DIGITAL PAYMENTS

Level the Playing Field to Leverage the Potential

Competing with cash in retail payments

CUTS International

#1713

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Abbreviations

AEPS:	*Aadhaar* Enabled Payment System
APIs:	Application Programme Interface
BBPS:	Bharat Bill Payment System
BHIM:	Bharat Interface for Money
BBPCU:	Bharat Bill Payment Central Unit
BoE:	Bank of England
BPSS:	Board for Regulation and Supervision of Payment and Settlement Systems
CBJ:	Central Bank of Jordan
CPSS:	Committee on Payment and Settlement Systems
DFID:	Department for International Development
DFS:	Digital Financial Services
DIPP:	Department of Industrial Policy & Promotion
DLT:	Distributed Ledger Technologies
ERPB:	Euro Retail Payments Board
FMIs:	Financial Market Infrastructures
FPS:	Faster Payment System
FRAND:	Fair, Reasonable and Non-Discriminatory
FSLRC:	Financial Sector Legislative Reforms Commission
GDP:	Gross Domestic Product
GST:	Goods and Services Tax
HKMA:	Hong Kong Monetary Authority
IMPS:	Immediate Payments Service
IOSCO:	International Organization of Securities Commissions
JoMoPay:	Jordan Mobile Payment
KYC:	Know Your Customer
MDR:	Merchant Discount Rate

MNOs:	Mobile Network Operators
MoF:	Ministry of Finance
MTSS:	Money Transfer Service Scheme
NACH:	National Automated Clearing House
NEFT:	National Electronic Fund Transfer
NPC:	National Payments Council
NPCI:	National Payments Corporation of India
NPSC:	National Payment Systems Council
OECD:	Organisation for Economic Co-operation and Development
PCI-DSS:	Payment Card Industry Data Security Standard
PoS:	Point of Sale
PPIs:	Prepaid Payment Instruments
PRB:	Payments Regulatory Board
PSD:	Payment Services Directive
PSS:	Payments and Settlement Systems
RBI:	Reserve Bank of India
RIA:	Regulatory Impact Assessment
RRBs:	Regional Rural Banks
RTGS:	Real Time Gross Settlement
SAC:	Stakeholder Advisory Council
UIDAI:	Unique Identification Authority of India
UPI:	Unified Payments Interface
VPA:	Virtual Payment Address

Foreword

Ajay Shankar
Former Secretary
Department of
Industrial Policy &
Promotion (DIPP)

Increased innovation and diversity in the nature of digital financial services (DFS) has revolutionised the manner in which consumers store and transact value, and has significantly enhanced vertical and horizontal penetration of financial systems across the globe. The Government of India has also recognised the potential which DFS holds in fulfilling public welfare objectives, such as financial inclusion. The government has aggressively endeavoured to create a favourable policy ecosystem for the same.

One of the major initiatives in this regard has been the sustained policy push towards digital payments. Under the 'Digital India' initiative, the government has launched and supported numerous digital payment solutions in order to successfully reap the benefits of the shift from a 'cash-heavy' to a 'less-cash society'. Despite the government's commendable efforts and as this report points out, consumers' preference to cash-based payments is still significantly higher in India and there is scope for further policy and regulatory reform.

In its endeavour to provide further policy and regulatory impetus to non-cash payments and seek optimal regulatory solutions which benefit the consumer, CUTS International in this detailed report has looked at the competition and regulatory impediments to digital payments. CUTS has objectively made an argument in favour of direct and open access to critical financial infrastructure, which is particularly crucial for new and emerging service providers and also enables seamless and cost-effective digital financial services. Also, in its quest to find unique and balanced regulatory solutions, CUTS has factored in the harmful effects of indiscriminate and unchecked access to financial infrastructure, which could compromise safety and security of the financial system and result in systemic risk. This provides objectivity and practicality to the report's recommendations.

The report suggests several immediate and medium-term regulatory interventions to level-the playing field which could help policymakers to optimally regulate digital payments and simultaneously leverage its full potential. For instance, recommendations to conduct regulatory impact assessment (RIA) and adopt innovative approaches such as regulatory sandbox are worth noting. This falls in line with one of the recommendations of the Expert Committee on Prior Permissions and Regulatory Mechanism (which I had the pleasure to chair) wherein we had also suggested adoption of RIA.

The uniqueness of this report lies in its simplicity, objectivity and overarching drive to encourage consumer welfare. This is reflected in its thorough analysis and a consumer-driven perspective on regulatory aspects of digital payments. I would strongly urge the government and other relevant stakeholders to go through its findings and I am quite optimistic about its recommendations. If accepted and implemented, it will go a long way in spurring sustained usage and growth of digital payments in India.

Summary of Recommendations

Competition and level playing field among market players is a necessary but not sufficient condition for growth of digital payments. It can complement but not substitute other necessary initiatives, such as ensuring digital connectivity, putting in place adequate acceptance infrastructure, generating awareness and working with consumers and merchants towards a behaviour change to accept digital payments. However, these initiatives require substantial time, effort and resources and may still fall short in the absence of insufficient competition.

Putting in place enabling conditions for market players to compete and cooperate at a level playing field require substantially less resources and can ensure efficient use of infrastructure, once it is put in place. It also incentivises market players to contribute towards infrastructure development, generate awareness and nudge the behaviour of consumers and merchants towards digital payments.

In this backdrop, this report makes several recommendations to ensure level playing field in digital retail payments sector in order to leverage the potential of digital payments. These recommendations broadly address competition at three levels of the payments ecosystem: payments services, platform and regulation. Entities responsible to ensure implementation and time frames within which implementation is expected have also been highlighted.

S. No.	Recommendations*	Responsibility	Timeframe
A	**Payments services related**		
1	Allow direct access to technical switch and clearance and settlement facilities to non-banks	NPCI	Immediate
2	Amend the PPI regulation to allow non-banks to issue open system PPIs via a graded risk based mechanism	RBI	Immediate
3	Explore option to allow non-banks of indirect access to critical clearance and settlement services	RBI	Medium term
4	Initiate the process to link *Aadhaar* details with unique non-bank identifier to facilitate non-banks direct access to AEPS	NPCI/UIDAI/ RBI	Medium term

* For additional recommendations in relation to developments post September 2017, refer to Chapter 6 on page 35.

S. No.	Recommendations*	Responsibility	Timeframe
5	Institutionalise activity based grievance redress and make provision to hear complaints against non-banks in the interim (like non-bank ombudsman)	RBI	Medium term
B	**Payments platforms related**		
6	Create threat of competition for NPCI	RBI	Medium term
7	Broad base decision making by inviting new banks, non-banks and consumer organisations at meetings of technical committees	NPCI	Immediate
8	Amend PSS Act to allow non-banks shareholding in NPCI	RBI	Immediate
9	Take necessary actions to brad base ownership	NPCI	Medium term
10	Revive Payments System Advisory Council for structured stakeholder consultation	RBI/NPCI	Medium term
11	Regulate NPCI as Financial Market Infrastructure	RBI	Medium Term
12	Explore the option to split regulatory and operational functions of NPCI	RBI/MoF	Medium term
C	**Payments regulation related**		
13	Make public the criteria to select and nominate members of PRB	MoF	Immediate
14	Expand and constitute the Payments Regulatory Board	MoF	Immediate
15	Adopt a new Payments and Settlement System Act taking into account key risks, objectives and principles to regulate retail payments	MoF	Medium term
16	Adopt regulatory impact assessment and regulatory sandbox	RBI	Medium term
17	Ensure coordination between different regulatory agencies	MoF	Medium term
18	Facilitate consumer ownership of data and open banking	RBI/MoF	Medium term
19	Encourage partnerships between market players and early regulatory engagement	RBI	Medium term

1
About the Report

The digital payments sector in India is facing tectonic shifts. Entities with divergent business models, subject to diverse regulations, are competing for a pie in the market share.

This report takes a stock of the existing business models in the digital payments sectors and reviews the applicable regulatory framework to such business models. The objective is to ascertain if level playing field exists for the market players in the sector to compete efficiently.

The report takes a step further and analyses reasons for lack of level playing field in the sector, highlights adverse impacts of such situation on consumer welfare. The report concludes with providing specific recommendations to level the playing field for leveraging the potential of digital payments in the sector.

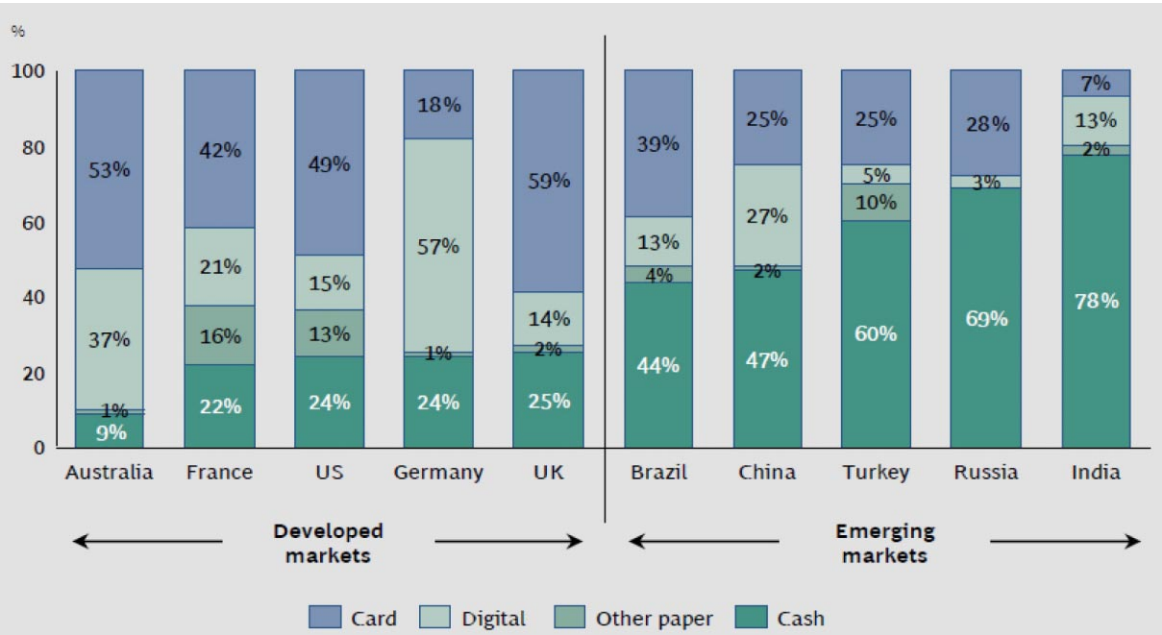
2
Retail Payments in India

The Obsession with Cash

Gone are the days when transfer of goods and services between parties to a transaction happened through barter or was based on gold. Transfer of funds depict value of goods and services, i.e. payments form bedrock of transactions in modern society.

Cash is the most preferred mode of payments in India. Currency circulation in India accounts for 18 percent of gross domestic product (GDP) as against 3.5-8 percent in mature markets, such as UK and US. Around 78 percent of all consumer payments and 97 percent of all retail payments[1] in India occur in cash.[2] Consumers' preference to cash payments is significantly higher in India when compared with other markets (**see Figure 1**).[3] A recent study in Jaipur highlighted that irrespective of income group, cash is the preferred source of transactions, such as payments for groceries, clothing, footwear, utility bills, fuel for vehicle, durable goods, restaurants, tours and travels, and recreation.[4]

Figure 1: Modes of Payments



Source: BCG, Digital Payments 2020, 2016, Google

It has been estimated that the Central and commercial banks in India annually spend around US$3.5bn in currency operations costs. The net cost of cash was estimated to be around 1.7 percent of India's real GDP in 2014-15.[5]

As a result, the need to shift from cash to digital modes of payments is being recognised. The Government of India has taken several steps to move towards a less cash society and reduce consumers' preference to cash. In this regard, one of the most recognised moves has been the demonetisation exercise in November 2016, pursuant to which 86 percent of currency in circulation was stripped overnight of its recognition as legal tender. Consequently, the volume of digital transactions increased from 671.5 million transactions to 844.7 million between November 2016 and June 2017, and the value of transactions increased from ₹94tn to ₹113.75tn.[6]

However, it has been reported that five months after demonetisation, cash withdrawals were actually 0.6 percent higher than a year earlier.[7] Further, upon remonetisation of currency notes as per the new denomination, people reverted to using cash for their payment transactions. This led to rising levels of cash in the economy.[8] The volume of digital payments has reduced from 957.50 million transactions in December 2016 to 862.38 million in July 2017. During this period, minor increase from ₹104 lakh crore to 107 lakh crore in the value of digital payments was recorded.[9] Consequently, during June 2017 the digital wallet industry contracted by 30 percent and recorded 221.63 million transactions as against 320.87 million transactions in April 2017.[10] It is time the government recognises that a broader, more systemic changes are needed to boost digital payments.[11]

Indian consumers differ greatly in their aspirations and attitudes toward technology, as well as their access levels and usage patterns. Consumers' needs, desires, and behaviours are complex and varied. People exhibit significant differences in their appetites for change and risk, underlying values and socio-cultural norms, and levels of education and financial literacy, along with an array of multi-dimensional needs.[12] Further, digital connectivity is a pre-requisite for digital payments. Large segments of the population in India remain in digital darkness. While mobile phone penetration is 72 percent, over 600 million users own feature phone. Fewer than five out of 10 women own a mobile phone. In rural areas, less than five percent of adults own a smartphone. Furthermore, 50 percent of smartphone owners across the country do not subscribe to data.[13] Digital payments have penetrated to merely six percent of the small merchant base in India.[14]

Addressing behavioural and infrastructure constraints to growth of retail digital payments will require time and efforts. Consequently, other constraints impeding the growth of retail digital payments, and capable of being addressed in short to medium term, with reasonable resources, need to be identified and addressed.

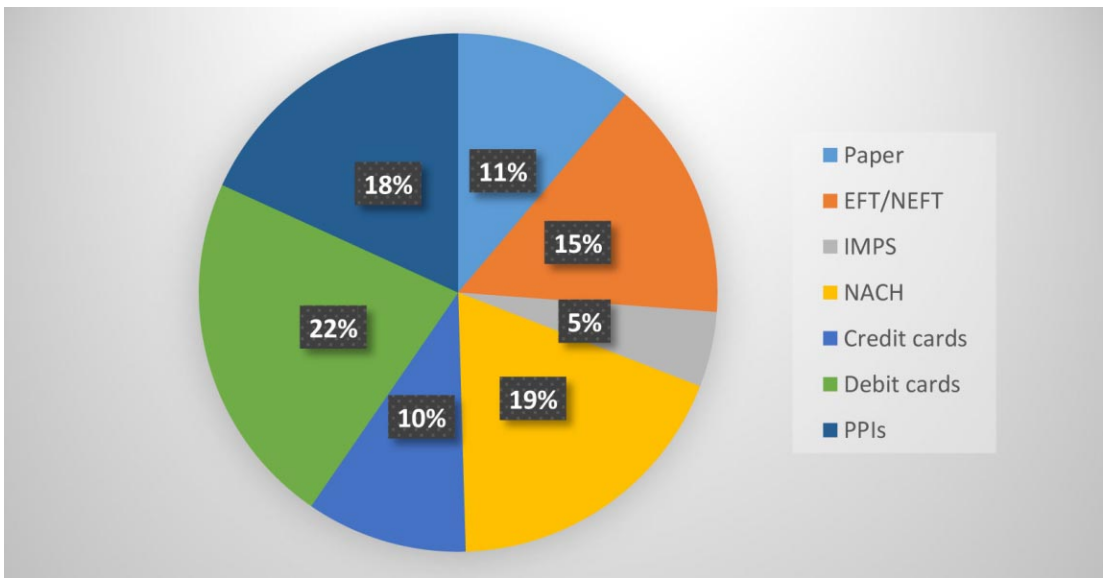
Drivers of Non-cash Retail Payments

Other than cash, paper and non-paper based modes are available to undertake retail payments in India. Paper-based modes include cheque and national electronic fund transfer (NEFT). Customers enjoying net banking facility offered by their bankers can also initiate the funds transfer request through NEFT online. Primary non-paper based modes for retail payments include, immediate payments service (IMPS), credit cards, debit cards, prepaid payment instruments (PPIs) and national automated clearing house (NACH). **Table 1 provides a description of key drivers of non-cash payments.**

Table 1: Key Drivers of Non-cash Payments	
NEFT	NEFT is a nation-wide payment system facilitating one-to-one funds transfer. Under this scheme, individuals, firms and corporates can electronically transfer funds **from any bank branch to** any individual, firm or corporate **having an account with any other bank** branch in the country participating in the scheme. It is offered by the Reserve Bank of India (RBI).[15]
IMPS	IMPS offers an instant 24X7 interbank electronic fund transfer service through mobile phones. IMPS is an emphatic tool to transfer money instantly **within banks across India** through mobile, internet and ATM. It is offered by National Payments Corporation of India (NPCI), India's sole retail payment organisation.[16]
PPIs	PPIs are payment instruments that facilitate purchase of goods and services, including financial services, remittance facilities etc. against the value stored on such instruments. PPIs that can be issued in the country are classified under three categories viz. (i) Closed system: are PPIs issued by an entity, including individuals, proprietorship firms, partnership firms etc., for facilitating the purchase of goods and services from that entity only. (ii) Semi-closed: are PPIs which can be used for purchase of goods and services, **including financial services at a group of clearly identified merchant locations/ establishments** which have a specific contract with the issuer to accept the payment instruments; and (iii) Open system: are PPIs which can be used for purchase of goods and services, **including financial services like funds transfer at any card accepting merchant locations** (point of sale terminals) and also permit cash withdrawal at ATMs/ business correspondents. **While banks and non-banks can issue closed and semi-closed PPIs, only banks are allowed to issue Open system PPIs.**[17]

The volume in non-cash retail payments is dominated by debit cards, and PPIs (see **Figure 2**). These, together with IMPS, constitute close to 45 percent of volumes. The largest bank in India, government-owned State Bank of India, is the largest issuer of debit cards in the country. It has issued close to 284.7 million cards, constituting 33 percent of total debit cards in the country. The Punjab National Bank is the second largest issuer of debit cards, with 284.7 million cards, the private sector HDFC Bank has issued highest number of credit cards.[18]

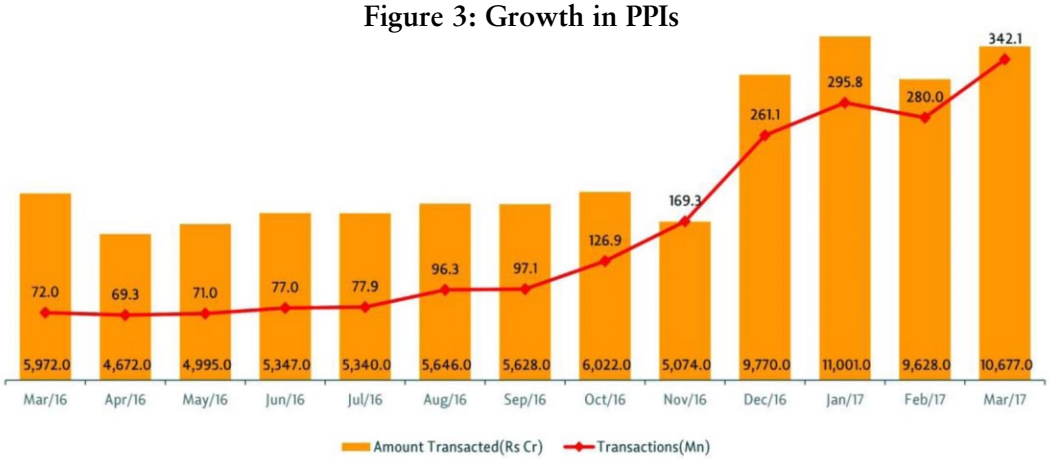
Figure 2: Retail Payments: 2016-17 (vol in mn)



Source: *Booklet on Measurement of Digital Payments*, 2017, National Institution for Transforming India (NITI) Aayog

Some of the largest non-bank issuers of PPIs/wallets include Paytm, Mobikwik and ItzCash. As of March 2017, Paytm had 218 million wallet users, and ₹899.11 crore as total balance in wallet. Mobikwik had 55 million wallet users. In September 2016, ItzCash had 110 million registered users. The PPIs have been registering impressive growth in recent past. During 12 months beginning March 2016, the number of PPI transactions grew to 342 million with an increase of 375 percent as compared to last year, while the amount transacted went up by 79 percent.[19] **Figure 3 depicts the growth in PPIs.**

Figure 3: Growth in PPIs

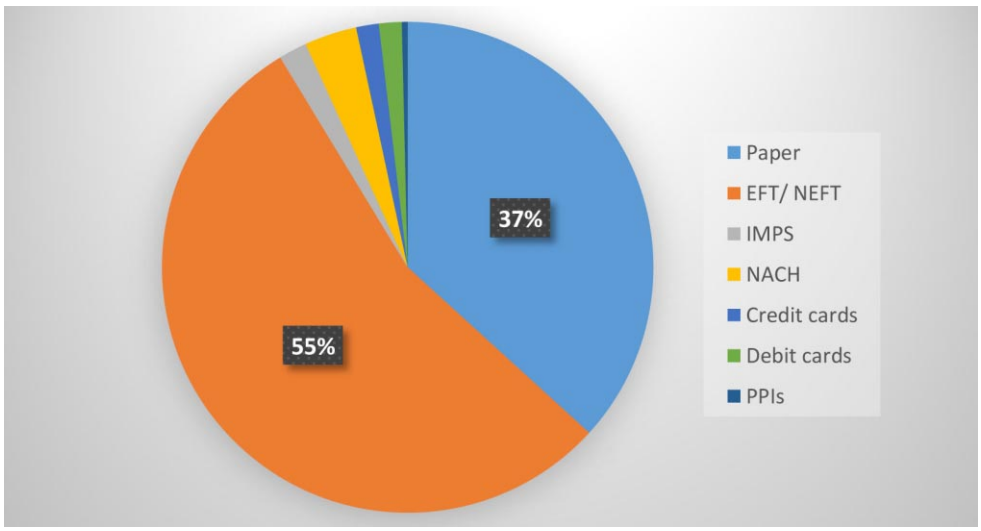


Source: Akamai, Digital payments in India, Medianama, May 2017

In addition to digital payments modes highlighted above, several other modes have been launched in India recently. These include, *Aadhaar* Enabled Payment System (AEPS), Unified Payments Interface (UPI), Bharat Bill Payment System (BBPS), Bharat Interface for Money (BHIM), and Bharat Quick Response Code Solution (Bharat QR) (**see Table 2** on page 6).

Despite impressive growth in recent months and significant contribution in volume of non-cash retail payments, the value of digital modes (other than NEFT) has remained insignificant to around 10 percent of non-cash retail payments (**see Figure 4**). In fact, it has been indicated that the value of digital payments declined from ₹149 lakh crore in March 2017 to ₹107 lakh crore in July 2017.[25]

Figure 4: Retail Payments: 2016-17 (val in ₹bn)



Source: *Booklet on Measurement of Digital Payments*, 2017, NITI Aayog

Table 2: New Modes of Digital Payments	
AEPS[20]	Enables balance enquiry, cash deposit/withdrawal and **inter-bank transfer** through *Aadhaar* number linked to bank account. This is facilitated through unique issuer identification number (to identify bank with which *Aadhaar* number is mapped); *Aadhaar* number and fingerprint. AEPS is operated by NPCI.
UPI[21]	Immediate money transfer through mobile device 24 hours*7 days*365 days. It facilitates accessing different **bank accounts** through single mobile application and single click two factor authentication (security standard prescribed by regulations). UPI runs on IMPS and is operated by NPCI.
BBPS[22]	Tiered structure for operating a unified bill payment system. NPCI functions as the authorised Bharat Bill Payment Central Unit (BBPCU), which is responsible for setting business standards, rules and procedures for technical and business requirements for all the participants. It also undertakes clearing and settlement activities related to transactions routed through BBPS. The payment modes options facilitated under BBPS are **Cards (Credit, Debit and Prepaid), Account transfer, IMPS, Internet Banking, UPI, Wallets, AEPS and Cash.**
BHIM[23]	A mobile application that enables simple, easy and quick payment transactions using Unified Payments Interface (UPI). Instant **bank-to-bank payments** and Pay and Collect Options are facilitated using just Mobile number and Virtual Payment Address (VPA). The application was launched by NPCI.
Bharat QR[24]	An interoperable solution for QR code, developed by NPCI, MasterCard and Visa. Merchants can display these QR codes at their premises and customers can pay through **linked account** by scanning these QR codes via Bharat QR enabled application in an interoperable environment.

It appears that the unavailability of modes of digital payments is acute in semi-urban and rural India. All regional rural banks (RRBs) and rural cooperative banks are yet to be brought under a pan-India electronic network. Of the 371 district central cooperative banks, only a handful is part of platforms like NEFT, IMPS and UPI. The participation of RRBs in IMPS is limited though they have more than 15,000 branches.[26]

Consequently, the potential of digital modes has remained unfulfilled in advancing retail payments.

3
Competition Assessment of Digital Retail Payments Industry

Need for Competition Assessment

For digital payments to make a significant dent in the cash payments, it will be essential for modes such as IMPS, PPIs, UPI, AEPS to register growth in value and volumes. Such growth will not only increase their share within the digital payments market, but also increase the share of digital payments in total retail payments.

As indicated earlier, all digital modes of payments envisage transfer of funds between bank accounts. It appears that non-banks have played limited role in facilitating digital payments. Banks are even allowed to issue all kinds of PPIs, whereas non-banks cannot issue open system PPIs.

Global Evidence on Role of Non-banks in Digital Payments

Globally, role of non-banks in promoting digital payments is increasingly becoming prominent. It has been reported that non-banks have high focus on superior user interface, user experience, ability to reach unbanked segments,[27] low cost and technology friendly structure, which allows them to be successful. In addition, availability of direct and interoperable access for non-banks to critical payments systems and ability to partner with incumbents has made significant contribution to growth of digital payments in different countries. This had complementary benefits like advancement of formal financial services and economic growth.

For instance, in Tanzania, during 2009-2014, the percentage of adults with a financial account more than quadrupled, from 12 to over 50 percent. Existence of multiple successful digital financial services providers, all of which allow customers to make cross-platform interoperable transactions has been reported to be one of the reasons for this jump. Transaction volumes recorded significant growth after interoperability was permitted. After putting in place measures to deliver interoperability, Tanzania saw a 3.5 time increase in the value of off-network transactions[28] (**see Figure 5**).

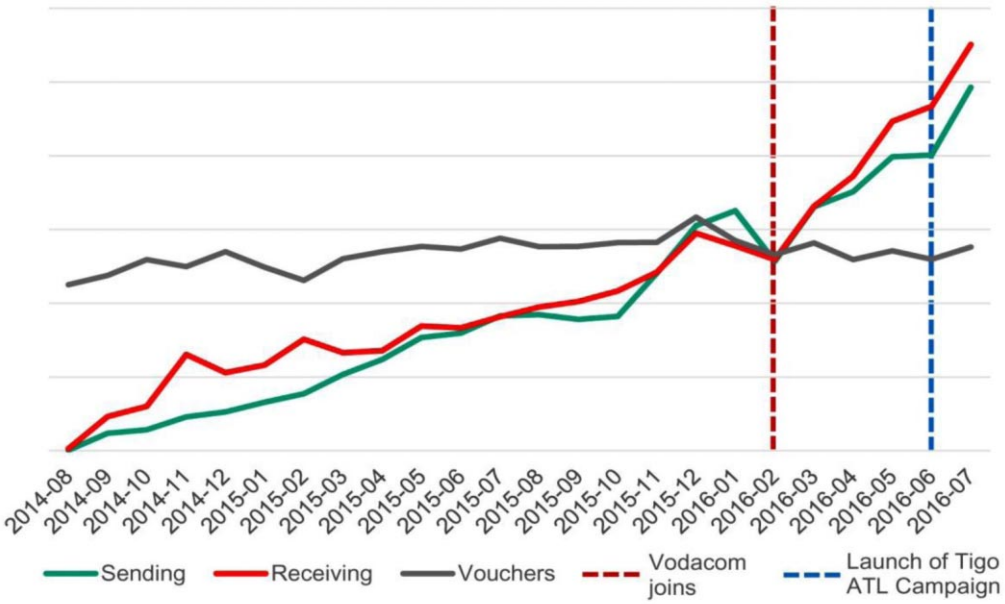
In Uganda, during 2009-2014, mobile money users grew from 10,000 to 18 million, including 5.5 million new accounts in 2013-2014 alone. Major commercial banks have partnered with telecoms and mobile network operators (MNOs) to provide competing mobile money products, which has spawned a diverse ecosystem of complementary products and services.

Pakistan allowed full account-to-account interoperability between operators and schemes in March 2014, by allowing participation of mobile money operators in the 1Link switch. As a result, the value of Interbank Funds Transfer (mobile money-to-bank transfers and vice versa) more than tripled during October 2014-September 2015, from PKR 2.4bn to PKR 7.8bn.[29]

Peru has also launched a fully interoperable mobile money platform called BIM. Bank account or internet access is not a necessity for making payments through BIM.[30]

Increasingly, interoperability is being recognised as a necessary feature of a healthy digital financial services market. As of March 2016, seven country markets were fully interoperable: Indonesia, Madagascar, Pakistan, Rwanda, Sri Lanka, Tanzania and Thailand.[31]

Figure 5: Growth in Transaction Volumes in Tanzania Owing to Interoperability

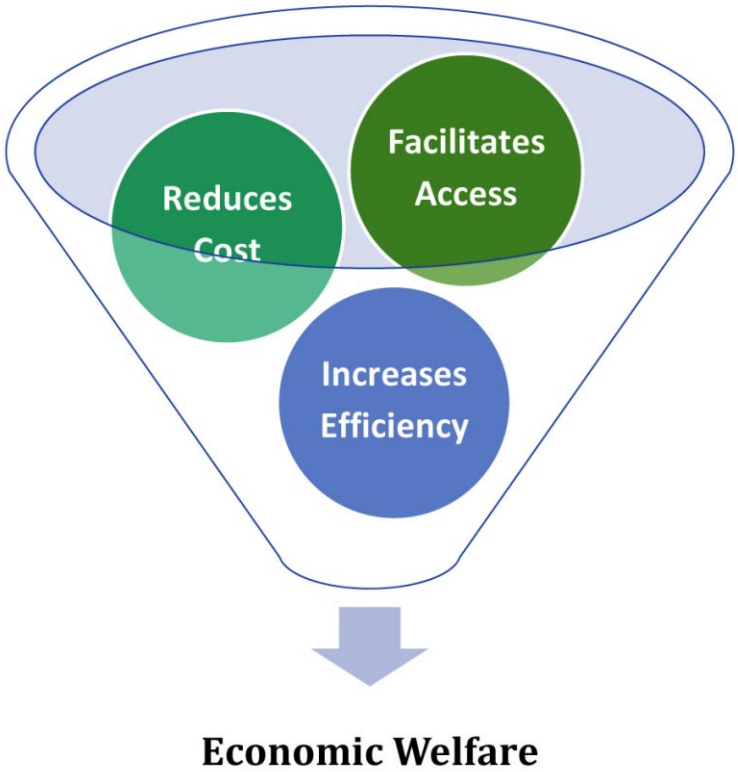


Note: The red dotted line refers to the month Vodacom joined the domestic interoperability solution. The blue dotted line refers to the month Tigo Pesa launched ATL campaigns.

Source: GSMA (2016)

Experts have also pointed out that greater interoperability and competition in digital financial services can improve financial inclusion and economic growth (**see Figure 6**). For instance, effective competition among providers drives them to operate more efficiently and price their products competitively to attract consumers. This can lead to lower costs passed on to consumers and businesses, which can make financial services more affordable to low income, underserved populations. Competition incentivises providers to ensure that products they provide are of high quality to retain consumers, helping adopters of products remain active users. It incentivises providers to introduce new and innovative mobile financial services products and services, which promote increased uptake and use of financial services among the poor. Where consumers have increased options for products and services, service quality will be promoted as firms compete on service for fear of consumers switching providers.[32]

Figure 6: Benefits of Competition



In India as well, arguments have been made in favour of greater role of non-banks, and partnerships between banks and non-banks to enable design of innovative digital payments solutions.[33]

Given that non-banks have led digital payments across the globe but have not been able to realise their full potential in India, there is a need for an in-depth review of role of non-banks in digital retail payments ecosystem in India, and identifying the policy and practice-related constraints to competition between banks and non-banks. In other words, it is crucial to assess if non-banks are being able to compete efficiently and effectively with banks in digital retail payments industry, or certain policy or practice-related constraints to competition exist.

Methodology for Competition Assessment

Several international organisations, including the Organisation for Economic Co-operation and Development (OECD),[34] Department for International Development, UK (DFID),[35] and CUTS International[36] have designed frameworks to assess the level of competition in different sectors. CUTS International had reviewed frameworks issued by OECD and DFID and customised them for emerging economies like India. Each of these frameworks has listed some primary questions to facilitate assessment of competition in relevant markets (**see Table 3** on page 10).

Table 3: Key Questions for Competition Assessment		
OECD[37]	**DFID[38]**	**CUTS International[38]**
1. Are there limits on the number or range of suppliers? 2. Are there limits on the ability of suppliers to compete? 3. Are there reductions in the incentives for suppliers to compete? 4. Are there limits on the choices and information available to customers?	1. Are there barriers to entry? 2. Do government policies or institutions limit competition? 3. Do stakeholders have vested interest? 4. Are there signs of anti-competitive conduct by firms?	1. Is the level playing field between competitors distorted? 2. Are there entry barriers? 3. Is the free and fair market process limited? 4. Are monopolies and their abuse promoted? 5. Is the scope to introduce new products or supply existing products in new ways limited? 6. Is institutional independence limited? 7. Is a subsidy or state aid distortionary? 8. Is the measure driven by vested interests promoted by the government? 9. Is anti-competitive conduct not effectively prevented?

If answers to most questions in the framework are in affirmative, competition is deemed to be sub-optimal and remedial measure need to be recommended.

Limited and Subordinate Role for Non-banks

Testing the digital retail payments industry on the touchstone of questions set out above, from the perspective of role of non-banks reveal that answers to most questions will be in affirmative. Indian digital retail payments industry is dominated by banks. Only banks are allowed direct and interoperable access to payments systems. They are also exclusively allowed to issue certain specific kinds of PPIs, **as listed in Table 4**.

Table 4: List of PPIs which only Banks can Issue
Open PPIs Prepaid instruments to government organisations for onward issuance to the beneficiaries of government-sponsored schemes
Prepaid instruments to other financial institutions for credit of one-time/periodic payments by these organisations to their customers
Prepaid instruments to principal agents approved under the Money Transfer Service Scheme (MTSS) of the RBI or directly to the beneficiary under the scheme for loading of the funds from inward remittances
Prepaid instruments to corporates for onward issuance to their employees
Rupee denominated non-reloadable (a) PPIs to NRIs and foreign nationals visiting India & (b) PPIs co-branded with exchange houses/money transmitters (approved by RBI) to NRIs and foreign nationals

Source: RBI, Master Circular on Issuance and Operation of PPIs in India, 2016

Limited and subordinate role has been envisaged for non-banks. For instance, direct and interoperable payments between non-banks PPIs are not allowed. Non-banks are in fact dependent on their competitors, banks to complete payments to other PPIs. **Table 5 summarises the role envisaged for non-banks in different digital payment modes.**

Table 5: Role of Non-banks in Digital Payment Modes	
PPIs[40]	• Allowed to issue closed and semi-open PPIs. • **Not allowed to issue open system PPIs, among others.** • ***Direct and interoperable payments to other PPIs not allowed.*** • ***Cash withdrawals not allowed.***
IMPS[41]	• Act as BCs to facilitate inter-bank fund transfer • Enable transactions with bank as counterparty • ***Payments inter-se non-banks not allowed***
AEPS[42]	• Engage in authorisation, best finger detection, e-KYC and demographic authentication services • Act as BCs to facilitate withdrawal and transfer· ***Payments between banks and non-banks not allowed***
UPI[43]	• Non-banks can be acquired as merchants by banks, requiring them to pay commission to banks • Non-banks might be able to partner with banks to develop UPI enabled apps, and participate in non-UPI leg of the transaction • ***Non-banks are not directly allowed access of UPI, inhibiting transactions from bank accounts to non-bank PPIs and vice versa; and transactions inter-se non-bank PPIs.***
BBPS[44]	• While non-banks can act as payment operating unit and facilitate bill payments, the settlement is made through the RBI's real time gross settlement (RTGS) payment system. Only banks have access to RTGS. • ***Consequently, non-banks need a sponsor bank to open bank accounts and enable settlement*** • ***Settlement between non-banks is not allowed (without intermediary sponsor bank)***

Consequently, it is evident the role of non-banks in Indian digital retail payments industry has been consciously limited by regulator and NPCI (operator of platforms listed above), through regulatory framework.

Government Preference to Bank Payments

Preferential treatment to select suppliers is one of the indicators of sub-optimal competition. In addition to limited role for non-banks in digital retail payments industry, it appears that Indian government also accords preferential treatment to banks and bank led modes of digital payments.

For instance, pursuant to the Union Budget 2017-18, two schemes were launched to promote usage of BHIM (an **inter-bank** payment mobile application operated by **NPCI**). These comprise a merchant cashback scheme and customer referral bonus scheme. These schemes have been recently extended till March 31, 2018.[45]

Under the merchant cashback scheme, for number of credit transactions between 20-50, merchants will receive a cashback of ₹50 at the end of month. In case of more than 50 credit transactions, from at least 20 unique customers and minimum transaction value of ₹25 each, merchants will receive a cashback of ₹2 per transaction up to ₹950. The maximum cashback in this case is ₹1,000 per month. Under the customer referral bonus scheme, each referrer and each new referee (new BHIM/ BHIM bank UPI application user) is eligible for a bonus of ₹25.[46]

It has been reported that ₹495 crores is the total outlay for such promotional schemes for BHIM for a six-month period (from April 14, 2017-October 14, 2017), and the scheme is being administered by the Ministry of Electronics and Information Technology. It has been pointed out that taxpayers' funds are being utilised to promote a mobile application issued by a private company.[47] Similar initiatives to promote NPCI/bank-led digital payments have been undertaken in the past.

In this regard, the government has decided to expand existing BHIM scheme to Bank UPI applications and bank merchants. UPI-enabled banks will need to use BHIM in their name and also logo. Consequently, the possibility of any competing product being developed by bank on BHIM application has been avoided, and thus prevented a potential innovation. The scheme excludes all third party applications (and thus applications developed by non-banks) as well as large organised UPI merchants, who will not be eligible for aforementioned benefits. [48]

Similarly, the Committee of Chief Ministers on Digital Payments (Convener: Chandrababu Naidu, Chief Minister, Government of Andhra Pradesh) recommended 50 percent subsidy to all merchant points for adoption of biometric (fingerprint and iris) sensors to be used for *Aadhaar* pay transactions. It also recommended promotion of AEPS by incentivising and not charging Merchant Discount Rate (MDR).[49] Further, it calls for allowing white labelled business-cum-merchant correspondents for spreading AEPS PoS terminals across country.[50] Accordingly, government proposed certain tax exemptions on specific PoS terminals through the Union Budget 2017-18.[51] It needs to be recalled that NPCI runs the AEPS platform which facilitates inter-bank transfers only.

Consequently, it appears that despite being aware that digital payments are competing more with cash and less *inter-se*, the government has been consciously promoting specific bank-led modes of digital payments.

Role of National Payments Corporation of India

Inability to curb practice related distortions to competition is also one of the key indicators of sub-optimal competition. This also appears to be true in case of retail digital payments in India.

As indicated earlier, most digital payment platforms viz. IMPS, AEPS, UPI, BBPS are offered by NPCI. It is a non-profit company promoted by 10 banks to run the payment systems. In September 2016, its shareholding was expanded to include 46 new banks.[52] Its board includes a nominee director from RBI and nominees of core promoter banks. The steering committees of IMPS, UPI and AEPS at NPCI are manned solely by bank representatives. It sets the technical standards for facilitating direct and indirect assess to such platform, and thus regulates the conduct of systems participants. NPCI has obtained a Type D membership of the RTGS system from the RBI and provides settlement service to its members.[53] NPCI does not allow non-banks to directly access

its platforms, thus arguably benefiting its shareholders (banks) to the detriment of non-banks, i.e. potential competitors of banks. Indian competition regulator has not yet shown an inclination to investigate or curb such potentially anti-competitive practices, perhaps owing to lack of awareness about competition concerns and limited share of digital payments in the entire retail payments ecosystem.

NPCI has also issued the BHIM mobile application to facilitate inter-bank payment, which runs on its UPI platform and competes with other applications which run on UPI platform. In fact, as indicated above, banks are rechristening their respective UPI-based applications to BHIM UPI application. Arguably, conflict of interest exists as NPCI has the dual role of platform operator and service provider, and it and government is promoting its products over competitors.

NPCI is also the sole retail payments organisation in India and is the sole operator of BBPS.[54] There are no guidelines for competing with NPCI as a retail payments organisation or operator of BBPS. NPCI has also received an in-principle approval for setting up and operating a National Electronic Toll Collection system.

The Working Group on Payments of the Financial Sector Legislative Reforms Commission (FSLRC) noted the worrisome prospect of monopoly by design being created through NPCI. It recommended that the RBI should generate confidence that there is no regulatory resistance to other payment system providers competing with NPCI, and that the latter does not resort to predatory pricing and abuse of dominance.[55]

It recommended that such a mechanism will aid in preventing systemic risk and single point of failure in the payments infrastructure. However, it appears that these recommendations have not been accepted and the government has continued to empower NPCI, without any complementary accountability standards. Such weak institutional mechanism according unreasonable power to one bank-owned private sector entity has the potential to limit competition in the digital retail payment sector.

Access to Data

Existence of banks and NPCI across digital retail payments ecosystem not only makes them dominant in this market, but also provides them access to data about consumers' choices, preferences and transaction history, not necessarily with express and informed customer consent. Non-banks do not necessarily have access to such entire set of data, as they are present at only one end (sending or receiving funds) of the digital payment transaction. Access to data puts incumbents in an advantageous position and provides them an opportunity to design products and services per consumer needs and preferences, consequently making it difficult for non-banks to challenge them.

Experts have already pointed out that with the power of artificial intelligence and data, it is possible to know when, where, and how much customers will pay, even before they do. Moreover, the virtuous cycle of data feeds itself, creating winner takes all scenarios. Such data is being locked into silos, so that the value extracted from the data does not have to be shared with anyone, not even with the users who helped create it. This sort of data domination does not leave any oxygen for challengers to outgrow the giants.[56]

The European Securities Market Authority recently noted in the context of Big Data: "*The use of Big Data could potentially also have an impact on consumers' access to products/services, raise issues around the processing of data and financial institutions' pricing practices … or decision-making using Big Data technologies, the potential limitations or errors in the data and analytic tools, or security and privacy/ethical concerns, eventually leading to legal and reputational risks for financial institutions. Potential entry barriers in accessing Big Data technologies could also have negative implications on innovation and competition in the financial markets at the detriment of consumers' welfare.*"[57]

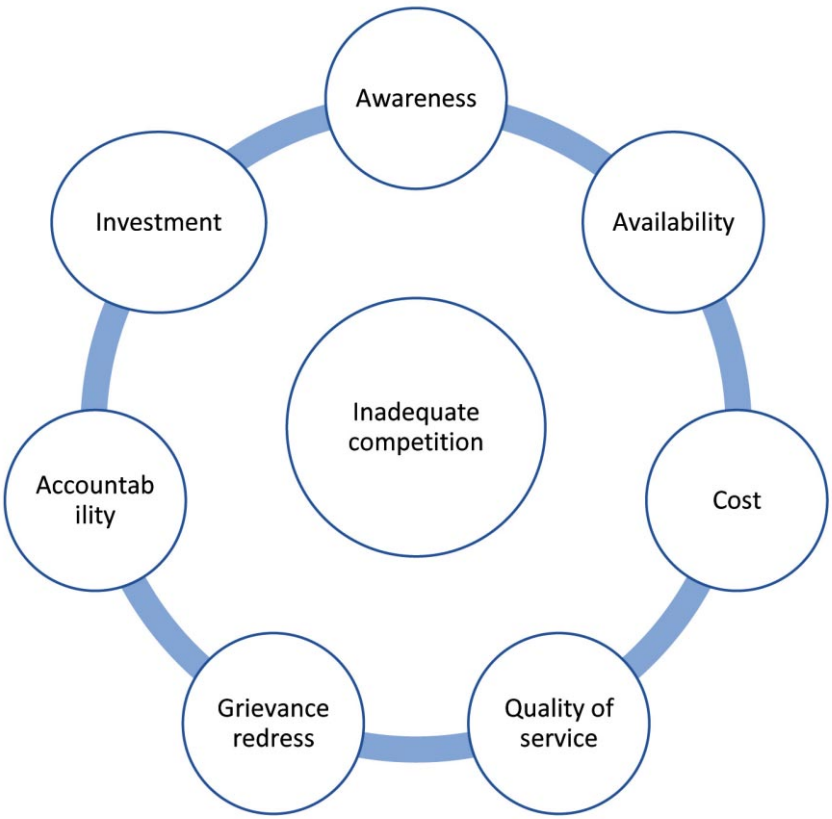
Such extension of dominant position in one sector (digital payments) to another (data) not only raises concern about abuse of dominance and limiting of competition, but also about protection of consumer data and the need to prevent its misuse.

4
Plausible Impacts of Sub-optimal Competition

Reduction in Consumer Welfare

Sub-optimal competition has the potential to adversely impact consumer welfare. It can increase cost of access, reduce quality of services and discourage innovation (**see Figure 7**). Experts suggest that there could be several direct and indirect adverse impacts of discriminatory treatment towards non-banks with respect to access to retail payments systems. These include failed transactions, liquidity risks of intermediaries, sub-optimal customer management and grievance redress, fraudulent transactions, and security and data protection.[58]

Figure 7: Indicators Adversely Impacted by Sub-Optimal Competition

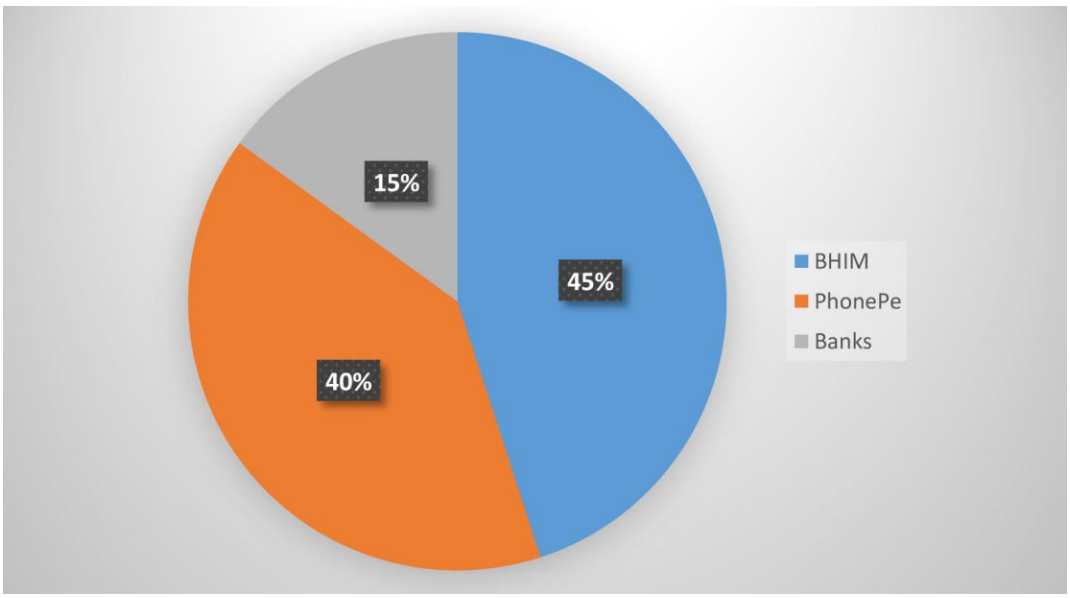


Insufficient Awareness

During April-June 2017, the UPI platform recorded 26 million payments. This was substantially short of the target of 40 million payments during this period. The contribution of UPI to overall electronic transactions is little more than one percent.[59] This points to lack of awareness among masses about the UPI platform. Experts suggest that less tech-savvy users struggle at different stages of the on-boarding process of UPI are tripped up by the jargon (such as 'passcode', 'UPI PIN', 'VPA', etc.) There is a clear need for greater awareness, generating guidance, and handholding through the on-boarding process, and in helping a user make the first transaction.[60]

Interestingly, despite having indirect access to UPI, around 40 percent of its payments are being driven by a non-bank, PhonePe, which is indicative of innovative awareness generation strategies and customer retention efforts implemented by PhonePe. It is second to NPCI's own application, BHIM, which has been able to drive merely 45 percent of payments despite full support by government and banks (**see Figure 8**). [61]

Figure 8: Drivers of UPI Payments



Source: Aadhaar News, Government augments hike in BHIM incentives, August 04, 2017

Further, it has been reported that while BHIM application has witnessed significant downloads in the past, activation rate is merely around 27 percent.[62] Less than 36 percent of rural population is aware of BHIM application.[63] Consequently, the number of BHIM downloads is down from 6.8 million in January 2017 to a mere 0.6 million in June. Moreover, a recent survey in Jaipur pointed out that the fable of demonetisation leading to higher acceptance of digital has begun to lose its sheen, and people are going back to their old ways of transacting. There is almost no awareness of the potential of digital payments to act as a gateway to deeper financial services among the low to mid income group. 49 percent of merchants reported lack of awareness on access and usage of digital payments.[64]

Inadequate competition has resulted in insufficient awareness about digital payments modes, which has consequently limited growth in digital payments and financial inclusion. This shows

that the potential of non-banks in generating awareness and attracting customers to digital payments has not been fully utilised. If non-banks are allowed to directly serve consumers without intervention from banks, they will have greater incentive to generate awareness about digital payments.

Inadequate Availability

Lack of interoperability and open access limits payments options,[65] and adversely impacts access for consumers.[66] Inability of non-banks to directly connect with UPI limits the number of entities offering UPI to merchants and customers, hence reducing the possibility of uptake from users.[67]

Owing to its limited reach, UPI has been unable to benefit from the direct and indirect network effects thus far. It has been pointed out that payment systems generally benefit from economies of scale and network effects and inability to participate in a key payments infrastructure may significantly affect the competitive balance among market participants, and tends to constrain the supply of payment services to users.[68]

UPI has not been able to treat different stakeholders, such as users sending and receiving money, app developers and banks — as distinct entities. Lack of market-based incentives for market players to adopt UPI has resulted in its low uptake.[69] Consequently, till recently, less than 50 banks were linked with UPI.[70]

While the aggregate target for UPI and BHIM is 40 crore transactions in financial year 2017-18, it must be noted the actual achievement in first quarter was a mere 2.5 crore, or a little over six percent. For all digital transactions, against the target of 2,500 crore for financial year 2017-18, the achievement for first quarter was a mere 230 crore,[71] thus pointing to lack of availability of digital modes of payments.

It needs to be realised that non-banks are the first point of contact for consumers in rural and semi-urban areas as they perform the role of on-boarding customers, conducting customer verification and undertaking best finger detection process. Despite such intensive consumer interface, they are unable to provider AEPS services. This has resulted in potential of AEPS, and other modes of digital payments, remaining under-utilised. Non-banks outreach and network in semi-urban and rural areas has not been leveraged for promoting digital payments, thus limiting UPIs reach.[72]

NPCI has also acknowledged the importance of widening the membership of products and adding new products to its portfolio as a reason for NPCI recording one billion transactions across platforms in July 2017.[73] There is a now a need to move forward from indirect access and allow non-banks direct access to payments systems.

Sub-optimal Quality

Lack of sufficient competition often results in reduction in standards of quality of service and deprives consumers of enhanced user interface.[74] It also curtails innovation, customisation and enhanced user experience which non-banks have the capacity to provide.

In case of digital retail payments, quality of service can be measured by successful transactions. It has been reported that *Aadhaar* cards have been linked with more than 500 million bank accounts, and such linkages are rapidly increasing.[75] Despite this, the failure rates owing to lack

of matching of biometric details, among other reasons, are reported to be as high as 36 percent in states like Telangana.[76] Similar high failure rates have been recorded in case of AEPS transactions. The Watal Committee on Medium Term Measures for Digital Payments noted, "*It has been brought in the Committee's notice that till recently, more than 60 percent of OFF-US*[77] *AEPS transactions were failing, whereas in OFF-US ATM transactions, failure rates are only in the range of only 10 percent. Apart from this, currently AEPS supports only ngerprints based authentication.*"[78]

Given that consumers have no option other than banks to perform AEPS transactions, banks are in a position to abuse their position without the risk of losing the customer. In this regard, the Economic Survey of India 2016-17 also notes, "*the decline rate for Off-US transactions was nearly 56 percent, almost double that for On-US transactions. One plausible hypothesis for this differential is that the larger banks are declining transactions involving smaller remitting banks while ensuring that transactions involving themselves are honoured...*"[79]. Consequently, it appears that banks are consciously not allowing digital retail payments to be made to accounts with other banks.

Further, delay in reconciliation by banks of AEPS transactions has been noticed. Such delay may lead to consumers not getting money in a timely manner. NPCI has recently issued a statement requiring banks to confirm performance of daily reconciliation at their end.[80]

As indicated earlier, non-banks and banks compete in the closed and semi-closed PPI segments. However, non-banks are dependent on banks to make payments to banks and other PPIs. It has been reported that banks often abuse such dominant position to disallow transactions with non-banks. For instance, the State Bank of India blocked its customers from transferring money to their Paytm wallets, and instead, recommended to use SBIs own wallet, the State Bank Buddy.[81] ICICI Bank had also blocked UPI transactions through PhonePe (**see Table 6**).

Table 6: ICICI Bank Blockage of PhonePe UPI Transactions
It was reported on January 13, 2017 that ICICI Bank blocked all its customers' UPI transactions to/from '@ybl' handle users. This UPI virtual payment address handle, was assigned to PhonePe by YES Bank, so ICICI in effect has also blocked all its customers from using all PhonePe products too. Reasons from 'data security concerns' to 'violation of UPI interoperability guidelines' were cited in this regard. However, PhonePe refuted all allegations[82] and argued that such allegations, despite its application being tested and validated by NPCI, amounted to scaring consumers without reason.[83] It appears that NPCI was unable to handle the situation prudently as initially it advised ICICI Bank to open UPI transactions immediately.[84] However, it quickly revised its position to state that PhonePe and Flipkart apps were in contravention of UPI guidelines on interoperability.[85] It has been reported that ICICI Bank resumed transactions on PhonePe on February 01, 2017 after the January 31 guidelines for the Android Intent Call had ended. The NPCI had issued a guideline for 'Android Intent calls', which entails that the application initiate an intent call to any other UPI enabled payment service provider application on the customer's mobile phone. PhonePe highlighted that it had not activated the intent call since the same was not being accepted by other applications and would have caused transaction failures. Thousands of transactions failed on the platform because of the block, according to PhonePe.[86] In addition, such incidents could result in loss of consumer money, delays in refunds, and loss of consumer trust in digital payments.

Consumers are the biggest losers in case of transaction failures, which reportedly occur without any fault at their end. Such instances have the potential to shake consumer trust in digital payments, which is difficult to rebuild. In addition, a recent study by Microsave revealed that mobile wallets need to redesign icons based on consumers understanding and usage patterns, to attract more consumers.[87] Competition has the potential to increase quality of services and innovation. It has also been noted that as the penetration of mobile phones, debit cards and *Aadhaar* seeding may vary among customers, thus, the providers should plan to offer and promote diverse mobile and card based payment solutions.[88] Several experts highlighted the need for inter-operable solution to promote digital payments.[89]

Moreover, a review of UPI applications by experts reveals sub-optimal quality of applications across the board. Limited number of apps provide facilities like split payments, indic support, multiple VPAs.[90] Lack of consumer protection features, such as facility of sending help text, reporting spam, dispute resolution mechanism, privacy policy are highly concerning. Significant time lapse since past update is also glaring.[91] Experts have also pointed out issues such as lack of user-friendly product design, difficulties in navigation across mobile applications offered by service providers.[92]

Such sub-optimal quality of products and services in digital retail payments services could have been avoided had there been optimal competition in the sector.

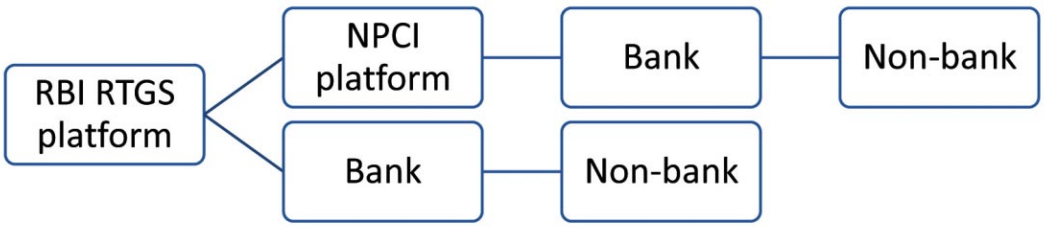
High Cost of Access

It has been noted that financial services have remained surprisingly expensive over the years and fintech have the opportunity to improve both nancial stability and access to services.[93] Sub-optimal competition often increases the cost of access of goods and services for consumers. This appears to be true in case of digital retail payments industry as well. Upfront costs and hidden charges have been cited as principal causes of non-adoption of digital payments.[94]

The situation exacerbates when consumers undertake digital payments through non-banks which are able to access payment platforms only through banks, resulting in increase of monetary and non-monetary (time and risk) costs of conducting digital payments (**see Figure 9**). It has been pointed out that in certain cases indirect access may not be effective if charges applied by the principal (an entity that is a direct participant in the infrastructure i.e. banks) are excessive relative to the costs it itself incurs for using the system, or if the criteria set by the principal for opening accounts and providing payment services to customer are disproportionate.[95]

More the number of players in digital payments, higher the cost, risk and time taken for non-banks to undertake the transaction. To illustrate, RTGS service charge of RBI comprise monthly

Figure 9: Digital Payments Value Chain for Non-Banks



membership fee and processing charges per transaction. The monthly membership fee for scheduled commercial banks is ₹5000. Every outward transaction attracts a flat processing charge of ₹0.50 (exclusive of service tax) in addition to a time varying charge up to ₹10 (exclusive of service charge). A member can charge up to ₹55 (exclusive of service tax) to non-banks/consumers for outward transactions.[96]

Several banks have chosen this upper limit as charge to facilitate access to RTGS platform.[97] Consequently, on account of uneven playing field between banks and non-banks, banks are allowed a margin of up to ₹45 per outward transaction, which can be recovered from non-banks for processing of transactions. Typically, such costs are ultimately recovered from end consumers.

In addition, RTGS service window for customer transactions is available to banks for a limited period of time, and during working days. However, most modern payment service providers, including non-banks, provide 24*7*365 payment services. As a result, such service providers are required to assume risk for the periods RTGS is not functional. For instance, the Procedural Guidelines on UPI issued by NPCI require payment service providers to ensure that adequate funds are available in its RTGS Settlement Account, after making necessary provisions for applicable holidays, to ensure seamless settlement.[98] The necessity to assume risk and the consequent need to protect consumer funds prompts imposition of entry barriers (in terms of capital and liquidity requirements) on payment system providers for directly or indirectly accessing RTGS systems.[99]

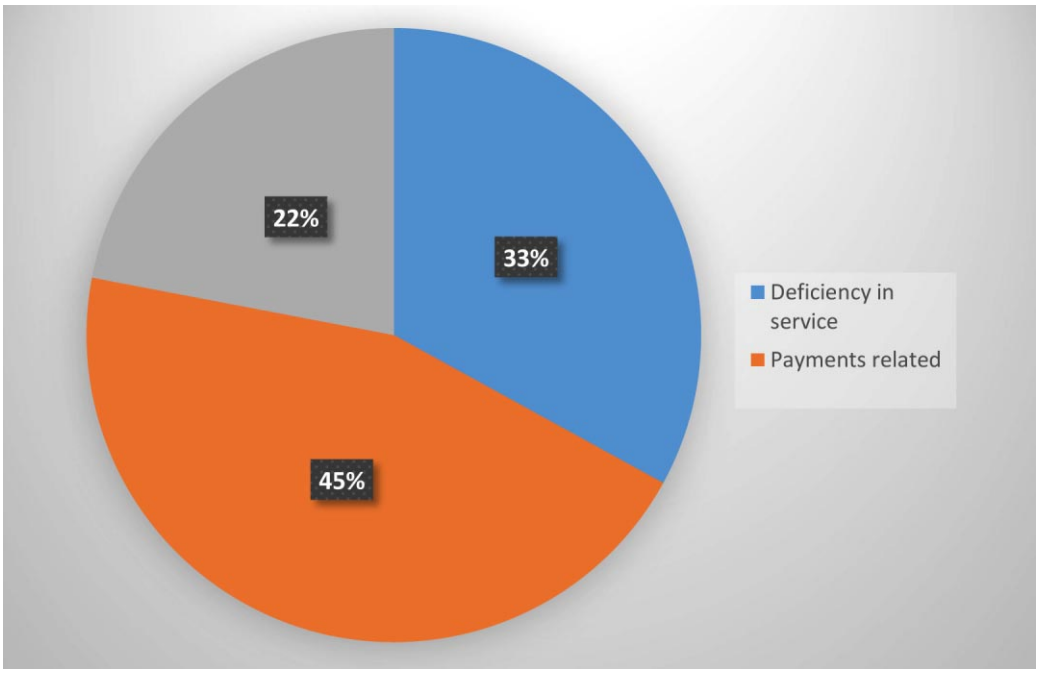
With the increase in number of intermediaries, the risk and consequently costs of accessing payments systems increase. Typically, such costs are eventually borne by consumers. In addition, non-bank issuers of PPIs are required to maintain funds equal to outstanding balance in an escrow account with any scheduled commercial bank, their potential competitors, as they themselves operate PPIs. The recently issued draft Master Directions on PPIs by RBI continue with this position.

The objective behind requiring non-bank PPI issuers to maintain outstanding balance in escrow account with any scheduled commercial bank is to enable timely settlement and ensure public confidence on PPIs. However, scheduled commercial banks are potential competitors of non-bank PPIs as they are eligible to issue and operate PPIs. Mandatory access to funds of potential competitors might put banks at a competitively beneficial position when negotiating terms and conditions of escrow with non-banks, and while designing their strategy for the PPI market. Such a situation might also discourage cooperation between banks and non-banks. Instead, non-banks must be allowed to invest their funds in highly rated liquid securities of their choice. Unavailability of such modes of investment results in non-banks losing an income generating opportunity. It also puts them at a disadvantage as they might not have much say in negotiation of charges imposed by banks in offering escrow facility. Such charges are eventually effectively passed on to the consumers, directly or indirectly.[100] As a result lack of competition appears to increase cost of access to consumers.

Ineffective Grievance Redress and Refund

Ineffective grievance redress in financial services sector is huge cause of concern, and is one of the indicators of inefficient competition. Complaints relating to payments, such as delay in refunds, unauthorised card transactions, unauthorised transactions from accounts, constitute a significant portion of total grievances in the financial sector, and are continuously increasing (**see Figure 10**).

Figure 10: Complaints in Financial Sector (%)



Source: CUTS, Grahak Suvidha Kendra, May 2017. Data for July 2015-May 2017

Further, according to data collected by the Indian Consumer Complaints Forum, the complaint resolution rate of NPCI is merely 17 percent.[101] Many grievances relate to delay and insufficiency of refunds. It has been reported that process of getting refund in BHIM application is very cumbersome. Consumers need to provide substantial details and solve a math question to file a complaint regarding BHIM/UPI with NPCI, on its website (see **Figure 11**).

It has been reported that the government has instructed NPCI to smoothen the complaint filing and grievance redress process.[102] Similar problems have been witnessed in refund process of UPI. Till recently, no application programming interface for refunds under UPI was created.[103]

Further, it has been reported that according to the procedural guidelines of products and platforms operated by NPCI, it is extremely difficult to hold NPCI accountable for any consumer grievance. For instance, in case of payments systems, relevant banks and other intermediaries appear to have been made responsible for dealing with grievance redress and NPCI has not taken any responsibility.[104]

It has even shied away from taking responsibility of consumer grievance against payments services (such BHIM) operated by it, wherein there is a direct linkage/agreement between NPCI and the consumer, and NPCI is not merely providing infrastructure support at the back end. Pursuant to the terms and conditions of BHIM app, NPCI provides no warranty of the application being free of defects or virus, quality of UPI service or BHIM application, and expressly disclaims any liability.[105]

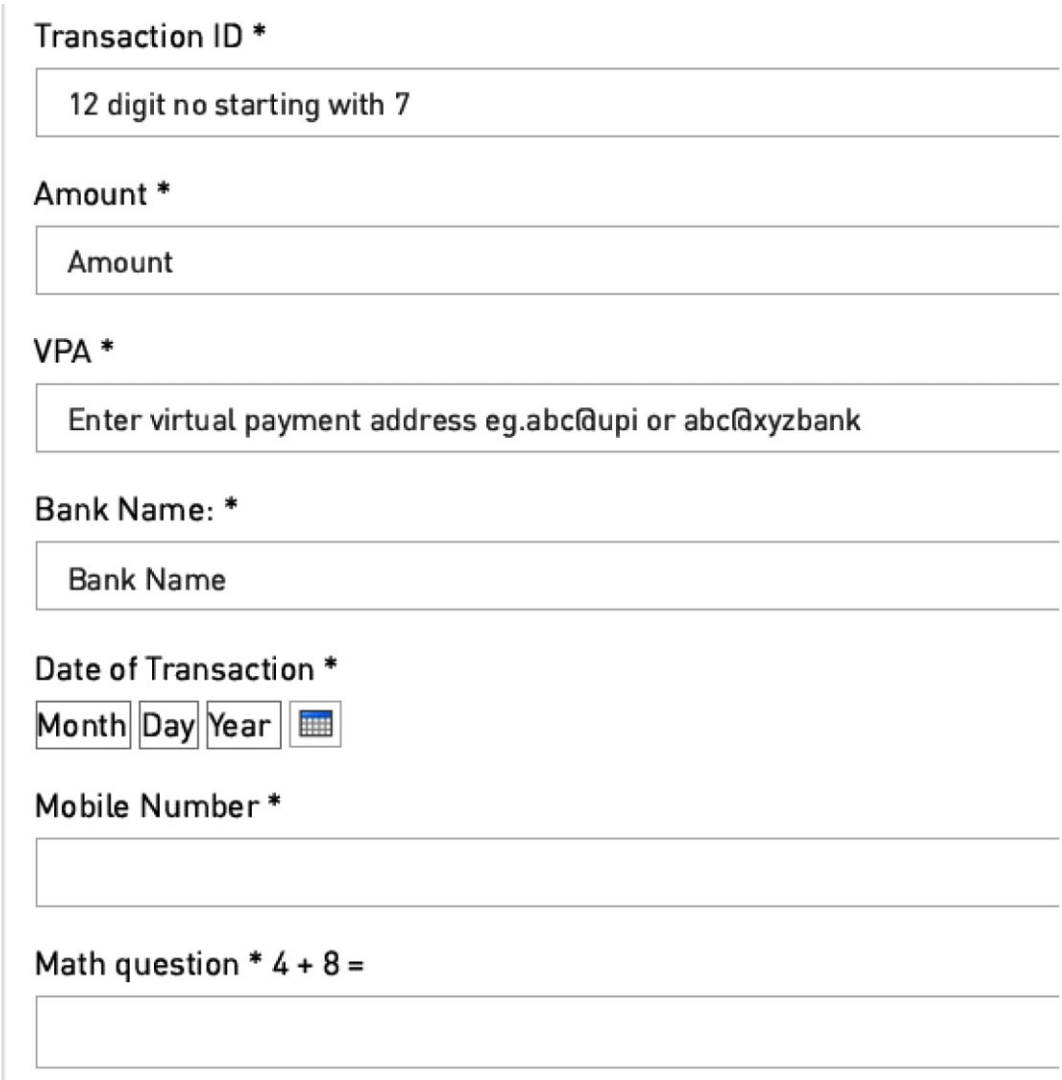
In addition, no independent statutory grievance redress forum like a banking ombudsman is available to report grievances against non-banks. This is a result of entity based regulation as against the need for activity based regulation. The government had planned to launch a helpline for e-payment grievance redress, which is not yet introduced.[106] Limited focus on fraud prevention

and privacy in products offered by service providers is also discomforting.[107] The RBI has recently issued a circular on limitation of liability of customers in unauthorised banking transactions. However, the circular is not applicable to non-banks, owing to entity-based regulatory regime.[108]

In addition, one of the key obstacles for sustained usage of digital payments by merchants is a lack of awareness on how to report problems merchants encounter while using various digital payment solutions. This highlights the need for more handholding by solution providers, as well as the need to set up robust grievance redress mechanisms.[109]

Cumbersome processes of filing complaints and sub-optimal redress mechanisms highlight the apathy which consumers are faced with. Competition has the potential to act as incentive to improve grievance redress mechanism for customer retention.

Figure 11: Details Required to File Complaint with NPCI



Source: www.bhimupi.org.in/get-touch

Lack of Accountability

Adequate competition helps in checking the behaviour of market participants and fixing accountability. Owing to sub-optimal competition in retail digital payments industry, it appears that service providers are being rarely held accountable for sub-optimal technology, data security and privacy practices.

For instance, it was reported recently that the Bank of Maharashtra lost ₹25 crores owing to a bug in its UPI application. The bug had resulted in funds moving out of the senders' accounts without them having the necessary funds. As a result, NPCI is learnt to have disallowed any new bank from joining the UPI system without thorough reconciliation and audit process.[110] However, reports suggest that multiple breaches in UPI applications have continued.[111] Owing to such repeated instances, state run banks including the State Bank of India have red-flagged security concerns over UPI. Banks concerned with security flaws in NPCI systems have required customers to provide additional details for verification and authentication of transactions.[112] This puts consumers at inconvenience without any fault of theirs, and shifting the responsibility from payment system operator to consumers.

Several reports have also highlighted security flaws in the BHIM application.[113] As a result, several consumers appear to have lost funds. Despite this, NPCI has gone on record to state that there is no vulnerability or loophole in its systems.[114] Such statements from NPCI, which has achieved a quasi-regulatory status owing to being the sole operator of AEPS and UPI payments, does little to restore public confidence. On the other hand, such statements point to sub-optimal monitoring and supervision by NPCI of service providers being linked to its systems. The unwillingness of NPCI to undertake stringent audits of mobile applications and service providers before allowing fund transfers has the potential to reduce consumer welfare.[115]

It appears that NPCI has realised the sub-optimal monitoring is adversely affecting consumers' confidence in its systems, and thus it has plans to develop a security framework exclusively for mobile phone based payments, for banks and mobile wallets, an equivalent to Payment Card Industry Data Security Standard (PCI-DSS) framework that regulates data security for card payments across the world.[116] The BHIM application is also being updated with security features, such as enabling users to block unwanted payment requests,[117] and alerts of transaction declines.[118] However, such measures are at best reactive in nature and corrective actions after damage has already been done. Competition helps entities to become proactive, prevent lapses and fix accountability.

As indicated earlier, banks and NPCI have access to significant data about consumers and transaction history. It is not clear if adequate measures have been adopted to protect customer data and prevent its misuse. Also, clarity *vis-a-vis* existence of accountability mechanisms in the event of leak of customer data and its misuse is lacking. Already, there are concerns of some entities attempting to store data and making transactions through AEPS.[119] Such incidents have the potential to shake consumer trust in digital payments.

Competition has the potential to keep market participants agile and take preventive steps which can stop customer trust from being eroded. Its potential to keep entities across the value chain on toes, and fix accountability of market players operating across levels/value chain, need to be leveraged, through allowing access of payments systems to non-banks.

Insufficient Incentives to Invest

As indicated earlier, the government has been supporting specific forms of bank led digital payments. It has also launched schemes with a corpus of around ₹500 crores to promote the BHIM application and linked UPI applications launched by banks. The benefits are not available on use of any other mobile application. Given that government is promoting specific digital payments products to the exclusion of others, venture capitalists and other investors may not have any incentive to fund competing products,[120] thus limiting innovation and outreach of digital payments.

Further, in pursuance of demonetisation, the government had capped the MDR on non-ATM debit card transactions up to ₹2,000 to promote digital payments. The cap was initially applicable for a three month period.[121] Subsequently, the cap was extended till the RBI issues final instructions on MDR,[122] which has not been happened as yet. The participating banks and PPI issuers of IMPS, UPI and USSD were advised not to levy charges on transactions up to ₹1,000 from January 01, 2017 till 31 March 2017.[123]

While such steps might be useful to arouse consumers interest in digital payments in short term, they might not necessarily result in adoption and sustainable usage of digital payments modes, for which structural reforms like ensuring adequate competition will be necessary.

Moreover, it has been reported that such measures have started to adversely impact business of digital payment service providers,[124] consequently increasing uncertainty and disincentivising investments in the sector. Investors are unlikely to invest if they are uncertain about returns on investments. This could adversely impact growth of digital payments.

5
Recommendations for Levelling the Playing Field

Recognise the Importance of Competition

There is a need to recognise that lack of competition in Indian retail digital payments industry is having adverse impact on consumer welfare and restricting the industry from realising its potential. Without levelling the playing field, it will be difficult to leverage the potential of digital payments and compete against prevalence of cash in the industry. Through allowing competition, addressing competition distortions and anti-competitive processes, and enabling regulations, regulators must support an open and level playing field for banks and non-banks to reach the underserved at scale.[125]

Allow Access by Adopting Risk Based Regulation

Hitherto, an entity-based regulatory approach has been practiced in financial sector. Banks have been assumed to be safest entities and have thus been kept at the highest pedestal and allowed direct and interoperable access to key payment platforms.

There is a need to realise that banking constitutes diverse activities like deposits, payments and credit, each of which pose different risks and can be differently regulated. All entities offering similar services need to be similarly treated, irrespective of their form. Consequently, all banks and non-banks deserve similar treatment to the extent they offer payment services. The artificial differential between bank and non-banks, to the extent payment services are considered, needs to be done away with and same standards are required to be applied for eligibility, risk and liquidity management, grievance redress and accountability, while dealing with access to critical payment systems.

Consequently, this would require allowing banks and non-banks access to payment platforms at fair and equitable terms. Non-banks must be allowed to offer all types of PPI wallets which banks offer. In addition, common grievance redress mechanisms like digital payments ombudsman should in place for consumers to file complaints against digital payment service providers, irrespective of their form.

Increased interoperability of and access to infrastructures supporting the switching, processing, clearing and settlement of payment instruments can lead to material reductions in cost and broader availability.[126] Several experts,[127] including the FSLRC Working Group on Payments have called for a level playing field within the payments industry and between bank and non-bank players in India.[128]

Also, the Report of Task Force for Promotion of Payments Through Cards and Digital Means, noted, "*that payments infrastructure and operations in India are largely driven by banks leaving aside a vast set of players associated with the payments ecosystem…it noted that innovations in the payments industry should be encouraged, and regulatory measures should be taken to encourage competition between banks and non-bank systems to drive down costs, facilitate innovation and improve compliance.*"[129]

It has also been argued that critical payment systems could be treated as 'essential facility' in the absence of a close substitute for supply of retail banking services, and access to payment service providers could be allowed on FRAND terms.[130]

Globally, countries have started to follow risk based regulation and allowing non-banks greater access to payments systems (**See Table 7**).

Table 7: Global Evidence of Greater Access for Non-banks to Payments Systems

UK: The Bank of England (BoE) has decided to extend direct excess to RTGS to non-bank payment service providers, over time.[131] The non-bank payment service providers have recently been made eligible to apply for a settlement account in the BoEs RTGS system. Holding their own settlement account at the BoE will enable these non-bank PSPs to apply, for the first time, for direct access to the UK's sterling payment systems that settle in sterling central bank money.[132]

Opening up access to the UK's payment schemes will allow non-bank payment service providers to compete on a more level playing field. They will be less dependent on competitors and able to offer a wider range of payment services. These factors help increase competition and innovation in the market for payments. It is expected that in the longer term, the innovation which stems from this expanded access should aid in promoting financial stability by creating more diverse payment arrangements with fewer single points of failure, identifying and developing new risk-reducing technologies, expanding the range of transactions that can take place electronically and be settled in central bank money.[133] The BoE has also released a Blueprint for a new RTGS service which contains broader access and wider interoperability as important considerations.[134]

Australia: Australia is expected to launch a New Payments Platform which will be accessible to different kinds of users. The platform is expected to be launched within a year. When the platform launches, it is anticipated that the majority of Australian bank accounts will be able to receive faster data-rich payments. This reach will gradually increase as more financial institutions and organisations connect to the platform over time.[135]

Africa: Experience from Kenya suggests that as digital financial services sector develops, regulatory priorities need to be shifted from growth and investment to ensuring interoperability and fostering competition for the sake of greater financial inclusion.[136] The introduction of National Payments Acts in Kenya in 2014 and the National Payment Systems Act in Tanzania helped in clarifying these questions of regulatory jurisdiction across authorities as well as set common standards for different types of firms offering mobile financial services (e.g., banks and mobile network operators).[137] Ghana recently issued draft of the Payments Systems and Services Bill 2017, which envisages non-banks to offer a variety of payment services. Similarly, the Central Bank of Liberia mandated in its Mobile Money Regulation of May 2014 that all authorised institutions licensed under its regulations should provide systems that are interoperable with systems of other authorised institutions.[138]

Brazil: In 2016, the Central Bank of Brazil decided to establish a working group with market participants to discuss and promote interoperability in the Brazilian market. In its first task on the operational side, the group discussed adjustments in the current interbank credit transfers standards to cope with non-bank payment service providers.

Hong Kong: The Hong Kong Monetary Authority (HKMA) is aiming to launch the new Faster Payment System (FPS) in late 2018. The FPS will be a multicurrency service allowing consumers to make retail payments and fund transfers 24/7 in real time. The target is to enhance consumer and company payment convenience and efficiency, but the HKMA also aims to promote healthy competition between banks and encourage non-traditional payment service providers through the provision of innovative services on top of a faster payment service.[139]

Malaysia: Malaysia is developing a new Retail Payments Platform which will grant eligible non-bank players access to the platform, opening the door for more competition, in particular from third-party mobile payment companies.[140]

US: The recently released report of the Fast Payments Task Force in US notes that the vision of a better payment system which is faster, ubiquitous, broadly inclusive, safe, highly secure, and efficient, can be realised through collaboration among all stakeholders, including competing faster payments solution operators, payment service providers, end users, and others.[141]

European Union: The European Payment Services Directive 2 (PSD 2) allows innovative players to compete for digital payments services alongside banks and other traditional providers.[142] It intends to increase competition and stimulate innovations, while harmonising market conditions and encouraging a level playing field.[143]

Others: Mexico has granted non-banks access to Mexican RTGS system.[144] The recently issued Singapore Payments Roadmap envisages expanding access to the payments systems and facilitating private sector innovations and improvements.[145]

Operationalising Access

Non-banks should be allowed access to retail payment platforms run by NPCI. This would require RBI to amend its regulations to allow non-banks to issue open system PPIs. As open system PPIs offer greater services to consumers, such as interoperable payments, and cash-out services, they carry greater risks as compared to closed loop and semi-closed PPIs. Consequently, banks and non-banks opting to issue open system PPIs must be subject to stringent customer identification and authentication requirements. A graded know your customer (KYC) structure could be put in place depending on risks involved in the activities of payments system providers, irrespective of the type of provider.

In addition to amendment of regulation by RBI, NPCI would need to allow non-banks direct access to its switching technology and clearing and settlement facilities for payment platforms such as IMPS, UPI, AEPS and BBPS. In order to operationalise AEPS through non-banks, NPCI will need to link *Aadhaar* numbers of consumers with unique non-bank PPI identifier, subject to express and informed consent of consumers.

Alternatively, a phased approach may be adopted to allow non-banks access to payment platforms. Globally, critical payment platforms allow entities to opt for direct and indirect access. Indirect access constitutes direct access to payment platform's technology but indirect access to its clearing and settlement facilities, through sponsored entities. In other words, there may be 'direct access' when it comes to transaction switching/exchanges, but clearing and settlement may occur under indirect access.[146]

Countries, such as Nigeria have adopted this model to allow access to non-banks to critical payment infrastructure. In addition, in Jordan, the National Mobile Payment Switch (JoMoPay)

was developed and built following an initiative of the Central Bank of Jordan (CBJ) for the purposes of exchanging 'on-us' and 'off-us' payments among payment service providers, including banks and MNOs that operate e-wallets. MNOs need to open account at a commercial bank in order to be able to settle transactions in the country's RTGS system (the 'RTGS-JO', operated by the CBJ). In other words, MNOs are direct participants in JoMoPay which allows them to exchange payment transactions directly, but need to be sponsored into settlement in the RTGS-JO by a direct participant of the latter (i.e. a commercial bank).[147]

In India, the option of sub-membership/indirect access to RTGS is only available to those banks that are not in a position to directly access it, and no other entity.[148] Allowing non-banks direct access to switching technology and indirect access to clearing and settlement facilities of NPCI and RBI could be a good first step in facilitating effective competition in retail digital payments sector.

Create Threat of Competition for NPCI

A competitive environment (or even a threat thereof) usually forces the incumbents to improve their performance, and make adequate provisions for fixing accountability and grievance redress. For instance, the financial sector has suffered in the past from opaque bank licencing policy. There were no clear guidelines or conditions on eligibility criteria for potential entrants in the banking system. A discretionary window approach was followed pursuant to which applications were invited within a prescribed time frame. As a result, no bank licenses were issued from 1994-2000 and 2002-2012.[149] There was no fear of competition among the incumbents. As a result, performance deteriorated and costs rose, resulting in reduction in consumer welfare.[150]

It was only recently that the regulator realised the merits of threat of competition and released guidelines for on-tap licencing of universal banks in private sector.[151] This move is expected to improve performance and prune operating costs, thereby benefiting consumers in the banking sector.[152]

It is unlikely that payments systems will be exception to this principle. Consequently, it will be useful for the regulatory agencies to learn from its experience in banking sector and apply it to the payments sector. A regulatory architecture needs to be put in place which makes it possible for interested entities to compete with NPCI by launching and operating competing payments platform, subject to application conditions. Threat of direct competition to NPCI in retail digital payments is expected to improve its performance.

Broad-base Decision Making at NPCI

As indicated earlier, NPCIs shareholding is limited to banks and non-banks have no formal representation in any of the steering committees of IMPS, UPI and AEPS. As a result, critical decisions with respect to NPCIs payments platforms are taken by banks.

In order to introduce systemic changes and ensure points of views of all market participants are taken into account in decision making of critical retail payments systems, there is a need for broad-base decision making at NPCI and its steering committees. It has been reported that several non-bank payment service providers like Paytm and PhonePe have recommended to the government that the NPCI be made a neutral body to ensure a level-playing field between banks and private technology companies.[153] The Watal Committee has made similar suggestions.

A phased approach could be adapted to broad-base decision making at NPCI. During the first phase, payments banks, small finance banks, non-banks and other fintech companies in the payments ecosystem could be made permanent invitees to the technical committees of NCPI. In the second phase, such entities could be offered NPCI's shares, along with voting rights and rights to participate in governance.[154] In the third phase, other stakeholders such as credible consumer organisations, think tanks and CSOs could be offered a status of permanent invitees to technical committees of NPCI. This will aid NPCI to take into account concerns of consumers and society, and consider broader economic interest. Decisions made by taking into account concerns of all stakeholders have greater chances of being successful and sustainable.

To enable non-bank membership within the walled-gardens of NPCI, the Payments and Settlement Systems Act, 2007 (PSS Act) will need to be amended. In its current form, the PSS Act envisages clearing houses only for banks, with majority ownership of public sector banks.[155]

Globally, different models have been followed to promote stakeholder consultation. In many countries, central banks have established and usually chair a 'National Payments Council' (NPC) that serves as a forum for multi-stakeholder consultations. In some cases, the NPC is a statutory body. In others, a body resembling NPC has been created as a company with operational functions, such as implementation of standards. It is crucial that the NPC gives fair representation to all the stakeholders. These normally include: the central bank, the Ministry of Finance, other relevant regulators (e.g. telecom regulator), the commercial banks, the non-bank financial institutions, non-bank payment service providers, the payment infrastructure providers and users (including both major initiators like the national treasury as well as consumers). In some cases, the competition and the national identification authority have also been invited to join NPC discussions, and to participate in specific developments.

To illustrate, the National Payment Systems Council (NPSC) of Bangladesh, created in 2007 is the central vehicle for formulating strategy, disseminating information on policy and good practices, and promoting technological development in the payments system. In Europe, the Euro Retail Payments Board (ERPB), a forum of all Euro area retail payments stakeholders. The Payments Association of South Africa is a private sector organisation, designated as a "payments system management body" under South Africa's NPS Act.[156]

Payments Canada has setup a Stakeholder Advisory Council (SAC) which essentially provides advice to the Board of Directors on payment, clearing, and settlement matters, and contributes input on proposed initiatives, including by-laws, policy statements, and rules that affect third parties.[157] Notably, the SAC is a statutory body and consists of consumers, businesses, retailers, and governments, as well as related service providers.[158]

While broad-basing decision making at NPCI, as suggested earlier, could be an ideal beginning, it might potentially lead to conflict of interest as NPCI has quasi-regulatory and standard setting powers, in addition to being operator of payments systems and services. Such conflict might lead to sub-optimal operation of retail payments systems.[159] Consequently, it might be a good idea to separate the quasi-regulatory/advisory and operational functions of NPCI. While one of the resulting entities could represent stakeholders and provide expert advice to payments regulator, the other could operate the retail payments systems.

The Payments and Settlement System Vision 2018 of the RBI also envisages setting up a Payments System Advisory Council (PSAC) of industry and government representatives/experts to strengthen the consultative process.[160] However, the recently released RBI Annual Report 2016-17 notes that PSAC was to be constituted as an advisory body to the Board for Regulation and Supervision of Payment and Settlement Systems (BPSS). Since the Payments Regulatory Board (PRB) is envisaged to replace the BPSS as per the Finance Bill, 2017, no further action is being taken on the formation of PSAC.[161] It needs to be realised that the roles of PRB and PSAC are different and important in their own right. The PRB, despite having representation from outside RBI, can substantially benefit from expert structured consultation process, constituted and recognised by the regulator. Thus, the idea of PSAC needs to be revived.

Regulate NPCI as Financial Market Infrastructure

Financial market infrastructures (FMIs) are entities which facilitate the clearing, settlement, and recording of monetary and other financial transactions. They strengthen the markets they serve and play a critical role in fostering financial stability. However, if not properly managed, FMIs can pose significant risks to the financial system and be a potential source of contagion. The disorderly failure of an FMI could lead to severe systemic disruption and markets could cease to operate effectively.[162]

To manage the risk posed by FMIs, the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) has laid down general standards for FMIs. These standards are applicable to all systemically important payments systems, among other FMIs. A payment system is systemically important if it has the potential to trigger or transmit systemic disruptions. This includes, among other things, systems that are the sole payment system in a country or the principal system in terms of the aggregate value of payments; systems that mainly handle time-critical, high-value payments; and systems that settle payments used to effect settlement in other systemically important FMIs. In general, the principles are applicable to FMIs operated by central banks, as well as those operated by the private sector.[163]

As indicated above, NPCI operates most of the electronic non-paper retail payments platforms in the country, including IMPS, UPI and AEPS. It is the only entity registered as retail payments organisation and also the sole operator of BBPS. It also operates one of the most successful mobile payments applications, BHIM. While these payments systems currently constitute a miniscule proportion of the total volumes and values in retail payments, they are expected to gather momentum in near future. Consequently, NPCI needs to be treated as a FMI. Given NPCIs role in payments market, its dominant position, access to crucial consumer data, its role in success of digital payments, and to address single point of failure risk, it is essential that it is regulated as FMI.[164]

It will be important to ensure NPCI is regulated in accordance with these principles. The government has, on many occasions, declared its trust in systems and services operated by NPCI. It is important that such trust is not eroded. Optimal regulation of NPCI will go a long way in providing such assurance. It has been noted that although the Principles were designed for being applicable to systemically important payment systems (and other FMIs), many central banks also apply the PFMIs, or a subset thereof, to the main retail payment systems in their jurisdiction.[165]

The CPSS-IOSCO principles describe several risks faced by FMIs and provide guidance for managing them. The risks include systemic risk, legal risk, credit risk, liquidity risk, operational risk, among others. It lays down several core principles which FMIs are expected to comply with in their operation. These include principles on: credit and liquidity risk management; settlement; default management; access; efficiency; transparency, among others. The Principles also set out responsibilities of central banks, market regulators and other relevant authorities for: regulation, supervision and oversight of FMIs; disclosure of policies with respect to FMIs; cooperation with other authorities, among others.[166]

In addition, it points out unique risks which specific FMIs need to deal with. For instance, in order to address credit risk, a payment system needs to cover its current and, where they exist, potential future exposures to each participant fully with a high degree of collateral and other equivalent financial resources. Similarly, in order to address liquidity risk, a payment system should maintain sufficient liquid resources to settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.[167]

Regulating NPCI as FMI would aid in optimal regulation and management of risks emanating from its operations and unforeseen circumstances. It will also prepare it for impending growth phase, it is expected to enter into.

Reform Regulatory Framework of Retail Payments

Pursuant to the recommendation of Watal Committee, the Union Budget 2017 had proposed constitution of a 'Payments Regulatory Board' (PRB) within the RBI for regulation and supervision of payments. The Board is expected to consist of three representatives of RBI and three persons nominated by the central government.[168]

Significant time has elapsed since the decision to constitute PRB, however, PRB is not yet in sight. There is no clarity on eligibility criteria or nomination process of non-RBI representatives on the PRB. As indicated earlier, government has supported bank led modes of digital payments over non-banks. Continuity of such myopic point of view remains a possibility in the wake of opaqueness in constitution of PRB. It is essential that government adopts a broader viewpoint and nominate credible independent experts having significant expertise and experience in digital payments as members of PRB. It will also be important to ensure consumers' concerns are taken into account while taking regulatory decisions for retail digital payments. Government should ensure that one of the expert members appointed to PRB is impartial to interests of direct stakeholders (service providers) and represents consumers/civil society.

Despite existence of PRB, retention of regulatory powers of retail digital payments with RBI could lead to conflict of interest as RBI also operates retail payment platforms like NEFT. Consequently, there is a need to revisit the argument of constituting an independent payments regulator for digital payments. For instance, UK has an independent and professionally run Payments System Regulator, a subsidiary of Financial Conduct Authority.[169]

The primary legislation in the Indian digital payments sector is Payments and Settlement Systems Act, 2007 (PSS Act). It has weaknesses, such as unclear objectives, preference to banks, and lack of accountability. It has been reported that government is in the process of revising the PSS Act,

however, timelines are not clear. In addition, there is no regulation as yet on resolution and exit of payments systems and service providers.

Given the rapid technological process, our retail payments legislation needs to ensure modern payments systems which are flexible and adaptable, yet stable. Given the involvement of vulnerable consumers, increased focus should be on user protection. A review of retail payments oversight framework in Canada has proposed a new approach to regulating retail payments, **which is summarised in Table 8.**

Table 8: Approach to Regulation of Retail Payments

Key risks	Key objectives	Key principles
Operational risk: Inadequate or failed internal processes, system failures, human errors, or external events that may disrupt payment services **Financial risk:** Failure to ensure sufficient liquidity to meet payment obligations and failure to properly safeguard end-user funds **Market conduct risk:** Behaviour of payment service providers with respect to end users that may lead to harm **Efficiency risk:** Barriers to entry, abuse of market power, limiting competition and innovation **Money laundering and terrorist financing risk:** Use by criminals to disguise the origin of funds derived from criminal activity or use to finance terrorist activities	**Safety and soundness**: Appropriate measurement, management and control of risks **Efficiency**: Effectiveness in clearance and settlement processes by ensuring competitive market conditions and removing barriers to entry to drive cost reductions and innovation **User interests**: Convenience, ease of use, price, safety, privacy, effective redress mechanisms, disclosure, risks and performance standards	**Necessity**: Oversight should address risks that can lead to significant harm to end users **Proportionality**: Level of oversight should be commensurate with the level of risk posed by a payment activity **Consistency**: Similar risks should be subject to a similar level of oversight, irrespective of the type of entity or the technology **Effectiveness**: Clear, accessible and easily adaptable requirements. Entity that poses the risk should be responsible for managing it. Regulator should have adequate enforcement capabilities

Source: Review of retail payments oversight framework in Canada[170]

The framework proposed in Canada could act as a good starting point in reforming the retail payments regulation in India.

Employ Regulatory Sandbox and Regulatory Impact Assessment

One of the principal arguments for treating non-banks differently from banks is the risks they bring with themselves. However, incorrect assumptions of excessive risks have the potential to put in place unreasonable restrictions on entry and operation of non-banks in the financial sector. Increasingly, new tools such as regulatory sandboxes are being used to identify and manage unforeseen risks. Regulatory sandboxes are tailored regulatory environments or 'safe zones' for conducting small scale, live tests of new fintech products and delivery models. These are evidence-based tools for fostering innovation while allowing regulators to remain vigilant to consumer protection and financial stability risks.

Regulatory sandboxes can help reduce regulatory uncertainty for new products or business models. The UK has been pioneer in use of regulatory sandboxes. In recent months, jurisdictions around the world, including Abu Dhabi, Australia, Bahrain, Brunei, Canada, Dubai, Hong Kong, Indonesia, Malaysia, Netherlands, Russia, Singapore, Switzerland, and Thailand, have announced or launched their own financial regulatory sandboxes.[171] In addition to regulatory sandboxes, there are good regulatory practices like RIA, which help in assessing the impact of proposed regulatory interventions in advance and prevent prescription of unreasonable conditions.

Such practices can help consumers benefit from innovation in areas like digital credit, peer-to-peer technology, integrating payments with other sectors such as electricity sector and adopting pay as you go model, use of artificial intelligence, algorithms and distributed ledger technologies (DLT) in making payments efficient and fast. For instance, DLT promises to streamline payment, clearing and settlement processes by reducing the number of intermediaries and eliminating the need for reconciliation among those that remain. It allows participants in a payment system to jointly manage and update a synchronised, distributed ledger. This contrasts sharply with existing payment systems, where a single authority manages a central ledger.[172]

However, DLT may pose new or different risks concomitant to operational and security issues arising from the technology, lack of inter-operability with existing processes and infrastructures and issues related to data integrity, immutability and privacy.[173]

Platforms like Facebook, Amazon, among others, are expected to enter digital retail payments industry. They are expected to leverage their subscriber base to offer digital payments services. Frameworks like regulatory sandbox and regulatory impact assessment can aid in optimally regulating such entities.

Given that it encourages a 360-degree stakeholder consultation, including of other government departments, regulatory impact assessment can help government achieve consonance and harmonisation between different government initiatives. For instance, under its 'Digital India' programme, government is promoting digital payments. It is also promoting transparency and taxation reforms through measures like GST. Pursuant to GST, the tax on MDR (income to digital service providers for providing digital payment services) increased from 15-18 percent.[174]

This increase in tax has the possibility to discourage digital transactions. The government is now mulling two percent relief on GST for digital payments.[175] Such instances and multiple policy revisions can be avoided if tools like RIA are adopted.

To ensure consumer benefit from innovative products and services and unlocking the potential of digital payments, Indian regulators will need to employ measures like regulatory sandboxes and RIA and ensure proportionate regulation.

Ensure Consumers' Right Over Data and Facilitate Open Banking

As discussed earlier, banks and NPCI have disproportionate access to consumers' personal information and transaction history, to the exclusion of non-banks. It is not clear with if express and informed user consent was obtained for such data collection and if adequate data protection and privacy practices are being adopted.

Recently, the Supreme Court has recognised the right to privacy as a fundamental right.[176] The right is subject to reasonable restrictions and can be violated only upon express and informed

user consent. Consequently, the judgement makes consumers rightful owners of data generated by them, and empowers them to use in the data in the way they desire. Experts have pointed out that consumers must be able to share their data in a safe, consented manner with their choice of service provider. Data portability will empower users to choose what their data is used for. To this end, it has been suggested that governments and regulators need to open up big public data sets for users to consume, in a standard, machine-readable format. In addition, a policy is needed to allow for the free flow of data with user consent in the private, unregulated spheres, to realise the potential of big data, in areas such as digital lending.

Similar initiatives are being undertaken in other jurisdictions in the financial sector. The PSD2 in European Union is expected to break bank's monopoly on their user's data, and allow access of such data to other service providers through open application programme interface (APIs), subject to user's consent. It enables bank customers to use third-party providers to manage their finances, while money remains in respective bank accounts. This will enable third-parties to build financial services on top of banks' data and infrastructure. PSD2 also prohibits the use of non-transparent pricing methods for international payments.[177]

In addition, the Australian government is planning to introduce an open banking regime under which customers will have greater access to and control over their banking data. Open banking will require banks to share product and customer data with customers and third parties with the consent of the customer. Data sharing will increase price transparency and enable comparison between services to accurately assess how much a product would cost a consumer based on their behaviour and recommend the most appropriate products for them. It is expected that open banking will drive competition in financial services by changing the way consumers use, and benefit from, their data. This will deliver increased consumer choice and empower bank customers to seek out banking products that better suit their circumstances.[178]

Encourage Partnerships and Early Regulatory Engagement

Globally, banks and non-banks digital payments providers are partnering to provide cutting edge customised services to consumers at the bottom of pyramid. Partnerships have helped in gaining access to new market segments, creating new offerings for existing customers, and other benefits. For instance, MasterCard is partnering with Grindrod Bank and Net1 to reach unbanked population segments in South Africa. It is essential that all stakeholders come together in order to increase engagement with digital financial services and realise its potential to improve lives.[179]

Early and open engagement with regulatory agencies has facilitated positive regulatory responses. For instance, in Mastercard's case, regulation in South Africa initially prevented integration of payments data with biometric identification data on one chip. Following a conversation with regulators, however, the project gained permission to complete the integration.[180]

Consequently, there is a need to realise that level playing field in digital retail payments sector is essential to leverage its potential and facilitate competition with cash in retail payments. Engendering and sustaining a level playing ecosystem will encourage better competition and cooperation (in necessary areas) between banks and non-banks. This is expected to have a positive impact on consumer welfare, by enhancing awareness, ensuring availability, improving quality of services, keeping costs under check, effective redress of grievances, fixing accountability and empowering consumers.

6
Developments from September 2017-January 2018 and related Recommendations

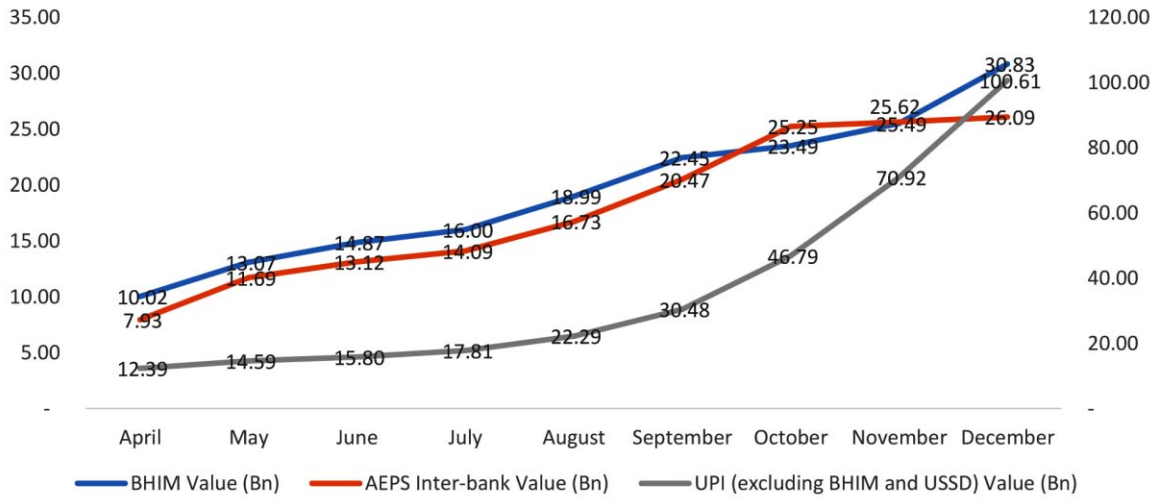
As discussed, promotion of digital payments has been stated objective of the Government of India. In the last one year, the government has broadly used three types of tools to promote digital payments. These are: financial, operational and regulatory. The sections below examine the application and effectiveness of these tools with special focus on the developments that took place from September 2017-January 2018.

1. Financial tools: The government provides financial incentives in form of cashback and bonus to individuals and merchants undertaking digital payments. To this end, it has launched schemes like BHIM *Aadhaar* Merchant Incentive Scheme,[181] BHIM Cashback Scheme for Merchants[182] and BHIM Referral Bonus Scheme for Individuals.[183] For six months starting April 14, 2017, a budget outlay of ₹495 crore was made for BHIM Cashback Scheme for Merchants and BHIM Referral Bonus Scheme for Individuals. Pursuant to notifications dated August 14, 2017, all three schemes were extended till March 31, 2018.

In addition, the government has recently decided that the MDR applicable on all debit card/ BHIM UPI/AEPS transactions up to ₹2,000 will be borne by the government for a period of two years with effect from January 01, 2018 by reimbursing the same to the banks. This is estimated to cost the exchequer around ₹1,050 crore in 2018-19 and ₹1,462 crore in 2019-20.[184]

In other words, at least ₹3,000 crore of taxpayers' funds are being used to provide financial incentives for promoting digital payments. It may be recalled that BHIM is a mobile application for enabling digital payments operated by NPCI, country's only retail payments organisation in which banks have majority shareholding. NPCI also operates BHIM *Aadhaar* to enable payments to merchants through biometric authentication and transfers from customers' *Aadhaar* number linked bank accounts. UPI and AEPS are payments systems/platforms operated by NPCI which facilitate digital payments. Consequently, it appears that most financial incentives are targeted to boost digital payments through applications and systems operated by NPCI. Figure 12 (on page 36) showcases growth in volume of digital payments through such applications and platforms:

Figure 12: Growth in value of digital payments (2017)



Source: NPCI (Retail payment statistics on NPCI platforms)

While it may be too soon to assess impact of such financial incentives, it may be useful to examine the factors that drive uptake and usage of digital payments among different stakeholders, especially merchants. A recent survey involving survey of micro-merchants revealed that despite having bank accounts and being aware about traditional digital platforms, awareness about mobile and internet banking is lower and the usage is consequently lower. Few merchants rely in formal sources of finance and those who do are unlikely to be satisfied with formal lenders.[185] Consequently, a holistic service that includes credit extension has been suggested. Low cost value added services like reminders to consumers and merchants for making payments, networking platform with suppliers, indications on potential credit limits could ensure greater uptake and continued usage.[186]

In coming months, it might be useful to conduct an impact assessment of financial incentives provided to promote digital payment and analysis if it is the most cost-effective option to achieve the objective.

2. Operational tools: The government has been nudging banks to make operational/business decisions to promote digital payments. Banks have been requested to charge merchant and customers only such charges as prescribed by the RBI for debit card, UPI and USSD transactions. They have been requested to not pass onto merchants the cost of payment acceptance infrastructure, and absorb such cost by cross-subsidisation with savings from reduction in cash transactions.[187] Banks have also been asked to re-examine the policy of allowing certain number of free cash transactions, while charging for every digital transaction.[188] In addition, the RBI has recently capped the MDR for debit card transactions. The cap differs with turnover of merchants (up to or above ₹20 lakhs) and acceptance infrastructure used (QR code enabled and others).[189]

The fixation with price caps is not limited to Indian regulators, but has been used by regulators in other jurisdictions as well. US,[190] Australia, Europe and Estonia, among others, regulate interchange fees chargeable in digital payments. Evidence is mixed with respect to the impact

of such cap. A recent study in US found that banks subject to such cap decreased the availability of free accounts, raised monthly fees, and increased minimum balance requirements, with different adjustment across account types. Banks exempt from the cap also adjusted prices as a competitive response to price changes made by regulated banks.[191] This is very similar to experiences in India wherein regulatory mandates often fail to conduct *ex-ante* impact assessment on different stakeholders, resulting in banks cross-subsidising such services by restricting access or increasing prices of other services.

A 2014 survey among merchants in US found that the price regulation had limited and unequal impact on merchants' debit acceptance costs. Around two-thirds reported no change or did not know the change of debit costs post-regulation. One-fourth of the merchants, however, reported an increase of debit costs, especially for small-ticket transactions. Less than 10 percent of merchants reported a decrease of debit costs. The impact varies substantially across different merchant sectors.[192] It has been noted that price caps cannot be an alternative to operation of market forces[193] and structural reforms in market.

Further, over the long run, other factors are expected to influence the structure of the payments system. These include technological developments allowing consumers to submit payments directly to other consumers or small businesses via alternative payment systems, and greater competition from non-bank institutions.[194] India is already witnessing impact of innovation in digital payment space. As per data released by NPCI, the UPI platform recorded 145.64 million transactions of ₹131.74 bn in December 2017. Approximately 94 percent volume and 76 percent value is reported to have been driven by innovative non-bank service providers like Google Tez and PhonePe.[195]

3. Regulatory tools: These include legislative and regulatory changes impacting digital payments. Pursuant to the budget 2017-18, the Payments and Settlement Systems Act, 2007 (PSS Act) was amended to constitute a Payments Regulatory Board in the RBI by replacing the Board for Regulation and Supervision of Payment and Settlement Systems (BPSS).[196] While the PSS Act was amended, the PRB is yet to be operationalised. The RBI has since dropped the idea of forming a Payments System Advisory Council, an advisory body envisaged earlier to support the BPSS.[197]

In addition, the last one year, the RBI has revised the regulatory framework of PPI issuers[198] and has introduced a regulatory framework for peer-to-peer lending platforms.[199] To ensure that such changes promote digital payments, it is necessary that they offer level playing field to different service provides and avoid impose unreasonable costs. Sufficient evidence exists about benefits of optimal regulation and competition across jurisdictions and sectors, including digital finance.

Optimal regulation and competition creates breeding ground for innovation,[200] can have significant impact on reducing costs,[201] and contribute to increase in volume of transactions. It has been suggested that the total mobile money transaction value was 5.4 percentage points higher in markets with enabling regulation, compared to countries with non-enabling frameworks – resulting in greater financial inclusion in the process.[202] As elucidated earlier, Tanzania, Uganda and Pakistan are among some markets which have benefitted from increase in competition and interoperability in digital payments.

Consequently, it will be useful to examine if recent regulatory changes move towards optimal competition and regulation. Such assessment can be undertaken by seeking responses to key questions as was pointed in Table 3 on page 10, which summarises approaches of competition assessment. Broad findings of competition assessment of recent regulatory changes in digital payments are set out below:

1. High entry barriers – The PPI regulations provide that all existing non-bank PPI issuers are required to have a minimum positive net-worth requirement of ₹15 crore as on March 31, 2020. Thereafter, the minimum positive net-worth of ₹15 crore is required to be maintained at all times. Previously, banks and non-banking financial companies were required to comply with capital adequacy requirements as prescribed by the RBI from time to time. All other persons were required to have a minimum paid-up capital of ₹5 crore and minimum positive net worth of ₹1 crore at all the times. The substantial increase in net worth requirement may adversely impact smaller players currently operating in the market, who might not be in a position to comply with the revised requirements by March 2020. In addition, the revised requirements may dissuade smaller interested players to enter the market.

Similarly, the eligibility criteria for non-banks to operate peer to peer lending platforms is net owned fund of ₹2.5 crore, which may discourage several interested players.

2. Disregarding proportionate requirements – The PPI regulations provide that semi-closed PPIs with outstanding amount of not more than ₹10,000 can be issued by banks and non-banks by accepting minimum details of PPI holder. However, such PPIs are required to be converted into fully Know Your Customer (KYC) compliant semi-closed PPIs within a period of 12 months from the date of issue of PPI. Such fully KYC compliant semi-closed PPIs are eligible to keep amount outstanding up to ₹1,00,000. However, the conduct of full KYC requires collection of proof of identity and address from the customer or conducting KYC verification through e-KYC service of UIDAI.[203]

Conducting full KYC can be expensive when compared with collecting minimum details of PPI holder, and may force PPI issuers to rethink their business strategy. In addition, some consumers might not be interested in obtaining enhanced benefits of full KYC and not willing to part with sensitive information. The revised requirements do away with risk based KYC and takes a one-size-fits-all approach, which may adversely impact interests of service providers and consumers.

The peer to peer lending platform regulations also impose high operational costs and adopt one size fits all approach. There are caps on exposures of lenders and amounts borrowed by borrowers. For instance, exposure of a single lender to the same borrower, across all peer to peer lending platforms cannot exceed ₹50,000. This is expected to reduce the attractiveness of the platform and the design of products which lenders can offer.

3. Escrow requirement – Pursuant to the PPI regulations, non-bank PPI issuers are required to maintain their outstanding balance in an escrow account with any scheduled commercial bank. This accords universal banks, which compete with non-bank PPI issuers, additional leverage in negotiating terms of engagement with the latter.

Similarly, under the peer to peer lending platform regulations, such platforms are required to maintain two escrow accounts, one for funds received, and other for collections from borrowers.

Both such escrow accounts are required to mandatorily promoted by banks. This restriction is expected to constrain innovation in fund transfer and restrict the income generating avenues of such platforms.

4. Preference to banks – Under the PPI regulations, while banks and non-banks can issue closed and semi-closed payment instruments, only banks are allowed to issue open system payment instruments. Further, in case of co-branding arrangements between bank and non-bank entity, the bank is required to mandatorily be the PPI issuer. The role of the non-bank entity is required to be limited to marketing/ distribution of the PPIs or providing access to the PPI holder to the services that are offered. Further, cross-border outward transactions can be conducted only through KYC compliant reloadable semi-closed and open system PPIs issued by banks having authorised dealer – I licence.

Similarly, under the peer to peer lending platform regulations, all fund transfers are required to be through and from bank accounts and cash transaction is strictly prohibited. This restriction excludes the possibility of non-bank PPIs from attaching with such platforms and thus provides an unfair advantage to banks.

5. Grievance redress – The RBI has issued detailed circular in related to limitation of customer lability in case of unauthorised/fraudulent transactions.[204] The banking ombudsman facility is available to the aggrieved consumers. However, such circular, including the banking ombudsman facility, is only applicable to banks and consequently to PPIs issued by banks. Non-bank PPI issuers and peer to peer lending platforms are expected to be outside its scope. There is no non-bank ombudsman. This puts consumers of non-banks at considerable disadvantage.

It can be deduced from the above that competition is being distorted at two levels in the digital payments market: by treating similarly placed entities dissimilarly, and by treating dissimilarly placed entities similarly. This imposes significant avoidable costs on service providers and consequently consumers.

Conclusion

It appears that the government intends to use taxpayers' money to promote digital payments through banks and bank-owned NPCI, to the exclusion of non-banks. Such strategy may not be advisable and sustainable in long term. Already, non-banks are leading in terms of product innovation, customer on-boarding and retention. They can be useful in reaching bottom of the pyramid and serving the hitherto excluded.

Regulators across jurisdictions are realising the importance of optimal regulation and regulation and opening up digital payments platforms to non-banks. These include UK, Australia, Brazil, Hong Kong, US, and European Union.[205] Indian regulators would do well to sincerely consider this international trend. This is not to suggest that risks emanating from non-banks should be disregarded. There is a need to adopt a risk based regulatory approach and shift from entity based regulatory approach. Advanced tools of regulation making, such as Regulatory Impact Assessment,[206] Regulatory Sandbox207 and Smart Regulation[208] can help in this regard.

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