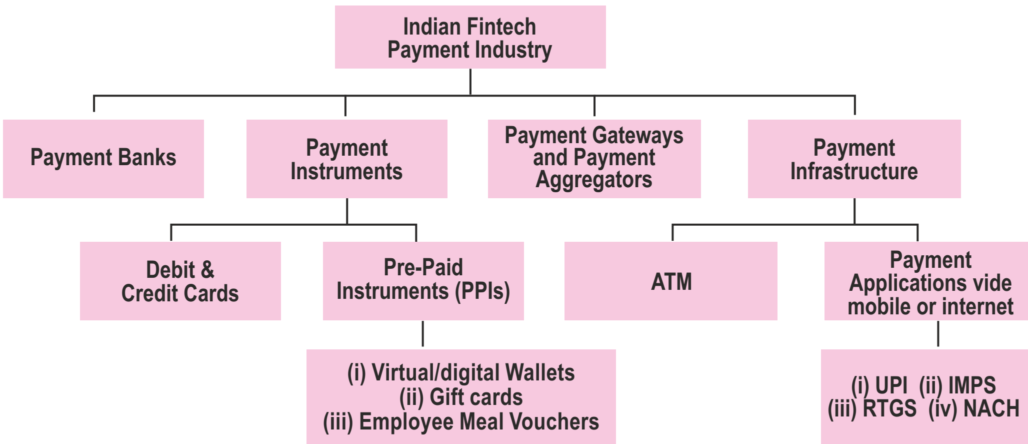



*Source: Author's illustration using data from NPCI*[4]

## 1.3 The Digital Payment EcoSystem

A broad overview of some of the key financial products and/or services in the digital payment system in India are provided in **Figure 2** below.

**Figure 2: Indian Fintech payment Industry**

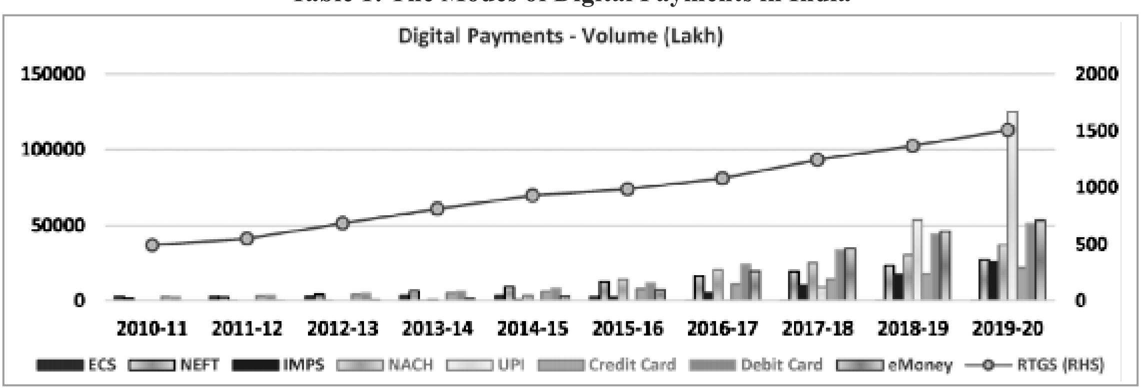


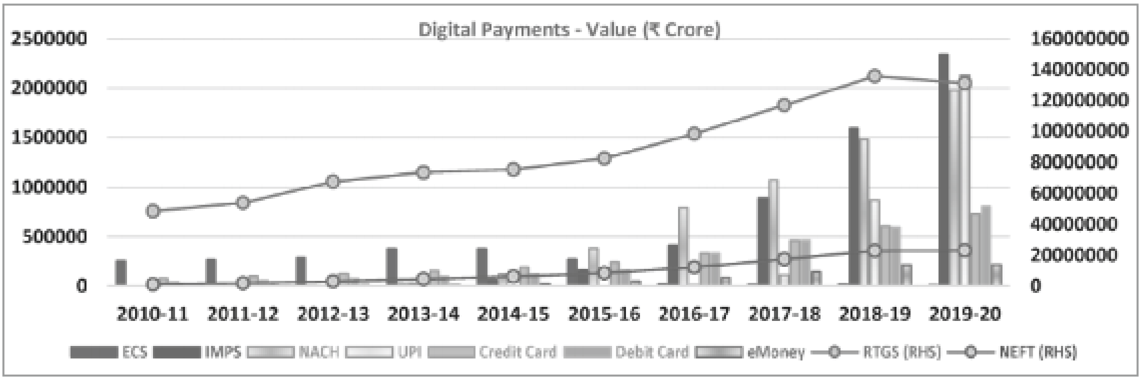

*Source: Data from RBI's Fintech Report, Nov. 2017*

The RBI continues to exercise further oversight and control through the Office of the Ombudsman Scheme for Digital Transactions.

The tectonic shift in choice of digital payment modes is also illustrated in **Table 1** below. Financial payments have vaulted from the earlier most preferred mode of payment **(cash)** to other modes of payment namely cards (debit/credit/smart); bulk electronic transfers (ECS/NACH); RTGS and NEFT; IMPS and UPI (both qualify as the "fast payment" systems); e-Money (wallets/PPI cards) and other similar digital modes for making payments.

**Table 1: The Modes of Digital Payments in India**






*Source: RBI Data*

Such outstanding growth in the digital payment system, also has various underlying risks and/aspects of accountability / security and transparency, which is a cause of concern for the regulator and the RBI has taken initiatives to balance the risks arising from the innovations with the fundamental issue of broad-basing digital financial inclusion. Some of the key initiatives taken by the RBI (without limitation) are highlighted below:

**i) providing in-principle approval for Payment Banks**

- The applicable licensing and operational guidelines for the payment banks are provided under the **Guidelines for Licensing of Payment Banks and the Operating Guidelines for Payments Banks** dated Nov. 27, 2014 and Oct. 6, 2016, respectively and this initiative is expected to largely address the issue of last-mile connectivity of the banks (S.M. Ahluwalia, et al., 2020[5]).

**ii) allowing the non-banking entities to operate in the payment ecosystem**

- RBI has authorised any person/ any entity/ a Non-Banking Financial Companies (NBFC), subject to the fulfilment of the prescribed conditions/criteria, to enter the payment ecosystem as payment system operator (Arvind Ravindranath, et al., 2020[6])
- Payment Intermediaries: In November, 2009, RBI introduced a new category of “intermediaries” which broadly include, inter alia, three categories:
  a) payment aggregators;
  b) payment gateways and
  c) electronic commerce and mobile commerce service providers.
- The **Guidelines on Regulation of Payment Aggregators and Payment Gateways** dated Mar. 17, 2020 (the “**Guidelines for PA&G**”) effective from Apr. 1, 2020 by the RBI formalised the concepts of 'payment aggregators' and 'payment gateways'. Pursuant to the Guidelines for PA&G, ‘the payment aggregators’ (who

connect merchants with acquirers, accept funds from consumers, pool funds and after a specified period transfer the said funds to the concerned merchants) will be directly regulated by the RBI. However, the service providers providing 'payment gateways' act only as technology service providers between merchants and do not handle funds, and are thus issued baseline technology-related recommendations only (Vinod Joseph, et al., 2020[7]).

**iii) Pre-paid Instruments (PPIs):**

- In order to provide the **non-bank customers** with the facility to use electronic modes of payments, **prepaid payment instruments/PPIs**, which facilitate the cashless or card-less transfer of funds between users and merchants/service providers (against the value pre-stored in them) in the form of e-wallet, physical cards, tokens or points and other similar forms were introduced. The PPIs along with the purchase of goods and services also enables other financial services and remittance facilities). Further, the pre-paid instruments also provided a more secured alternate payment option (with limited risk exposure) to the traditional payment modes used by **existing bank customers** (Srinath Desai, et al., 2020[8]).
- The operational guidelines regarding the issuance and operation of the PPIs are specified by RBI in the ***Master Direction on Issuance and Operation of Prepaid Instruments*** dated Oct. 11, 2017.
- Additionally, the RBI has allowed an additional category of **small-value PPIs**, which can be issued with limited KYC procedures and can be used for purchase of goods and services.
- Significantly, to promote ease of convenience, the RBI vide its notification dated May 19, 2021 mandated that by Mar. 31, 2022 all the PPIs had to provide interoperability to their fully KYC- compliant holders through UPI and authorised card networks.

**iv) Security Controls for Digital Payments:**

- The RBI vide its ***Master Direction on Digital Payment Security Controls*** dated Feb. 18, 2021 laid down the guidelines for the regulated entities (specified therein to include payment banks, NBFCs which issue credit cards, small finance banks and scheduled commercial banks) to have an internal governance framework with minimum security controls and standards in order to ensure safe and secure digital payments for both general and specific aspects of security control. This is an attempt to boost customer confidence in digital payment system by directing the said regulated entities to promote customer awareness and ensure effective grievance Redressal mechanism.

To summarise, the aforementioned initiatives by the regulator are indeed laudable and reflect on RBI's proactive approach towards digitisation of economy. However, when it comes to virtual currency/ cryptocurrency (used interchangeably herein) - which is essentially a platform-based technology - there appears to be a considerable amount of scepticism on the part of both RBI and the Government of India (the "**GoI**"). The RBI's circular on *Prohibition on dealing in Virtual Currencies* dated Apr. 6, 2018 prohibited regulated entities like banks or any entity licensed by RBI, from either dealing in virtual currencies or facilitating any person or entity dealing with or settling in virtual currencies. The GoI vide its draft legislation *Banning of Cryptocurrency and Regulation of Official Digital Currency Bill, 2019* seconded the RBI's resistance to recognising cryptocurrency as a valid payment system. The said RBI cryptocurrencies circular was challenged before the Supreme court of India for being unconstitutional and was struck down on the grounds of proportionality by the Apex Court vide its judgment dated Mar. 4, 2020[9]. Nevertheless, as seen from actions of some financial institutions, the RBI still maintains its apprehensions though debatable, about the various risks like money laundering, tax evasion and cyber security associated with the cryptocurrencies.

In order to have a successful digital payment ecosystem along with the regulatory push, it is imperative to have a combination of other favourable factors, hereinafter referred as *"the digital payment enablers"*, which includes *inter alia* the right trends, initiatives and policies of the *government* to suitably address the concerns of various stakeholders (viz. merchants, consumers, payment providers); adequate and compatible *infrastructure* (viz. mobile phone and internet); and early adoption of the ever evolving fast-paced *technology* (viz. biometric technologies, contactless technologies, block chain technology).

## 2. Digital Payment Enablers

Digitalisation initiatives in India are broadly a combination of two sets of measures: a) Initiatives by the government (both at the central and state level) and the regulatory push by the RBI on the one hand and b) the technology and innovation contributed by the private players (industry associations, technology service providers and payment corporations) on the other. The purpose of such initiatives was two-fold: *firstly* to facilitate and enhance the digital payment experience of the citizens/ customers and *secondly* to improve government's own internal processes (Rathin Roy & Suyash Rai, 2017[10]).

*"[I]n India, the government played the role of the market disruptor, not only through regulation (demonetization) but also by choosing a deliberate open-platform solution to drive incumbents and start-ups alike to embrace digital payments."* (WEF Report, May,

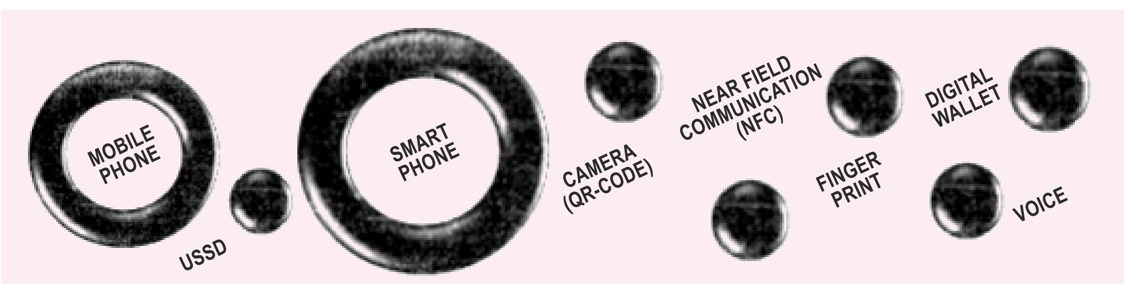
2020). Considering that the vast majority of population in India is either unbanked or underbanked, the role of government in driving financial inclusion through various initiatives like *improving infrastructure, promoting digital literacy* and *ease of accessing digital services* becomes very crucial (PWC, May 9, 2019). For instance, the government's flagship schemes like ***Make in India*** and of supporting start-ups, resulted in phenomenal growth of the start-ups in Fintech space across India which eventually led such Fintech start-ups to serve the under-banked or unbanked segment with their low-cost and innovative, digitised products.

A brief summary of such digital payment enablers which have catalysed the process of digitalisation, is provided in this section.

### 2.1 Mobile Technology

Liberalisation of the telecommunications sector coupled with a boom in the mobile technology, led to a sharp rise in the mobile tele-density in India and the resultant widespread use of mobile phones over the last ten years. The tele-density in India had soared to 87.01% as on Jan. 31, 2021.[11] The mobile (feature) phones, launched to be typically used as communication devices, were limited to the Unstructured Supplementary Service Data (the "**USSD**") only. However, the influx of the smartphones which have enhanced capabilities like *advanced technology processors*, high-capacity storage memories etc. have led to the ease of handling technology and has accelerated new innovations in payment mechanism and have thus become *commerce enablers* .

**Figure 3: The impact of changing form of mobile device on payment technology**




*Source: Author's illustration using data from KPMG, Aug., 2019*[12]

### 2.2 Internet usage

In India, the number of people using internet is not only the largest in the world but also growing at a very fast speed. As on Jan., 31, 2021, there were over 73.49 crore and 2.3 crore wireless and wireline broadband subscribers, respectively, across the country.[13] In an earlier report[14], the Boston Consultancy Group have stated that the internet base in India have grown exponentially primarily because of the following three factors: (a) growing awareness and ever-increasing demand for the internet; (b) internet coverage reaching out to the small towns and rural parts of India; and (c) owing to the rise in the availability of affordable data enabled mobiles. The increased penetration of 3G and 4G in remote areas, has led to the faster acceptance of the alternate modes of digital payments throughout India (RBI's Assessment Report dated Feb. 24, 2020). The mobile (owing to its affordability, convenient size and the availability of cheaper data plans), remains the most popular device to access internet in both urban and rural India, as demonstrated by the Internet and Mobile Association of India (IAMAI) in its 2019 Report .

## 2.3 JAM trinity

JAM stands for Pradhan Mantri *Jan Dhan Yojana, Aadhaar* and *Mobile* based technology. Under the Jan Dhan Scheme approximately 320 million accounts were opened,[15] which to begin with, proved fundamentally a right step towards financial inclusion as it (a) provided banking services to the unbanked population (thus a step towards ensuring last mile connectivity of the banks) and (b) increased awareness and need for financial services and products and eventually led to creation of various fintech opportunities (PWC, May 9, 2019). The GoI's initiatives in 2014-2015, to link the said three modes of identification for enforcing Direct Benefit transfers (the "**DBT**") on a mass scale resulted in JAM trinity. The *fly-wheel effect* of JAM trinity has successfully resulted in better financial inclusion. Further, such financial inclusion initiatives have, to an extent, addressed the gender-based disparity in financial inclusion (for instance INR 1500 were transferred to all those women who have an account under the Jan Dhan Yojana) and also proved to be a helpful tool in current pandemic situations (as the said financial aid was DBT-based and was part of the corona welfare package of INR 1.7 lakh crore announced by the GoI in March 2020)[16] .

## 2.4 Demonetisation

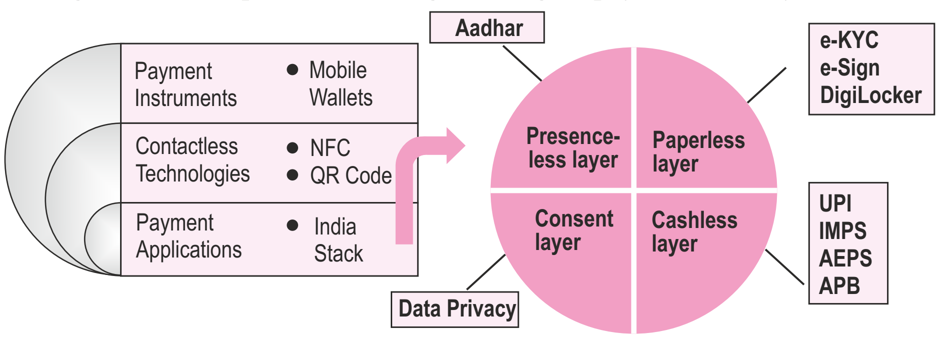
On Nov. 8, 2016, the GoI announced demonetisation of its INR 500 and INR 1,000 denominated notes. *These high-denomination notes comprised about 87 percent of currency in circulation and amounted to about $235 billion (nominal conversion), or 10 percent of GDP.*[17] Following the much-debated demonetisation move, in order to bolster the use of digital payments, various incentives were provided wherever digital payments were made to the government agencies like waiver of the transaction charges, discounts and rewards. Additionally, the RBI provided relaxation in customer charges for payments made electronically/ digitally. One of the direct and most visible impact of the demonetisation was the lucrative returns on mobile wallets *(which had increased 40 times in the past five years, as per a consumer payment survey report of 2018)*[18].

## 2.5 New Technologies

The emergence of smartphones ***(responsible for the usage of mobile phones as e-commerce enablers)***, upgradation of cellular network technology from ***3G to 4G*** and now to ***5G (being attributed towards the usage of mobile network in multiple devices like never before)***, the advent of new contactless technologies like ***Quick Response (QR Code)***, Near Field Communication (NFC), process innovation like ***tokenisation of cards***, new payment products like ***Mobile Wallets*** and services like ***Mobile Money Transfer*** and new access modes like USSD have certainly overhauled the digital payment landscape in India.

Also, it is interesting to note that the application of the existing technologies to new products ***for instance deployment of chatbots for customer support by leading banks in the country*** and the application of new technologies to existing products has redefined the digital payment ecosystem in India. "India Stack"[19] is one of the most significant examples of technology advancement which has the potential to amplify the government efforts and regulatory push towards the digital financial inclusion. This technology stack comprises of an identification layer - which is based on a universal biometric digital identity - basis which a number of top-up services may be provided to the end users. The five integral elements of India Stack and the impact of technologies which have been instrumental in offering a plethora of new products and services, is illustrated in Figure 4 below.

**Figure 4: The impact of technologies on digital payment delivery channels**




***Source: Author's illustration using data from IndiaStack***

The blockchain technology is an interesting example of how a revolutionary technology (which is a subset of distributed ledger technology) leads to a phenomenal "decentralised" and "transparent" payment system, which *"enabled the transfer of value across the internet without any intermediary"* (Jaideep Reddy & Vaibhav Parikh, 2021)[20]. The application of blockchain technology started with the first cryptocurrency i.e. Bitcoin (in the year 2008). While the cryptocurrency (even with all its good intentions to reduce the cost and diffuse the risk involved in a traditional payment system characterised by a central issuing authority)[21] has faced regulatory resistance both from the RBI and the GoI (given the legal and regulatory ramifications), the blockchain technology *per se* particularly the innovations based on the blockchain technology, have received favourable regulatory treatment[22].

The disruption caused through Fintech in India is significantly evident by improved speed and efficiency, reduced cost and risk and increased financial inclusion in the financial markets. However, there are certain challenges which need to be duly addressed before unlocking the full potential of the digital payments in India.

## 3. Regulatory landscape

The regulator and the GoI (vide its various directives from the Ministry of Corporate Affairs and the Ministry of Information Technology) in order to strengthen the digital payment ecosystem are certainly taking several game changer initiatives like ***National Electronic Toll Collection (NETC) System- which enabled linking of FASTag with authorised payment systems and instruments, National Common Mobility Card (NCMC) - one nation one card***, setting up of ***Common Service Centres (CSCs)***, RBI's mandate (vide its notification dated Oct. 22, 2020) to ensure interoperability of QR codes by Mar. 31, 2022 and its recent proposal to set up ***New Umbrella Entities (NUE)*** across India. However, given the ever -evolving nature of fintech, the various threat vectors (like cyber security, data privacy, customer protection) associated with it and given that there is no unified code laying down the law and/or policy guidelines regulating the issues and challenges in the digital payment space, governing the digital payment ecosystem is similar to harnessing an unruly horse. Further, it is also critical for the regulator(s) and the government to have a broader and/or balanced perspective when it comes to regulating trade and commerce by passing enabling regulations and/or legislations. RBI's recently announced Security Control Master Direction (discussed in Section 1.3 (iv) above) is certainly a move in the right direction but it has its challenges from compliance perspective particularly in the area of third-party risk assessment by regulated entities.

Another aspect of regulating the fintech business in India is the existence of various sector specific key regulators besides RBI. The Securities and Exchange Board of India (SEBI) which regulates the securities markets; the insurance and re-insurance sector which is regulated by the Insurance Regulatory and Development Authority of India (IRDAI); and the Pension Fund Regulatory and Development Authority (PFRDA) which regulates; the pensions in India.

Some of the major areas concerning the regulatory framework for digital payment system in India which need deliberation and successful implementation are discussed below:

## 3.1 Regulatory Sandboxes

### 3.1.1 Initiatives:

Regulatory sandbox, which essentially allows to test such products and technology which are not currently regulated but need some regulatory relaxations for testing, underscores the need of risk based, ***light touch regulation*** in order to allow greater freedom for the regulated players (and also encouraging them) to serve the customers in a viable manner (Shashidhar, 2020[23]). For instance, considering that the smartphones are still not widely prevalent in rural India, in order to provide workable payment options using mobile phones, the RBI's regulatory sandbox approach may be helpful in addressing this challenge as it allows testing of new products and innovations based on technology by providing regulatory relaxations and thus enhancing financial services options and enables rapid adoption of digital payments.

RBI vide its report on ***Enabling Framework for Regulatory Sandbox (Aug. 13, 2019)***, has allowed various fintech companies to test their products in the regulatory sandbox provided such companies satisfy the eligibility criteria prescribed therein. The RBI has also not only allowed banks and financial institutions and companies offering financial services but has also permitted start-ups to participate under the said framework/ guidelines.

### 3.1.2 Implications:

However, with data - privacy concerns grabbing eyeballs of various sector specific regulators, the focus appears to be shifting from ***light touch*** to ***compliance-based*** regulations. For instance, the RBI vide its notification dated Apr. 6, 2018 specified the data localisation requirement by directing *inter alia* that all *system providers shall ensure that the entire data relating to payment systems operated by them are stored in a system only in India.* More recently, the Payment Aggregators are mandated to have a strong data security infrastructure to ensure customer protection as per the Guidelines for PA&G (as discussed in section 1.3 (ii) above). However, most payment service providers (including banks and non-banks) are yet to formalise a policy on data security with focus on customer protection.

It thus remains to be seen how the regulator would strike the balance between providing the much - needed relaxations to entities applying to test their products in a regulatory sandbox (which essentially rests on test and learn approach and heavily relies on customer data analysis) and ensuring that such entities comply with the data protection and KYC requirements even during the duration of the sandbox.

## 3.2 Consumer Protection

### 3.2.1 Initiatives:

The Consumer Protection Act, 2019 (the "CPA") (which repealed the Consumer Protection Act, 1986 effective July 20, 2020) is a very important socio-economic legislation for protecting the rights of the consumers (which includes the users of the products and services provided by the fintech companies). Considering the need to protect the consumers in the digital commerce space, on July 23, 2020 the GOI notified the *Consumer Protection (E-Commerce) Rules, 2020* ("the e-commerce Rules") (under Section 101(2) (zg) of the CPA). The e-commerce Rules lay down an extensive compliance framework which is applicable to an e-commerce entity and a seller of a product or a provider of services.

### 3.2.2 Implications:

Considering that the e-commerce Rules prescribes onerous obligations, the e-commerce entities will need to re-visit their existing contractual arrangements and payment mechanism (Anish Jaipuria, 2020[24]). Further, the obligations under the e-commerce Rules at several places overlap with sector-specific rules and regulations.

For instance, an e-commerce entity intending to sell an insurance product has to (a) get certified by IRDAI and (b) comply with the advertisement and promotion guidelines issued by IRDAI as applicable to insurance companies as well as insurance intermediaries. Now in addition to the said compliance obligations, the entity will also need to comply with the obligations prescribed under the e-commerce Rules. Another example is that under the Guidelines for PA&G, the merchants and payment aggregators are restricted to store customer card data, even if they have duly complied with the technology and data security related compliances. While on the one hand the multiple obligations under the Guidelines for PA&G are onerous and have business and commercial impact, the obligations under e-commerce Rules will further add to the woes of e-commerce entities. Thus, it is pertinent to observe how the regulators would strike a balance between ease of online business on one hand and consumer protection on the other.

## 3.3 Data Protection

### 3.3.1 Initiatives:

The Fintech companies predominantly deal in large volumes of data. The current data protection legal framework in India primarily includes the Information Technology Act, 2000 (the "**IT Act**"); the Information Technology (Reasonable security practices and procedures and sensitive personal data or information) Rules, 2011 (the "**SPDI Rules**") and the Information Technology (Intermediaries Guidelines) Rules, 2011 made under the IT Act. Currently, the IT Act covers the personal information and sensitive personal data or information and the SPDI Rules are applicable only to a body corporate and to persons located in India. The current provisions of the IT Act read with the SPDI Rules and the said Guidelines, is a simple ***consent-based*** regime. Any entity, irrespective of its nature or the operations it performs, which is involved in either collating; disclosing; or transferring any **personal data** (for instance, e-mail address, password) needs to obtain prior written consent of the owner of such personal data. In case of **financial data** (for instance, bank account details), any payment system provider is legally bound to ensure that such data pertaining to domestic transactions is stored only in India[25]. The said simple ***consent based*** regime is supported by a host of other significant sector specific regulations/guidelines/notifications which includes inter alia (a) the ***IRDAI Guidelines*** (Apr. 7, 2017) regarding laying down information and cyber security framework for insurers; (b) the ***RBI Circular (Apr. 6, 2018)*** regarding payment transaction data localisation requirement; (c) the ***SEBI Circular (Nov. 3, 2020)*** advising those financial sector organisations (intending to use Software as a Service based solution) to ensure that the critical data is stored only in India.

A watershed event in the evolution of the data protection framework in India, is the landmark judgment passed in *Justice K. S. Puttaswamy (retd.) and Anr. V. Union of India And Ors.*[26] (the "**Puttaswamy Judgment**") whereby the Supreme Court of India unanimously upheld that the right to privacy is a fundamental right. Consequently, a bill laying down the data protection framework in India was introduced in the Parliament first in July, 2018 and later with certain amendments in Dec. 2019 as the Personal Data Protection Bill, 2019 ("the PDP Bill") which is pending deliberation before a Joint Parliamentary Committee as on Dec. 2020 and is expected to be a law by end of 2021.

### 3.3.2 Implications:

The PDP Bill marks a departure from the simple ***consent-based*** regime to a more rigid ***informed consent based*** regime. The proposed ***rule based*** PDP regime is fundamentally based on the triple test laid down in the Puttaswamy Judgment, which needed to be satisfied for judging the permissible limits for invasion of privacy, which are (a) ***legality*** (i.e. no processing of personal data unless provided in the existing law); (b) ***legitimate goal*** (i.e. processing of personal data only for specific, clear and lawful purpose only after obtaining free and specific consent); and (c) ***doctrine of proportionality*** (i.e. collection of data to be proportional to the object). Additionally, the handling of personal data is dependent on its **classification as personal data or sensitive personal data** (which includes financial and health data) or critical data (which includes personal data in relation to persons serving the state like President or Prime Minister and such classified data). For instance, with respect to sensitive personal data, the data fiduciary (i.e. an entity which determines the purpose and means of processing of the personal data) must ensure that it is stored only in India (Suneeth Katarki, et al., 2020[27]). From commercial viewpoint, this would have significant impact on the current practices of the fintech companies who would need to rework their existing business models and/or organisational practices to comply with the obligations under the proposed new stricter PDP regime. They will need to have a comprehensive data protection policy which would incorporate an IT policy, cyber security policy and an enhanced PDP compliant framework.

## 3.4 Anti Money Laundering and KYC

### 3.4.1 Initiatives:

A significant challenge faced by the financial sector organisations is to ensure that the processes or solutions deployed by them are not being used for committing or abetting financial crimes like money laundering. The existing legal framework to counter such financial crimes primarily includes the Prevention of Money Laundering Act, 2002 and the Prevention of Money Laundering (Maintenance of Records) Rules, 2005. In addition to the various compliance requirements under the said PML Act and PML Rules, which includes inter alia, to conduct customer verification, to maintain records and periodically report the relevant information to the Financial Intelligence Unit, the financial sector organisations are required to conduct Know Your Customer verifications. The RBI vide its ***Master Direction on KYC (Feb. 25, 2016)***, has directed the payment system providers and participants, PPI issuers, and all such "Regulated Entities" to implement a KYC policy in addition to a customer acceptance policy and it is also incumbent on them to adopt a comprehensive risk management policy[28].

In order to comply with the said compliance obligations vis-a-vis customer identification, various fintech companies started using Aadhar to establish identity of an Indian customer and further by way of extension started relying on the OTP based e-KYC (to signify prior consent of the concerned Indian customer), as permitted under the relevant provisions under the Aadhaar Act and the Regulations of 2016 thereunder.

### 3.4.2 Implications

Pursuant to the Puttaswamy Judgment, the fintech companies are prohibited to use Aadhar for the purpose of customer authentication. As an alternative to the said prohibited KYC models, the fintech companies have been developing various innovative methods, such as video-based KYC, offline boarding, offline QR code, e-Sign, and Digi Locker. However, this has adversely impacted the fintech companies as certain significant advantages of a low cost- efficient- and- convenient KYC model is lost.

## 3.5 The Next Generation Regulatory Reforms

### 3.5.1 Initiatives:

a) *Self- Regulatory Organisation (SRO) for payment:*

The RBI has issued draft guidelines on Aug. 18, 2020 to create an SRO, a recognised industry body which will have an independently run governance board although its members will be from the concerned industry. SRO will set and enforce rules and standards for participants in the digital payment industry. Currently, the Payment Council of India (an entity under the IAMAI) and the Fintech Convergence Council operate as representative bodies in the fintech ecosystem (The Money Control, Sep. 15, 2020[29]).

b) *New Umbrella Entity (NUE) for Digital Payment:*

The RBI has recently proposed to create NUE for retail payments across India. The NUE will be a competitor to the NPCI but will have interoperability with the various systems run by NPCI. Also the NUE will not be a non-profit entity in which foreign investment will be permissible. (RBI's Annual Report, May 27, 2021)

c) *Offline Payments:*

With an intent to overcome the connectivity/network issues faced beyond the large cities in India, which reduce the spread of digital transaction, the RBI is pushing payment companies to develop and deploy offline solutions to help overcome network constraints, particularly in rural areas (Bloomberg Quint, Aug. 10, 2020[30]).

d) *Online Dispute Resolution (ODR) mechanism*

The RBI intends to address consumer grievances and disputes pertaining to digital payments (including reporting of failed transactions) in an online dispute resolution mechanism (with almost nil or no manual intervention) and which must be totally customer centric (RBI's Annual Report, May 27, 2021).

### 3.5.2 Implications:

Notably, these Next Gen Reforms are a manifestation of the recommendations made by the *Nandan Nilekani* Report 2019[31], which highlighted the fact that as digital payments become ubiquitous, two issues will become imminent:

a) to ensure that the best quality of services is provided to the customers, and

b) to provide the customers an efficient and speedier grievance redressal mechanism.

With the phenomenal growth witnessed in the digital payment landscape (supported by the government- regulator combo and catalysed by the COVID pandemic), the threat to data privacy and security risks associated with the digital payment usage is also looming large. Thus, it would be imminent for the key players in the digital payment ecosystem to ***thoughtfully design and efficiently implement an enhanced compliance framework to protect the consumers*** from various security threats and take concrete steps to promote financial literacy amongst them.

## 4. The Way Forward

The Scheme promulgated by the Hon'ble Finance Minister in the Union Budget 2021-22, with an allocated budget of INR 15000 million, *to provide financial incentives for promoting digital modes of payment*[32], seeks to deepen the role of fintech in the Indian economy and provide much needed fillip to widen the digital payment ecosystem. Owing to the vastly improved and expanded infrastructure, the new and emerging technologies, the governmental push and the regulatory oversight, there is now a far wider range of payment services *on the issuance side*. However, *on the acceptance side*, the digital payment space is still marred by a few major hurdles which include inter alia building awareness and speedier education of the digital users (many of whom are first timers) on how to utilize the benefits of digital payments in a

***convenient yet safe and secured manner;*** capacity building in the fintech players for providing an ***efficient grievance redressal and safety mechanism against fraud; building cost-effective & user - friendly acceptance infrastructure.*** Considering the fast evolving nature of technology and spurt in the growth of digital payments, the regulator would need to take, in areas discussed above, a more strategic view of its regulatory oversight to significantly improve digital financial inclusion. However, it remains to be seen how the regulator would ensure compliance, constant monitoring, fraud management, and grievance redressal without overlooking the commercial feasibility of ease of doing business for fintech companies in the digital payment space and conform to a balanced regulatory approach with progressive initiatives like PPI interoperability. Ever evolving technologies like blockchain technology along with their advantages also throw challenges to the regulator with their imminent risks (like money laundering, tax evasion). However, given the advantages thereof, the right approach is not prohibition *(say complete ban on cryptocurrency by the proposed Bill of 2021)*[33] but a balanced and progressive regulatory approach and the RBI's recent clarification regarding invalidity of its cryptocurrency circular (of 2018) is probably a move in the right direction.

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