



# WHITEPAPER



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## I. About the event

From swiping to contactless cards payments, we have conveniently moved from cash to a cash-free world over the last decade. Payment systems have changed faster than ever and especially in Asia. Contactless and mobile payments have seen a considerable boom, especially in response to increasing demand of e-commerce growth and, more recently, as a result of the COVID-19 pandemic. The digital economy is growing exponentially thus eliminating cash payments completely. With credit cards came the idea of paying with plastic, with cashless transactions it simply means that there will be no need for any physical representation of money in the future at all. While these new payment methods have opened up a world of opportunities for merchants and consumers alike but they also come with challenges that need to be addressed and with a need to enable easy adoption at large. With this in purview, Sapphire Connect successfully executed the **2nd Annual PayGround E-Summit 2021 – Asia Edition**. The summit was centered on the theme “**Instant. Accessible. Universal.**” and witnessed a pragmatic mix of content discussing on the rapid transformation, the needs for effectively identifying and implementing the most relevant solutions that can help to further optimize the existing system and unlock new business opportunities.

## II. Aadhaar: Empowering Digital Payments in India

The digital payment industry in India is constantly unfolding record innovations and challenges thanks to the new technologies resulting in cost reduction, efficiency, and speedier transactions. The factors below have been pillars for the growth of the digital economy:

- Supportive regulatory environment
- Government policies
- Financial inclusion
- Customer Identification
- Digital literacy

Looking back, India has faced many challenges related to customer identification because 40 % of the population did not have any formal identity. As a result, the Government of India launched a digital identity program in 2009 to create a unique digital ID called Aadhar ID. It is a low-cost program with its physical cards available in 13 languages which makes it accessible & acceptable to a larger population. Only one Aadhaar ID gets issued to every individual under this digital identity program which uses security systems such as biometrics to avoid duplication. Moreover, it assigns ID numbers through random number generation techniques to protect data pooling.

Currently, 99% of the adult population holds Aadhaar cards solving the issue of customer identification. It enables eKYC and provides simpler authentication by linking Aadhaar to bank accounts. Besides this, Aadhaar has helped in the accomplishment of various digital payments modules as listed below:

- **Financial inclusion through bank accounts:** Pradhan Mantri Jan-Dhan Yojana was launched in 2014 by the Government of India for the Indian citizens that enabled affordable access to various financial services like bank accounts, insurance, pensions, etc. A zero-balance savings account called a Jan-Dhan account is opened and RuPay debit cards get issued to the account holders for its service utilization. These Jan-Dhan accounts get linked to the mobile number and the Aadhaar card called JAM trinity that lets the Indian Government make effective and inclusive payments.
- **Aadhaar Enabled Payment System (AEPS):** This is a bank-led model which allows online transactions at PoS (MicroATM) through the bank's business correspondent using the Aadhaar authentication. It offers multiple banking services like cash deposit & withdrawal, balance inquiry, mini statement, Aadhaar to Aadhaar fund transfer, authentication, BHIM Aadhaar Pay, tokenization, etc. As of Dec 2021, around 9.6 crore transactions worth Rs. 25,860.92 crores were processed through AePS.

- **Direct Benefits Transfer (DBT) / Aadhar Payment Bridge (APB):** This scheme allows payment of subsidies directly into the Aadhar linked bank accounts. This facility has prevented duplicate payment transactions and other malpractices associated with G2P payments. Currently, 940 banks with 750 million bank accounts are members of APB.

Considering the multiple use cases and benefits of Aadhaar, it is right to state that the digital payment system got strengthened with the interference of Aadhaar.

### III. The evolution of Digital Payments: Shaping the Future

India has seen substantial and innovative growth in digital payments with trigger points like demonetization and COVID-19. Further, the launch of new and innovative payment products like Unified Payments Interface (UPI), National Electronic Toll Collection (NETC), and Bharat Bill Pay Service (BBPS) have firmly placed the digital payment industry on an upward growth trajectory. The primary aim of all these innovations and progress is to provide the services that benefit the customers. The following are some factors that will drive digital payments:

1. **Overlay services:** These can help businesses in creating value for their customers and improve profitability.
2. **Contextual payments:** These can help in leveraging data analytics and AI to understand customer behaviors.
3. **Offline payments:** This seems to be the next trigger for digital transactions. The Reserve Bank of India (RBI) has started encouraging companies to develop an offline payment mode for digital payments through cards, wallets, and mobile phones to conduct banking transactions.
4. **Invisible payments:** These have gained traction in recent times during the pandemic with the potential to drive the course of digital payments in India.

The foundation of these systems led through a regulatory framework, startup ecosystem, and other innovations. Digital payments today provide security to the customer. The two-factor authentication security is also evolving with technological innovations like biometrics, retina detection, etc. Such innovations demand constant upscaling to verify the authenticity of registered payers. For example, a wallet company has introduced a sound system with a QR code that provides instant payment confirmation. It eliminates false transaction risks and financial malpractices.

***“More mobile penetration and low data cost will increase inclusion and application of digital payments which is already happening” - Bhavesh Gupta (CEO, Lending Business, PayTM)***

#### IV. Building cashless societies of the future by boosting financial inclusion: The Role of Regulators

Financial inclusion is a building block of the economy and development to foster inclusive and sustainable growth. It refers to the accessibility, availability, and affordability of financial services in a safe and transparent manner. The regulators play an important role in increasing financial inclusion through various elements such as:

- **Basic bouquet of financial services:** The regulators act as a catalyst in increasing the volume of bank accounts through various policies like zero-balance accounts, subsidies accounts, etc. It had encouraged customer participation in primary financial services like banking, investing, and insurance.
- **Global access to financial services:** It is interesting to note that almost two-thirds of the regulators worldwide are acting upon financial inclusion by easing the universal infrastructure policies and global adoption.
- **Effective collaboration:** Banks and Fintech collaboration fuels the move towards financial inclusion. It has the potential to enhance regulatory compliance and risk management and enhance seamless digital services.
- **Digital literacy:** Digital literacy is one of the key elements of financial inclusion as it makes the population aware of the usage of financial products and services promoting a cashless society and digital payments.
- **Customer grievance redressal:** The regulators have produced various approaches such as mandating banks to have an internal ombudsman to protect the customers from any malpractices.

To conclude, the linkage between regulators and financial inclusion can be enhanced through a more comprehensive framework focusing on enacting more friendly regulations, controlled innovations, collaboration, and digital literacy. The correct alignment of these services can facilitate the creation of a cashless society and increased financial inclusion.

## V. Inspire, Measure and Improve Customer loyalty by delivering value with instant payments

Financial services today are in the midst of a significant transformation that has been accelerated by the COVID-19 Pandemic. Payments, rewards, and loyalty are the epicenter for this transformation. Retaining a customer has become more challenging as the customers have endless choices of products and services. The way the brands keep their customers involved, appreciated, and emotionally connected is crucial to retaining the customers in this transformation phase. Since the customer footprint has become far more digital, it provides an opportunity to analyze the customer behavior, trends, and leverage this data to provide personalized products for the customer.

Analysis on how we can reward users for every action and how we can bring variability in their rewards is very important to make sure we provide a reward that is useful for the customer. Because a reward that is not being used by the customer is of no value to the business.

Also, in today's fast-moving world, Digitization plays a very important role in our financial markets. It helps revolutionize customer loyalty. It is creating an impact right from customer acquisition to customer engagement to customer fulfillment. Enhancing the customer experience to provide service in just a click of a thumb provides a wow factor to the customer delivering value in the need of an hour by leveraging digital payments and Artificial Intelligence. It is also important to leverage the AI to perform area analysis in understanding the success rates of each loyalty program or derive customer interests. Ultimately, providing customers with options to choose their preferred way of communication or payment is very important for a seamless customer experience.

Organizations tend to use multiple matrices to measure customer loyalty, for example, Net promoter Score (NPS), Repurchase ratio, Customer Lifetime Value (CLV), Customer Satisfaction (CSAT) score. All these circles down to a very technical term called Word of Mouth which spreads the information fast and creates an impact on the customers.

To summarize, a frictionless journey in payments will add massively to the element of customer loyalty eventually. There is an intersection that is more important rather than probably looking at the payments problem or the customer experience problem in isolation. With everyday innovations happening in the payments area, it is important to analyze and understand how these innovations drive the intersection points with real-time data.



## **VI. Real-Time Cross-border Payment: Need for Faster Payment Services and Lower Transaction Fees to enable New Growth Opportunities**

The increased mobility of people, capital, and services has raised the importance of cross-border payments. There is a need for faster, more transparent, cheaper cross-border payment services to make a safe and efficient system. Currently, cross-border payment can take up to 5 days and can cost up to ten times more than a domestic payment. The following are various challenges in the current cross border payment system that need improvement:

- Payments are processed through messages, but the data formats can vary across systems, networks, and countries.
- Screening processes to validate no financial crime linkage are lengthy
- Different operating hours lead to fluctuations in forex rates
- Fundamental limitations of legacy systems
- High funding costs
- Long transaction routes due to the involvement of intermediaries
- Capital controls by jurisdiction
- Documentation and balance reporting

In order to level up the cross-border payments with the domestic payments, there is a need for the integration of faster payments within different countries. This integration will require the collaboration of Banks, FinTech, and regulators to make cross-border payments more transparent and predictable. There are certain parallel considerations needed to develop an enhancement plan such as:

- Identification of bilateral corridors with similar payments infrastructure and a sizeable number of transactions
- Customer inclusion
- Speed and efficiency of intermediary financial institutions
- Faster and simpler technological innovation
- Change in regulatory norms
- Globalization such as the cross-border expansion of e-commerce

The global adoption and universal infrastructure system are emerging rapidly across the borders as in India-Singapore payment linkage, Malaysia-Thailand QR code, CBDC/cryptocurrency, etc. Several such enhancements are needed to bring cross-border payments at par with domestic payments to provide a faster, cheaper, secure, and more transparent payments system.

## VII. The Digital Shift: E-commerce & Payment Methods

Fintech sector is rapidly scaling, innovating and evolving especially the digital payments and digital lending. From 2015 the physical modes of payment have grown 6x and remained relevant as a form factor. At the same time, the shift in digital is very clear which has a growth of 17x with payment methods like UPI, Wallets, AEPS, FastTag, IMPS. India is home to one of the most vibrant and diverse fintech ecosystems globally with over 2100+ fintech's, of which interestingly 67% have been set up only in the last five years. In the last couple of years, with consumers shifting towards Ecommerce there is a lot of pressure in the online retail industry to evolve and create new trends to attract consumers.

### I. Digital & Mobile Wallets

There's been a dramatic shift in the way payments have evolved both in debit and credit forms. In the last five years, we have predominantly seen a shift in the payment's domain - from the physical to the digital space. Indian economy which was dominated by cash & other forms of debit instruments in the three to four years has lost most of its share to newly launched technologies led by UPI. UPI has grown rapidly over the last 2 years to overtake debit & credit cards. There is also a large shift in usage patterns from wallets to UPI predominantly as people can do direct transfer from their bank accounts.

In addition, AEPS & Fast tags have been instrumental in enabling contactless payments. The predominant shift of this paradigm is a combination of multi factors from a pandemic, innovation in new technologies like UPI & fast tag, the banks & the fintech building technology stacks for consumer-facing as well as business-facing, consumer fintech companies who have built superlative experiences for their consumers, etc.

### II. Buy Now, Pay Later: New Business Model

BNPL has started taking shape globally from 2005 and in India from 2015, supported by technology. Local e-commerce and digital lenders have shifted focus to consumer lending in the smallest values with the highest velocities, indicating that the lines of business are blurring and advancing at a rapid phase. Fintech lenders, especially NBFCs, have grown tremendously focusing on small tickets. With the growing competition, even the digital payment firms are entering into Buy Now Pay Later (BNPL) as an alternative to traditional credit cards.

***“BNPL players have scaled and seen rapid adoption globally representing about 2% of all global ecommerce GMV transacted”*** - Saurabh Sinha, Vice President & Regional Head - FinTech, eCommerce & Payments, CIBIL

BNPL provides several features to customers, giving them a frictionless and consumer-friendly experience. The features include:

- Easy availability at the point of sale
- Zero interest
- Flexible repayment
- No minimum transaction size

BNPL offers consumer-friendly features which in turn help merchants improve their average order values as well as improve the cart checkout rates and reduce cart abandonment rates. The merchants are ready to pay merchant discount rates for these services. This forms a primary source of revenue for BNPL players apart from late payment fees received from the customers. The most popular BNPL product is a 15-day product, followed by the monthly or pay next month construct and the quarterly product.

When it comes to the cost of acquisition of BNPL customers, the cost is quite steep as consumers need to be routed to e-commerce or a point-of-sale platform that may have several leakage points until a purchase using the chosen payment instrument is made. Hence, it is extremely important to have a strong plan of action for the growth to be made with long term roadmap for optimizing the best tenor and campaigning to the target customers.

To summarize, BNPL is the modern technology revolution and to continue evolution in the BNPL industry, we will need a lot more judicious innovation and a stronger risk management framework. Also, it is important to put BNPL regulations in place to prevent fraud and avoid high credit risk to the merchants.

## VIII. Protecting Online Payment from Fraud

Payment digitization has led to massive opportunities for fraudsters to do fraudulent activities. Cybercriminals target accounts, cards, phones, mail, and even gift cards to commit their activity. Below are some methods of fraud that target online payments:

- **Phishing:** Multiple un-trusted websites can wrongly use personal or private information like card details, login credentials, account details, etc.
- **Identity theft:** This is one of the primary concerns of Payments fraud as hackers penetrate firewalls or hijack login credentials and falsely acquire authority.
- **Pagejacking:** These are suspicious online activities where the user is directed to an unwanted website while their open account gets accessed by hackers for malpractices
- **Credit card fraud:** The financial criminals set up a merchant account on behalf of a legitimate business and charge stolen credit cards.

Cybercriminals use other media like email, phone calls, texting malware to obtain personal data and penetrate through security walls. As a result, it becomes challenging to eliminate frauds. In order to establish a secure system, financial institutions use mechanisms to protect against such financial crimes. These include:

- Keeping the software up to date ensures the safety of business information
- Providing awareness to the public about the latest fraud trends
- Verify the processors before the transaction
- Encryption or tokenization of confidential information
- Frequently updating login credentials
- Inclusion of digital signature in the authentication process
- Login requirement before the transaction
- Digitizing the identity and linking it to accounts

The regulators and financial industry are also working on the development of more effective policies like blocking the card/ digital ID, promoting devices with legal certifications, SOS services to eradicate the frauds in the online payment system.

***“The digital signature and digital identity-based system rather than authentication will evolve in future to promote secure payment.” - Parthasarathy P. (EVP-Chief Security Officer, First Abu Dhabi Bank)***

## **IX. Transforming business models: From vertical B2B business to omni-channel B2C ecosystem**

With the growth in digital space, there is a Techtronic shift in the way banking business is being conducted. There has been a record growth of 96% in mobile-based transactions in volume along-with a rise in the global downloads of banking applications by 21%. However, there is still a large segment of the population who do not have internet access. As a result, it becomes equally important to engage and retain them. One of the best ways to manage this is through segmenting the customer base and targeting and positioning them rightly.

Building omni channel solutions that are personalized to a particular customer segment provides a variety of choices for the customer. Further, building an infrastructure that provides interoperable communication channels is crucial, so the customer does not have to repeat the processes for every channel. In order to achieve this, the financial institutions use several matrices and data points, and closely monitor them to provide the customer with delightful experience.

Artificial Intelligence & Machine learning play an effective role in helping financial institutions to bring customer-centricity and right engagement with customers. Financial institutions have started making heavy investments to build data lakes for gathering various data sets from different applications and sources. Analyzing the data in numerous ways using artificial intelligence provides these financial institutions with several opportunities to enhance their products and services for customers. Some of the areas where the financial institutions are heavily investing include analytics, product development, ensuring interoperable infrastructure, ramping up channels, recreating digital journeys etc.

## X. Digital Payment Methods: Decoding the Trends

The way payments market shape up and unfold can be segregated into four key buckets. The same has been discussed below:

### 1. Digital Payments Inclusivity

- Smartphone payments are one of the key growth segments with new trends developing daily. In addition to this, a lot of focus is now being put on feature phone payments to enable digital payments to reach last mile villages as well. Research is being done to enable digital payments through a voice call or SMS or any other method which is safe and secure
- Another area of great pressure from RBI's Innovation Center and FinTech working in this area is cross-border payments. There is a lot more evolution that can be seen in this space by easing consumer experience, building a wider reach, and bringing down the cost of these transactions while making them more affordable.
- Many existing merchants and financial service entities are getting into the wallet space as they realize the importance of creating a wallet providing an opportunity to the consumers to safeguard their funds and keep them readily available for purchases.

### 2. Mobile First Phenomenon

- Especially with the COVID-19 pandemic situation, there is a shift in the behavior of a consumer from physical to digital. The way utility payments, recharges are made, and daily essentials are brought have taken a paradigm shift through UPI payments and Mobile e-commerce. UPI payments being a foothold, a foot in the door strategy to get into consumers' payment lives today but beyond UPI payments there are several apps that offer bill payments solutions. The mobile revolution is expected to grow with the way customers are adapting to this mobile-first phenomenon.

### 3. Payments & Credit Convergence

- Payments and credit convergence is the next large wave of shifting behavior. This is expected to be a permanent shift as it is linked with a viable source of revenue. While payments today are not looked at from a monetization model, credit does have a clear monetization model and there are multiple ways in which this can be done. As a result, point-of-consumer credit using BNPL and other methods such as EMI has been growing today.

- New forms of credit that are different from traditional credit cards like by just tapping a card or scanning a QR code are evolving.
- Tokenization as technology is probably one of the most brilliant innovations in the last few years where customers can take full benefit of the card which is safely stored by their issuer banks

#### **4. New Tech Stacks & Regulations**

- Recurring payments has taken a big leap with UPI auto pay going live and while the ecosystem still gears up through opening this up on multiple apps and for multiple banks, several merchants who are in the small value recurring payment space are quickly adapting to this.
- Tap & Pay can work for any form of payment including debit cards and a lot of banks and non-banks have also started experimenting with creating this ecosystem both on the acceptance side as well as on the consumer side.
- One of the possible development areas is employing technology to make offline payments. The major barrier to digital payment acceptance, particularly in rural areas, is a lack of Internet access. As a result, there is a lot of room for growth in the offline payments market.

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**About PwC**

At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in 156 countries with over 295,000 people who are committed to delivering quality in assurance, advisory and tax services.

Our vision is to develop the most impactful and innovative global FS technology platform in the professional services industry. We have organized our platform around capabilities related to FinTech, Payments Transformation, FS Technology Strategy, FS Data and Analytics. Each of these capabilities are spearheaded by a leader(s), who strive to achieve greater innovation as well as consistency across our delivery efforts, and create a fun and exciting community dedicated to serve our clients.

**About Sapphire Connect**

Sapphire Connect is a B2B meeting specialist that focuses on creating knowledge sharing and networking platforms through conferences, business meetings, webinars & virtual conferences, bespoke events, research papers and by building business communities. The start of Sapphire Connect is the end result of a decade long effort by the founders in the space of delivering the best in terms of quality and service. Our platforms rotate around the current scenarios and talk about how best to tackle these challenges in the future. We provide and share knowledge with end-to-end stake holders so that they can take back vital learnings and most importantly EXPERIENCES. Our platforms act as a junction for industry leaders who aim to achieve path breaking courses in their respective fields.

Our Bespoke Platforms aim to create customized solutions in order to meet client objectives by conducting different format of events involving the thought leaders of India along with a very limited and select audience.

It is our intention to further validate and build the content of all our initiatives with the help of experts. The findings of such initiatives will be published as research papers in order to enhance learnings.

Our Business Communities bring together Industry Leaders of the country to absorb new learnings, network and relate with each other and impart knowledge to peers.