



Bharat Bill Payment System

KPMG in India's perspective

February 2018

KPMG.com/in

The information contained in this report is of a general nature and is not intended to address the circumstances of

any particular individual or entity. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

Although we have attempted to provide correct and timely information, there can be no guarantee that such information is correct as of the date it is received or that it will continue to be correct in the future.

The report contains information obtained from the public domain or external sources which have not been verified for authenticity, accuracy or completeness. Use of companies' names in the report is only to exemplify the trends in the industry. We maintain our independence from such entities and no bias is intended towards any of them in the paper.

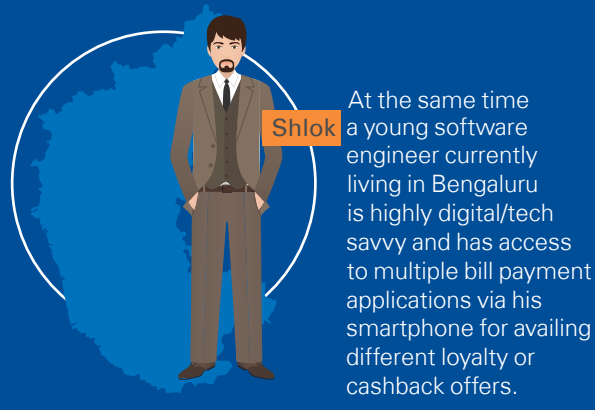
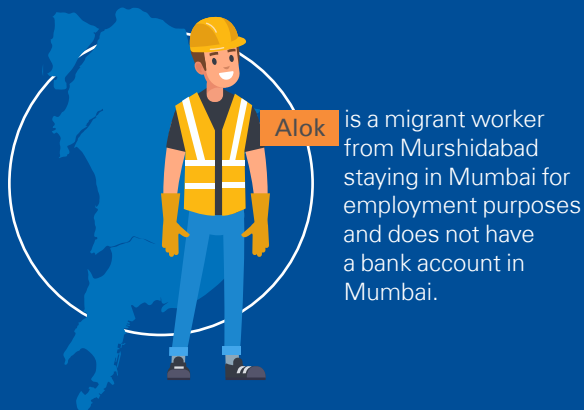
Our paper may make reference to 'KPMG Analysis'; this merely indicates that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented; we do not accept responsibility for the veracity of the underlying data.

In connection with the report or any part thereof, KPMG does not owe duty of care (whether in contract or in tort or under statute or otherwise) to any person / party to whom / which the report is circulated to and KPMG shall not be liable to any such person / party who / which uses or relies on this report. KPMG thus disclaims all responsibility or liability for any costs, damages, losses, liabilities, expenses incurred by any such person / party arising out of or in connection with the report or any part thereof.

By reading the report the reader shall be deemed to have accepted the terms mentioned above.

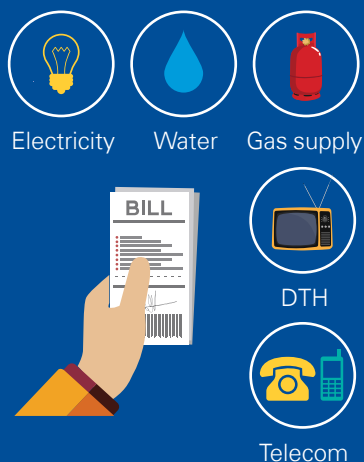
Table of Contents

Bill payments in India	02
Bharat Bill Payment System	03
Global case studies	11
Bharat Bill Payment System: A game changer	12
What does future hold for Bharat Bill Payment System	13
Conclusion	15
Abbreviations	16



Every month he has to send funds to his mother, wife and kids in his hometown for paying their utility bills and meeting daily expenses. He is largely dependent on the domestic transfer services such as domestic money remittance agents of banks, mobile network operators or PPI wallet players.

Shlok likes to pay all his bills online however, he does not like visiting various websites and applications for paying utility bills. For Shlok, the key challenge is to create an account on each of the service provider's website and remember the username and password details of each one of them.



Subsequently, his family has to struggle to pay the bills physically at various utility service provider outlets. This whole bill payment process is cumbersome for Alok's family, considering they have to spend substantial amount of time and effort to make bill payments and most of the time due to system issues have to visit multiple times for one bill payment.

This type of distributed system of bill payment is currently present in India because different billers have tied up with different aggregators for processing their bill payments.

The above mentioned examples bifurcate the population of India, one where the user has limited or no technical knowledge in addition to no infrastructure available to support, and secondly where the user has substantial knowledge and comprehensive infrastructure is available to perform the digital transactions. However, both the situations have different challenges in the processes and for the end users. The Bharat Bill Payment System has provided a solution which can bridge the gaps in the current ecosystem and provide a route which is impervious to technical knowledge and infrastructure and provides a reliable, safe and quick digital bill payments solution to the end user.

Bill payments in India

Over the years, bill collections and payments in India has largely been managed by the utility service providers themselves, either through online (website, mobile app, etc.) or offline (agent stores, customer service centers, etc.) channels. Introduction of digital/online payment methods has helped organisations reduce their operational expenditure as well as turnaround time (TAT). The growing Internet and smartphone penetration and entry of new players such as Paytm, PhonePe, FreeCharge and Mobikwik in the bill payments market have provided the much needed push. This is clearly evident from the transaction volumes which have grown at a CAGR of 15.5 per cent¹ between FY'2010-FY'2015 for the bill payments market in India.

However, this growth is not substantial and major push is required towards digital bill payments services considering, major section of the below mentioned bill payment market is still unorganised.

Currently, India has:

- More than 36.1 lakh PNG connections²
- More than 6.3 crore active DTH connections³
- More than 120 crore mobile connections (Including prepaid and postpaid)³
- More than 32.4 crore active broadband subscribers³
- Power sector generates more than 18 crore bills per month, but only 10 per cent of the total payment received is through a digital channel⁴

It is estimated that⁵, the size of bill payments market in India is projected to reach INR9.4 trillion⁵ by the year 2020. By the end of 2016, the size of the bill payments market in India was more than INR5.85 trillion⁵, out of which 70 per cent⁷ of the bill payments were done using cash or cheque. The bill payments market in India is primarily based on the aggregator based business model with the banks or e-wallets players integrating their channels i.e. Internet banking/mobile banking/mobile app/website/ATM with the aggregator's system and PG services on the company's website for allowing its customers to make the bill payment for different services. A major drawback of this model is that the banks have to establish relationships with multiple aggregators in order to increase the total biller base for their customers. India being a highly fragmented market, it is not possible for one bank or an aggregator to cover the entire geographical region and diverse range of billers/utility companies.

After the entry of payments banks, e-wallets and launch of UPI services the rate of adoption of digital payments in semi-urban and rural areas has been steep. Mobile phone based payment transactions has outnumbered all other digital mediums and is the fastest growing payment mode⁶. The transactions done through UPI channel have been valued at INR131.74 billion⁶ as of December 2017 while other PPI based transactions have been valued at INR32.7 billion⁷. Out of overall transactions, a majority of the transactions were related to remittances and shopping while some of the other popular transactions were mobile bill payments, DTH bill payments, data card bill payments, utility bill payments and movie/travel ticket purchases.

1. India bills payment market outlook to 2020, Ken Research, published March 2016
 2. Annual Report 2016-17, Ministry of Petroleum and Natural Gas, Govt. of India, published September 2017
 3. Press Release, TRAI, published September 2017
 4. NPCI gets RBI nod to operate Bharat Bill Payment System, Livemint, published July 2017

5. India bills payment market outlook to 2020, Ken Research, published March 2016
 6. Retail payments statistics on NPCI platform, NPCI, published December 2017
 7. Electronic payment system, RBI, published December 2017



Bharat Bill Payment System

Bharat Bill Payment System is a Reserve Bank of India's (RBI) conceptualised system, managed by National Payments Corporation of India (NPCI), which offers integrated, accessible and interoperable bill payment services to consumers across geographies with certainty, reliability and safety of transactions. It offers bill payment services to consumers through a network of agents/retail shops/bank-branches and digital channels like Internet banking, mobile app/website of banks and non-bank entities. It allows multiple payment modes like cards, UPI, net-banking, Aadhaar based payments, e-wallets, cash, etc. and provides instant confirmation in the form of SMS/receipt/email. The customer who wants to make a bill payment can access any payment channels of the banking/non-bank entity registered on the Bharat Bill Payment System. Customers will know Bharat Bill Payment System as 'Bharat BillPay'.

A. Inception

The bill payments market in India is characterised by the presence of limited aggregators and multiple billers who are present across different geographical territories who provide a variety of bill payment options to their customers. There was a need for a centralised bill payment system which should have a pan India presence and supports interoperability. This led to the idea of development of Bharat Bill Payment System by RBI who initiated the groundwork for an interoperable bill payment system integrating billers, banks, e-wallets and other stakeholders available on one single platform for making instant bill payments.

01

INTEROPERABLE

Integrated platform connecting entities such as banks and non-banks for operations of bills aggregation business, biller management, payment service providers and retail bill payment outlets.

02

ACCESSIBLE

Provides seamless payment of bills through digital (mobile app, website, etc.) or physical (agents, bank-branches, etc.) channel.

03

COST-EFFECTIVE

Highly cost-effective for the entire ecosystem, involves a flat fee charge against the current charges.

Some of the salient features of Bharat BillPay are:⁸

04

INTEGRATION

Banks and non-bank entities authorised by RBI viz. Bharat Bill Payment Operating Units (BBPOUs) will have to connect their system only with the Bharat Bill Payment Central Unit (BBPCU) system to get access to all the billers across India for making bill payments. Utility companies need to connect to minimum one BBPOU and maximum of two BBPOUs to enable all customers to pay bills

05

COMPLAINT MANAGEMENT

Standardised and efficient, complaint and customer grievances handling system for both ON-US and OFF-US transactions.

06

DISPUTE MANAGEMENT

Facilitate BBPOU's to raise and resolve disputes relating to transactions that have passed through the Bharat Bill Payment System.

07

CLEARING AND SETTLEMENT

Bharat Bill Payment System has standardised turnaround time for multiple clearing and guaranteed settlements, amongst different parties.

08

STANDARDISATION

Standard processes for the entire Bharat Bill Payment System participants.

09

BRAND CONNECT

Single and trusted brand connect with the Bharat BillPay assurance.

Note: All transactions under Bharat Bill Payment System consists of both ON-US transactions and OFF-US transactions. Bharat Bill Payment System. Bharat Bill Payment System denotes the bill payment ecosystem and not merely OFF-US transactions passing through BBPCU.

8. Bharat BillPay product overview on NPCI website, NPCI, accessed on 31st January 2018

Biller categories⁹

Currently, RBI has approved five categories of billers on the Bharat BillPay –



*(Landline, mobile and broadband) – Currently postpaid only

For these five services Bharat BillPay provides a quick, safe and reliable bill payment option to customers.

Payment channels

Bharat Bill Payment System is accessible via 11 different channels (digital channel and physical channel) through which a customer can pay their bills.

- i. **Digital channels** – Internet, Internet banking, mobile, mobile banking, Point of Sale (POS), Mobile Point of Sale (mPOS), kiosk and Automated Teller Machine (ATM).
- ii. **Physical channels** – Bank branch, business correspondents and agents.

Currently, there are no charges levied to the customer on digital banking transactions while third party payments may incur certain charges. A flat fee ranging from INR5-25 may be charged on transactions done through physical channels.

Payment modes

Currently, 11 payment modes are available on the Bharat Bill Payment System platform for customers to make a bill payment. The customer will have to choose the preferred mode of payment and enter the details to successfully authorise the payment.

Available payment modes: Cash, credit card, debit card, IMPS, Internet banking, account transfer, prepaid card, e-wallet, UPI, NEFT and Aadhaar based payments.

Payment options

Bharat Bill Payment System gives ample flexibility to its customers when it comes to payment to the billers. A customer is allowed to make payments to all the billers in all the permissible payment forms like full payment, minimum payment, excess payment, partial payment, penalty payment and multiple payments depending on the biller's option.

B. The Bharat Bill Payment System ecosystem

The Bharat Bill Payment System ecosystem comprises of five major participants⁹:

1. Bharat Bill Payment Central Unit (BBPCU)
2. Bharat Bill Payment Operating Units (BBPOUs)
3. Billers/Utility companies
4. Agent institutions
5. Agents

BBPCU – Bharat Bill Payment Central Unit

The RBI authorised NPCI to function as the BBPCU, which will be responsible for setting up procedures, rules and business standards for technical operations and business requirements for all the stakeholders of Bharat Bill Payment System.

BBPOU – Bharat Bill Payment Operational Unit (Banks and non-banks)

A BBPOU can be a bank or a non-bank institution which will handle payment and aggregation of services related to bill payments under the scope of Bharat Bill Payment System. A BBPOU may opt to function as below:

- i. Customer Operating Unit (COU) – BBPOUs interfacing with the customers
- ii. Biller Operating Unit (BOU) – BBPOUs engaged in acquiring billers
- iii. Both Customer OU and Biller OU – BBPOUs which manage both customers and billers

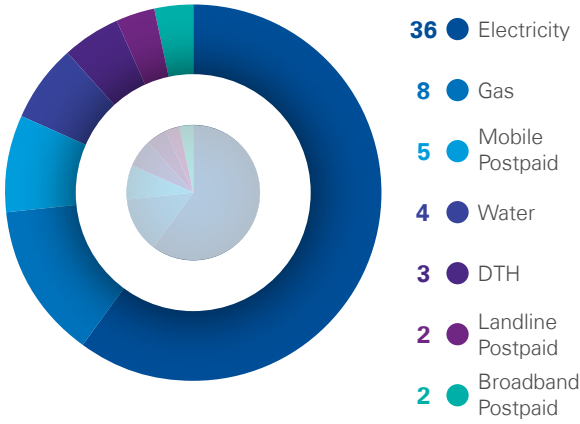
As of December 2017, 70 OUs (60 banks and 10 non-banks) have in-principle authorisation to serve as BBPOUs on the Bharat Bill Payment System platform, 55 are currently acting as only COUs and 2 as BOUs and 7 as both COUs and BOUs. Each BBPOU may be available on multiple channels offered under Bharat Bill Payment System for bill payment.

Billers/Utility companies

A biller is a service provider who receives a payment, for the services rendered by them. By integrating the biller's system with the Bharat Bill Payment System, the biller will be able to receive payments via multiple channels for the services provided to its customer. As of December 2017, there are 59 entities registered as billers under Bharat Bill Payment System platform. 36 out of the 59 registered billers are electricity distribution companies. The graph below represents the number of billers currently available on the system and their distribution across various categories.

9. Bharat BillPay product overview on NPCI website, NPCI, accessed on 31st January 2018

Figure 1: Category wise billers (Total live: 60)



* As on 31st December 2017 – Demonstrates the number of Billers under each category which are live on Bharat Bill Payment System. **Source:** Bharat BillPay product overview on NPCI website, NPCI, accessed on 31st January 2018

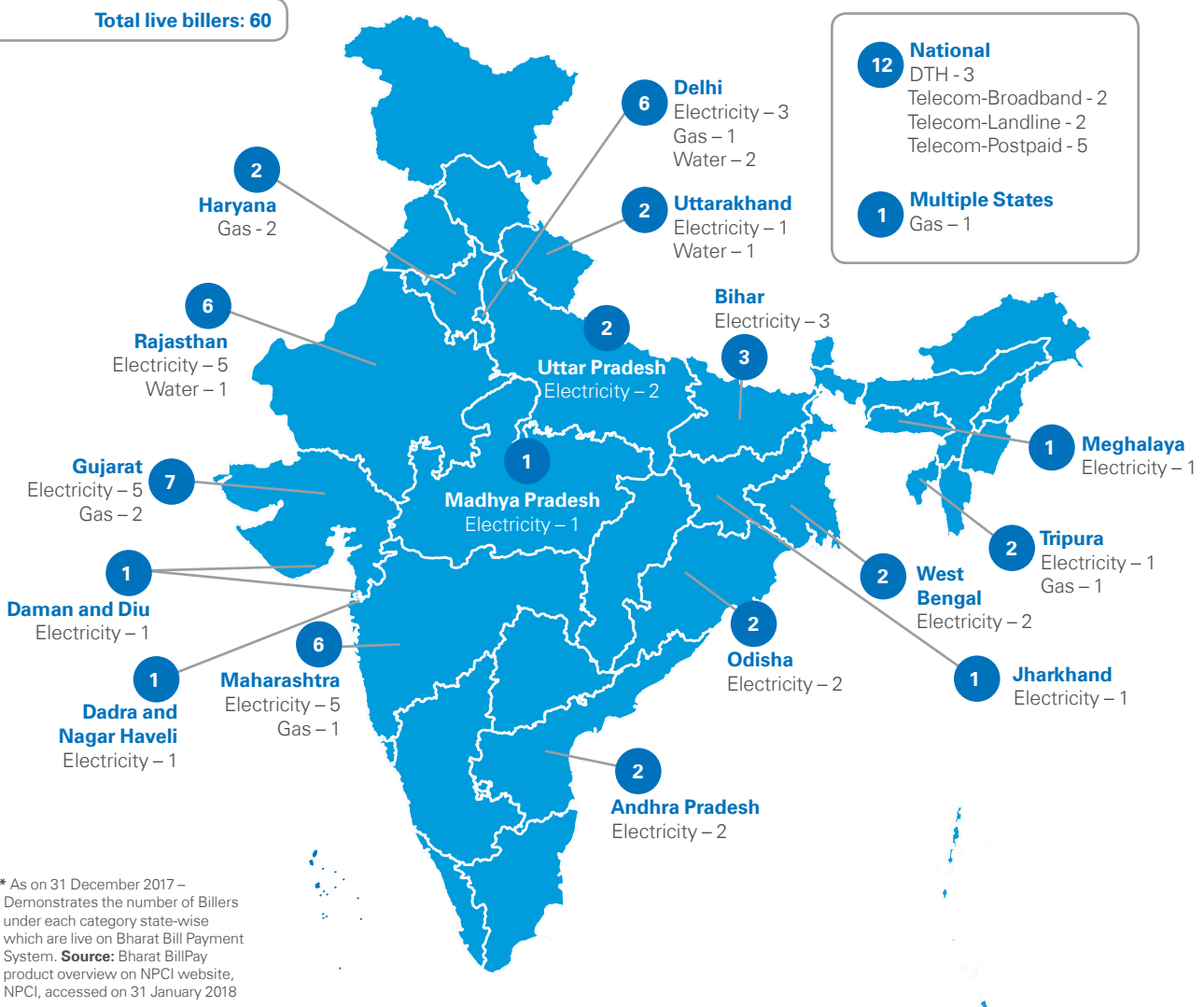
Agent institutions

Agent institutions are the entities who are currently involved in bill payment and aggregation business or who want to enter the bill payments business. These entities connect with the customer BBPOU to access the entire bill payment ecosystem. As of December 2017, 200 entities have given consent to act as an Agent-Institution and there are 27 entities live on Bharat Bill Payment System as an agent institution.

Agents

Agents are customer service points available in the form of agent outlets, business correspondent, bank branches, collection centers, retail outlets and other service points. As of December 2017, there are 7.5 lakh entities registered as Bharat Bill Payment System agents.

Bharat Bill Payment System is truly a pan India system. This is evident from the distribution of the billers across different states. There are 11 national billers and 48 state specific billers over 18 states as of December 2017. The distribution of billers across states is represented in the figure below:



Potential benefits

Bharat Bill Payment System is a first of its kind bill payment system in India which affects all the stakeholders involved in a typical bill payment process across key biller categories. With a robust interoperable system, it comes with its own set of advantages for various stakeholders:

Bharat Bill Payment Operating Unit (BBPOU)

- **A single window solution** for integration and reconciliation with access to all billers of the approved categories.
- **COUs benefit:** Customer operating units have the opportunity to capture increased number of customers by offering efficient services to their existing customers and attract new customers.
- **BOUs benefit:** Biller operating units can potentially capture a major share of the bill collection business for the billers it has on-boarded on Bharat Bill Payment System.
- The interchange will be uniform across different payment channels and will be managed by a standard set of guidelines as published by NPCI from time to time.
- The **settlement process** of the bill payments made on the Bharat Bill Payment System platform is expected to be standardised, timely and guaranteed.
- Efficient complaint management system along with a dispute management system.

Biller

- Cost-effective platform for billers as they do not have to maintain separate integrations with different aggregators while the traditional approach of aggregation business incurs huge cost.
- Funds realisation is likely to improve due to faster settlement mechanism.
- Barriers to entry will be low for the small billers or billers restricted to small/remote geographies.

Customer

- One single platform for making bill payments anytime, anywhere instead of visiting multiple websites, applications, etc.
- Ease of accessibility for making bill payments through both digital (Internet, mobile, etc.) or physical channels (agents, bank branches, etc.)
- Time saving, convenient, standard and uniform experience, and flexibility of payment channels.
- Advanced security standards makes it a reliable bill payment service.
- Transparent pricing with instant payment confirmation via SMS/e-mail/print.

- Unified grievance handling.

Agent institutions

- Agent institutions can easily integrate their systems with a COU already registered with the Bharat Bill Payment System.
- Billers of all types and categories can be accessed just by integrating with the Bharat Bill Payment System.
- Incremental bill payment transactions is expected to lead to increase in the overall revenue.
- Increased customer traffic and footfalls will provide rich customer data for future planning and strategic purposes.

Challenges

As with every new system, the Bharat Bill Payment System has its own share of challenges. Few of the challenges observed in the early stages of implementation are as follows:

- Stakeholders might be using different technologies for operating their backend systems. Integration of these backend systems with the Bharat Bill Payment System might pose a big challenge.
- To keep tab on charges to be levied on bill payments done through agent based retail outlets.
- Adding new biller categories and types (Presentment and Presentment + Payment) and allowing ad-hoc payments to presentment billers.
- Spreading awareness about Bharat Bill Payment System as a reliable and secure medium of bill payments.



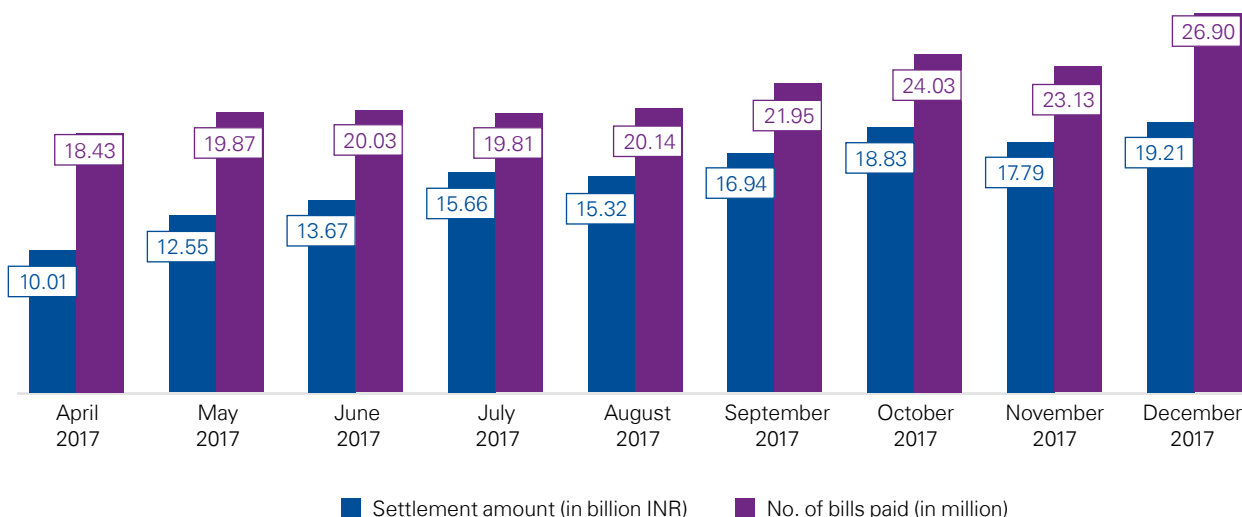
Bharat Bill Payment System – The story till now

NPCI ran a pilot during April – October 2017 of the Bharat Bill Payment System across different channels (digital and physical) to evaluate the efficiency, robustness and challenges of the system. It has been onboarding new billers and operating units since and has been testing the system’s efficiency. As per the data available from NPCI, Currently, (approximately) 99 per cent of bill payments are successful and disputes are limited to 0.14 per cent of all transactions.

With addition of new billers and OUs to the platform, transactions have increased by volume and value over the period. The graph below shows the growth of bill volumes and settlement amount on Bharat Bill Payment System platform from April – December 2017. There is a steep growth in the value and volume of transactions being carried out on the Bharat Bill Payment System which shows the increasing acceptance of the bill payment platform from different payment channels and customer touch points.

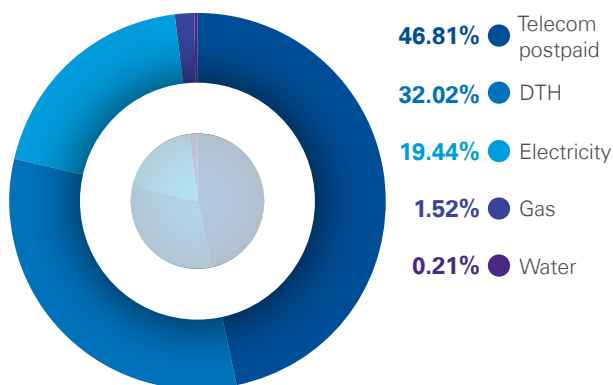
The graph below demonstrates that the Bharat Bill Payment System is witnessing steady growth and acceptance amongst its customers which is clearly evident from the M-o-M growth percentage which is 7.51 per cent for transaction value and 4.29 per cent for transaction volume during the period April 2017 to December 2017. The reason behind this growing acceptance of Bharat Bill Payment System is the ease of making instant bill payments to any registered biller of any state/city/region from anywhere in India through various types of payment methods and channels available. Bharat Bill Payments System also offers the convenience of round-the-clock bill payments through both digital and physical channels, thus catering to a wider user segment. The dependency on specific collection points available during a fixed time-window for a particular bill payment is completely eliminated.

Figure 2: Total bill payment transactions on Bharat Bill Payment System (April 2017 - December 2017)



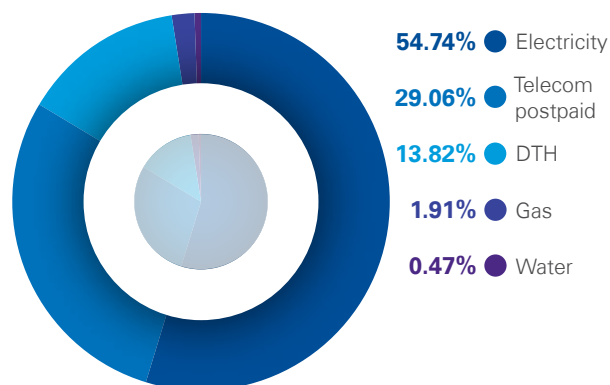
* As on 31st December 2017 – Demonstrates the total number and total value of transactions done through Bharat Bill Payment System from the period of April 2017 – December 2017. Note: The Bharat Bill Payment System transactions consists of both ON-US and OFF-US transactions. Bharat Bill Payment System denotes the bill payment ecosystem and not merely OFF-US transactions passing through BBPCU. Source: Bharat BillPay product overview on NPCI website, NPCI, accessed on 31 January 2018

Figure 3: Biller category wise share in transaction volume (April 2017 - December 2017)



* As on 31st December 2017 – Demonstrates the percentage of volume transactions done under each biller category during the period April 2017 - December 2017 on Bharat Bill Payment System. **Source:** Bharat BillPay product overview on NPCI website, NPCI, accessed on 31 January 2018

Figure 4: Biller category wise share in transaction value (April 2017 - December 2017)



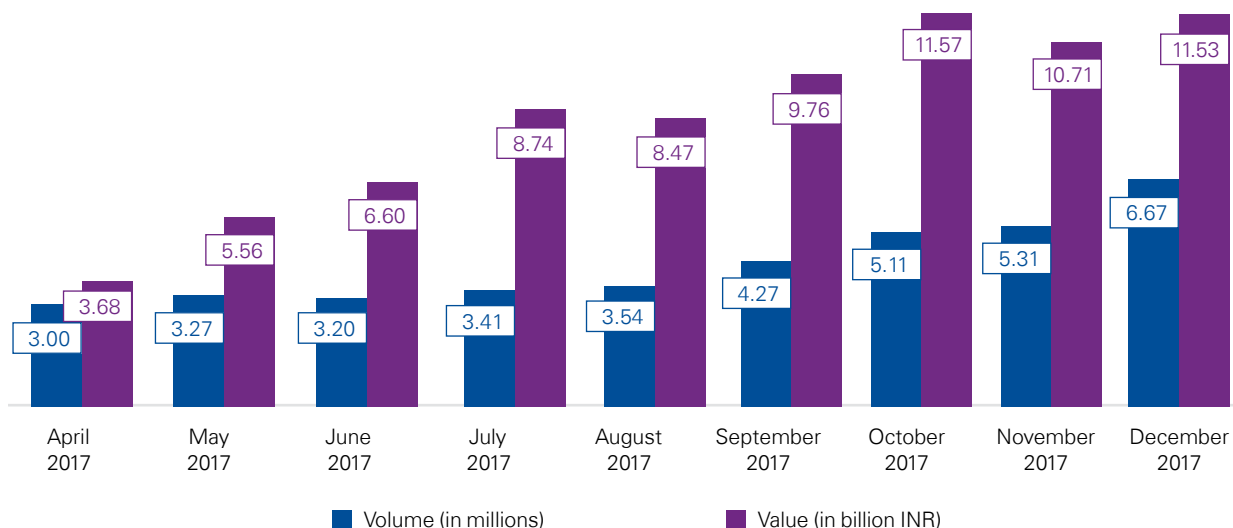
* As on 31 December 2017 – Demonstrates biller share of transaction value across various biller categories during the period April 2017 - December 2017 on Bharat Bill Payment System. **Source:** Bharat BillPay product overview on NPCI website, NPCI, accessed on 31 January 2018

This graph shows that telecom postpaid bill payments is the most popular transaction on the Bharat Bill Payment System in terms of total volume of transactions followed by DTH and electricity bill payment transactions. One of the major reasons behind this is, non-availability of a company owned telecom service provider outlet in the close vicinity of customers especially in rural areas. With the launch of Bharat Bill Payment System, a consumer can use any of the available payment method/channel for making bill payments for his/her telecom postpaid connection in any of the nearby Bharat BillPay agent outlet or also any of the digital channels like a mobile app, Internet-banking via his/her own bank. Similarly, electricity bills are majorly paid at the electricity department office or authorised centres owned by electricity billers but after the launch of Bharat Bill Payment System electricity bills can be paid through any agent outlet or also any of the digital channels like Mobile app, Internet-Banking of participating BBPOUs and their Agent-Institutions using available modes of payment.

Similarly, the graph above shows that electricity bill payments are the highest value generating transactions amongst all transactions happening on the Bharat Bill Payment System followed by telecom postpaid and DTH bill payment transactions. The reason behind electricity bill payments leading the value transactions is the average ticket size of electricity bills and volume of bills generated by electricity service providers which is much more than any other of the above mentioned service providers because of electricity being a basic requirement of every household.



Figure 5: Electricity bill payments on Bharat Bill Payment System (April 2017 - December 2017)

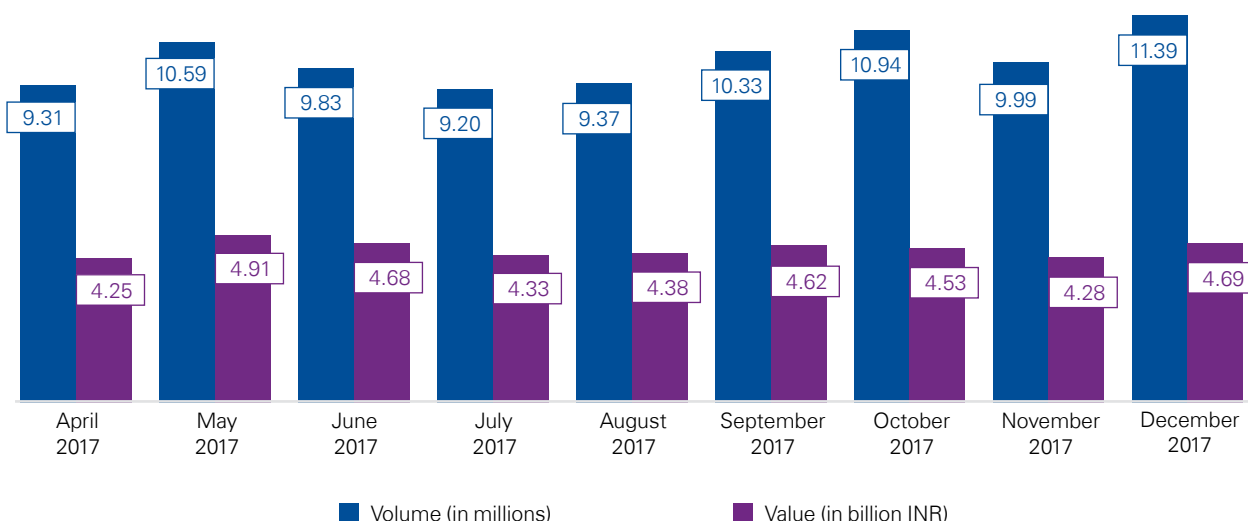


Source: Bharat BillPay product overview on NPCI website, NPCI, accessed on 31 January 2018

The graph above represents the growth of electricity bill payment transactions during April 2017 – December 2017 on Bharat Bill Payment System. There is a significant growth in the total value transactions as they have grown at a CAGR of 13.53 per cent over the last nine months while total volume transactions have grown at a CAGR of 9.28 per cent. This shows the

growing acceptability of Bharat Bill Payment System for electricity bill payments because of availability of bill payment agent outlets in close vicinity or access to billers through various digital banking and non-banking channels. The popularity of Bharat Bill Payment System for electricity bill payments is evident through growing number of transactions over the period.

Figure 6: Telecom postpaid bill payments on Bharat Bill Payment System (April 2017 - December 2017)

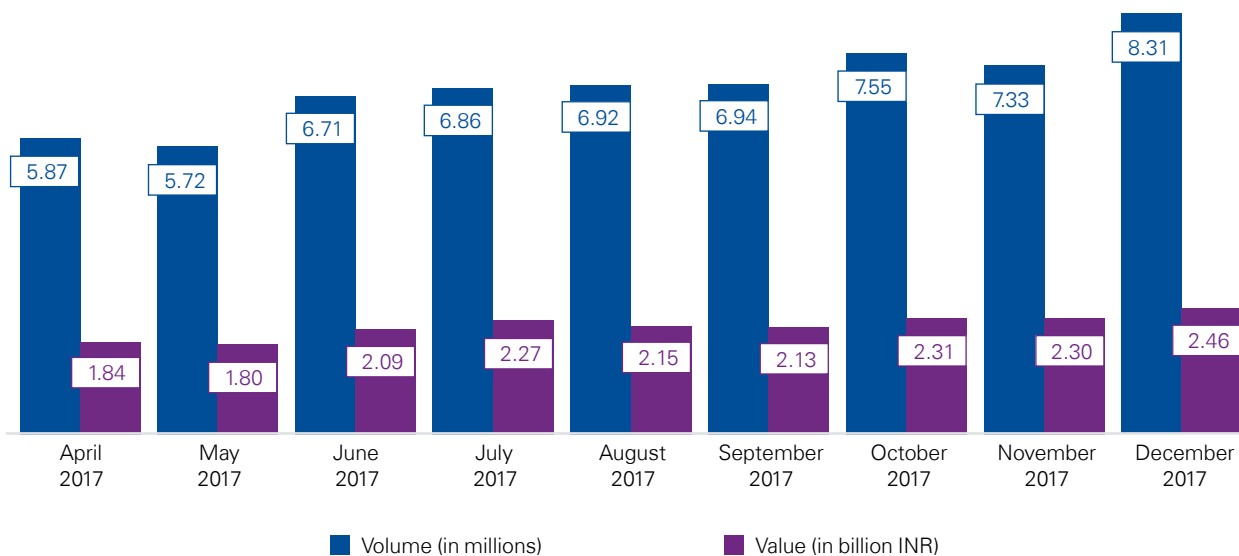


Source: Bharat BillPay product overview on NPCI website, NPCI, accessed on 31 January 2018

The graph on page 09 represents the growth of telecom postpaid bill payment transactions during April 2017 – December 2017 on Bharat Bill Payment System. Postpaid telecom bills as a category has moved to digital payments fairly early due to its urban customer base and entry of online mobile recharge portals such as Paytm,

Mobikwik, and Freecharge, etc. into the Indian market resulting in a high base and timid growth numbers. However, Bharat Bill Payment System increases accessibility by adding new channels and enhances consumer convenience by adding multiple payment options.

Figure 7: DTH bill payments on Bharat Bill Payment System (April 2017 - December 2017)



Source: Bharat BillPay product overview on NPCI website, NPCI, accessed on 31 January 2018

With the government tightening its lease on unorganised cable service providers, making digitisation of services compulsory and the growing penetration of television even in the remotest parts of the country, DTH connections in India have been growing at a rapid pace. The combined subscribers of the three major players grew by 8.33 per cent in FY-17 compared to FY-16. DTH

payments closely resembles telecom and have seen a strong growth in value terms through Bharat Bill Payment System with 4.44 per cent M-o-M growth. DTH has a huge potential in terms of value and volume, as the overall growth rate has been 2.67 per cent Q-o-Q over the last two years.



Global case studies

There have been several attempts at developing a centralised bill payment system around the world. One of the most successful bill payment systems is the BPAY system which is operational in Australia with a very large biller base.

BPAY – Australia¹⁰

BPAY is Australia's most widely used bill payment service which enables customers to make bill payments electronically from their bank accounts to the billers in a fast, convenient and easiest way possible. More than 170 financial institutions in Australia offer BPAY as a payment channel for making bill payments through their Internet banking, phone banking and mobile banking services.

Offered through Australia's leading financial institutions and accepted by more than 45,000 billers, bills can be paid through BPAY including water, telephone, and electricity. The substantial growth in the Internet and mobile telephone penetration and its usage has also contributed to the acceptance of BPAY as more number of customers have access to Internet banking, phone banking and mobile banking. BPAY offers different modes of bills payment to its customers, namely – cheque, bank transfer and credit card payment.

The customer can initiate the transaction from any of the available banking channels and the settlement of bill amount will be done through an intermediary platform called BPAY which will credit the bank account of the biller entity on successful completion. BPAY, however, does not accommodate aggregator or agent/third party based bill payment system as well as for the cash based payment settlement.

BPAY and Bharat Bill Payment System both work on a five party model but the type of participants is different, namely –

- i. **BPAY** – Participant member, associate member, payer institution member, BPAY and biller
- ii. **Bharat Bill Payment System** – BBPCU, BBPOU, biller, agent institutions and agents

BPAY is a digital only bill payment system with no provision for customers who do not have a bank account. In contrast to BPAY, the Bharat Bill Payment System has presence across all possible customer touch points both digital and physical outlets based. On payment modes, BPAY has limited number of payments modes while the Bharat Bill Payment System provides a high number of payment modes available in India including cash as a payment mode.

10. bpay website, accessed on 4 January 2018

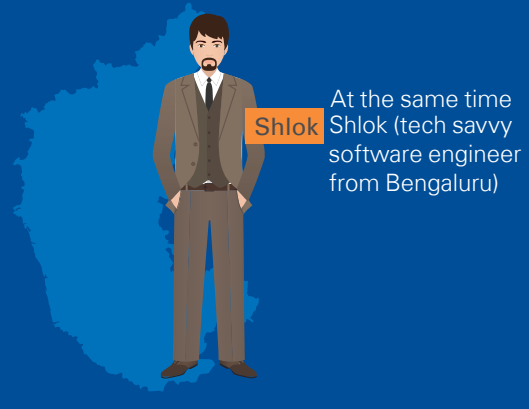


Bharat Bill Payment System: A game changer

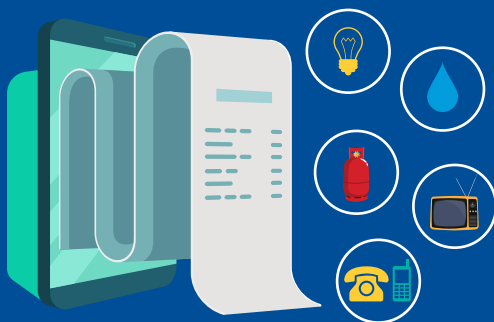
The Bharat Bill Payment System is a central platform which comprise of billers and payers/consumers, who would have access via a service provider or a bank. The Unique Selling Point (USP) of the platform is the ease of making bill payments to multiple billers from a single

platform (through digital/physical channel) without the hassle of visiting multiple biller websites or physical outlets of each of the biller. Now there is a centralised system i.e. one single platform for making bill payment to multiple billers.

With the Bharat Bill Payment System in place, the two personas defined in the beginning



and the bill payment experience for them is expected to be completely revamped. Alok will be able to instantly pay all the bills of his house in Murshidabad from any local customer touch point or COU in Mumbai itself through cash or any other mode of payment option available. While Shlok will no longer have to install different payment apps or visit multiple websites for making bill payments. Shlok will be able to do it directly through his mobile banking app or internet banking website and will also have the liberty to pay through any mode of payment of his choice.



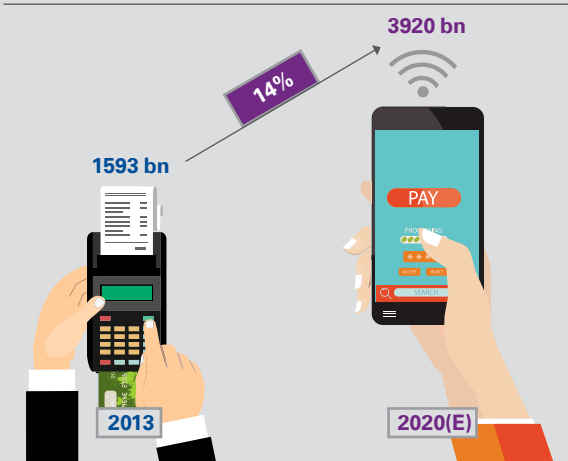
Not only the customers but the billers will also be benefitted from this payment collection system. The bill generation and disbursement process will be completely online from the biller's side resulting in reduced operational expenditure. Due to this reduction in operational expenditure, the utility companies would be able to offer their customers different types of value added services and benefits such as discounts, cashbacks, cross selling of related products, etc. Bharat Bill Payment System will have something to offer to all the existing players of the bill payments industry.

What does future hold for Bharat Bill Payment System

The utilities currently covered under the Bharat Bill Payment System capture a major portion of the current bill payments landscape. The last two decades have seen urbanisation at a rapid pace in India. 31.4 per cent of the Indian population as per the 2011 census resides in urban areas and the share of urban population is further expected to increase to 40.76 per cent by 2030 as per UN State of the World Population. The Government of India has envisioned to connect one crore households with Piped Natural Gas (PNG) connections by 2020 from approximately 36 lakh PNG connections currently. Similar developments have taken place in rural India too. The current government through its developmental projects, plans 100 per cent electrification of villages and piped water connection in 90 per cent.

fees, subscriptions, credit card bill payments, government taxes, loan EMIs, etc. can be plugged easily into the current framework post approval from RBI. Bharat Bill Payments System also has the flexibility to accommodate one time payments like e-commerce payments (post approval from RBI) with the players acting both as BOUs and COUs. Bharat Bill Payment System is expected to be a cost effective solution compared to payment gateways currently in use as there will be no need to maintain separate systems for different aggregators and payment gateways. The payment options also increase significantly at one go by integrating to the Bharat Bill Payment System network without having to enter into separate agreements with multiple entities.

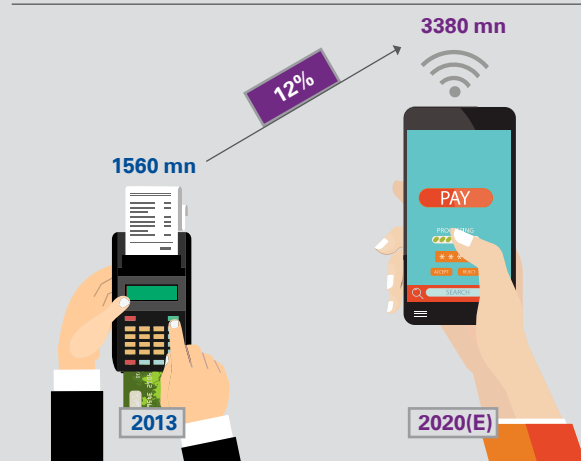
Figure 8: Bill payment by value in INR (for utilities covered under Bharat Bill Payment System)



DTH is spreading rapidly to the hinterlands with about 60 million users as of September 2017, which the wired cable television connections found difficult to penetrate. With 1.2 billion active mobile connections, India represents one of the largest and rapidly growing markets for telecom providers. The usage will only increase with higher smartphone and internet penetration. Growing urbanisation and rapid development in rural areas will lead to increased usage of services like water, electricity, telephone and cooking gas. The estimated volume of bills generated by the aforementioned utilities is forecasted to grow at a CAGR of 12 per cent to 3380 million from 1560 million in 2013. In terms of value, the growth is expected to be even faster at a CAGR of 14 per cent to INR3920 billion by the year 2020.¹¹

However, the scope of Bharat Bill Payment System extends far beyond the current set of utilities. Any routine and repetitive payments such as SIP, insurance premiums, institution fees such as school or college

Figure 9: Bill payment by volumes (for utilities covered under Bharat Bill Payment System)



Various state and central government agencies can register themselves as billers and enable citizens to make payments through the system. This can include all kinds of tax and fees collection, resulting in utmost ease of payment for the citizens of the country.

While, the list of use cases for Bharat Bill Payment System can be very long, a significant change that the system brings going forward is make aggregators and bilateral agreements redundant and reduce the entry barriers for new players. Bharat Bill Payment System is likely to lead to standardisation in the bill payments industry.

Bharat Bill Payment System opens multiple avenues for fintech companies by ending the monopoly of a select few aggregators. In an industry where transaction volumes are crucial for sustenance, Bharat BillPay provides instant access to a large customer base and a level playing ground to fintech companies donning the role of COUs. Apart from being a party to the Bharat Bill

11. KPMG in India's analysis, 2017 based on secondary research and/or Industry discussion

Payment System, fintech companies also play a crucial role in improving the entire system by partnering with agents or COUs to offer user friendly solutions, identify customer needs and develop solutions for new use cases and can also help in increasing the efficiency and improving the internal operational capabilities of the agents and the COUs. The sheer volume of users of the Bharat Bill Payment System generates data which can provide multiple insights about the customer. The fintech companies can come up with analytics applications which can improve the revenue generating opportunities for players in the Bharat Bill Payment System ecosystem.

A larger ecosystem does not only augur well for the industry but also for the Indian economy. A large number of billers with a host of services ensures a large consumer base and furthers the larger target of financial inclusion. The flexibility of payments through multiple channels including physical agents and payments through cash and by digital means ensures it reaches every nook and corner of the country. Over years, Bharat BillPay as a brand has the potential to become an integral part of the daily life of every Indian.

Nevertheless, the road to success for Bharat Bill Payment System is not as straightforward as it looks. For the ecosystem to grow beyond the current mandate, a collective effort by NPCI and the Government of India is imperative. Volume is critical in payments. Though, the current list of utilities provide just enough transaction volumes required for operations. However, for bringing more players into the ecosystem to ensure profitability and growth, there is a need for stronger business case in terms of customer satisfaction, revenue opportunities, growth and cost savings.

The moot purpose behind Bharat Bill Payment System remains unachieved as long as the payments are not made through digital means. To encourage digital payments the government can run marketing campaigns on the lines of 'DigiDhan' mission, to get more users on the digital platform. Joint marketing and customer education campaigns by OUs and billers can also help the purpose.

In a conservative society like India, customer dissatisfaction and suspicion can be perilous for any financial product. Bharat Bill Payment System needs to develop customer trust through a robust grievance handling system, quick turnaround and reversal of funds in case of failed transactions. The customer must be provided with detailed and satisfactory explanation justifying any action. Bharat BillPay should be developed as a brand trusted by the masses, which in turn, can be used as a pull factor by the merchants. This is likely to bring greater number of customers and billers into the framework.

NPCI as the BBPCU must ensure the processing capabilities and that technology is upgraded at regular intervals to ensure low downtime, minimal transaction failure and compliance with highest level of security.

However, NPCI's role has to evolve beyond that of just BBPCU. For Bharat Bill Payment System to be successful, multiple system upgrades and standardisation needs to take place at the operating units' and the billers' end. Also, to realise benefits out of digital payments through the Bharat Bill Payment System, a host of auxiliary systems need to be developed for analytics, reconciliation, customer value mining, etc. NPCI must nurture vendors with technical expertise to integrate multiple systems and hasten the onboarding process for all OUs and billers. Innovative, early stage companies can be given an opportunity by providing open APIs to develop systems that adds value and opens up unconventional revenue streams for the players.



Conclusion

The Indian payments industry has undergone radical changes in the last few years with payment systems like UPI, Bharat Bill Payment System and BharatQR being introduced. E-wallets and other innovative payment companies that were under incubation for a long time now are tasting success partly as a result of government push towards digital payments, demonetisation, and partly because of their customer centric products. With Indians adopting digital payments and growing awareness around its usage and security, time is ripe for the Bharat Bill Payment System to leverage the momentum and consolidate the billing industry under one payment system. A concentrated effort at bringing together multiple stakeholders including the innovative fintechs to continue offering the best possible customer experience remains the key to growth for Bharat Bill Payment System.

Abbreviations

Abbreviation	Definition
API	Application Program Interface
ATM	Automated Teller Machine
BBPCU	Bharat Bill Payment Central Unit
BBPOU	Bharat Bill Payment Operating Unit
BOU	Biller Operating Unit
COU	Customer Operating Unit
DTH	Direct-to-Home
IMPS	Immediate Payment Service
mPOS	Mobile Point of Sale
NBFC	Non-Banking Financial Company
NEFT	National Electronic Funds Transfer
NPCI	National Payments Corporation of India
OU	Operating Unit
PNG	Piped Natural Gas
POS	Point of Sale
RBI	Reserve Bank of India
TAT	Turnaround Time
UPI	Unified Payments Interface

Acknowledgement

1. **Nitish Nath Shrivastav**, Associate Director, BPS-Strategy & Operations – nitishshrivastav@kpmg.com
2. **Nikhil Magu**, Manager, BPS-Strategy & Operations – nikhilmagu1@kpmg.com
3. **Prateek Mehta**, Consultant, BPS-Strategy & Operations – prateekmehta@kpmg.com
4. **Nishant Nayak**, Consultant, BPS-Strategy & Operations – nishantnayak@kpmg.com

KPMG in India contacts:

Mritunjay Kapur

National Head

Markets & Strategy

Head

Technology, Media & Telecom

T: +91 124 307 4797

E: mritunjay@kpmg.com

Gayathri Parthasarathy

Partner and Head

Financial Services

Advisory

T: +91 22 3090 2828

E: gparthasarathy@kpmg.com

Vikram Hosangady

Head

Advisory

T: +91 44 3914 5000

E: vhosangady@kpmg.com

Harshvardhan Bisht

Partner

Management Consulting

Advisory

T: +91 22 22 6134 9249

E: hbisht@kpmg.com

KPMG.com/in



Follow us on:

kpmg.com/in/socialmedia



© 2018 KPMG, an Indian Registered Partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.

This document is meant for ecommunication only.