

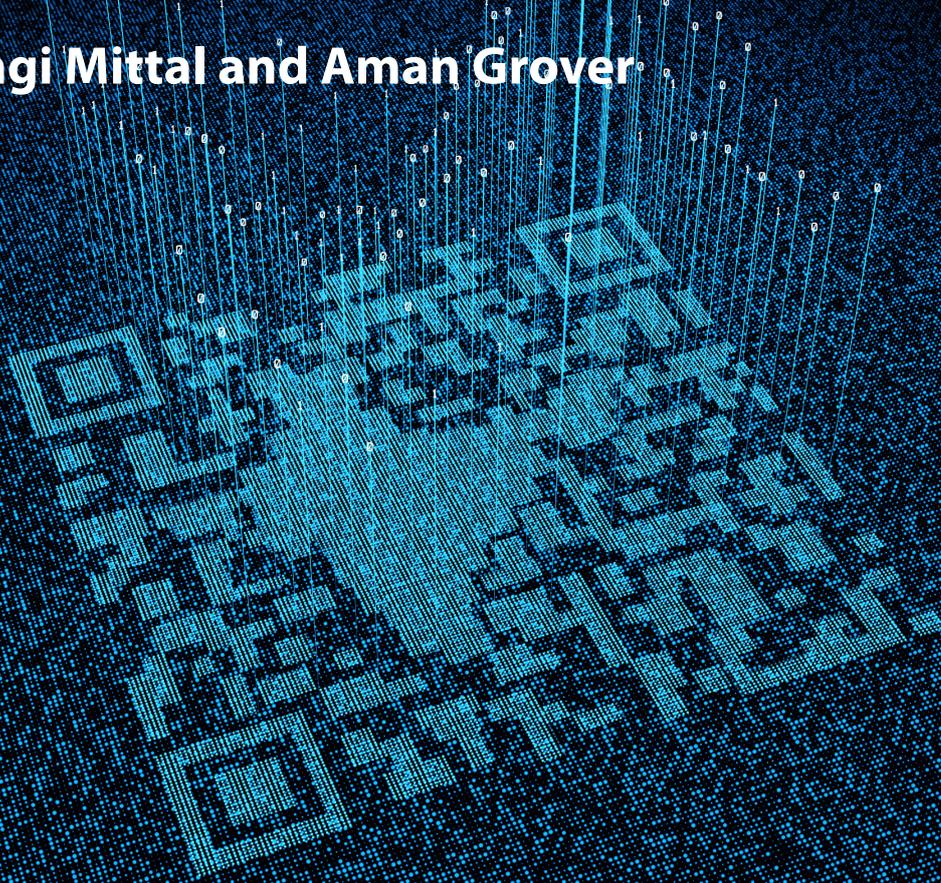
116

ORF SPECIAL REPORT

August 2020

Resolving Bottlenecks in the Adoption of Digital Payments

Shivangi Mittal and Aman Grover



Getty Images / liulolo

Attribution: Shivangi Mittal and Aman Grover, "Resolving Bottlenecks in the Adoption of Digital Payments," *ORF Special Report No. 116*, August 2020, Observer Research Foundation.

Observer Research Foundation (ORF) is a public policy think-tank that aims to influence the formulation of policies for building a strong and prosperous India. ORF pursues these goals by providing informed and productive inputs, in-depth research, and stimulating discussions.



To know more about
ORF scan this code

ISBN: 978-93-90159-85-7

© 2020 Observer Research Foundation. All rights reserved. No part of this publication may be reproduced, copied, archived, retained or transmitted through print, speech or electronic media without prior written approval from ORF.

INTRODUCTION

The COVID-19 pandemic has placed unprecedented strain on the Indian economy, and the GDP is expected to contract by 4.5 percent in FY 21.¹ Consumption expenditure accounts for over 60 percent of the Indian GDP and will be among the worst hit by the pandemic.² The wide adoption of digital payments, which facilitates billions of daily consumer transactions, will play a critical role in minimising the economic fallout of COVID-19.

Consumers and merchants have started using digital payment instruments as they enable social distancing and therefore guarantee business continuity amidst restrictions on movement.³ Further, consumers have sampled a wider range of online services. Unique visits to video on demand (VoD) platforms like Netflix and Prime Video increased by over 80 percent in March over the preceding month.⁴ The country has also witnessed increased use of online grocery stores, EdTechs, and payment portals for utility bills.⁵ Indeed, the Reserve Bank of India (RBI) has also urged consumers to use digital payments instead of cash to facilitate social distancing.⁶ Using digital payments also helps reduce the ‘cost of cash’⁷ for the economy, which has increased as experts now advise that notes can potentially harbour the virus and need to be sanitised.⁸

Despite this, the volume of digital transactions declined by 21.23 percent in April 2020 over the preceding month, and the value of these transactions declined by 45.33 percent over the same period. This was probably due to the overall decline in economic activity during the lockdown, which is directly correlated with the number of transactions in the economy. To be sure, digital payments have increased since the lockdown restrictions were lifted, and in some cases surpassed the pre-Covid levels.

For instance, transactions on Unified Payment Interface (UPI) increased by approximately 33 percent from April 2020 to June 2020.⁹ The amount of cash in circulation in the Indian economy has remained high as well. In the month of July 2020, currency worth INR 25.8 trillion was in circulation, an increase of 22.9 percent over July 2019.¹⁰ This high cash circulation is primarily driven by direct cash transfers from the government to low-income households and micro merchants,^a and a tendency among households to use cash in times of uncertainty. As the economy reopens, it is important to leverage the benefits of digital payments to facilitate a resilient recovery. Addressing impediments to digital payments adoption and use entails resolving frictions, addressing

a This includes transfers under the PM Gareeb Kalyan Yojana and other announcements under the government’s fiscal relief package following the COVID 19 pandemic.

poor quality service, and creating a stronger redressal mechanism.

These interventions will supplement the Government of India's efforts to enhance digital payments adoption in India and formalise the economy. Examples of such efforts include amendments under the Finance Act, 2019, which require all businesses with a turnover exceeding INR 500 million to provide facilities for accepting payments through prescribed electronic modes.¹¹ At present, these payment modes are limited to: debit cards powered by RuPay; UPI; and Unified Payments Interface Quick Response Code (UPI QR Code) (BHIM-UPI QR Code). Similarly, the RBI's Vision Document for the year 2019-21 outlines a roadmap for 'Empowering Exceptional (E)payment Experience'.¹² This is aimed at empowering every Indian with access to a bouquet of e-payment options that are safe, secure, convenient, quick and affordable. India is also among the leading innovators in this sector. India's UPI has been lauded worldwide, and the country was one of the earliest adopters of the "Chip and Pin" technology for digital payments.¹³

On 20 June 2020 the Observer Research Foundation (ORF) organised a roundtable to identify key bottlenecks in the existing regulatory architecture, which prevents adoption of digital payments, and explore potential policy options for decision-makers.^b This report builds on the insights shared during the roundtable.

IMPROVING ACCESS TO DIGITAL PAYMENTS

Digital payments serve diverse user needs in India. The majority of the country live in rural areas, and are self-employed. Micro, small and medium enterprises (MSMEs) contributed approximately 28.9 percent of the country's GDP in 2016¹⁴ and accounted for nearly 49 percent of the total exports that year.¹⁵ Micro merchants constituted 99 percent of the total number of MSMEs in the same year.¹⁶

The adoption of electronic payment systems by MSMEs in India, however, remains low. A recent study indicates that nearly 40 percent of MSMEs were completely offline and only five percent had fully embraced digital technology

b The panel for the roundtable comprised of - Ajit Pai, Officer on Special Duty, NITI Aayog; Ashutosh Chadha, Vice President, Public Policy, Mastercard India; Malavika Raghavan, Head, Future of Finance Initiative, Dvara Research; Sunil Abraham, Professor for Digital Policy and Design Practices, ArtEZ University for the Arts, The Netherlands; Vishal Mehta, Head of Advisory; Moderator: Vivan Sharan, Visiting Fellow, ORF.

in 2019.¹⁷ To be sure, socio-economic factors such as age, gender, literacy rates and geographical variation influence adoption rates in MSMEs. Understanding these needs and addressing them with tailored solutions is vital to improve access to digital payments.

Table 1: Digital Payments Users in India

	Rural	Urban
MSMEs in India		
Manufacturing	114.14	82.5
Trade	108.71	121.64
Other Services	102	104.85
Electricity*	0.03	0.01
All	324.88	309
Literacy Rate in India (%)		
Female	64.5	81.6
Male	80.7	91.6

Source: Ministry of MSME and Periodic Labour Force Survey 2017-18¹⁸

- Imposing artificial caps on the number of transactions that a consumer can undertake inhibits adoption of electronic payment systems. For instance, several banks limit the number of transactions on Aadhar-enabled payment systems to only one per day.¹⁹ These limits appear to have been imposed because service providers benefit from high-value transactions rather than a high number of low-value transactions. This is dissonant with the needs of low-income households and MSMEs, who require digital payment platforms to access cash transfers from the government, and who need to withdraw small amounts of cash to service different needs. It is important for industry to contemplate how to create an appetite to service high-volume transactions.
- Solutions which help build a “less cash” society are more suitable for India than those which aim for a “cashless” society. The cash supply chain has been disrupted due to the pandemic, and withdrawing cash through banks or banking correspondents has become more difficult. It is also important to provide access to digital payments infrastructure for customers who need to make low-value transactions. Constraints such as server downtime

impede such access and create problems such as transaction failures, which are beyond the control of users. It is important to improve access to acceptance infrastructure such as micro-ATMs. This requires investments by banks and payment service providers, which in turn, will be financed by the Merchant Discount Rate (MDR).²⁰ However, the RBI has set the MDR at zero for RuPay and UPI, lowering incentives to invest in the payments ecosystem. A potential solution to this problem is to reimburse MDR to micro and small merchants, so that large merchants can subsidise smaller ones.

Table 2: Average Transaction Value and MDR

Instrument	Average Transaction Value in April 2020 (Rs.)	Existing MDR Rates (%)	Hypothetical MDR @ 1% (Rs.)
UPI	1512.05	0	15.12
RuPay	972.11	0	9.72
Credit Card	2701.91	1.7-3%	27.01
Debit Card	1386.10	0.3-0.9%	13.86
AePS*	1639	Upto 1% (Rs. 5 - Rs. 15)	16.39

Source: NPCI and RBI

- In addition, improving financial literacy is important to enhance uptake of digital financial services among Indians. The NITI Aayog's Centre for Digital Financial Inclusion is already working towards educating users on the merits of digital payments. Providing literacy within financial services apps can further these efforts. Simplifying contracts for consumers to understand is one of the most critical measures to facilitate consent mechanisms and literacy.

MINIMISING FRICTION

Bad experiences can deter users from using digital payments more frequently. These may include problems such as transaction failures, frauds, and arduous grievance redressal processes. In other contexts, enhancing consumer convenience can significantly improve their experience. Improved quality of service (QoS) would engender trust among consumers and encourage them to use digital payment instruments more often. RBI's High Level Committee on Deepening Digital Payments²¹ has also articulated the importance of QoS as the digital payments ecosystem scales.

- QoS should focus on aspects such as fraud protection, preventing transaction failures, and grievance redressal. It should also curtail wrong usage, address leakages, and ensure ease of use. Establishing metrics for assessing performance will significantly enhance quality of service in the digital payments industry, similar to those established in the telecommunications industry.
- Average AePS Failure rates of 39 percent in April 2020²² emphasise the need of a robust redressal mechanism. Issues like server downtimes and biometric mismatches increase failure rates and act as artificial constraints on digital payments. Transaction reversal is a time-consuming process and can take upto three weeks. In some instances, the money may never be returned. This is despite the RBI's regulation for "Turnaround Time"²³ which mandates that money should be returned within five days. An in-app complaint box or a virtual chat bot can help customers register their complaints. Assisted technology will play a key role in enhancing access to grievance redressal in rural markets. This can also be expedited under new institutions such as the Data Protection Authority or the Central Consumer Protection Authority.
- A chargeback mechanism can be used to build trust in the ecosystem, so that users do not have to face the consequences of unauthorised transactions. Easy redress does not need to mean building an arduous process.

RECURRING PAYMENTS

Enabling smooth recurring transactions is essential for business continuity in several sectors, especially those dominated by MSMEs. For example, the ongoing physical distancing and lockdown measures have had an adverse impact on the cash collection in the TV ecosystem. Local cable operators saw a revenue dip of almost 84 percent²⁴ during the lockdown, which could have been offset through wider integration of digital payments. To promote recurring payments, the RBI allowed e-mandates for recurring payments on debit cards, credit cards and Prepaid Payment Instruments including wallets in August 2019.²⁵ The recurring payments feature was extended to United Payments Interface (UPI) in January 2020 and was operationalised in late July.^{26,27} However, there are regulatory prescriptions that will create practical difficulties in achieving the intended objective of facilitating recurring payments.

To this end, it is important to tailor regulations to user needs to achieve a balance between risk management techniques and user convenience while using recurring payments. This can be demonstrated through these instances:

- Most transactions using credit cards or corporate cards are recurring in nature. Earlier, these transactions did not require two-factor authentication and were not bound by a transaction amount cap. However, under the new regulations, transactions using these instruments will also have to comply with these requirements. Here, users of credit cards and corporate cards do not need protection measures as stringent as those for debit cards or wallets, because they will not lose money (but credit) and can pay it later or ask for chargebacks. Since these risk mitigation strategies already exist, frictions in the use of these instruments can be removed. If these regulatory requirements are removed, credit or corporate cards will help MSMEs minimise costs by reducing administrative costs.
- The condition which pertains to ‘Pre-transaction Notification’²⁸ has posed certain practical and operational challenges. As per the RBI’s circular, this notification by the issuer shall inform the cardholder about the name of the merchant, transaction amount, date / time of debit, reference number of transaction/ e-mandate, and the reason for debit. Since only merchants have such granular data, building new systems to support this data transfer is expensive, inefficient and has systemic challenges. It is therefore difficult to successfully implement automatic recurring card transactions.
- Risk mitigation techniques for digital payments in B2C business models can create a lot of friction if used in B2B business models. Industry-specific payment innovations can be encouraged if such differentiated frameworks are operationalised.
- For vulnerable user groups, it is necessary to ensure adequate safeguards while using recurring digital payments. For instance, some fintech companies may push consumption loans without collateral to the poor after tracking the Direct Benefit Transfers they have received. Recurring payments without verification or overruling can create systemic risks.

As per RBI regulations, payers need to register and authenticate their transactions the first time they transact with a merchant. Subsequent transactions can be implemented without any authentication. However, only one payment service provider, Billdesk, has come up with a software solution that is compliant with the RBI’s framework. This creates problems for merchants who do not use this software because they would have to incur

costs to integrate multiple services or transition to said software. The RBI, NPCI or card networks should create an interoperable standard that will allow other software providers to also offer regulation-compliant services.

RELYING ON USER CONSENT

On 17 March 2020, the Reserve Bank of India (RBI) issued Guidelines to regulate Payment Aggregators and Payment Gateways, with the intention to deepen digital payment penetration in the country.²⁹ These guidelines prohibit merchants from storing customer data and card data. This is on top of the obligation to comply with relevant security standards—Payment Card Industry-Data Security Standard (PCI-DSS) and Payment Application-Data Security Standard (PA-DSS). It is worth noting that the Discussion Paper released by the RBI contemplated a consent mechanism for storing customer cards and related data, with the default option being "No"³⁰. The rationale for imposing this restriction, and deviating from the discussion paper remains unclear and adds unnecessary business frictions. Without storing customer card data, recurring transactions are difficult for merchants. That is because customer billing cycle data rests with the merchant with whom the customer has entered into an agreement.

Moreover, such blanket prohibition may hamper innovation, as Card on File (CoF) is critical to explore payment optimisation. From the consumer's perspective, CoF is convenient as they are not required to manually enter credit or debit card information for each purchase. From an ecosystem point of view, enabling CoF will promote competition among payment aggregators and enhance innovation to benefit merchants.

Therefore, to achieve the twin objectives of fostering innovation and promoting consumer convenience, it is important to rationalise and simplify regulations. The regulator can then develop carrots and sticks to regulate in an agile manner. When there is transparency among stakeholders, dependency on user consent will be reduced.

MINIMISING SECURITY-RELATED FRICTIONS

The RBI issued in January 2020 a Security Mandate for card transactions³¹. Users of newly issued cards must explicitly "opt in" for online transactions with greater risks, such as card-not-present, e-commerce, cross-border and

contactless payments. This mandate is expected to hinder the adoption of new cards for these use cases.

Risk-focused supervision from the RBI can be better balanced with customer experience. Alternatively, the Government of India can mandate that every new card issued can be used for contactless payments, and users can “opt out” if they wish to do so. The RBI may also want to consider increasing the INR 2,000 cap per transaction on contactless cards.³² An increased limit may be conducive for less frequent but higher quantum transactions, especially as the use of electronic payment modes increases due to the pandemic. Similarly, the regulator may also consider revising the INR 2,000 limit per transaction for recurring payments.³³ This can allow payment of high-value transactions such as yearly subscriptions to services. In its present form, the RBI circular that caps the transaction limit, does not appear to restrict frequency of recurring payments. As such, payments can be made on a daily basis, unless specific periods are set by banks. Therefore, to avoid such additional artificial layers for high-value transactions, the Government of India may adopt a risk-based approach and relax transaction limits. 

About the Authors

Shivangi Mittal and **Aman Grover** are technology policy researchers at Koan Advisory Group, New Delhi.

ENDNOTES

1. International Monetary Fund. *World Economic Outlook Update*. June 2020. <https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020>
2. Reserve Bank of India. *Governor's Statement*. May 2020. https://www.rbi.org.in/Scripts/bs_viewcontent.aspx?Id=3859
3. LiveMint. *Indians rapidly adopt digital payment routes amid covid-19 crisis: Study*. May 2020. <https://www.livemint.com/news/india/indians-rapidly-adopt-digital-payment-routes-amid-covid-19-crisis-study-11589282338592.html>
4. Comscore. *Coffee with Comscore: COVID-19 and its impact on Digital Media Consumption in India*. May 2020. <https://www.comscore.com/Insights/Presentations-and-Whitepapers/2020/Coffee-with-Comscore-COVID-19-and-its-impact-on-Digital-Media-Consumption-in-India>
5. PwC. *Impact of the COVID-19 outbreak on digital payments*. May 2020. <https://www.pwc.in/consulting/financial-services/fintech/dp/impact-of-the-covid-19-outbreak-on-digital-payments.html>
6. Reserve Bank of India. *COVID-19- Operational and Business Continuity Measures*. March 2020. <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11820&Mode=0>
7. Cost of cash refers to the cost of printing, storing and protecting paper money. Harvard Business Review. *The Hidden Costs of Cash*. June 2014. <https://hbr.org/2014/06/the-hidden-costs-of-cash>
8. Live Mint. *This is how DRDO plans to sanitise your phone, laptops, currency notes, challans*. May 2020. <https://www.livemint.com/news/india/this-is-how-drdo-plans-to-sanitise-your-phone-laptops-currency-notes-challans-11589161291859.html>; New Indian Express. *Currency sanitiser at railway counters- The New Indian Express*. July 2020. <https://www.newindianexpress.com/states/andhra-pradesh/2020/jul/03/currency-sanitiser-at-railway-counters-2164713.html>; Financial Express. *Sanitizing currency notes, mobile phones made easy! IIT Bombay develops portable UV sanitizers*. March 2020. <https://www.financialexpress.com/lifestyle/health/sanitizing-currency-notes-mobile-phones-made-easy-iit-bombay-develops-portable-uv-sanitizers/1914568/>
9. Reserve Bank of India. *Settlement Data of Select Payment Systems*. July 2020. https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=49901
10. Reserve Bank of India. *Money Supply for the fortnight ended July 17, 2020. 30 July 2020*. https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=50142
11. Ministry of Law and Justice. *The Finance Act, 2019*. August 2019. <http://egazette.nic.in/WriteReadData/2019/209695.pdf>

12. Reserve Bank of India. *Payment and Settlement Systems in India: Vision 2019-2021*. May 2019. https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=47045
13. Business Standard. *Digital payments: Google wants US Fed to replicate India's UPI model*. December 2019. https://www.business-standard.com/article/technology/digital-payments-google-wants-us-fed-to-replicate-india-s-upi-model-119121401013_1.html
14. Ministry of MSME. *Annual Report 2018-19*. 2019. <https://msme.gov.in/sites/default/files/Annualrprt.pdf>
15. Reserve Bank of India. *Report of the Expert Committee on Micro, Small and Medium Enterprises*. 2019. <https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/MSMES24062019465CF8CB30594AC29A7A010E8A2A034C.PDF>
16. Ministry of MSME. *Annual Report 2018-19*. 2019. <https://msme.gov.in/sites/default/files/Annualrprt.pdf>
17. Yes Bank. *Yes Bank MSME Study Shows Significant Opportunity for Digitization in the MSME Sector*. 18 January 2019. <https://www.yesbank.in/media/press-releases/yes-bank-study-show-significant-opportunity-for-digitization-in-the-msme-sector>
18. Ministry of Statistics and Programme Implementation. *Periodic Labour Force Survey (PLFS) Annual Report, July 2017 - June 2018*. http://www.mospi.gov.in/sites/default/files/publication_reports/Annual%20Report%2C%20PLFS%202017-18_31052019.pdf
19. Malavika Raghavan. *Transaction failure rates in the Aadhaar enabled Payment System*. May 2020. <https://www.dvara.com/research/wp-content/uploads/2020/05/Transaction-failure-rates-in-the-Aadhaar-enabled-Payment-System-Urgent-issues-for-consideration-and-proposed-solutions.pdf>
20. Merchant Discount Rate is a fee paid by merchants to banks for offering them infrastructure to accept digital payments. The amount is then split between the bank that offered the acceptance device (acquirer), the bank whose customer made the payment (issuer) and payments services that facilitate transactions. The MDR therefore acts as an incentive for banks to push digital payments and for greater innovation within payments networks.
21. High Level Committee on Deepening of Digital Payments. *Report of the High Level Committee on Deepening Digital Payments*. May 2019. <https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/CDDP03062019634B0EEF3F7144C3B65360B280E420AC.PDF>
22. Malavika Raghavan. *Transaction failure rates in the Aadhaar enabled Payment System*. May 2020. <https://www.dvara.com/research/wp-content/uploads/2020/05/Transaction-failure-rates-in-the-Aadhaar-enabled-Payment-System-Urgent-issues-for-consideration-and-proposed-solutions.pdf>

23. Reserve Bank of India. *Harmonisation of Turn Around Time (TAT) and customer compensation for failed transactions using authorised Payment Systems*. 20 September 2019. <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11693&Mode=0>
24. Farah Bookwala Vhora, “All work, no pay: Cable TV industry struggles to keep head above water”, *Moneycontrol*, May 28, 2020, <https://www.moneycontrol.com/news/business/all-work-no-pay-cable-industrys-tough-fight-to-keep-head-above-water-5328201.html>
25. Reserve Bank of India. *Processing of e-mandate on cards for recurring transactions*. 21 August 2019. https://m.rbi.org.in/scripts/BS_CircularIndexDisplay.aspx?Id=11668.
26. Reserve Bank of India. *Processing of e-mandate in Unified Payments Interface (UPI) for recurring transactions*. 10 January 2020. <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11784&Mode=0>.
27. Staff Writer, “UPI Autopay facility launched for recurring payments up to `2,000”, *Livemint*, 22 July 2020, <https://www.livemint.com/technology/tech-news/upi-autopay-facility-launched-for-recurring-payments-up-to-rs-2-000-11595414912864.html>
28. Reserve Bank of India. *Processing of e-mandate on cards for recurring transactions*. 21 August 2019. <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11668&Mode=0>.
29. Reserve bank of India. *Guidelines on Regulation of Payment Aggregators and Payment Gateways*. 17 March 2020. <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11822&Mode=0>
30. Reserve Bank of India. *Discussion Paper on Guidelines for Payment Gateways and Payment Aggregators*. 17 September 2019. <https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=943>
31. Reserve Bank of India. *Enhancing Security of Card Transactions*. 15 January 2020. <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11788&Mode=0>
32. Reserve Bank of India, May 14, 2015, Card Payments – Relaxation in requirement of Additional Factor of Authentication for small value card present transactions <https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=9718&Mode=0>
33. Reserve Bank of India, August 21, 2019, Processing of e-mandate on cards for recurring transactions, https://m.rbi.org.in/scripts/BS_CircularIndexDisplay.aspx?Id=11668#:~:text=The%20cap%20%2F%20limit%20for%20e,based%20on%20such%20e%2Dmandates.

Resolving Bottlenecks in the Adoption of Digital Payments



Ideas • Forums • Leadership • Impact

20, Rouse Avenue Institutional Area, New Delhi - 110 002, INDIA
Ph. : +91-11-35332000. Fax : +91-11-35332005.
E-mail: contactus@orfonline.org
Website: www.orfonline.org