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Charges in the UPI System

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Standing on the shoulders of a giant: The impact of UPI

Charges in the UPI System

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Executive Summary

As India strides forward to move from paper-based payments to digital payments, a crucial aspect that would further acceptability is affordability of making and receiving digital payments. With the ultimate stakeholders being the public and providers of the payment system, the government has to ensure an environment where the stakeholders are able to make a rational choice to embrace at least one digital means of payment that can closely substitute for currency. With UPI being the front runner that is allowing people to happily migrate from currency usage to digital payments, the government and RBI must provide full support to keep UPI on rails, just like they have been supporting the currency based payment system of the country.

Key Takeaways

i. Conflicting policies with the emergence of the UPI system: *There is a regulation on the one hand that defines savings accounts as one where 'restrictions to the number of withdrawals permitted' applies; while on the other hand, RBI through their financial inclusion strategy encourages 'usage' of financial services (thereby encouraging more activities in savings accounts) to take the country towards a cash-less society through digital means. Surely the two policies counteract each other.*

ii. In violation to the UPI-Law, RBI allows Canara Bank and IDBI Bank to indirectly charge for using UPI: *RBI is our watchdog, our guardian, in the country's payment systems to protect the vulnerable people holding regular and BSBD (PMJDY) Accounts. However, by letting banks impose indirect charges (@ Rs 5 to Rs 20 per transaction) for making payments through UPI, RBI may be inadvertently allowing violation of the PSS Act and depriving the very ones that need to be uplifted through government's financial inclusion mission. Moreover, IDBI Bank has restricted number of withdrawals (debit transactions) to 10 per month in a BSBD Account – an account type that was especially introduced by RBI to promote financial inclusion.*

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The views expressed in the report are those of the author and not necessarily of the institution to which he belongs.

iii. Discriminatory restrictions impinges on ones right to equality: *No restriction in the number of transactions is mentioned in RBI's BSBD Account guidelines of 2019. The concept of restricting the number of withdrawal transactions follows from the RBI's general definition of savings bank account. Accordingly, such a restriction cannot be applied in a selective manner to different savings bank account holders. A savings account, which is primarily meant for savings and less for transactions, should be the same in terms of usability for both rich and the poor. Service charges can be different depending on the account categories but restricting number of transactions within the savings bank deposit account product, for one and not for the other, is discriminatory and possibly impinges on ones right to equality.*

iv. Keep digital payments outside the (age-old) definition of withdrawal restrictions in savings deposit: *RBI did not envisage the present digital trend when they first introduced several decades back in their circular on "Interest Rates on Rupee Deposits" the definition of a saving bank account, wherein the clause "savings deposit is subject to the restrictions as to the number of withdrawals permitted" appears. In the current phase of digital payments, RBI has to devise ways and means to keep the digital payments outside the age-old definition of withdrawal restrictions in savings deposit, which were inherently paper based – cash withdrawals/ cheque usage.*

v. Cost of currency system: *The government and RBI have been bearing significant costs on printing and management of currency. Over the past few years they have spent, on an average, Rs 5,400 crore annually on currency printing alone and even more on currency management. The expenditure towards UPI may be much lower and could even curtail the expenditure on currency. A reduction in cash-cost burden must partly get channelized for furthering the UPI ecosystem.*

vi. E-commerce merchant payments: *There is a potential to introduce a uniform fee of 0.3% (or a more judiciously arrived rate) <u>across all electronic payment modes</u> for e-commerce. Such a fee imposed, in lieu of extant MDR, on e-commerce merchants and institutions who cannot transact in currency notes would be more in line with '<u>digital payment facilitation fee</u>'. By introducing such a uniform fee of 0.3% onto the e-commerce merchants towards a 'digital payment facilitation fee', the UPI system alone would generate around Rs 5,000 crore in 2023-24.*

vii. Who should bear the cost for offline UPI transactions: *The government and RBI have been actively keeping UPI on rails alongside currency based payment system of the country. Given that UPI has turned out to be the best alternative to cash for offline P2M transactions, the government should formulate a more robust means for a continued support for such UPI transactions. Just like the Law has entrusted onto RBI the responsibility of running the currency based payment system, at some point of time <u>the responsibility of the UPI payment system alongside currency management needs to be vested onto RBI</u>. Like RBI provisions for the cost of currency in their books of account, it should also provision for bearing the cost associated with managing the UPI infrastructure. Till such time, the government should continue supporting for the infrastructure and operations of UPI.*

I. Introduction

1. India has strived for payment and settlement systems that are not just safe and secure, but also efficient, fast and affordable. The government, Reserve Bank of India (RBI), National Payments Corporation of India (NPCI), mastercard, VISA and the banks (along with the fintech companies) have contributed significantly towards the country's goal to bring in a digital environment in the payments space, as the people of India move towards a less-cash society.

2. Unlike yesteryears, when currency notes and cheques were the sole means for monetary transactions, today with our technological advancement, we have developed several alternative and efficient digital means to carry out similar transactions. As India strides forward to move from paper-based payments to digital payments, apart from ease of transacting, a crucial aspect that will further acceptability is affordability of making and receiving digital payments.

3. As on date currency usage is practically free for consumers and so are cheques. In fact, RBI has mandated that banks provide ATM services for free to the extent of 8-10 ATM cash withdrawals per month. To a great extent, banks also entertain cash withdrawals at their branches for free. Though such cash withdrawal systems are costly for the banks in terms of installations, operations and management, it is still kept affordable for the public. Currency when exchanging hands also has a cost to the system in terms of mutilation of the currency notes. However, such costs are neither accounted for nor charged directly onto the users of these currency notes. RBI pays for the same while discarding old notes and printing new ones. Regarding usage of cheques, to a greater extent, banks still provide cheque services for free. However, the cheque based payment system also costs significantly for the banks.

4. Compared to the cost involved in operating and managing the currency and the cheque based payment systems, the digital payment systems cost far less. Therefore, as the country moves deeper into digital payments, the comfort of affordability for the users is very crucial.

5. The regulatory intervention for charges in the payment systems, for users and others, has to be judiciously structured and implemented. As highlighted by RBI, an efficient payment system requires that the fees/ charges/ prices are appropriately determined, to ensure optimal cost to users and appropriate return (revenue/ earning) to operators. On August 17, 2022, RBI brought out a "*Discussion Paper on Charges in Payment Systems*" with an intention to seek answers to few questions from the public.

6. In an attempt to address the questions posed by RBI, we present a three-part report addressing all questions. In first two parts of the report, we had taken up all digital payment systems considered by RBI, other than Unified Payments Interface (UPI). We found it more appropriate to take up UPI separately since that has come to be more universal in the hands of the public and where the government found it more appropriate to directly pitch-in facilitating larger acceptability. Here, in Part-IIIA of the report, we dwell on a much bigger picture that relates to

direct and indirect charges in the UPI system. The new avatar – *credit card on UPI* – will be taken up in Part-IIIB of the report.

II. Payment systems

7. Payment system is not a commodity for retail consumption that it can be left to the market to determine its pricing in an unbounded manner. Just to illustrate, within the payment system, it costs the country to manage currency in form of printing and distribution of the same (the government has vested this job to RBI). This does not mean that the usage of currency should get reflected in form of a currency usage fee, every time currency exchange hands.

8. The government and RBI bear the cost of providing currency as a means of monetary transactions and imposes universal taxes (direct and indirect taxes) to manage the same. Thus, for the common man, the payment system reflects no additional charge at the time currency exchange hands. Now, to facilitate payments, when the country is migrating to a substitute of currency, the same mechanism could be adopted.

9. When currency exchange hands, it does not involve any cost to the immediate system (other than mutilation of the bank notes, for which RBI bears the expenses towards discarding old currency notes and printing new ones). However, unlike currency notes, in case of digital payments, certain additional infrastructure and processes gets involved when money change hands.

10. Thus, a dilemma exists as to how a more efficient payment system adopted by the country (i.e., a digital payment system like UPI) should be allowed to reflect an additional burden for the citizens of India?

11. When money changes hands there are of two types transactions: (i) Person-to-Person (P2P), and (ii) Person-to-Merchant (P2M). Currently, UPI provides P2P and P2M payment service with per transaction limit of Rs two lakh.[1] There has to be at least one digital means that the government has to substitute for currency and such a means has to reflect all the feasible positives that would allow people to happily migrate from currency usage to digital payments.

III. Enabler of usage and quality of savings bank account – The UPI system

12. The focus of providing banking services do not end with opening of bank accounts. It also involves making available a bouquet of financial services that includes **transactions and payments**. Among the six strategic objectives of the National Strategy for Financial Inclusion (NSFI) 2019-2024, RBI has identified and included the strategy on "*providing **basic bouquet** of financial services*" that includes digital payments.

[1] For specific categories, Retail Direct Scheme and UPI based ASBA IPO, the per transaction limit is Rs 5 lakh.

13. To achieve their vision on financial inclusion, RBI identified certain milestones, which includes:

(i) "*strengthening digital financial services to create infrastructure to **move towards a cash less society** by March 2022*" and

(ii) "*ensuring that every adult has access to a **financial service** provider **through a mobile device** by March 2024".*

The financial inclusion strategy aims to provide access to formal financial services along with their **usage** through transactions and payments at an **affordable** price.

14. Regarding usage of the payment systems, Shri M. Rajeshwar Rao, Deputy Governor, RBI recently mentioned about the vision and key objectives NSFI 2019-2024. He said that

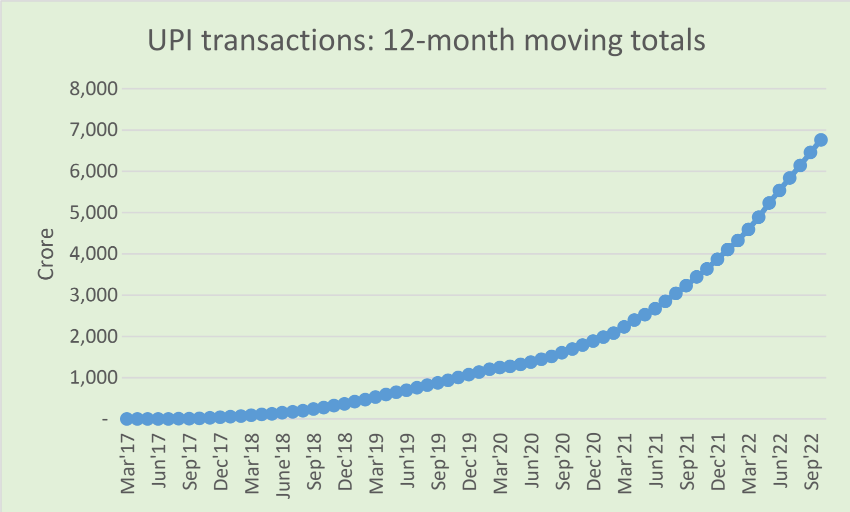
> "*The strategy aims to provide access to formal financial services in **an affordable manner**, broadening & deepening financial inclusion and promoting financial literacy & consumer protection while the reach of the banks amongst the ranks of the underserved got a boost through the Pradhan Mantri Jan Dhan Yojana (PMJDY). ... But we cannot remain content with this, and efforts are continuing to achieve universal access to financial services and products. At the same time the policy focus is being repositioned from 'access of financial services' alone to **'Usage' and 'Quality'** of financial services as well. The FI-Index constructed by RBI, which is an indicator of our efforts in this direction, is based on the above three dimensions viz., 'Access', 'Usage' and 'Quality'. The weights of the index are forward-looking with higher weights given to the deepening aspect of financial inclusion ('Usage' and 'Quality').*".[2]

While promoting financial inclusion, the Deputy Governor, RBI is purporting about *usage* and *quality* of financial services in a savings bank account. Contrastingly, as we discuss later in the report, RBI's own regulations are allowing restrictive *usage* of these very PMJDY accounts to only 4 debits a month (including debits arising out of UPI transactions).

15. UPI has acted as a good vehicle to boost '*Usage*' and '*Quality*' of the financial services offered in a savings bank account. The month of October 2022 is projected to have around 730 crore UPI transactions.[3] By end-October 2022, UPI would do nearly 6,765 crore transactions during the immediate past 12 months (November 2021 – October 2022). Compared to the period November 2020 – October 2021, this amounts to an y-o-y growth of 97% (Chart 1). At this rate, the next 12-month period should see UPI transactions in excess of 12,000 crore. A digital payment mechanism that is free of transaction charges, for the payer and payee, has attracted over 26 crores users and over 5 crore merchants in India alone. This implies that currently, on an average, about 30 UPI transactions are done per month by every user of the UPI.

[2] Inclusive Credit: The Next Milestone (Remarks delivered by Shri M. Rajeshwar Rao, Deputy Governor, Reserve Bank of India – September 08, 2022 - at ASSOCHAM's 17th Annual Summit & Awards on Banking & Financial Sector Lending in Mumbai) https://rbi.org.in/Scripts/BS_SpeechesView.aspx?Id=1326

[3] RBI publishes daily data of select payment systems https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=49901



Source: NPCI Statistics https://www.npci.org.in/statistics

Chart 1: UPI Volume

IV. Conflicting policies with the emergence of the UPI system

16. Decades ago when RBI arrived at the definition of savings bank account, UPI did not exist. The concept of savings bank account, unlike current account, had been primarily to save and transact few times a month. Historically, such transactions involved cheques and few cash withdrawals in a month. The cash withdrawn in a month sufficed to do several small P2P and P2M cash transactions that did not involve a bank account. Now, with these small cash transactions getting transformed to UPI transactions, the savings bank account is hit with over hundred UPI transactions in a month. When we have 1,000 crore UPI transactions a month, it would lead to nearly double that number of UPI transaction-entries hitting the savings and current accounts of banks every month. This is a challenge as it puts a significant burden on the banks' core banking systems. To allow management of savings bank accounts in an efficient and cost-effective manner, the challenge would need to be addressed appropriately.

17. One way to address this dilemma is to invoke the definition of savings bank account and enforce the same. The definition of a savings account is set forth in RBI's "Master Direction - Interest Rate on Deposits". It states:

> **"Savings deposit"** means a form of interest bearing demand deposit which is a deposit account whether designated as "Savings Account", "Savings Bank Account", "Savings Deposit Account", "Basic Savings Bank Deposit Account (BSBDA)" or other account by whatever name called which is subject to the restrictions as to the number of withdrawals as also the amounts of withdrawals permitted by the bank during any specified period.

Alongside, the Master Direction also defines current account. It states:

> **"Current Account"** means a form of non-interest bearing demand deposit wherefrom withdrawals are allowed any number of times depending upon the balance in the account or up to a particular agreed amount and shall also be deemed to include other deposit accounts which are neither Savings Deposit nor Term Deposit.

18. These definitions are more or less in sync with international practices, though unlike India, most of the counties provide a non-interest bearing checking/ chequeing account (akin to our current account), which is the primary account of every bank customer. The savings account, in most countries, is always a secondary account that is interest bearing. The funds in it are usually transferable to the linked primary checking account at will, however, transfers to other accounts from the savings account are restricted.

19. In India the concept of individuals opening current accounts is literally non-existent. Current accounts get opened by only those entities who are prohibited to open a savings account. The fundamental differentiator between savings account and current account is ‘the number of withdrawals permitted’. Historically, savings accounts offered by banks could accommodate what constitutes “restrictions to the number of withdrawals permitted” since, in general, the practical need for excessive withdrawals never arose. However, all that has changed with UPI facilitating multiple withdrawals for day-to-day and time-to-time exchange of money digitally.

20. This creates potential conflict between two polices. There is a regulation on the one hand that defines savings accounts as one where ‘restrictions to the number of withdrawals permitted’ applies; while on the other hand, RBI through its financial inclusion strategy encourages *‘usage’* of financial services (thereby encouraging more activities in savings accounts) to take the country towards a cash-less society through digital means. Surely the two policies counteract each other.

21. Banks do get a cue from this definition of savings account, but majority of them in the present age of digital payments (specially, UPI) do not find it prudent to implement the definition in its true spirit. However, among the outliers, we do have IDBI Bank that has restricted number of withdrawals (debit transactions) to 10 per month in a BSBD Account, an account type that was especially introduced by RBI to promote financial inclusion.
https://www.idbibank.in/pdf/soc/Basic-Saving-account-with-complete-KYC.pdf

22. Again, as a means towards indirectly invoking the definition of savings account, Indian Overseas Bank (IOB) in its Savings Bank Rules mention that:

> *“Savings Bank account is a form of demand deposit account, opened mainly for the purpose of saving and **not** for any business purpose, subject to restrictions on the number of withdrawals during any specified period. **Number of withdrawals** in a savings bank account permitted is fifty per half year in a financial year. For accounts opened in the middle of the half year permissible withdrawals will be calculated prorata. If the number of withdrawals exceed the permitted limit, a service charge as advised from time to time will be levied.”*

https://www.iob.in/upload/CEDocuments/Savings_Bank_Rules.pdf (accessed: 29-10-2022)

Though IOB has invoked the spirit behind the definition of a savings account by subjecting it to the restriction of the ‘number of withdrawals’ during a specified period, it finally deviates from the spirit by allowing unlimited number of withdrawals, but for a fee. In other words, the bank disincentives rather than restricts excessive withdrawals.

V. The UPI-Law

23. To facilitate the objectives of the NSFI (or otherwise), the government introduced Section 10A of the Payment and Settlement Systems (PSS) Act, 2007 (inserted vide the Finance (No. 2) Act, 2019) which states that

"*... no bank or system provider shall impose, whether **directly or indirectly**, any charge upon a person making or receiving a payment by using the prescribed electronic modes of payment.*"

The Central Board of Direct Taxes, under Rule 119AA of the Income-tax Rules, 1962, notified UPI and RuPay debit cards as prescribed electronic modes of payment. An arrangement of **no direct or indirect** charges for transacting via UPI came into effect from January 1, 2020. Thus, banks and system providers were prohibited to impose any **direct or indirect** charges to a person for payments made or received through UPI since beginning 2020.

24. Before we proceed further, clarity is required as to what constitutes imposition of **direct and indirect charge** for using UPI? Any charge imposed by a bank or system provider for using UPI would be a **direct** charge if that gets attributed directly. However,

> *any charge imposed by a bank or system provider due to the occurrence of an event, which is a guaranteed consequence of the UPI transaction, would be an **indirect** charge.*

A debit entry or a debit transaction in a bank account due to an UPI transaction is a guaranteed consequential event. Therefore, the 'debit transaction' that is a guaranteed consequence of an UPI payment cannot be charged – else it would result in an indirect charge for using UPI. Engineering of any such **indirect** charges that are a guaranteed consequence of making or receiving an UPI payment, whether in the name of handling fee, or convenience fee, or digital fee, or network fee, or debit fee, etc., are inherently prohibited under Section 10A of the PSS Act.

25. However, charges imposed for non-maintenance of minimum balance requirements, or monthly rentals on POS terminals and value-adds like UPI sound-box, etc., cannot be associated as consequential events for making or receiving an UPI payment, and hence would not fall under the purview of indirect charges for using UPI. Moreover, a debit transaction that is **not** a consequence of an UPI transaction (such as ATM or cheque withdrawal) would also not fall under the purview of Section 10A of the PSS Act.

VI. RBI allows IOB, Canara Bank and IDBI Bank to indirectly charge for using UPI

26. We now present case studies based on three banks that have indicated **indirect** charges for transacting digitally via UPI and RuPay debit cards. These charges are in place over several years in their schedule of service charges and continue to remain. Although we illustrate with only three banks where, as per their board approved schedule of service charges, they decided to **indirectly** impose charges for UPI transactions, it is likely that other banks may also have taken cues and are contemplating/ imposing such indirect charges on UPI payments.

IOB https://www.iob.in/upload/CEDocuments/iobService_Charge_New_Circular.pdf
SB Accounts (effective 01.01.2020 or earlier)[4] (accessed: 29-10-2022)

TRANSACTION ENTRY CHARGES 50 debit transactions (except Bank charge) per half year – Free. After that each transaction is to be charged @ Rs 5.

This implies a charge of Rs 5 per transaction beyond 8 UPI transactions a month.

Canara Bank https://canarabank.com/User_page.aspx?othlink=425 (accessed: 29-10-2022)
BSBD (PMJDY) Accounts (effective 01.01.2020 or earlier) (accessed: 29-10-2022)

CHARGE RS 5 + GST ON ALL DEBIT TRANSACTIONS BEYOND FOUR A MONTH The above charge is related to per debit transaction beyond 4 withdrawals of BSBD Account. Accordingly, beyond 4 debits in a month, Rs 5 + GST is applied on each ***UPI debit transaction***, which is in addition to zero fees for UPI transactions.

This implies a charge of Rs 5 per transaction beyond 4 UPI transactions a month.

IDBI Bank https://www.idbibank.in/pdf/soc/Basic-Saving-account-with-complete-KYC.pdf
Basic Savings Accounts (effective 01.01.2020 or earlier)[5] (accessed: 29-10-2022)

First 4 Customer Induced Debit transactions per month free. thereafter Rs. 20 per transaction upto 10th will be charged over & above the respective transaction charges. Maximum 10 Customer induced Debit transactions (viz. ATM, Branch, Inet transactions etc.) are allowed in 1 month; thereafter no further debit transactions will be allowed.

This implies a charge of Rs 20 per transaction beyond 4 UPI transactions a month.

27. Banks have the freedom to decide on service charges subject to regulatory and legal restrictions. RBI mandates that while Fixing Service Charges the banks ensure reasonableness of charges, which is not out of line with the average cost of providing the services. The Bank's Board of Directors has been vested with the responsibility to ensure the reasonableness of such charges. Though as per the definition put forth by RBI, banks can restrict the number of withdrawals (debits) in savings accounts, however, they are bound by the extant statutory stipulations on imposition of charges, and that includes Section 10A of the PSS Act.

28. Thus, in violation to Section 10A of the PSS Act, by letting banks continue with the application of such usurious charges, RBI has implicitly allowed imposition of **indirect** charges, in the range of Rs 5 to Rs 20 per transaction, onto users of the 'prescribed electronic mode' of payment, the UPI. Such exorbitant charges, making transactions unaffordable against the letter and spirit of NSFI, are being imposed when one transacts using UPI in lieu of cash for P2P and

[4] Though on paper IOB had decided to charge Rs 5 on every debit entry beyond 50 debit transactions per half year, the bank only recently learned that their IT support had not implemented the software changes to enable the charges that was to take effect from 01-07-2017. **Accordingly, the actual charges never got imposed.** The bank is now re-evaluating their policy before coming out with a correct disclosure of service charges on debit-transaction entries.
[5] As an exception, during the interim peak period of Covid-19 pandemic, IDBI Bank relaxed the debit restrictions of maximum 10 debit transactions in 1 month. **However, the charges continued @ Rs 20 per transaction beyond the first 4 debit transactions in a month.**

P2M transactions. Similar slapping of charges applies while using RuPay debit cards for carrying out digital transactions.

29. The PSS Act mandates, not the government but, RBI as the administrator of the Law. Despite so, it is the government who had to pitch-in as certain non-compliant banks then, were charging directly or indirectly for UPI transactions. The need for the government to pitch-in arose because RBI was reluctant to administer the specific Section 10A of the Law. When the issue was explicitly raised with RBI, they advised that the government be approached for the same.[6] Accordingly, the government had to reiterate that UPI being a prescribed electronic mode of payment, the banks and system providers cannot impose a charge, directly or indirectly, onto the users of UPI making payments through such a channel (see, Annexure).

30. RBI is our watchdog, our guardian, in the country's payment systems to protect the vulnerable people holding regular and BSBD (PMJDY) Accounts. However, by letting banks impose indirect charges (@ Rs 5 to Rs 20 per transaction) for making payments through UPI, RBI may be inadvertently allowing violation of the PSS Act and protecting the banks when it comes to assigning liability. For addressing such issues, the standard operating procedures followed by RBI for banking supervision, consumer education and consumer protection need to be upscaled. Moreover, keeping the NSFI in the forefront, the Financial Inclusion and Development Department of RBI should also have assessed the impediments.

31. On the one hand, the RBI-prepared NSFI recommends conducting surveys to assess the current impediments to financial inclusion (such as "*issues faced while using digital services, knowledge of customer rights and attitude of service provider*"), and on the other hand enforcement of the UPI-Law lags despite RBI being its administrator under the PSS Act. RBI is aware of these bottlenecks but is yet to address them.

VII. The thought processes – charging and/or limiting UPI transactions

32. There are three independent thought processes that went behind designing the features of a saving bank product – first, the RBI regulation defining savings bank deposit accounts; second, the government instituted Section 10A of the PSS Act; and third, some banks' philosophical justification for imposition of indirect charges for transacting through UPI. Despite the UPI-Law, the engineering of exorbitant fees for UPI transactions, through **indirect means**, has been considered by the board of directors of the banks to be reasonable and correct! These prohibitive charges are preposterous and unaffordable for day-to-day UPI payments, especially for the PMJDY (BSBD) Account holders, who are generally the hitherto financially excluded citizens.

33. Moreover, the government's and RBI's thought process on the free usage of UPI will become redundant if banks restrict withdrawals (as per the definition of savings bank deposit account).

[6] Das, Ashish (2020). Deviating from the BHIM-UPI Law. IIT Bombay Technical Report. August 24, 2020. http://dspace.library.iitb.ac.in/jspui/handle/100/25215

It would be a retrograde for the NSFI's vision of 'usage' through digital means if more banks start imposing debit freeze, taking cues from IDBI Bank (and from SBI, who during 2019-21 was imposing debit freeze in BSBD Accounts after 4 debit transactions a month).

34. No restriction in the number of transactions is mentioned in RBI's BSBD Account guidelines of 2019. The concept of restricting the number of withdrawal transactions follows from the RBI's general definition of savings bank account. Accordingly, such a restriction cannot be applied in a selective manner to different savings bank account holders. A savings account, which is primarily meant for savings and less for transactions, should be the same in terms of usability for both rich (normal savings deposit account) and the poor (BSBD Account opened under PMJDY). **Service charges can be different depending on the account categories but restricting number of transactions within the savings bank deposit account product, for one and not for the other, is discriminatory and possibly impinges on ones right to equality**.

35. RBI did not envisage the present digital trend when they first introduced several decades back in their circular on "Interest Rates on Rupee Deposits" the definition of a saving bank account, wherein the clause "savings deposit is subject to the restrictions as to the number of withdrawals permitted" appears. **In the current phase of digital payments, RBI has to devise ways and means to keep the digital payments outside the age-old definition of withdrawal restrictions in savings deposit, which were inherently paper based – cash withdrawals/ cheque usage.**

VIII. On-Device wallet: The UPI Lite

36. NPCI has introduced a product "**On-Device wallet**" called *UPI Lite* for small value transactions (ticket sizes up to Rs 200) within the UPI system. Once this is effectively operationalized, a concern will always remain for the users to enable *UPI Lite* in their UPI app, since the funds in the On-Device UPI wallet would be non-interest bearing. However, the benefits of *UPI Lite* in terms of fostering ease of using UPI would overcome these inhibitions. Once *UPI Lite* matures and is enabled across all UPI apps, a regulatory intervention could be thought of to encourage *UPI Lite* by discouraging excessive number of direct UPI transactions of low values in the underlying savings bank account. Such a move would safeguard against, and control, the excessive number of direct UPI transactions in a savings bank account. **However, funds lying in the non-interest bearing *UPI Lite* wallet (akin to a current account) should be explicitly brought into DICGC's insurance coverage of Rs 5 lakh.**

37. Once *UPI Lite* becomes popular, issuing banks could possibly invoke their freedom to limit customer-initiated UPI debits from a savings bank deposit account. However, in the above arrangement, funds transferred from the savings account onto the *UPI Lite* should not to be considered in the debit counts. Also, the use of *UPI Lite* should be devoid of any charges. Although *UPI Lite* would act as a surrogate for current account (for low value transactions), individuals have the freedom to open an additional current account in case they intend to carry out excessive higher value inter-account debit transactions. Once *UPI Lite* is established

universally, any charges imposed in form of a penalty for excessive debit transactions in a savings bank account, arising of UPI usage, would need the government's nod.

IX. Who should bear the cost for UPI transactions?

38. A payment system settles financial transactions between payers and beneficiaries. In any economic activity, including payment systems, there is no justification for a free service, unless there is an element of public good and dedication of the infrastructure for the welfare of the nation. It is for this reason that RBI has not introduced any charges in one of the core payment systems – the cash based payment system. This is so despite RBI shouldering the responsibility of currency management, be it printing, distribution, storage, destruction, mitigating counterfeiting, etc.

39. The government and RBI have been bearing significant costs on printing and management of currency. **Over the past few years they have spent, on an average, Rs 5,400 crore annually on currency printing alone** and even more on currency management.[7] In line with RBI asking a question on subsidising costs, one may as well ask whether subsidizing such huge cost of printing currency a more effective alternative than subsidizing for the cost of running UPI. The expenditure towards UPI may be much lower and could even curtail the expenditure on currency. A reduction in cash-cost burden must partly get channelized for furthering the UPI ecosystem.

40. RBI has still not considered UPI as a true alternative to cash payments in today's day-to-day payment transactions. RBI appears to be questioning the government's stance of the steps taken (through Section 10A of the PSS Act) towards making UPI as a true alternative to cash. On the question of who should bear the cost of setting up and operating such an UPI infrastructure, it should be the responsibility of RBI (or of RBI/government's joint balance sheet) just as it handles the cost of cash – more so, since **the cash/UPI payment system of our country is sovereign and is a public good.** It facilitates use of money through transacting.

41. Banks incur significant costs on currency management to facilitate financial transactions in the country. Major portion of such costs are not directly passed by the banks to their customers. The cost of servicing UPI, however, is miniscule compared to the costs that the banks incur in handling cash. Nevertheless, there are indeed costs involved to manage the tremendous volumes of UPI and to maintain the related infrastructure.

42. With UPI having the greatest potential to reduce currency notes in the country unlike any other digital means of payment, the question of who pays for the associated costs for UPI transactions has to hinge on the spirit of the Law under Section 10A of the PSS Act. Pricing policy can be ideally based on economic and accounting principles. On accounting principle,

[7] The total expenditure incurred on security printing during April 1, 2021 to March 31, 2022 was Rs 4,984.8 crore as against 4,012.1+4,377.8+4,810.67+4,912+7965 = Rs 26,077.57 crore during July 1, 2016 – March 31, 2021. Therefore, during July 1, 2016 to March 31, 2022 RBI spent Rs 31,062.37 crore amounting to over Rs 5,400 annually. (Source: Annual reports of RBI)

there is no rigorous and impartial study on cost of producing such UPI services and the likely loss to banks and system providers, should they have to bear it all.

43. However, as we work on the pricing of UPI, there is a questionable assumption that banks may be at a loss if they are not allowed to charge for UPI. Fundamentally, banking business works on the principal of arbitrage. We should not forget that consumers pay a huge price to banks by implicitly sacrificing interest on savings, current and prepaid account deposits. It has been perceived for long that it is necessary for banks to provide certain basic payment transactions for free since banks have differentiated the rate of interest on the term deposits and the time component of the savings/current deposits. With such large core balances under the current/ savings account portfolio, the differentiated rate of interest has been the basis of identifying the nature and quantum of 'basic transactions' to be provided free by banks. Thus, what is perceived as 'free' service of savings/current accounts by banks is actually paid *ex ante* by depositors by agreeing to park their funds in these accounts at a lower return.[8] This is possibly the reason why the government insists on zero charge for UPI. However, to settle the issue objectively, without taking sides, we need to consider all aspects.

44. Is the government's decision to make UPI free rational enough? Given that digitisation through UPI leads to multifaceted savings by banks as compared to providing the same through paper-based services (currency notes and cheques), the government has enough justification for spearheading UPI payments free of charge. While banks have to contribute their bit for the payment system, it does not mean that the government and RBI do not have to share the cost burden in their endeavour towards furthering the digital payment system in the country and facilitate people to move away from cash for every small, medium or large transaction.

45. UPI as a digital payments' platform increases efficiency towards tax compliance, and provides overall convenience for public good. With the government's vision of no direct or indirect charge on payments using UPI, an appropriate sharing of cost burden by the government and RBI is called for, with UPI being the simplest alternative to cash in this era of mobile phones. Now, just like the Law has entrusted onto RBI the responsibility of running the currency based payment system, at some point of time the responsibility of the UPI payment system alongside currency management needs to be vested onto RBI. Like RBI provisions for the cost of currency in their books of account, it should also provision for bearing the cost associated with managing the UPI infrastructure. Till such time, the government should continue supporting for the infrastructure and operations of UPI.

X. E-commerce merchant payments

46. With technological changes, systems have developed in the payments space where payment transactions can be done remotely and instantaneously. This has been a boon for the e-commerce sector's online sale of services and commodities. The e-commerce industry runs under a model

[8] Das, Ashish (2020). Merchant transactions through debit cards – costs and prices. IIT Bombay Technical Report. September 22, 2020. http://dspace.library.iitb.ac.in/jspui/handle/100/25218

that just requires a warehouse/ kitchen to distribute their sales. As such, to enable sales there is no need for a formal brick and mortar shop for walk-in customers. This reduces costs on physical infrastructure but it increases costs on IT driven sales operations. One of such costs arise due to the services provided by the payment solution providers. The banks and fintech companies should provide efficient payment solutions for the e-commerce industry and charge for the same. The services rendered by the payment solution providers have to be remunerated well in form of fees. This is completely acceptable for the e-commerce industry as payment solutions are not only their backbone of business continuity but are also part of their business costs that is accounted for to run the business.

47. Accordingly, focusing only on e-commerce transactions, the use of debit card, prepaid card, prepaid wallet and UPI (and also credit card once credit costs are not thrust onto merchants) are analogous since the payments-solution provided are on an integrated platform. Thus, the price that needs to be borne by the organized sector of e-commerce merchants and institutions should be at par for all these modes. Restricting to e-commerce related transactions, there is a potential to introduce a uniform fee of 0.3% (or a more judiciously arrived rate) across all these payment modes, in lieu of extant MDR (merchant discount rate). Such a fee imposed on e-commerce merchants and institutions who cannot transact in currency notes would be more in line with **digital payment facilitation fee**. However, such a suggestion is premature as this would need a more thorough understanding of the pros and cons and more importantly, the government has to be on board.

48. Table 1 and Table 2 provide the UPI Ecosystem Statistics in millions and billions.[9] A UPI transaction is either a P2P or P2M. NPCI has provided a bifurcated data on UPI Volumes and Values with respect to P2P and P2M transactions. Starting October 2021, NPCI is disseminating granular data based on ticket sizes, Rs 0-500, Rs 500-2000, and > Rs 2000 (Table 1). More specifically, for the P2M transaction values, we see from Table 1 that 30% of the transaction values are of the ticket size category Rs 0-2000, while 70% are of the category Rs >2000.

Table 1a: UPI transactions (Volume) based on ticket-size distribution

Month	P2P Volume (Mn)				P2M Volume (Mn)			
	Rs 0-500	Rs 500-2000	Rs >2000	Total	Rs 0-500	Rs 500-2000	Rs >2000	Total
Oct'21	1449.00	506.00	553.00	2508.00	1337.00	260.00	115.00	1712.00
Nov'21	1493.00	508.00	546.00	2547.00	1265.00	257.00	116.00	1638.00
Dec'21	1675.00	547.00	591.00	2813.00	1361.00	273.00	120.00	1754.00
Jan'22	1637.00	540.00	581.00	2758.00	1458.00	279.00	122.00	1859.00
Feb'22	1535.00	520.00	577.00	2632.00	1499.00	274.00	123.00	1896.00
Mar'22	1921.00	613.00	667.00	3201.00	1755.00	313.00	137.00	2205.00
Apr'22	1978.00	648.00	694.00	3320.00	1826.00	304.00	133.00	2263.00
May'22	2038.27	660.74	709.53	3408.54	2035.78	349.56	161.31	2546.65
June'22	1992.19	630.48	680.00	3302.67	2037.94	358.08	164.06	2560.08
July'22	1914.52	666.67	707.95	3289.14	2430.61	393.57	175.07	2999.25
Aug'22	1882.67	691.80	714.79	3289.26	2695.27	414.15	180.95	3290.37
Sep'22	1805.56	693.81	734.23	3233.60	2931.53	426.17	189.49	3547.19

[9] 1,000 million = 1 billion = 100 crore.

Table 1b: UPI transactions (Value) based on ticket-size distribution

Month	P2P Value (Rs Bn)				P2M Value (Rs Bn)			
	Rs 0-500	Rs 500-2000	Rs >2000	Total	Rs 0-500	Rs 500-2000	Rs >2000	Total
Oct'21	211.79	613.09	5389.12	6214.00	190.33	259.90	1050.21	1500.44
Nov'21	216.33	614.24	5350.44	6181.01	185.26	257.28	1060.82	1503.36
Dec'21	239.38	661.45	5790.46	6691.29	205.03	276.42	1095.76	1577.21
Jan'22	238.09	653.16	5781.46	6672.71	216.09	281.65	1149.49	1647.23
Feb'22	223.30	631.56	5783.56	6638.42	215.85	277.63	1136.53	1630.01
Mar'22	275.03	739.79	6763.41	7778.23	246.96	315.14	1265.49	1827.59
Apr'22	287.75	780.77	6990.73	8059.25	244.07	307.58	1222.11	1773.76
May'22	294.27	800.01	7177.25	8271.54	276.07	355.66	1511.93	2143.66
June'22	282.52	765.01	6956.59	8004.13	280.13	364.74	1494.85	2139.72
July'22	289.51	809.88	7223.27	8322.66	318.07	400.64	1588.55	2307.26
Aug'22	294.72	841.52	7197.47	8333.71	341.25	420.50	1632.47	2394.22
Sep'22	288.59	844.96	8620.49	9754.04	359.22	434.10	1750.57	2543.89

Source: UPI Ecosystem Statistics of NPCI

Table 2: Monthly UPI transactions and P2M percentages

Month	Total		P2M %	
	Volume (Mn)	Value (Rs Bn)	Volume	Value
Oct'21	4218.65	7714.45	40.57	19.45
Nov'21	4186.48	7684.36	39.14	19.56
Dec'21	4566.30	8268.48	38.42	19.07
Jan'22	4617.15	8319.93	40.27	19.80
Feb'22	4527.49	8268.43	41.87	19.71
Mar'22	5405.65	9605.82	40.78	19.03
Apr'22	5583.05	9833.02	40.54	18.04
May'22	5955.20	10415.20	42.76	20.58
June'22	5862.75	10143.84	43.67	21.09
July'22	6288.40	10629.92	47.69	21.71
Aug'22	6579.63	10727.93	50.01	22.32
Sep'22	6780.80	11164.38	52.31	22.79

Source: UPI Ecosystem Statistics of NPCI

49. The government incentivised the banks by way of paying 0.25% of the P2M UPI transactions (with ticket sizes upto Rs 2,000), for a financial year 2021-22.[10] Thus, the banks and system providers received about Rs 1,015 crore in 2021-22 for such UPI transactions.[11] The government's decision to continue with such incentives would lead to providing about Rs 2,000 crore in 2022-23 for P2M UPI transactions.[12] Now, even if we restrict to e-commerce transactions, based on September 2022 data, a uniform fee of 0.3% towards **digital payment facilitation fee** onto the merchants would generate more than Rs 275 crore in a month from UPI transactions alone.[13] By introducing a uniform fee of 0.3% onto the e-commerce merchants

[10] For certain Industry Programmes the rate was fixed at 0.15%.
[11] IIT Bombay Technical Report. Aug'22. http://www.math.iitb.ac.in/~ashish/workshop/UPI-AmoghDas-2022.pdf
[12] Based on September 2022 P2M UPI data. 12×(359.22+434.10)×(0.0025×0.6+0.0015×0.4) = Rs 19.99 billion.
[13] E-commerce RuPay debit card transactions have a share of 36% in value terms (September 2022). In absence of similar data for UPI, we have taken 36% as the share of e-commerce in P2M UPI transactions.

towards a **digital payment facilitation fee**, the UPI system alone would generate around Rs 5,000 crore in 2023-24. It may turn out to be prudent for the government to consider the **digital payment facilitation fee** of 0.3%, in lieu of extant MDR, onto e-commerce merchants across all digital payment modes. The government is clear that "*the concerns of the service providers for cost recovery have to be met through other means*". The service providers involving issuer bank, acquirer bank, and the intermediaries, have to devise appropriate business model without showcasing that charges are being imposed on UPI transactions either directly or indirectly. The government and RBI should come on board to some of the suggestions made and help India reach the pinnacle of retail digital payments in the world.

11. Questions on UPI charges raised by RBI

50. We present short answers to questions raised by RBI on UPI charges. To understand the answers better, it is advised to go through the details presented in the relevant sections of this report. We will separately deliberate on NPCI's proposed RuPay Credit Cards linked to UPI and the UPI-Law in Part-IIIB of the report.

i. In the context of zero charges, is subsidising costs a more effective alternative?

This question also arises for cash transactions just like it has been put forth for UPI transactions. The country is striving to become a less-cash society for which India pioneered to bring in UPI as an excellent alternative of cash to the world. Now, just like the Law has entrusted onto RBI the responsibility of running the currency based payment system, at some point of time the responsibility of the UPI payment system alongside currency management needs to be vested onto RBI. Like RBI provisions for the cost of currency in their books of account, it should also provision for bearing the cost associated with managing the UPI infrastructure. Till such time, the government should continue supporting for the infrastructure and operations of UPI.

ii. If UPI transactions are charged, should MDR for them be a percentage of transaction value or should a fixed amount irrespective of the transaction value be levied?

In view of above, this question does not arise. However, if an efficient and robust payment system is the responsibility of the government, UPI can be considered as an outsourced operation carried out by NPCI and the banks. In such a situation, the funding mechanism that RBI and the government has to adopt can be better left to a more focused assessment of costs and prices.

iii. If charges are introduced, should they be administered (say, by RBI) or be market determined?

The question of direct or indirect charges on UPI is currently ruled out. For savings bank deposit accounts, with the onset of *UPI Lite* (as and when it stabilizes), there is a potential to promote *UPI Lite* over direct UPI debits from a savings account for small ticket sizes. On the question of not allowing a savings account function like a current account, RBI needs to appropriately take a call once usability of *UPI Lite* is established. RBI needs to provide guidance on ways and means to restrict number of withdrawal transactions during any specified period in savings bank deposit account.

Annexure

Circular No. 16 /2020

F.No.370142/35/2019-TPL-Pt
Government of India
Ministry of Finance
Department of Revenue
Central Board of Direct Taxes
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Dated: 30th. August, 2020

Subject: Imposition of charge on the prescribed electronic modes under section 269SU of the Income-tax Act, 1961 – reg.

In furtherance to the declared policy objective of the Government to encourage digital transactions and move towards a less-cash economy, the Finance (No. 2) Act 2019 inserted a new provision namely section 269SU in the Income-tax Act, 1961 (**"the IT Act"**), which provides that every person having a business turnover of more than Rs. 50 crores during the immediately preceding previous year shall mandatorily provide facilities for accepting payments through prescribed electronic modes. Further, a new provision namely section 10A was also inserted in the Payment and Settlement Systems Act 2007 (**"the PSS Act"**), which provides that no Bank or system provider shall impose any charge on a payer making payment, or a beneficiary receiving payment, through electronic modes prescribed under section 269SU of their IT Act. Subsequently vide notification no. 105/2019 dated 30.12.2019 (i) Debit Card powered by RuPay; (ii) Unified Payments Interface (UPI) (BHIM-UPI); and (iii) Unified Payments Interface Quick Response Code (UPI QR Code) (BHIM-UPI QR Code) were notified as prescribed electronic modes under section 269 SU of the IT Act.

2. A circular no. 32/2019 dated 30.12.2019 was issued by the Board to clarify that based on section 10A of the PSS Act, any charge including the MDR (Merchant Discount Rate) shall not be applicable on or after 01st January, 2020 on payment made through prescribed electronic modes. However, representations have been received that some banks are imposing and collecting charges on transactions carried out through UPI. A certain number of transactions are allowed free of charge beyond which every transaction bears a charge. Such practice on part of banks is a breach of section 10A of the PSS Act as well as section 269SU of the IT Act. Such breach attracts penal provisions under section 271DB of the IT Act as well as section 26 of the PSS Act.

3. Banks are, therefore, advised to immediately refund the charges collected, if any, on or after 1st January, 2020 on transactions carried out using the electronic modes prescribed under section 269SU of the IT Act and not to impose charges on any future transactions carried through the said prescribed modes.

Goyal 30.08.2020

(Ankur Goyal)
Under Secretary to the Govt. of India

References (*Chronological from oldest*)

[1] Das, Ashish and Agarwal, Rakhi (2010). Cashless Payment System in India - A Roadmap. IIT Bombay Technical Report. May 31, 2010.
http://dspace.library.iitb.ac.in/jspui/handle/10054/1732

[2] Promotion of Payments through Cards and Digital means. Government of India OM (Ministry of Finance), DEA F.No-01/02/2015-Cy.I dated February 29, 2016.
https://dea.gov.in/sites/default/files/Promo_PaymentsMeans_Card_Digital_0.pdf

[3] Das, Ashish (2016). Promotion of payments through cards and digital means. IIT Bombay Technical Report. April 24, 2016.
http://dspace.library.iitb.ac.in/jspui/handle/100/18428

[4] Report of the Inter-Ministerial Committee for Finalisation of Amendments to the PSS Act, 2007. RECOMMENDATIONS TO CONSOLIDATE AND AMEND THE LAW RELATING TO PAYMENTS (Ministry of Finance). August, 2018.
https://dea.gov.in/sites/default/files/Payment%20and%20settlement.pdf

[5] Financial Inclusion- Access to Banking Services – Basic Savings Bank Deposit Account (BSBDA). RBI/2018-19/206 DBR.LEG.BC.No.47/09.07.005/2018-19 dated June 10, 2019.
https://rbidocs.rbi.org.in/rdocs/notification/PDFs/NT206B907C2CDEA744542826A19D64D360A27.PDF

[6] Guidelines on Regulation of Payment Aggregators and Payment Gateways. RBI/DPSS/2019-20/174 DPSS.CO.PD.No.1810/02.14.008/2019-20 dated March 17, 2020 (Updated as on November 17, 2020).
https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11822&Mode=0

[7] Das, Ashish (2020a). Deviating from the BHIM-UPI Law. IIT Bombay Technical Report. August 24, 2020.
http://dspace.library.iitb.ac.in/jspui/handle/100/25215

[8] Das, Ashish (2020b). Charging Consumers for Merchant Payments. IIT Bombay Technical Report. December 8, 2020.
http://dspace.library.iitb.ac.in/jspui/handle/100/25219

[9] Amogh Das and Ashish Das (2022). Unified Payments Interface - A Giant in the Digital Payments Space. IIT Bombay Technical Report. August 1, 2022.
http://www.math.iitb.ac.in/~ashish/workshop/UPI-AmoghDas-2022.pdf

[10] Discussion Paper on Charges in Payment Systems. (Available for public comments up to October 3, 2022). RBI. August 17, 2022.
https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=21082

[11] Inclusive Credit: The Next Milestone (Remarks delivered by Shri M. Rajeshwar Rao, Deputy Governor, Reserve Bank of India – September 08, 2022 - at ASSOCHAM's 17th Annual Summit & Awards on Banking & Financial Sector Lending in Mumbai)
https://rbi.org.in/Scripts/BS_SpeechesView.aspx?Id=1326

[12] Das, Ashish (2022a). Charges in Payment Systems in India. IIT Bombay Technical Report. October 2, 2022.
http://dspace.library.iitb.ac.in/jspui/handle/100/36653

[13] Das, Ashish (2022b). Charges in Credit Card Payment System. IIT Bombay Technical Report. October 2, 2022.
http://dspace.library.iitb.ac.in/jspui/handle/100/36654