Sanitising Distortions in Digital Payments

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Honest tax payers look for some order to emerge from the chaos following withdrawal of high denomination notes. If this gives push to digitalisation, the country will reap the benefits that come along with it. While the earlier drive by the Government to push financial inclusion has brought most Indian adults under the banking net and provided them with a debit card, the acceptance network where these cards can be used is still restricted. One reason for merchant reluctance to accept digital payments is the associated tax accountability; and the other reason is the cost at which digital payment solutions are available. For small merchants – the largest in number among the merchant community – the main deterrent is perhaps these costs. An avoidable element in the costs of digital payments is the credit cost that piggybacks on payment cost and raises the overall cost burden. This paper intends to draw readers’ attention on this anomaly and provides path to cross this major road block.
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*Let My Country Awake*

Where the mind is without fear and the head is held high;  
Where knowledge is free;  
Where the world has not been broken up into fragments by narrow domestic walls;  
Where words come out from the depth of truth;  
Where tireless striving stretches its arms towards perfection;  
Where the clear stream of reason has not lost its way into the dreary desert sand of dead habit;  
Where the mind is led forward by thee into everwidening thought and action;  
Into that heaven of freedom, my Father, let my country awake.

*Rabindranath Tagore*

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Ignorance of bank customers is the biggest asset on bank’s balance sheet. Likewise, ignorance and lack of freedom for merchants is also a big asset for the providers of the digital payment system.
Sanitising Distortions in Digital Payments*

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Executive Summary and Action Points

1. The unprecedented measure by the Government of India to withdraw the legal tender character of high denomination currency will ship the country several notches ahead towards a less-cash more-digital economy, notwithstanding the transitory pain in implementation. To ease the current currency crunch in the country, several temporary and quick-fix measures to promote acceptance and usage of digital payments are being announced – waiver of merchant fees for Debit cards by banks, enhancement of limits for select Prepaid Payment Instrument, etc. With more than 728 million Debit cards outstanding as of September 2016, the financial inclusion initiative of the Government and the Reserve Bank of India (RBI) has already given primary digital access to almost every adult Indian along with a bank account. While the need and convenience to go digital is now being felt by most of the consumers and businesses, including the micro and small ones, time is absolutely opportune to think of long term solutions. This paper could not have come at better time than now as it suggests ironing out some of the frictions in the electronic payment space to give long run impetus to the current wave of digitalisation.

2. The costing of digital payments should be transparent and free from any additional non-payment related cost burden that impedes its adoption by consumers and retailers. In this connection, we compare the extant costing structure of credit-based and creditless digital payments. The cost burden of the perceived ‘free’ credit embedded in the payment system are brought to light and solutions suggested to transit to a fair and non-discriminatory pricing. A survey is also undertaken to gather user preference and consumer perception on credit cost in digital payment system. Though the conclusions of the paper apply to all countries, the focus is on India.

* The views expressed are those of the authors and not necessarily of the institutions to which they belong.

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3. Credit and Debit cards payments are facilitated by banks (as issuer and acquirer) that issue cards to consumers and acquire merchants to accept these cards; and the network companies that provide technology support to put through transactions. The fee for using digital payment products is decided by banks along with payment networks. The facilitators also set the rules of the game. Under honour all cards at par (HACP) rule, merchants are required to keep equivalence among all cards and cannot steer consumers to cheaper card payment alternatives, if any.

4. In India the merchant discount rate (MDR) charged to merchants for accepting Credit cards usually ranges from 1.2% to 2.5%. A major share of this MDR goes to the issuer bank in form interchange. Based on the prevailing 1-month lending rate for unsecured credit, a conservative estimate of the cost of ‘free’ loan for Credit cards is estimated to exceed ₹50 billion in 2016-17. This credit cost, imposed indirectly on the merchants is, in turn, passed on to all her customers through increased selling price of goods and services\(^1\). Thus, credit-less digital payments cross-subsidise the hidden cost of credit embedded in the payment system. With significant increase in the growth of Debit card usage, a decrease in the average ticket size of transactions at point-of-sale (POS) is noted. While this augurs well for digital inclusion of lower spectrum of consumers, a negative fallout is that the hidden credit burden in the payment system is being shoved to small customers in the regions where Credit and Debit cards simultaneously prevail\(^2\).

5. It is prudent to migrate to measures that incentivise digital payments since they are more economical, beneficial and efficient than cash payments. This paper presents a way forward for encouraging the cost effective credit-less digital payments. It focuses on the incentives and disincentives in the existing payment space and provides rational policy path, for possible consideration by the Government and the RBI.

**Action Points:**

6. With the above backdrop, given the extant regulations and the new initiatives taken by the government; taking into account the findings of the survey on consumer perception for credit cost in digital payments; putting together the learning from international practices; and the analysis in the paper, the following recommendations emerge:

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\(^1\) Increase in product price by merchants to adjust for high card payment cost has been noted among others by the European Commission 2013, the European Union 2015, Government of India 2016, and RBI March/September 2016.

\(^2\) The premium Credit cards also enjoy freebies like reward points, lounge facilities, *etc*. The cost for these freebies is recovered in the form of even higher interchange fee. With about 90% of Credit cards being premium cards, this effectively increases the subsidy rich clients receive from the poor. Our assessment of the cost burden is, therefore, an underestimate as we do not account for this additional burden.
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A. Bringing parity in digital payments

- **Make credit conscious and credit cost explicit:** Credit cost pertaining to the Credit card product should be made explicit rather than mixing/camouflaging it with the payment feature of the product. This will ensure that Credit card is used by consumers who consciously desire to avail credit and not by those who are availing credit because it is perceived to be ‘free’.

- **MDR for Credit and Debit cards be made low and at par – charge for credit separately:** MDR for Credit cards should be brought down at par with Debit cards so as to unbundle the ‘credit’ and ‘payment’ features of Credit cards, making the reduced MDR independent to the electronic payment choice made by customers. Issuing bank be given freedom to impose a credit fee, in lieu of the revenue loss for decreased interchange. The credit fee may be charged in the Credit card’s monthly statement by the card issuing bank for use of credit facility (and not for using a digital payment facility). This would relieve the retail payment system from a thrust credit cost that continues to be twined with it for historical reasons.

- **MDR for Credit cards and debit payments\(^3\) be kept high and at par – give cash back for debit transactions:** Another way to address the credit burden in payment system is to keep MDR for Credit card and debit payments high and same so that MDR includes the credit cost. Under this proposal, the issuing bank should give cash-back, to the extent of credit cost, to users of debit payments. The cash back feature for debit payments will attract consumers to move away from cash to digital payments. This approach would be more in the direction of showcasing promotion of digital payments through incentives.

- **Alternative pricing strategies for payment transactions:** Based on the discussions of the distortions present in the digital payment space, we propose the following alternate pricing strategies for digital payments. The recommendations on interchange and MDR in this study have maintained a holistic balance and ensured that frills like credit cost, reward points, etc. get distinctly recognised, separately priced and do not overburden the credit-less digital payments. The incentive structure, if any, in the digital payment space should be such that it steers the system towards cheaper alternative rather than expensive modes that are lucrative to select few.

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\(^3\) Rationalising promotion of digital payments, our approach remains form-factor agnostic and extends to all debit based payment products besides Debit cards such as internet banking, mobile-based banking, UPI, prepaid instruments/wallets, and the like.
1: For Transactions of less than or equal to ₹1000
   Interchange of 0.2% with MDR cap of 0.5% for both Credit/Debit based transactions. Credit cost of nearly 1.0% to be imposed in monthly Credit statement.

2: Alternatives for transactions exceeding ₹1000 can be as under:
   a) Interchange of 0.2% with MDR cap of 0.5% for both Credit/Debit based transactions. Credit cost of nearly 1.0% to be imposed in monthly Credit statement.
   b) Interchange of 0.7% with MDR cap of 1.0% for both Credit/Debit based transactions. Issuing bank gives 0.5% cash back to its customer on retail Debit transaction. Credit cost of nearly 0.5% to be imposed in monthly Credit statement.
   c) Interchange of 1.2% with MDR cap of 1.5% for both Credit/Debit based transactions. Issuing bank gives 1.0% cash back to its customer on retail Debit transaction.

3: The fee for the digital payment network including insurance against cyber security breach has to be derived out of the revenue earned by the issuer and the acquirer, or be a minor part of the MDR.

4: It may be noted that the proposed model of explicitly charging Credit card users for the credit cost, amounts to giving teaser loans at about 10.5% per annum till the payment is due and about 40% per annum thereafter, for the whole period of credit (including the grace period).

One may consider refinement in the ticket size cut-off beyond which MDR structure changes. Moreover, for online payments where there is no scope of cash payments (other than cash-on-delivery), the choice of model could as well be a flat fee of ₹5 instead of the MDR prescribed under 1. Also, the question of unlimited \textit{ad valorem} pricing of MDR is debatable with possible scope for setting a cap, say, of ₹100. In order to cover for expenses related to fraud control / risk mitigation and developmental activities, for the incremental amounts in excess of ₹20000, the MDR could have a uniform cap of 0.1%. Thus, we see that the proposed model has scope for improvisation.\footnote{We acknowledge that there is no certainty on whether merchants will pass through their savings in part, if not full, to consumers by bringing down prices when MDR is reduced. Neither is it ruled out that the banks would not be tempted to pass through some of their losses to consumers of digital payment products by way of higher prices or fewer services. Nonetheless, the proposal to strip out credit cost from payment system merits attention. With this change, in the medium term, the credit cost component in the payment system would no longer influence merchant’s selling price.}
• **Higher cap for acquirer fee is to hasten banks for merchant acquisition:** In the above proposals, the debit (Debit card, mobile-based, online, or other credit-less digital payment modes) interchange routed through a payment network is proposed to be capped at 0.2% and acquirer fee at 0.3% of transaction amount. This is expected to invigorate penetration of acceptance network in the country, which presently is limited and for which there is a cost bank incurs especially in case of acquisition of small merchants, mom-and-pop stores, and merchants in villages and small towns. Though the cap is higher, actual acquirer fees imposed on the merchants within the cap would depend on aspects such as the relationship of merchant with the bank – including average balances, volumes and value of transactions in the current account; merchant’s net worth; and cost of merchant acquisition. Banks may be persuaded to offer innovative solutions including m-POS, Unified Payment Interface (UPI), etc., bringing access of cheaper and seamless modes of digital payments particularly to the small merchants.

• **Pricing for mobile-based retail transactions:** With new technologies expected to migrate consumers to mobile-based payment transactions and other cheaper means of digital payments, we propose additional set of rules as under to adapt our pricing strategies to mobile platforms:
  a) there should be no additional fee outside MDR for UPI or other similar payment form-factors for merchant transactions; and
  b) monthly rental/maintenance for POS or other similar expensive devices (provided by banks) that enables digital payments should be outside MDR and be separately charged depending on its usage and cost.

• **Acceptance of foreign cards:** Foreign cards have higher MDR than domestic cards. In order to safeguard the interests of domestic retail market, it is recommended that the choice between accepting card payments in foreign card holder’s home currency or in local currency (the choice influences merchants’ cost) should lie with the merchant. This way, the merchants would be able to steer foreign card payments in home currency making it cheaper for them.

**B. Other policy implications**

• **Limiting 'free' cash to disincentivise cash:** Given the availability of digital payments, the government and regulators should disincentivise excessive cash in form of imposing fee on monthly cash deposits/withdrawal (from bank counters and ATMs) in excess of a certain minimum amount. This disincentive would bring parity between digital payments (where payments are charged on cost basis) and cash (where costs are not made apparent), and thus stimulate digital payments.
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- **Incentivise digital payments:** With a 0.5% to 1% cash back on credit-less digital payments as proposed above, merchants who do not favour digital payments would embrace them to remain in business and the consumers would drive this in view of the above cash back scheme. Resultantly, more and more merchants would become tax compliant thereby adding to the exchequer’s kitty.

- **Merchants should not be allowed to surcharge:** Allowing merchants to surcharge Credit cards (for the credit cost component in MDR) is one way to handle the cost differential vis-à-vis Debit cards. However, if the customers are gullible, this freedom may get misused – merchants may overcharge; surcharge a Debit card in the process; discriminate between customers that will be difficult to monitor; and may bring in a feeling of distrust among consumers and dispirit digital payment usage. Thus, for Credit card based transactions, merchants should not be given the freedom to surcharge.

- **Financial education to further digitalisation of Indian payments:** Consumer awareness and education towards digital retail payments is of prime importance. Central banks and the governments of developing countries need to aggressively drive financial education on digital payments. The combination of reasonable transaction fees, technology based innovative payment modes, together with consumer awareness for digital payment would facilitate digital India mission and make us a less-cash society.

- **Bank statements can make a lot of difference:** Credit card users have the privilege and comfort of receiving a consolidated monthly statement showing all retail transactions done during the billing cycle. This adds value to the product and brings convenience to Credit card users. Monthly statements of savings account lack such details. Such simple innovations to improve presentation of retail transactions in monthly statements of savings account remains in the hands of the banks and competition should guide them to make such simple yet important value-additions.

7. For smaller merchants, value added tax and service tax requirement acts as an impediment to embrace the digital means of retail payments. Such merchants usually negotiate for a cash transaction when it comes to receiving payments digitally, since cash makes it easier to evade tax. Tax evasion leads to a win-win for both merchants and consumers since merchant is able to keep her price more competitive and consumer gets a good bargain in return and is also able to make an expenditure which cannot be trailed. However, with Goods and Services Tax (GST) in place, the scope of evasion of such taxes would get minimalised. Moreover, the government’s measure to withdraw ₹1000 and ₹500 notes will suck out unaccounted money. With cash in the system now being tax paid, there will be no need for transacting without audit trail and thus cash in the hands of consumer will no longer be the preferred mode over digital payments.
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8. While migration to GST along with the drive to withdraw specified bank notes will give digital payments a strong fillip; to make it a habit amongst consumers and merchants before unaccounted cash again catches up, the distortions in the digital payment space (credit-based vis-à-vis credit-less alternatives) need to be urgently addressed for which the paper provides directions.
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Abstract

The unprecedented measure by the Government of India to withdraw the legal tender character of high denomination currency will ship the country several notches ahead towards a less-cash more-digital economy, notwithstanding the transitory pain in implementation. With more than 728 million Debit cards outstanding as of September 2016, the financial inclusion initiative of the Government and the Reserve Bank of India has already given primary digital access to almost every adult Indian along with a bank account. While the need and convenience to go digital is now being felt by most of the consumers and businesses, including the micro and small ones, time is absolutely opportune to think of long term solutions.

With innovations in Core Banking Solutions and communication technology, digital payment space, which was initially occupied by Credit cards, has expanded to credit-less mediums. Amongst these, Debit cards are in the lead, with mobile-based payments, prepaid instruments/wallets etc. growing at a good pace.

While the recent move by the Government has given a strong stimulus to digital payments, this paper addresses an important distortion that remains in the digital payment space (credit-based vis-à-vis credit-less alternatives) which needs to be urgently addressed for furthering its acceptance and usage. A survey is undertaken to gather user preference and consumer perception on credit cost in digital payment system. With an understanding of the user preference and analysing the pros and cons of the prevailing mindset of availability of free credit, the paper suggests paths that may facilitate migration to a fair and non-discriminatory less-cash more-digital society. Though the conclusions of the paper apply to all countries, the focus is on India.

* The views expressed are those of the authors and not necessarily of the institutions to which they belong.
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In this paper all possible care has been taken to project the correct picture using the data gathered. Deviations, if any, are inadvertent.
1. Introduction

1. Across history human beings have aspired to possess goods and found various ways to pay for them. They began with bartering centuries ago, moved to other choices as medium of exchange for carrying out payments – such as, livestock, grains, shells, beads, and later to more sophisticated choices including precious metals that were used to make coins and introduce a formal concept of money. In modern times, money’s definition has changed from being a physical object – usually cash in the form of a legal tender within a country – to bank balances and other digital forms.

2. A peep into history shows that digital retail payments were introduced to the world by Diners / Amex / Visa / MasterCard who were the pioneers of Credit card payment system and set the Credit card business model in an environment when other cashless retail payment products were absent. They developed the Credit card based digital payment space through well researched strategies and gradually became the giants of digital payments. As a financial product, Credit card is a combination of the payment system and the credit system of a country.

3. With the inception of Debit cards and its real time interoperable capabilities through Core Banking Solutions, the digital payment ecosystem has broadened, matured, and increased manifold in size. Unlike Credit cards, Debit card and other similar debit forms of digital payments are solely payment products.

4. Emerging market economics (EMEs) have, in recent years, gained momentum in moving towards credit-less digital payments. The appreciable progress of digital payments in India with efforts from the Government and the Reserve Bank of India (RBI) makes her a good sample country, among the EMEs, for studying the digital payment environment. Das and Agarwal (2010) and Visa Inc. (2016) provide a good feel of the challenges and solutions to further India’s transition to a less-cash economy. Looking at India’s Credit and Debit card statistics for the three financial years\(^5\) 2013-14 to 2015-16, it is seen that though in 2015-16, in volume terms, Credit cards constitute only 40% of the card transactions at point-of-sale (POS), in value terms they constitute 60% of the card transactions. As of 2015-16, the annual increase in volume for Credit card transactions was 28% while for Debit cards the increase was much sharper at 45% (Chart 1). Appendix E provides this data and extends it to the period April-September 2016.

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\(^5\) A financial year is a 12 month period from April of one year to March of next year.
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Chart 1: Credit and Debit card – Usage Statistics for India

Source: RBI Bulletin. Cards outstanding are as of March-end.

5. Since 2014, while there has been deceleration in overall Non-food credit, Personal loans continue to accelerate. Within Personal loans, the Credit card outstanding loan is increasing at a fast pace, showing its increasing importance in Personal loans category (Chart 2).

Chart 2: Growth in Non-food credit, Personal loans and Credit card outstanding loans

Source: Database on Indian Economy, RBI and authors’ calculation.
https://dbie.rbi.org.in/DBIE/dbie.rbi?site=statistics
6. Cash is an important payment mode in the retail payment system, but it does not come for free. Visa Inc. (2016) estimates that the cost of cash to the Indian economy is 1.7% of GDP, and there are several gains in reducing cash in the economy, as also elucidated in Das and Agarwal (2010), such as (i) improving tax revenue; (ii) proliferation of financial inclusion; (iii) giving convenience of anytime anywhere banking using plastic cards and smartphones; (iv) eliminating risk of carrying currency notes; (v) earning interest for bank balances till the final point of use. With a clear understanding that excess use of cash is detrimental to the interest of the economy, this paper delves only on the digital retail payments, with a special focus on the costing structure of Credit cards vis-à-vis other debit based digital transactions. The aim is to have an efficient and effervescent ecosystem for digital payments which will enable consumers and retailers to enjoy full benefits of brick and mortar and online markets in line with the country’s digital India initiatives.

7. Developing a secure, efficient and competitive payment system requires, inter alia, innovation and adeptness in the field of payment instruments for card or account based transactions in an offline, online or mobile environment; as also existence of a level playing field between payment facilitators/providers (card companies and banks) and users (merchants and consumers). Any restrictive business rule and practice that lacks information on cost and pricing, prohibits retailers or consumers to have full knowledge on the fee charged to use a particular payment mode, hampers efficiency in the retail market and leads to sub-optimal outcomes including inefficiency in pricing.

Distortion in digital payments model

8. When retail merchants sell their goods and services and receive payments digitally, the billed amount for the product/service sold is same irrespective of the mode of payment, under the principle of honouring all cards at par (HACP). However, the post settlement sale proceeds vary depending on the card type or the digital payment type used. Merchants’ sale proceeds are generally least for Credit card payments, with proceeds falling even further if the Credit card is a frilled one, such as a premium card. Banks and card companies fix the fees for acceptance of such Credit cards vis-à-vis Debit cards. While Credit cards are relatively expensive, merchants do not find a level playing field in fixing the fee for their acceptance. A merchant would typically not set his selling prices that vary by payment method. However, in the absence of a level playing field for arriving at the card acceptance fee and other charges, merchants pass the excessive cost for Credit card usage on to product prices. Thus, high merchant transaction fees for Credit cards ultimately translate to higher prices for all consumers, including those who use other methods of payment.

9. The aspect of increase in product price by merchants to adjust for high card payment cost has been noted among others by the European Commission, 2013 (reference [4]), the European Union, 2015 (reference [10]), Government of India, 2016 (reference [14]),
RBI, 2016 (references [15] and [21]) and Das (2008, 2016). Among the various digital payment options available, a disproportionately high number of consumers use Debit cards. Therefore, the issue that this paper tries to address is the need for a level playing field for this section of digital payment users. The issue needs to be addressed appropriately so as to avoid disadvantaging merchants and/or credit-less digital payers, and to ensure that Credit cards do not get promotion/acceptance in a manner that their cost is borne by other forms of digital payments.

10. With the significant growth and prevalence of credit-less digital payments, this paper articulates the flipsides of the camouflaged and discriminatory Credit card system which is still being nurtured and thrust on the digital retail payment system. Though we focus our discussions and comparisons in the paper between Credit and Debit cards, the inferences drawn would apply to all forms of credit-less digital payments.

11. The rest of the paper is organised as follows: in Section 2, we describe the Credit and Debit card system, the mechanism underlying its business along with global developments in the digital payment system. In Section 3, through an example of a country like India, we illustrate how the cost of credit is imbedded in the Credit card payment system which runs in parallel with the general digital payment system of a country. Policy rate of various countries and its impact on Credit card payments is also studied. In one of its kind, a survey was conducted to gather consumer perception on the credit cost included in the purchase price for our digital retail payment space. The survey results are presented in Section 4. Section 5 deliberates on who should pay for the credit cost and why. In Section 6, we look into the science of discovering interchange and attempt discovery of the true interchange for Debit cards or other forms of uncontaminated digital payments. Some related issues are also discussed. Finally, Section 7 gives some concluding remarks and policy implications.

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6 Payers who use digital payment modes like Debit card/prepaid instruments/Net banking/mobile-based debit payments, etc., instead of Credit cards.
2. The Credit and Debit card system – Global context

12. Globally, one of the contentious issues in the payment card system is the interchange fee. Interchange is a term used in the payment industry to describe a fee paid between banks for the acceptance of card based transactions. It is a fee that a merchant's bank (‘acquiring bank’) pays to a customer’s bank (‘issuing bank’). In a Credit or Debit card transaction, the card-issuing bank deducts interchange fee from the amount it pays to the acquiring bank that handles a Credit or Debit card transaction for a merchant. The acquiring bank then pays the merchant the amount of the transaction minus – (i) the interchange fee, (ii) an additional (usually smaller) fee for itself, and (iii) the card payment network fees. The total fee charged for interchange, acquirer, and network, is often referred to as the merchant discount fee. Interchange fees, the largest of the three components, in card based payments are set by the card payment networks (like Visa, MasterCard, etc.).

13. Interchange fees has a complex pricing structure, which is usually based on the card brand; the type of card – Credit or Debit; the type and size of the accepting merchant; the type of transaction (e.g. online, in-store, whether or not the card is present for the transaction, etc.); and the regions or jurisdictions where it is used. For example, consumer Credit card have relatively lower interchange rate as against corporate or commercial Credit cards. Again, a premium Credit card that offers rewards generally will have a higher interchange rate than the standard cards (like Silver/Gold cards). Transactions made with Credit cards generally have higher rates than those with Debit cards. Sales that are not conducted in person (also known as card-not-present transactions) such as by phone or on the internet, are generally subject to higher interchange rates, than the transactions made by cards presented in person. This is due to the increasing risk and rates of fraudulent transactions. It is important to note that interchange is an industry standard that all merchants are subject to. It is set to encourage issuance and to attract issuing banks to issue a particular brand. Higher interchange is often a tool for schemes to encourage issuance of their particular brand.

14. For an example of how interchange functions, imagine a consumer in United States (US) making a $100 purchase with a Credit card. For that $100 item, the retailer gets approximately $98. The remaining $2 (merchant discount fee), gets divided. A significant portion, that is, about $1.65 goes to the card issuing bank (that is, the interchange); $0.14 goes to card payment network; and the remaining $0.21 goes to the retailer's bank (the acquirer). For example, if a Credit card displays a Visa logo, Visa will get the $0.14, likewise with MasterCard. Chart 3 provides a complete flow of the MDR sharing. On an average the Credit card interchange rates in the US are about 175

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7 Under a broader context, interchange applies for any form of interoperable digital payments.
basis points (1.75%; 1 basis point is 1/100th of a percentage) and vary widely across countries (See, Chart 4). The acquiring bank earns comparatively less fee since it is perceived that the bank indirectly earns through retailer’s large balances held in non-interest bearing current accounts.

Chart 3: Flow for a typical sharing of MDR

![Chart 3: Flow for a typical sharing of MDR](chart.png)

15. Setting up of a high interchange fee structure by the card payment network and banks, impedes proliferation of card payments among small merchants and among small town merchants. The MDR, of which the interchange fee is the largest component, is charged to merchants, which merchants in turn pass on to consumers. As discussed in the previous section this pass-through of MDR to selling prices is noted by several countries and various institutions, including India. Thus, high MDR ultimately gets passed on to consumers in form of higher final price for goods and services. Ideally competition between issuing banks should guide interchange fee and bring it down. However, in reality, competition between card schemes prompt banks to issue premium cards, cards with frills (reward points, movie tickets, cash back, insurance, etc.) that typically lead to higher rather than lower fees. Thus the usual price disciplining effect of competition in a market economy, does not work in lowering the payment system interchange fee. At present, no legislation regulating interchange fees is in place in India, except indirectly in form of caps on MDR for Debit card transactions.

16. Thus price increases caused by interchange fee are ultimately borne by consumers, who tend to be oblivious of the fact that the price of goods and services includes the
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fees paid by merchants for digital payment. The merchants are often ignorant of the difference in fee on different cards and even if they are aware, the HACP rule forces them to accept all cards under the same brand (such as all cards under Visa brand or MasterCard brand) at par. Merchants do not have the freedom to choose cheaper card or refuse an expensive frilled/premium card. Prime incongruity in this scheme of things is that the cost of payment mode is passed on to product price and is borne by all consumers – including those who possess no-frill cards and those who do not even use card payment. Thus the low-end customers end up subsidising the cost of fancy cards used by the richer clientele. To bring in level playing field, this calls for regulations that either allow merchants to surcharge; or give them the freedom to accept cards selectively under the same brand, that is free them of the HACP diktat; or impose transparency in making known the amount of fee that is levied on different genre of cards upfront so that consumers and retail merchants make informed choice of payment mode being used; or take recourse to mandating a reasonable interchange fee for acceptance of basic payment cards. Some of these aspects were also highlighted by the European Commission in a proposal for a regulation of the European parliament and of the council on interchange fee for card based payment transactions (see reference [4]).

The standards for interchange in the US, the European Union, India and other countries

17. The emergence of Debit cards has been one of the most notable developments in consumer banking and the retail payments industry in recent decades. In the developed countries, since mid-1980s, Debit cards have grown to become a popular non-cash retail payment instrument. This growth has been particularly pronounced over the last decade for both the number and value of Debit card transactions.

18. Merchants have historically, and increasingly, objected to certain aspects of the Debit card system. The most prominent merchant objection is over interchange for Debit card transactions. Since the largest portion of MDR goes as interchange fee to the issuing bank and only a small portion is for the merchant’s acquiring bank, the unease of the retail merchants is on the interchange fee component of MDR. The share of MDR kept by acquirer, being small, remains un-contentious. Surprisingly, merchants seem to be less concerned with the MDR for Credit card transactions, possibly due to their inability to segregate credit cost inbuilt in the interchange (unlike Debit cards).

19. In US, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, represents an attempt at using the legislative and regulatory processes to address this conflict between retail merchants, banks, and card payment networks over interchange fees. A provision in the Act instructs the Board of Governors of the Federal Reserve System to regulate interchange fees for certain Debit cards. As implemented by the Federal Reserve Board’s Regulation II, the new regulation caps Debit card interchange fees for certain transactions at 21 cents plus 0.05% of the transaction value. This cap,
which became effective from October 2011, significantly reduced the then prevailing interchange fees (for other than small ticket size transactions). For more details, one may see Kay, Manuszak and Vojtech (2014).

20. Effective December 9, 2015, the European Interchange Fee Regulation for the European Union regulated the interchange fee on consumer Credit and Debit cards (see reference [10]). The interchange fee cap for Credit card transactions has been set at 0.3%. For Debit cards, the card schemes have been allowed the flexibility to set a weighted average rate so that interchange fee does not exceed more than the equivalent of 0.2% of the annual overall transaction value of all domestic Debit card transactions within each payment card scheme. Certain cards, however, are exempt from the interchange fee caps, which primarily include commercial cards that come associated with high interchange fee. These rates for the interchange fees were arrived at by the European Parliament based on a ‘Merchant Indifference Test’ undertaken by the European Commission (see reference [9]). Accordingly, Visa and MasterCard have since aligned their interchange fees (see references [17] and [22]). Before this regulation took effect, the fee was much higher for the countries, including key markets such as Austria (starting from 1.0% for Visa consumer Credit cards), Germany (starting from 1.58% for Visa consumer Credit cards), and the UK (starting from 0.87% for Visa consumer Credit cards). Chart 4 provides the Credit card interchange fees for other European Union countries in the pre-December 2015 era.

21. The interchange fee for Credit and Debit cards in the US, Canada, Australia, New Zealand and the European Union countries varied mostly from 0.2% to 2.3% as seen from Charts 3 and 4 (based on the August 2015 updates provided by the Payments System Research Department of the Federal Reserve Bank of Kansas City (see reference [11])). The variation was not only seen across countries but also within countries, where premium cards had far higher fee than the non-premium ones. While the Credit card interchange fee ranges from 1% to 2%; for a $40 equivalent of Debit card transaction, under the regulated system (for the US) or otherwise, the interchange was much lower around 0.5%. Even before the December-2015 Interchange Fee Regulation took effect, the European countries had a tendency of lower interchange rates, unlike the US and Canada. Recently, Hayashi and Maniff (2016) of the Federal Reserve Bank of Kansas City have put together various country practices (as on August 2016) on public authority involvement in payment card markets with respect to (i) interchange and merchant service fees and (ii) surcharges and discounts.
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Chart 4: Credit card interchange fee (IF) in various countries- August 2015 Update

Chart 5: Debit card interchange fee (IF) in various countries- August 2015 Update
22. As against the above countries, in India the interchange on Credit cards for most of the brands typically varies between 1% through 2%. Accordingly, the MDR for domestic consumer Credit cards usually starts from 1.2% and goes up to 2.5% for premium cards. For corporate/commercial Credit cards and for foreign Credit cards the MDR could be as high as 3.5%. As a general practice, depending on the net worth of merchants and business relationship (for example, high average balances in its current account, bank’s gain due to float through a negotiated deferred settlement of funds, merchant availing loans from the bank and generating high volume of sales, etc.), the bank may offer lower MDR on Credit cards.

23. With an objective to boost digital retail payments, effective September 2012, the RBI mandated banks to cap Debit card MDR at 0.75% for transactions up to ₹2000 and 1% for transactions above ₹2000. Additionally, RBI directed banks to ensure that there is no surcharge on Debit cards. In line with this regulatory change, India’s card payment network provider RuPay also revised down Debit card interchange. NPCI set RuPay’s interchange rates to 0.45% for transactions up to ₹2000 and 0.65% for transactions above ₹2000 (this interchange fee includes ₹0.60 per transaction which is the card payment network fee). With interchange level of 0.45% to 0.65%, the POS terminal deploying (acquiring) banks have a cushion of 0.3% to 0.35%. The card payment network, however, imposes an additional fee of ₹0.30 per transaction to the acquiring bank.

24. While some discipline has been brought in by mandating a cap on Debit card MDR, for the fees imposed on Credit card banks and card companies are free to decide on MDR. The MDR for Credit card remains high and competition has not brought these rates down. We look at this aspect in more detail in the following section.

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8 Additionally there is a 15% service tax in India on the merchant discount fee, leading to an effective rate of 1.15% for every MDR of 1%.
10 Pernicious practices of select banks deterring customer protection and accounting integrity. RBI/2013-14/292 DBS.CO.PPD No. 3578 /11.01.005/2013-14, September 17, 2013. [https://rbi.org.in/scripts/NotificationUser.aspx?Id=8461&Mode=0]
3. The burden of the Credit card system on digital payments

25. The main thrust of this paper pertains to a mindset that needs to be changed – it is regarding bundling of the credit feature on to a payment product. This increases the payment cost and burdens all consumers and retailers. Unbundling of this credit cost that piggybacks on a payment product like the wily ghost Betaal on king Vikram\textsuperscript{12} is by far the most important prerequisite to remove the opaqueness in pricing of payment products, bring in a level playing field, create space for new players, and promote innovation.

26. Few stakeholders feel that merchants themselves absorb this credit cost for Credit card payments. Some merchants in fact do so with an expectation of generating larger sales through Credit cards which could possibly off-set the differential in profit margin between Credit cards and Debit cards. However, such subsidy by merchants is possible only for big merchants that work on large volumes and margins. The smaller merchants including mom-and-pop stores work on narrow margins and low volumes, and possibly cannot absorb such costs. Moreover, even if a few merchants absorb such costs, their doing so tantamounts to discrimination across customers merely on the basis of the payment mode they choose to use, by sacrificing some portion of profit for one customer (Credit card user) and not for the other (Debit card user). This discrimination by merchants is not by choice but thrust by the HACP mandate of card companies.

27. At the dawn of digital retail payments, a choice between Credit card and cash was guided by the creation of a payment system which on one hand, showcased the convenience of Credit cards to increase sales (due to the flexibility of paperless money) and on the other hand presented to the card holders with not only credit but a perceived ‘free’ credit. Subsequently, it was the digital feature of the money on tap that increased convenience and sales for the merchants who were accepting cards. With the inception of Debit cards in retail payments, which can be viewed as true digital conversion of cash, the landscape of digital payments changed. Now that the digital payments with both credit and credit-less features co-exist, there is a state of confusion among merchants who find the two products to have different net cost even though they serve the same purpose of digital payment. Both these credit and credit-less products are same with respect to their digital payment feature (and must coexist), however, the cost of credit should be unbundled and be borne by Credit card users. As mentioned earlier, identifying this conflict in the payment systems and proposing ways to handle these is the major thrust of this study.

\textsuperscript{12} Vikram Aur Betaal is based on Betaal Pacchisi, written nearly 2,500 years ago by the legendary Mahakavi Somdev Bhatt. These are spellbinding stories told to the wise King Vikramaditya by the wily ghost Betaal who rides on the king’s back and leaves him only when he answers a moral question pertaining to the story's characters.
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The cost of credit

28. Unlike Debit cards, or other credit-less digital payments, Credit card users in a Credit card transaction are inherently facilitated to make the actual payment at a later point of time without incurring any interest fee. Usually, the deferred period for making the payment ranges from 20 days through 52 days, based on the date of purchase and the Credit card billing cycle. Deferred payment by the Credit card user amounts to a loan taken for such periods from the card issuing bank. Since banks are financial intermediaries that accept deposits with a purpose of lending or investment, they are not allowed to extend free credit using depositor’s money. In such a scenario, who bears the interest cost of this perceived ‘free’ credit? The Credit card system has put the burden of this interest (in form of interchange) on to the merchants who accept such Credit cards.

29. In India, effective April 1, 2016, for any credit product\(^{13}\), the RBI has mandated banks to arrive at a minimum lending rate on the basis of Marginal Cost of funds based Lending Rate (MCLR). The prevailing 1-month MCLR for scheduled commercial banks in India is around 9% per annum\(^{14}\). Thus for the 36 days\(^{15}\) of ‘free’ credit provided to Credit card users, the card issuing bank, as per the RBI mandate, has to necessarily receive interest for the credit at least at the 1-month MCLR. Accordingly, taking the annual Credit card loan rate at the prevailing 1-month MCLR of 9%, the interest for credit of 36 days would be 0.89% of the credit amount. However, given that the Credit card loans are unsecured, accounting for a minimal credit risk premium and bank’s business strategy, a conservative estimate of the interest cost for this loan should not be less than 10.5% per annum. This additional risk based cost works out to 0.15% of the loan amount for an unsecured credit for the 36 days. Thus the total credit cost of a Credit card loan for 36 days works out to 1.04% of the transaction amount. This credit cost of 1.04% of the transaction amount has to be part of the interchange and consequently, of the overall MDR fees imposed on merchants for acceptance of Credit cards.

30. The above discussion shows that the cost of ‘free’ loan (for 20 to 52 days) enjoyed while using a Credit card is about 1.04% of the transaction amount. However, payments made through Debit cards or other credit-less payment modes do not have this additional credit cost. Since the system imposes this credit cost of 1.04% to the merchants accepting Credit cards, as discussed in the previous section, the merchants in turn pass this higher payment cost to all consumers through increased selling price of their goods and services (see illustration in Appendix A). Thus, credit-less digital payments cross-subsidise the hidden cost of credit embedded in the payment system.

\(^{13}\) Loans through Credit cards fall in the category of unsecured credit.


\(^{15}\) Based on an average of the number of days of free credit, that is, 20 days through 52 days.
31. Why are the banks and the payment system inducing an environment wherein people use Credit cards for which others who use credit-less digital modes of payment have to pay? The payment system needs a payment product and not a credit product and on the same footing, the credit system needs a credit product and not a payment product. One may create a hybrid product but the lines of burden should be clearly demarcated and should not be passed from one system to another. As mentioned earlier, the bulk of the Credit card transaction fees (MDR) goes to the issuing bank as interchange fee. The issuing banks do not expect to make a significant amount of money from late fees and interest charges from creditworthy customers (who pay in full within the billing cycle every month), and instead exploit the MDR revenue sharing arrangement that gives them the lion’s share by ultimately pushing the burden to all users of the payment system.

32. Moreover, unlike Credit cards, there is a significant increase in the growth of Debit card usage in volume terms; while in value terms the increase in growth is relatively marginal (Chart 1 and Appendix E). This has led to a decreasing trend in the average ticket size at POS for Debit cards (Chart 6). Increase in volume and decrease in average ticket size indicates that the financial inclusion initiatives of the Government and the RBI are fructifying, taking small customers into the realm of digital payments. However, it also follows that the credit burden in the payment system is being shoved to small customers who are bearing the burden of the credit cost without getting any benefit from it.

Chart 6: Average ticket size (₹) at POS for Credit and Debit cards

<table>
<thead>
<tr>
<th>Year</th>
<th>Credit card</th>
<th>Debit card</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>3025</td>
<td>1542</td>
</tr>
<tr>
<td>2014-15</td>
<td>3087</td>
<td>1502</td>
</tr>
<tr>
<td>2015-16</td>
<td>3063</td>
<td>1354</td>
</tr>
<tr>
<td>2016-17</td>
<td>3112</td>
<td>1287</td>
</tr>
</tbody>
</table>

Source: RBI Bulletin and authors’ calculation.

33. For India’s card spends at POS, considering a conservative estimate of the credit cost as 1.04% of the transaction amount, Credit cards burdened the payment system by ₹15.18 billion in the 6-month (6m) period ending September 2016. Using the 2015-16
6m-o-6m percentage growth for Credit card values and considering a 3% additional boost due to Government’s measure to withdraw specified bank notes, it is estimated that the camouflaged credit burden on the payment system through card use at POS would be about ₹333 billion in the financial year 2016-17 (Table 1).

<table>
<thead>
<tr>
<th>Table 1: Estimating Credit burden based on POS transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Half-year (6m)</td>
</tr>
<tr>
<td>Apr’15-Sep’15</td>
</tr>
<tr>
<td>Oct’15-Mar’16</td>
</tr>
<tr>
<td>Apr’16-Sep’16</td>
</tr>
<tr>
<td>Oct’16-Mar’17</td>
</tr>
<tr>
<td>Apr’16 - Mar’17</td>
</tr>
</tbody>
</table>

Source: RBI Bulletin for Credit card amount and authors’ calculation.

34. Other than Credit card transactions at POS, a significant usage of Credit card is for e-commerce (eCom). Though the RBI is not yet publishing such eCom transaction data for Credit and Debit cards, the data is published by National Payments Corporation of India (NPCI) for all transactions for RuPay Debit cards. It is seen from the RuPay Debit card transaction statistics for the period April-September 2016 that the share of eCom usage for RuPay Debit cards is about 46% in volume terms and about 22% in value terms (Chart 7). Furthermore, a significant 6-month growth of 102% is seen in eCom transaction amount, which is more than three times the growth for POS transaction amount. Though the eCom data for other than RuPay cards is not available, with significant growth seen in online shopping, it is expected that the general Credit and Debit cards are also seeing similar exponential growth in eCom usage. The 6-month average ticket size for RuPay Debit cards is about ₹1030, with it being about ₹1490 at POS and ₹490 at eCom. Appendix E provides the corresponding RuPay data.

Chart 7: India’s RuPay Debit card statistics for April-September 2016

Source: NPCI data and authors’ calculation.
35. The ₹33 billion burden on the payment system attributed to Credit cards is just a conservative estimate based on only the POS transaction data. Adding Credit card usage data for eCom, the overall burden figure on the payment system would be much higher and expected to exceed ₹50 billion. This burden is thrust on the non-Credit card users transacting digitally in the retail market who subsidise the expensive Credit card system significantly.

Policy rate of countries and its link with the digital payments system

36. In India the MCLR of bank is usually guided by the monetary policy rate or the Repo rate as this influences banks’ marginal cost of borrowings. The Repo rate is currently set at 6.25%. Table 2 presents central banks of select countries clubbed by their policy rates. The bottom row of the table gives an indicative minimum lending rate which corresponds to the Central bank’s policy rate. It is seen that Countries like the US, the UK, Canada, Hong Kong, Japan, Singapore and the Euro area have very low lending rate and thus they have no present concern for the Credit card paradox existing in the payments system. However, unlike the above countries, the countries like India, Turkey, Indonesia, South Africa, Russia, Brazil, and to some extent China, have lending rates which are much higher. This puts severe burden on the credit-less digital payment system of these developing countries due to the current lack of regulatory mechanism to check it.

![Table 2: Lending rate based on Central bank rates as prevailing during 2015-16](http://data.worldbank.org/indicator/FR.INR.LEND?end=2015&start=2014)

37. Undoubtedly, the world’s digital payment majors like the US, the UK, Canada, Hong Kong, Japan, Singapore and the Euro area are expected to set digital retail payment trends, but that does not mean that they are not sensitive while promoting prudent and non-discriminatory digital payment systems. For example, the European Union has realised this and has brought down the interchange gap between consumer Credit cards and Debit cards to 10 basis points. Given the interest rate differential between these countries, it becomes important for countries with higher interest rates to

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16 Based on trends seen from eCom data for RuPay
Sanitising distortions in digital payments

initiate setting required trends so as to eliminate some of the discriminatory, though unintentional, practices.
4. A survey on consumer perception for credit cost in digital payments

38. The Government of India has taken strong initiatives to promote payments through digital means and in reducing the burden of inefficient and expensive payment modes. We undertook an e-mail (Google Forms) based survey in India to understand the present mood of the users of digital payments and awareness towards its associated cost. The survey “Cashless payments – Do you have a choice?” canvassed a questionnaire containing 7 multiple choice questions (Appendix B). The survey aimed to gauge consumer awareness and perception on the credit cost included in the sellers’ price, within the digital payment space. It also attempted to understand the preference of the users of digital payments. The survey was conducted during September-October, 2016.

39. The first five survey questions relate to user profile, card-type owned, and their preferences for payment modes. The next two questions had some prior information (backdrop) provided. They are as below:

The cost of the free loan (for 20 to 52 days) enjoyed while using a Credit card is about 1% of the transaction amount. However, payments made through Debit card, Net banking, Cash, etc., DO NOT HAVE this additional credit cost.

**Question 6:** If you do not use Credit card but instead use Debit card, Net banking, etc. for shopping, are you aware that you would be unconsciously paying for this credit cost inbuilt in the selling price of products?

*Option 1: Yes*
*Option 2: No*

Since the banks impose this credit cost of 1% to the merchants accepting Credit cards, the merchants in turn pass this cost to all consumers by fixing a universally HIGHER selling price to absorb this cost. This way DIGITAL payments like Debit card, Net banking, etc. (other than Credit cards) cross subsidize the hidden cost of credit embedded in the payment system.

**Question 7:** As a user of the digital payments, which of these measures do you think will be most effective to overcome this cross-subsidization?

*Option 1: merchants discouraging Credit card by charging the extra 1% from only the Credit card users*
*Option 2: banks not charging the merchants the extra 1%, instead Credit card holders' bank taking it in the Credit card monthly statement*
*Option 3: Either of the two above*
*Option 4: None of the above*
Sanitising distortions in digital payments

40. The survey is restricted to people having web access and who also have access to digital payments. Though this may appear as a biased (elite) set of respondents, as digital payments grow and cover the entire spectrum of consumers, the country will have to gear up to cater to the needs of such citizens. The summary data generated out of the survey based on the 1530 responses is given in Appendix C. Sifting through the responses of 1530 participants, we get some interesting insights.

Results of the survey

41. Our sample constitute of 50% students, 43% salaried, and remaining self-employed / housewife / retired persons (Chart 8). As expected, about 80% of the students have a Debit card but not a Credit card (unlike only 30% for salaried). On the other hand, about 70% of the salaried have both Debit and Credit cards (unlike only 20% for students).

42. Viewing the data differently, our sample constitutes 53% respondents who have only Debit cards, while 44% respondents have both Debit and Credit cards. There are 46% respondents who have a Credit card and of them 95% also have Debit cards. Only 0.7% of the respondents have neither Credit nor Debit cards (Chart 9).

43. The survey shows that 52% of the card holders are prepared to move away from currency notes even for small ticket size transactions of less than ₹1000. For
transactions size of ₹1000 or more, 90% of the card holders did not prefer using cash (Chart 10).

Chart 10: Preference distribution of payment mode for walk-in shopping

The totals may not add up due to rounding-off of numbers.

44. For online shopping, 41% of the card holders use cash-on-delivery. To promote digital payments and reduce cash management costs, the eCom business should meaningfully convert its strategy of ‘cash-on-delivery’ to ‘payment-on-delivery’, harnessing the state-of-art Unified Payment Interface (UPI)\(^{17}\). Among Credit card holders, 33% do not prefer using their Credit card for online purchases; while among respondents who have only Debit cards, 41% do not prefer using Debit card for such transactions. Overall, Net banking comes out as the most preferred online payment mode with more than 53% preferring it (Chart 11).

Chart 11: Preference distribution of payment mode for online shopping

The totals may not add up due to rounding-off of numbers.

\(^{17}\) For more on UPI and procedural guidelines for the same, refer to [18].
45. An important aspect covered in this survey, as mentioned earlier is to get a gauge of consumer awareness. The survey shows that 64% of Credit card holders are not aware of the credit cost inbuilt in selling price. Among the persons holding only Debit cards, 80% are not aware of this increase in cost (Chart 12).

Chart 12: Awareness of the credit cost inbuilt in selling price

<table>
<thead>
<tr>
<th>Have only Debit card</th>
<th>Have Credit card</th>
<th>Have Debit or Credit card</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>36%</td>
<td>64%</td>
</tr>
<tr>
<td>27%</td>
<td>80%</td>
<td>73%</td>
</tr>
</tbody>
</table>

The totals may not add up due to rounding-off of numbers.

46. Finally, after being made aware of this additional cost, 28% of Credit card holders still prefer that the existing costing be left as it is, that is, the credit cost should continue to be shared by all (including those who do not benefit from it at all) for their Credit card usage. Since they are the beneficiaries of the concealed and convoluted costing of credit in the payment system, they possibly choose this option. On the other hand an overwhelming 84% of the card holders having a Debit but no Credit card feel that this cost should be taken off their shoulder and be borne by those who are benefitting from it (Chart 13).

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18 However, 72% of Credit card holders still feel that the cost of credit should be borne by the Credit card users.
Sanitising distortions in digital payments

Chart 13: Percentage opting for the four options to control cross-subsidisation

The totals may not add up due to rounding-off of numbers.

**Option 1**: Merchants discouraging Credit card by charging the extra 1% from only the Credit card users

**Option 2**: Banks not charging the merchants the extra 1%, instead Credit card holders' bank taking it in the Credit card monthly statement

**Option 3**: Either of the two above

**Option 4**: None of the above

47. As on date 1553 responses have been received. Summary Charts based on 1553 responses are given in Appendix D and the results broadly match the analytics in this section.
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5. Who should pay for the credit cost of a digital payment?

48. A country’s payments system has to be carefully crafted and be sensitive to the concerns of both merchants and consumers. A merchant will be happy to accept digital payment modes like Debit cards / prepaid instruments / net banking / mobile payments, etc. (and accordingly price his products) that do not burn hole in his pockets. She can accommodate thin costs for these payment modes within her profit margin.

49. Though a merchant is ready to pay MDR for the convenience of digital payments, would she also want to pay for the credit cost, which is a significant component of interchange? If yes, it would amount to discriminating Debit card users against Credit card users since the merchant’s proceeds on a net basis will be less from the latter than from the former. Just like value received through cash is denomination agnostic, and a merchant accepts 20 notes of ₹100 at par with one note of ₹2000, the merchant’s cost of card-based payment alternatives should also be form agnostic. The digital retail payment alternatives, just like Cash (of any denomination), should be kept uncontaminated to retain the purity of payment feature.

50. Credit cards today are given to select few who have continuous flow of money or have sufficient bank balances and who may really not need a credit line for taking real credit. Such people use Credit cards as a means of payment facilitator while enjoying the frills of ‘free’ credit and other goodies. Who should ideally be paying for this credit – the beneficiary or the entire system?

51. Of the ₹3 trillion Credit card usage annually, a certain percentage is paid on or before the due date (which does not attract any finance charges). This set of Credit card holders predominantly use Credit cards only for transaction purpose. The remaining Credit card holders are users of true credit in Credit card transactions. As per some industry experts, use of Credit card with a need to avail credit (even by paying finance charges) does not exceed 20% of Credit card spending. In other words, more than 80% of the Credit card usage is only for transaction convenience and free credit, while 20% or less of Credit card spending is where users borrow on their cards by paying interest (not just transacting).

52. Though Credit card is an excellent digital product for a country’s payment system and must continue, as a fair trade practice, only the beneficiaries of this credit facility should bear the cost of credit. This additional cost should not be thrust on to other credit-less users of the digital payments in an unfair and camouflaged manner. In India, the average cost of such credit is at least 1% of the transaction amount, which is currently overburdening the payment system.
Segregate payment and credit feature of Credit card

53. From the above discussions it is clear that there is a need to bring down the MDR for Credit cards at par with Debit cards so as to unbundle the ‘credit’ and ‘payment’ features of Credit cards, making the reduced MDR independent to the electronic payment choice made by customers. The issuing bank can then exercise its freedom to impose a credit fee, in lieu of the revenue loss for decreased interchange. The credit fee may be charged in the Credit card’s monthly statement by the card issuing bank for use of credit facility (and not digital payment facility). This would relieve the retail payment system from a thrust credit cost that continues to be twined with it for historical reasons. Though such a move may impact Credit card usage (and the Credit card business) through decline in the usage by direct credit cost conscious customers, but it would lead to migration of Credit card payments to other credit-less digital payments which are seamless, secure and cheaper. This will also disentangle the credit feature of a payment product by keeping its costing separate.

54. Alternatively, another way to address the credit burden in payment system is to keep MDR for Debit and Credit cards high and same so that MDR includes the credit cost. Under this proposal, the issuing bank would give cash-back, to the extent of credit cost, to its Debit card users to promote credit-less digital retail payments. Though the modalities need to be worked out meticulously, if found suitable, the approach would be more in the direction of showcasing promotion of digital payments through incentives.

55. With Credit card having a dual feature of being a credit product and digital payment product, those issued Credit cards could be provided with a corresponding bank account with a line of credit to the extent of the credit limit. The customer who avails credit pays for the number of days the credit is availed. Once the banks migrate to such a model, it would lead to innovations where those availing credit through such accounts can be provided the flexibility to fund the credit account as an when they wish, thereby reducing their days of credit and thus, credit cost. This would be unlike a frilled credit of 20 to 52 days, prevailing today, in case of Credit card accounts.

56. In a recent discussion paper related to card based payment system in India (see reference [15]), the RBI has raised a question of “Whether MDR for Credit cards should be rationalised?” Any answer different from “yes” to this question would only showcase discriminatory pricing that is detrimental to the country’s interest. Even though a relaxation in the HACP rule could mean that it will no longer be obligatory for merchants to accept both Credit and Debit cards (and thus be free to choose Debit but not Credit card), it inherently discourages an excellent means of digital payment for those who would want to truly avail credit and are willing to pay the cost of credit.
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57. As seen in some countries, another way out from this conundrum could be to allow the merchants to surcharge\(^\text{19}\) only on Credit cards for the credit cost component in the MDR. It could be made very clear that the surcharge is for use of credit and not for using a digital mode of making payment. However, the RBI has noted that to allow surcharging is not a desirable option. The RBI’s concept paper (reference [15]) indicates that where there are instances of surcharge, merchant passes on costs to customers, irrespective of type of card used and underlying difference in MDR. Moreover, the freedom of surcharge in the hands of the merchants may get misused – merchants may overcharge; surcharge a Debit card in the process; discriminate between customers that will be difficult to monitor; and may ultimately bring in a feeling of distrust among consumers and dispirit digital payment usage. Thus, for Credit card based transactions, merchants should not be given the freedom to surcharge.

**Frilled cards – Merchant charges should be unbundled**

58. Consider an arrangement of uniform MDR across all card types (from classic to premium Credit cards and even Debit cards). What does this arrangement reflect? It shows how acquiring banks and the switch providers camouflage the working of the card system to apparently reflect that the cost of Debit and various categories of Credit cards are same in the card payment system. Is there a problem in this arrangement? If yes, how does one correct it?

59. The problem here is that the true cost of payment mode gets camouflaged leading to merchants’ unconscious acceptance of an expensive mode of payment (premium Credit card, say) at par with a cheaper mode (Debit card). Scheme rules applied by card payment networks and payment service providers tend to keep merchants and consumers ignorant about underlying differences in fee and reduce market transparency, for instance by amalgamating fees or prohibiting merchants from choosing a cheaper card brand or allowing them to navigate consumers to cheaper card alternatives. It is fair if consumers and merchants are conscientiously using/accepting frilled Credit cards with a clear understanding that it is increasing the overall costs in the system *vis-à-vis* Debit cards. However, if one is not kept conscious of the true costs then it is a defect in the pricing structure of the digital payment system.

60. The RBI had raised this important issue of merchant charges being bundled (in form of a composite MDR) for Credit, Debit, Prepaid cards, leading to difficulty in ensuring adherences to the present regulatory mandates on MDR (reference [15]). For effective policy making and its implementation, it is important to see transparency in MDR for

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\(^{19}\) Presently merchants in India are not allowed to surcharge customers when they transact using Credit cards. Australia and New Zealand are the major ones among a few countries, to have given freedom to their merchants to surcharge separately when payments are made through Credit cards. The European Union and several states in the US also allow the same.
Sanitising distortions in digital payments

different categories of cards. Accordingly, the RBI recently came out with regulations to curb this veiled practice (reference [21]). For improving transparency and awareness among merchants, what should possibly emerge of this regulation is that all acquirers start giving information on the costs charged to the merchant (including the split between the interchange and merchant service fees) based on different categories of cards.

No free lunch – Enjoy credit consciously to minimise cross-subsidisation

61. Credit card business should earn from a business model based on conscious credit offered to the card holder rather than the present business model of a veiled credit that is apparently viewed as free. The credit in a Credit card system should be used by customers who need credit and not by those who are looking for a pure digital payment option. Banks may continue to offer the product in a need based manner to their creditworthy clients.

62. The survey findings illustrate that 28% of Credit card holders prefer that the existing costing be left as it is, that is, the credit cost should continue to be shared by all (including those who do not benefit from it at all) for their Credit card usage. Since they are the beneficiaries of the convoluted and concealed costing of credit in the payment system, they choose this option. On the other hand an overwhelming 84% of the card holders having a Debit but not a Credit card feel that this cost should be taken off their shoulder and be borne by those who are benefitting from it. This suggests that card usage leads to addiction when one sees the freebies in the form of cash backs, reward points and apparently disguised free credit, while the costs are borne by the merchants who eventually pass it on to all the other customers. The adverse effects of drugs and intoxicants and their consequent addiction are not in the interest of any society. Accordingly, governments have set forth controls through laws to inhibit them. In a similar fashion, regulations need to be made for Credit card usage, to bring in a concept of conscious credit, eliminate discrimination, provide accurate information on fee paid for a digital transaction so that consumers make informed choices, and above all ensure that the poor do not cross-subsidise the rich.

63. We would like to add here that there is an apparent feeling among Credit card users (who pay their dues on time) as to why should they lose the monetary benefits of Credit cards (over Debit cards) that they are enjoying all these years for free. It is not easy to internalise the fact that there is no free lunch and that the system in totality is bearing its cost (it being a zero sum game). Banks and other players in the payment system cannot ensure that every individual has a Credit card (since not everyone is creditworthy). Under the present digital payment landscape, those who are not creditworthy (and thus not offered a Credit card) are subsidising for the credit takers through the Credit card
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payment system. This is similar to regressive taxation\(^{20}\) whereby retail credit-less digital payment users (like those using Debit card, net banking, mobile App payments), due to lack of level playing field and contamination in the digital payment system, pay for the facilities (free credit) enjoyed by the better off. However, appropriate regulation can ensure that the cost for the benefits enjoyed by Credit card users is not thrust in an unfair and non-transparent manner on other users of the digital payments that use Debit card or other credit-less digital payments.

64. Contrary to the concept of HACP and the no surcharge rule, there are some businesses in India like sale of services by Indian Railway Catering and Tourism Corporation Limited (IRCTC) and fuel at petrol pumps that set terms with the card payment networks to have a waiver of the HACP rule. Accordingly, these merchants indirectly charge higher rate of 1.8% to 2.5% of the transaction amount from Credit card users (through the issuer bank) than from Debit card users. This shows the concept of charging Credit card users for the associated credit cost. Similarly, Union Bank of India has provided an innovative solution to receive fees from over 1.2 million students of Kendriya Vidyalayas (Central Schools) digitally. The bank imposes a fee of 1.5% of the transaction amount only for Credit card payments, while for all other digital payments there is no additional fee. These examples (along with the surcharge rule in Australia, New Zealand, the European Union and several states in the US) support our arguments to be transparent in showing the cost of credit.

65. Though the Indian government, with an objective to promote digital transactions as against cash transactions, has recently taken a good step when it decided to bear the cost of all digital payments\(^{21}\) rather than customers bearing the same (reference [14]), the question that lingers is why should government encourage cheaper modes of digital payments to subsidise the expensive modes (like Credit cards) at the cost of their loyal and common customers (who are making digital payments but not through Credit cards). The transparency should continue as the government moves towards promoting digital payments and eliminating all disincentives (and unintentional cross-subsidisation) in digital payments as articulated in the following Section.

\(^{20}\) A regressive tax is a tax that takes a larger percentage of income from low-income earners than from high-income earners. It is in opposition with a progressive tax, which takes a larger percentage from high-income earners.

\(^{21}\) Applicable to all government merchants and service providers (utility service providers, petrol pumps, gas agencies, railway tickets, tax department, passport service, museums, monuments, etc.).
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6. Science of discovering interchange and related issues

66. At present, the manner in which interchange (as part of MDR) is levied by acquiring banks on merchants is complex and non-transparent. The interchange for cards is fixed by the card companies in a manner that conceals the credit cost of the Credit card by confounding it with its cost as a payment product – a cost common to both Credit and Debit cards. To disentangle these two effects, first it is important to identify the credit cost associated with the product and then find out its payment system cost. In what follows, we try to give a rational assessment for discovering the interchange.

Discovering interchange for India

67. In India, for RuPay Debit cards the interchange is 0.65% (for amounts exceeding ₹2000), whereas for regular consumer Credit cards the interchange for the combine credit and issuer’s cost of processing payments is about 1.25%\(^\text{22}\). This gives a difference of 0.60% between Credit and Debit card interchanges, which is difficult to explain given that the credit cost itself is about 1.04%. A rational way that one can possibly explain this is that either (i) issuing banks, in possible violation to prevailing lending rules, are undercutting and fixing the lending rate at 1.25 - 0.65 = 0.60%, which is much below the prevailing minimum of 1.04% derived under the principle of MCLR; or (ii) the Debit card interchange rates are cross-subsidising the Credit card rates; or (iii) the issuing banks’ debit interchange are high by about 0.65 - (1.25 - 1.04) = 0.44%. The above assumes that the pure cost of processing payments for the issuing bank is same for Credit and Debit cards since they use the same infrastructure.

68. The scenario (iii) above suggests that the true cost of processing payments (which includes cost of combating fraud) for cards is possibly 0.65 - 0.44 = 0.21%\(^\text{23}\). This appears to be in sync with Debit card interchange mandated in the European Union at 0.20%. Despite higher cost of the card payment infrastructure in Europe than in India, higher volume of card transactions provides a balance. In India, while the regulator has mandated a ceiling on MDR for Debit cards, the industry uses it more as a floor. This has lead RuPay Debit cards to set an interchange at 0.65%, which looks elevated even by international standards.

\(^{22}\) The interchange for premium cards is higher (may go as high as 2%) since here in addition to the credit and payment processing cost, the premium Credit cards enjoy freebies like reward points / lounge facilities / etc. The cost for these freebies is recovered in the form of higher interchange fees imposed on all merchants, further increasing their burden. While working out the burden in Section 3, we did not add this aspect since there we were concentrating only on the credit burden. It is gathered that about 90% of the Credit cards issued are premium cards, which effectively increases the average interchange fees significantly for Credit card transactions in India.

\(^{23}\) This also comes directly as the difference 1.25 - 1.04 = 0.21%.
69. The European Union’s difference in interchange for credit and debit payments $0.30 - 0.20 = 0.10\%$ is in line with the prevailing interest rates there (being about 10 times less than that of India). However, this analogy does not hold when one tries to study the US scenario, where the lending rates are similar to the European Union, but the interchange difference between credit and debit is much higher than what could be explained by their lending rates. One explanation could be that the designing of reward points associated with Credit cards in addition to the credit cost is keeping the corresponding interchange high in the US.

70. For India, given the extant regulations and the new initiatives taken by the government; taking into account the findings of the survey on consumer perception for credit cost in digital payments; putting together the learning from international practices; and the discussions in the paper, we propose certain pricing strategies for digital payment transactions. The recommendations on interchange and MDR in this study have maintained a holistic balance and ensured that frills like credit cost, reward points, etc. get distinctly recognised, separately priced and do not overburden the creditless digital payments. The incentive structure, if any, in the digital payment space should be such that it steers the system towards cheaper alternative rather than expensive modes that are lucrative to select few. Finally, rationalising promotion of digital payments, our approach remains form-factor agnostic and extends to all debit based payment products besides Debit cards such as internet banking, mobile-based banking, UPI, prepaid instruments/wallets, and the like.

1: For Transactions of less than or equal to ₹1000
Interchange of 0.2% with MDR cap of 0.5% for both Credit/Debit based transactions. Credit cost of nearly 1.0% to be imposed in monthly Credit statement.

2: Alternatives for transactions exceeding ₹1000 can be as under:
   a) Interchange of 0.2% with MDR cap of 0.5% for both Credit/Debit based transactions. Credit cost of nearly 1.0% to be imposed in monthly Credit statement.
   b) Interchange of 0.7% with MDR cap of 1.0% for both Credit/Debit based transactions. Issuing bank gives 0.5% cash back to its customer on retail Debit transaction. Credit cost of nearly 0.5% to be imposed in monthly Credit statement.
   c) Interchange of 1.2% with MDR cap of 1.5% for both Credit/Debit based transactions. Issuing bank gives 1.0% cash back to its customer on retail Debit transaction.

3: The fee for the digital payment network including insurance against cyber security breach has to be derived out of the revenue earned by the issuer and the acquirer, or be a minor part of the MDR.
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4: It may be noted that the proposed model of explicitly charging Credit card users for the credit cost, amounts to giving teaser loans at about 10.5% per annum till the payment is due and about 40% per annum thereafter, for the whole period of credit (including the grace period).

71. One may consider refinement in the ticket size cut-off beyond which MDR structure changes. For online payments where there is no scope of cash payments, the choice of model could as well be a flat fee of ₹5 instead of the MDR prescribed under 1. Also, the question of unlimited ad valorem pricing of MDR is debatable with possible scope for setting a cap, say, of ₹100. In order to cover for expenses related to fraud control / risk mitigation and developmental activities, for the incremental amounts in excess of ₹20000, the MDR could have a uniform cap of 0.1%. The advantage of 2(b) and 2(c) over 2(a) is that it gives a strong incentive for cash users to move to Debit based digital payments. Though it may appear that there is no need to give incentives for digital payments under eCom, models 2(b) and 2(c) will incentivise eCom users to migrate from cash-on-delivery to digital-payment-on-delivery. Thus, we see that the proposed model has scope for improvisation.

72. With an average ticket size of ₹2000 currently prevailing at POS for Credit and Debit card combine, the proposed interchange fees would give, on an average, revenue of ₹4 per transaction to the issuer. Considering that volumes are expected to increase under the proposed model, as cash users migrate to digital payments, issuing banks may not hesitate to embrace this proposal.

73. The acquirer fee has been suggested to be capped at 0.3% of transaction amount. This is expected to invigorate penetration of acceptance network in the country, which presently is limited and for which there is a cost bank incurs especially in case of acquisition of small merchants, mom-and-pop stores, and merchants in villages and small towns. Though the cap is higher, actual acquirer fees imposed on the merchants within the cap would depend on aspects such as the relationship of merchant with the bank – including average balances, volumes and value of transactions in the current account; merchant’s net worth; and cost of merchant acquisition. Banks may be persuaded to offer innovative solutions including m-POS, UPI, etc., bringing access of cheaper and seamless modes of digital payments particularly to the small merchants. It may be noted that the acquirer fee is recommended as a cap and there is always a

24 Discussing the pricing structure, Phatak (2015) had in fact suggested that mobile-based digital transactions of less than ₹500 should be completely free in the hands of the merchants and consumers and that the costs for these digital transactions be borne by the Government, the RBI and/or cross-subsidised by larger transactions. For larger transactions, in order to generate sustainable revenue, he suggested that ad valorem MDR with a floor and cap be in place; however payment system player offering mobile payments, and not RBI, should prescribe the cap (as a low cap could render digitisation unviable as a business). In contrast, our analysis is based on the principle of price and cost after putting together the learning from international practices and the discussions in the paper.
flexibly to acquiring banks to charge lower fee from its merchants based on the size of its business relation. It is expected that for the acquirers, competition would guide this proposed fee of 0.3% to a lower average of 0.2%. In other words, the proposed MDR cap would also, as in case of interchange, give the acquirer an average revenue of at least ₹4 per transaction. In summary, it is felt that while India moves further into the digital payment space (from the perceived ‘free’ cash payment system), a digital retail transaction of ₹2000, under the country’s payment system would not cost the system more than ₹10.

74. The Visa Inc. (2016) report highlights that the 2012 regulation on MDR reduction for Debit cards in India did not fruit any results since the growth in POS acceptance reduced during post-regulation period vis-à-vis what it was during 2011-12. The report attributes MDR reduction as the cause for slowing down of the growth rate of low-value Debit card transactions. Though there could be a correlation between the two, but by no means can it demonstrate causality. Firstly, the growth of growth (2nd derivative) cannot keep growing. Second, once the transactions have included a certain portion of the country, there has to be a technological intervention of say, cost reduction, to expand the coverage further. Third, in relatively smaller towns, as demonstrated in Appendix F, low turnover fee (charged by acquirer when sale volumes/values are low) plus monthly fee for terminal maintenance to be borne by merchants, nullifies the impact of the reduced MDR for Debit cards. Fourth, the MDR reduction was a prescription for Debit cards alone. In bigger cities Credit cards are as common as Debit cards, with Credit cards dominating in value terms. Continuation of high MDR requirement for Credit card acceptance, possibly nullified the envisaged benefit from MDR reduction for Debit cards, in furthering proliferation of card acceptance.

75. With new technologies expected to migrate consumers to mobile-based payment transactions and other cheaper means of digital payments, we propose additional set of rules as under to adapt our pricing strategies to mobile platforms:
   a) there should be no additional fee for UPI or other similar payment form-factors for merchant transactions; and
   b) monthly rental/maintenance for POS or other similar expensive devices (provided by banks) that enables digital payments should be separately charged depending on its usage and cost.

76. Our proposed pricing strategies eliminate discrimination and cross-subsidisation based on the mode of payment. At the merchant establishments that accept both cash and card, it may appear that purchasers using cash subsidise the digital payments; however, it needs to be appreciated that unlike the cognisable cost for digital payments there is a hidden cost of cash which the economy is subsidising and not recognising upfront. Thus, the proposed pricing models should not be seen as disincentivising payments by cash, but should be viewed as furthering Government’s efforts in promoting digital payments. This will also be in line with the country’s objective of
moving to a less-cash society with the understanding that the overall cost of facilitating cash (as a means for retail payments in the economy) is incorrectly perceived to be less than the overall cost of enabling digital retail payments.

77. In case of model 2(c), merchants may tend to fix their selling price (keeping in mind the maximum MDR cost of 1.5%) independent of the purchase size being of ₹1000 or less. Thus, one may argue that the model 2(c) induces cross-subsidisation (at merchant locations that accept digital payments) to the tune of 1% for a transaction of ₹1000 or less. This can possibly be seen as a common scenario similar to the unit price (per gram price) of 200g toothpaste tube being less than the unit price of 50g toothpaste tube. That is, if you transact through purchase of more or expensive items costing more than ₹1000, you tend to spend less on unit price through 1% cash back. This would also help in pushing up the small ticket purchases to above ₹1000.

78. Since inception, interchange in (Credit) card transaction had been higher than the share acquirers got. The reason was simple; since card payment was initially conceived as a Credit card payment product, the additional cost of credit was borne by the issuer, and not the acquirer. The actual cost of processing payments got blurred in this process. Now, when Debit cards entered the payments market, the Credit card companies (who were deciding the interchange for Debit cards too) adopted the same norm and fixed the interchange for Debit cards higher than the share that acquirers got, though the cost of processing payments for the acquirer (after including the cost of POS terminal, etc.) is expected to be higher than the issuer. It is important to note that the acquirer is the initiator and terminator of the transaction and issuer is more like an intermediary, though an important one.

79. Though the paper suggests that the cost of credit be unbundled and be borne by the Credit card user, however, in case the merchant community feels that they would lose business under the proposed model, they are always free to offer discounts to Credit card users or, to be fair, offer discounts to retail payments done through any digital means. With smart phones in the hands of large number of people, such digital payments have now come within ones reach. Nonetheless, a big thrust is required for appropriate education campaigns to showcase the seamlessness and comfort of such digital payments.

80. Protection of consumers’ and merchants’ interest for digital payments is prime. There is a need to take a very bold stand on interchange. The present pricing game only favours producers of digital payments – for it to be fair, the pricing should be on a cost plus basis and not exploitative. There should be morality in product pricing – i.e., Credit card holders be charged for the credit they enjoy and take wily Betaal (read as pure credit fee), off the shoulders of credit-less payment system users. Going forward, the government and the regulator should take this forward keeping all stakeholders in mind.
81. To further the inclusion of merchants in the digital payment space, it is important to assess and understand the mindset of merchants, who form the user end of the payment spectrum. While our proposals benefit from the findings of a small survey on user perception for credit cost in digital payments conducted by us, there is a need to carry out a systematic assessment of merchant preference as well. A study on the ‘Merchant Indifference Test’ conducted by the European Commission (see reference [9]) identifies the level of fee a merchant would be willing to pay (i.e. the merchant service charge and the interchange fee) if the merchant were to compare the cost of the customer's use of a payment card with those of non-card (cash) payments. The level of fee (cap) thus arrived by the European Union stimulates the use of efficient payment instruments through the promotion of those cards that provide higher transactional benefits, while at the same time preventing disproportionate merchant fees, which would impose hidden costs on other consumers. By making such assessment, a country can take well calibrated steps to bring in true parity between cash and digital payments. The results of this survey provided important inputs to the European Union to bring in regulations on interchange for Debit and Credit cards.

Cross-border card payments and dynamic currency conversion

82. Till a prudent international standard is arrived at, in order to bring in parity across digital payment modes (which is more of an issue for countries having high interest rate regimes), one has to systematically make changes in the digital payments market, as per local needs.

83. For foreign Credit cards used in a different country, international rules would apply. However, such transactions will be minuscule compared to all the domestic card transactions done in home country. Furthermore, in the case of India, foreign Credit card transactions may be concentrated around high net worth merchants.

84. We would like to mention here that when a Credit or Debit card is used in a foreign country, the acquiring banks have a facility of dynamic currency conversion (DCC) whereby merchants can virtually receive the full payment without any discounting. While invoking DCC, the amount reflected to the card holder at the time of a transaction is not only in the local currency but also in the card holder’s home currency. In order to make an informed choice (between payment in card holder’s home currency or in local currency) while using the card, currently the card holder is given an option to select the currency of payment. When home currency is selected (under DCC), the foreign transaction mark-up, i.e., the additional charge for providing the facility of currency conversion is not certain if people really make an informed choice between home and local currency since the process of exchange rate determination in the two scenarios is opaque. When home currency is selected the amount of mark-up that impacts the card-bill amount is not known upfront (since the foreign transaction mark-up is taken from the card holder by the acquirer rather than issuer bank).

25 It is not certain if people really make an informed choice between home and local currency since the process of exchange rate determination in the two scenarios is opaque. When home currency is selected the amount of mark-up that impacts the card-bill amount is not known upfront (since the foreign transaction mark-up is taken from the card holder by the acquirer rather than issuer bank).
conversion, is taken from the card holder by the acquirer bank (and not the issuer bank). The commission through this mark-up, at the hands of the acquirer bank, usually gets shared between the acquirer bank and the merchant, thereby reducing or nullifying the impact of MDR for foreign transaction using home currency.

85. In order to safeguard the interests of domestic retail market, the choice between accepting card payments in foreign card holder’s home currency or in local currency should lie with the merchant. This way, the merchants would be able to steer foreign card payments in home currency making it cheaper for them.

*Merchants’ and consumers’ willingness to accept credit-less digital payments – some impediments*

86. In case of online purchases, for some category of merchants, there appears to be an inherent friction to successfully complete a credit-less digital payment *vis-à-vis* a Credit card payment. The failure rates for credit-less digital payments like Debit card and net banking are much higher than Credit card payments. Such failures are usually attributed to (i) lack of proficiency – first time users and novice customers having access to debit mode of payments, but are not credit-worthy to get a Credit card, make several unsuccessful attempts to put through a transaction; (ii) low-end technology – basic mobile phones used by a large number of customers who do not have Credit card while making online purchases; (iii) low daily limits – to prevent frauds, banks set smaller daily limit for Debit card usage, *etc.* Such merchants may not be comfortable if policy interventions push them to migrate from online Credit card usage to other credit-less form of digital payments.

87. Some of these impediments can be easily addressed. Consumer awareness and education towards digital retail payments is of prime importance. Central banks and the governments of developing countries need to aggressively drive financial education on digital payments. The combination of reasonable transaction fees, technology based innovative payment modes, together with consumer awareness for digital payment would help accomplish digital India mission and make us a less-cash society.

88. On the IT related issues, banks need to make their systems more robust. Merchants on the other hand can possibly facilitate by making people aware, on their payment page, the success rate of various payment modes. This may allow such consumers, who have various alternatives to choose from, to select their payment mode appropriately.

89. Credit card users have the privilege and comfort of receiving a consolidated monthly statement showing all retail transactions done during the billing cycle. This adds value to the product and brings convenience to Credit card users. Such a convenience is presently missing in the monthly statements of savings account, where transactions are not separately categorised as retail payments. Such simple innovations to improve
presentation of retail transactions in monthly statements of savings account remains in the hands of the banks and competition should guide them make such simple yet important value-additions.

90. For smaller merchants, value added tax (VAT) and service tax (ST) requirement acts as an impediment to embrace the digital means of retail payments. Such merchants usually negotiate for a cash transaction when it comes to receiving payments digitally, since cash makes it easier to evade tax. Tax evasion leads to a win-win for both merchants and consumers since merchant is able to keep her price more competitive and consumer gets a good bargain in return and is also able to make an expenditure which cannot be trailed. However, with Goods and Services Tax (GST) in place, the scope of evasion of such taxes would get minimalised. Moreover, the government’s measure to withdraw all existing ₹1000 and ₹500 notes, effective November 9, 2016, will suck out unaccounted money. With cash in the system now being tax paid, there will be no need for transacting without audit trail and thus cash in the hands of consumer will no longer be the preferred mode over digital payments.

91. While migration to GST along with the drive to withdraw specified bank notes will give digital payments a strong fillip; to make it a habit amongst consumers and merchants before unaccounted cash again catches up, the distortions in the digital payment space (credit-based vis-à-vis credit-less alternatives) need to be urgently addressed for which the paper provides directions.

92. We acknowledge that there is no certainty on whether merchants will pass through their savings in part, if not full, to consumers by bringing down prices when MDR is reduced. Neither is it ruled out that the banks would not be tempted to pass through some of their losses to consumers of digital payment products by way of higher prices or fewer services. Nonetheless, the proposal to strip out credit cost from payment system merit attention. With this change, in the medium term, the credit cost component in the payment system would no longer influence merchant’s selling price. Additionally, it is envisaged that tweaking of payment system prices, as recommended in this paper, would further the penetration of digital retail payments in the country (as was witnessed in case of ATM usage when the society embraced the technology following rationalisation) by drawing more acceptability from both merchants and consumers.

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26 Merchants may still consider this model as unattractive as it curtails evasion of tax. To address this mindset the government needs to continue with its education and awareness drive with patriotic fervour.

27 This aspect was analysed by Evans, Chang and Joyce, Steven (2015) in a Visa Inc. funded research on the impact of the US debit-card interchange fee regulation on consumer welfare. Though this aspect may be true in US where net interest margins (NIM) are low and bank revenue generated from the card business is significant; in India banks work with relatively large NIM so as to provide for the costs associated with most of the bank operations including (paper and paper-less) payment transactions.
93. Finally, to support our model and given the availability of digital payments, the government and regulators should disincentivise excessive cash in form of imposing fee on monthly cash deposits/withdrawal (including from bank counters, ATMs, etc.) in excess of a certain minimum amount. The same should apply for usage of paper cheques wherein a fee could be imposed in excess of a certain minimum number of cheques issued and deposited in a month. These would bring in parity between digital payments (where payments are charged) and cash/cheques, and thus stimulate digital payments. This aspect has also been discussed by RBI in 2013 (see reference [3]) and in Das (2016a).
7. Concluding remarks and Policy implications

94. Banks along with payment networks are facilitators of the interoperable digital payment system. They decide charges that are levied on merchants and consumers for using these services. Setting up of a high fee structure impedes proliferation of card payments among small merchants and among small town merchants. These fees are ultimately borne by consumers in form of higher final prices for goods and services. Ideally competition between the issuing banks should guide the fee and bring it down.

95. The facilitators also have a HACP diktat whereby merchants are required to keep equivalence among all cards within the same brand including the high cost frilled Credit cards. To protect her profit margin, the merchant passes these costs to her selling price burdening the credit-less digital payment users. To tackle this bias, either merchants should be allowed to surcharge; or given freedom to accept cards selectively, i.e. be freed from HACP diktat; or make fee structure transparent; or mandate a reasonable fee for acceptance of basic payment cards.

96. Given the extant regulations and the new initiatives taken by the government; taking into account the findings of the survey on consumer perception for credit cost in digital payments; putting together the learning from international practices; this paper puts forth the following recommendations:

A. Bringing parity in digital payments

- **Make credit conscious and credit cost explicit:** Credit cost pertaining to the Credit card product should be made explicit rather than mixing/camouflaging it with the payment feature of the product. This will ensure that Credit card is used by consumers who consciously desire to avail credit and not by those who are availing credit because it is perceived to be ‘free’.

- **MDR for Credit and Debit cards be made low and at par – charge for credit separately:** MDR for Credit cards should be brought down at par with Debit cards so as to unbundle the ‘credit’ and ‘payment’ features of Credit cards, making the reduced MDR independent to the electronic payment choice made by customers. Issuing bank be given freedom to impose a credit fee, in lieu of the revenue loss for decreased interchange. The credit fee may be charged in the Credit card’s monthly statement by the card issuing bank for use of credit facility (and not for using a digital payment facility). This would relieve the retail payment system from a thrust credit cost that continues to be twined with it for historical reasons.

- **MDR for Credit cards and debit payments be kept high and at par – give cash back for debit transactions:** Another way to address the credit burden in
Sanitising distortions in digital payments

Payment system is to keep MDR for credit card and debit payments high and same so that MDR includes the credit cost. Under this proposal, the issuing bank should give cash-back, to the extent of credit cost, to users of debit payments. The cash back feature for debit payments will attract consumers to move away from cash to digital payments. This approach would be more in the direction of showcasing promotion of digital payments through incentives.

- **Alternative pricing strategies for payment transactions:** Based on the discussions of the distortions present in the digital payment space, we propose the following alternate pricing strategies for digital payments.

1: For Transactions of less than or equal to ₹1000
Interchange of 0.2% with MDR cap of 0.5% for both credit/debit based transactions. Credit cost of nearly 1.0% to be imposed in monthly credit statement.

2: Alternatives for transactions exceeding ₹1000 can be as under:
   a) Interchange of 0.2% with MDR cap of 0.5% for both credit/debit based transactions. Credit cost of nearly 1.0% to be imposed in monthly credit statement.
   b) Interchange of 0.7% with MDR cap of 1.0% for both credit/debit based transactions. Issuing bank gives 0.5% cash back to its customer on retail Debit transaction. Credit cost of nearly 0.5% to be imposed in monthly credit statement.
   c) Interchange of 1.2% with MDR cap of 1.5% for both credit/debit based transactions. Issuing bank gives 1.0% cash back to its customer on retail Debit transaction.

3: The fee for the digital payment network including insurance against cyber security breach has to be derived out of the revenue earned by the issuer and the acquirer, or be a minor part of the MDR.

4: It may be noted that the proposed model of explicitly charging credit card users for the credit cost, amounts to giving teaser loans at about 10.5% per annum till the payment is due and about 40% per annum thereafter, for the whole period of credit (including the grace period).

One may consider refinement in the ticket size cut-off beyond which MDR structure changes. Moreover, for online payments where there is no scope of cash payments (other than cash-on-delivery), the choice of model could as well be a flat fee of ₹5 instead of the MDR prescribed under 1. Also, the question of unlimited *ad valorem* pricing of MDR is debatable with possible scope for setting a cap, say, of ₹100. In order to cover for expenses related to fraud control / risk mitigation and developmental activities, for the incremental amounts in
excess of ₹20000, the MDR could have a uniform cap of 0.1%. Thus, we see that the proposed model has scope for improvisation.

- **Higher cap for acquirer fee is to hasten banks for merchant acquisition:** In the above proposals, the debit (Debit card, mobile-based, online, or other credit-less digital payment modes) interchange routed through a payment network is proposed to be capped at 0.2% and acquirer fee at 0.3% of transaction amount. This is expected to invigorate penetration of acceptance network in the country, which presently is limited and for which there is a cost bank incurs especially in case of acquisition of small merchants, mom-and-pop stores, and merchants in villages and small towns. Though the cap is higher, actual acquirer fees imposed on the merchants within the cap would depend on aspects such as the relationship of merchant with the bank – including average balances, volumes and value of transactions in the current account; merchant’s net worth; and cost of merchant acquisition. Banks may be persuaded to offer innovative solutions including m-POS, UPI, etc., bringing access of cheaper and seamless modes of digital payments particularly to the small merchants.

- **Pricing for mobile-based retail transactions:** With new technologies expected to migrate consumers to mobile-based payment transactions and other cheaper means of digital payments, we propose additional set of rules as under to adapt our pricing strategies to mobile platforms:
  a) there should be no additional fee outside MDR for UPI or other similar payment form-factors for merchant transactions; and
  b) monthly rental/maintenance for POS or other similar expensive devices (provided by banks) that enables digital payments should be outside MDR and be separately charged depending on its usage and cost.

- **Acceptance of foreign cards:** Foreign cards have higher MDR than domestic cards. In order to safeguard the interests of domestic retail market, it is recommended that the choice between accepting card payments in foreign card holder’s home currency or in local currency (the choice influences merchants’ cost) should lie with the merchant. This way, the merchants would be able to steer foreign card payments in home currency making it cheaper for them.

**B. Other policy implications**

- **Limiting ‘free’ cash to disincentivise cash:** Given the availability of digital payments, the government and regulators should disincentivise excessive cash in form of imposing fee on monthly cash deposits/withdrawal (from bank counters and ATMs) in excess of a certain minimum amount. On the same footing, a fee could be imposed for usage of paper cheques in excess of certain minimum number issued and deposited in a month. These disincentives would bring parity between digital payments (where payments are charged on cost basis) and
cash/cheques (where costs are not made apparent), and thus stimulate digital payments.

- **Incentivise digital payments:** With a 0.5% to 1% cash back on credit-less digital payments as proposed above, merchants who do not favour digital payments would embrace them to remain in business and the consumers would drive this in view of the above cash back scheme. Resultantly, more and more merchants would become tax compliant thereby adding to the exchequer’s kitty. Similarly, person to person and person to merchant payments through IMPS/NEFT/RTGS should get incentivised over cash and cheques, and latter should not be offered for free when the former is available at a cost.

- **Merchants should not be allowed to surcharge:** Allowing merchants to surcharge Credit cards (for the credit cost component in MDR) is one way to handle the cost differential *vis-à-vis* Debit cards. However, if the customers are gullible, this freedom may get misused – merchants may overcharge; surcharge a Debit card in the process; discriminate between customers that will be difficult to monitor; and may bring in a feeling of distrust among consumers and dispirit digital payment usage. Thus, for Credit card based transactions, merchants should not be given the freedom to surcharge.

- **Financial education to further digitalisation of Indian payments:** Consumer awareness and education towards digital retail payments is of prime importance. Central banks and the governments of developing countries need to aggressively drive financial education on digital payments. The combination of reasonable transaction fees, technology based innovative payment modes, together with consumer awareness for digital payment would facilitate digital India mission and make us a less-cash society.

- **Bank statements can make a lot of difference:** Credit card users have the privilege and comfort of receiving a consolidated monthly statement showing all retail transactions done during the billing cycle. This adds value to the product and brings convenience to Credit card users. Monthly statements of savings account lack such details. Such simple innovations to improve presentation of retail transactions in monthly statements of savings account remains in the hands of the banks and competition should guide them to make such simple yet important value-additions.

97. Indian Government’s recent drive of withdrawing specified bank notes has given a great push to digitalisation. Both customers and users are appreciating that there is a cost to use cash and immense gain in going digital. However, the costing of digital solution have some imperfections. This paper tries to address these and provide solutions in a holistic manner keeping all players into consideration. It is hoped that these solutions will facilitate furthering digital India mission.
Sanitising distortions in digital payments

References (Chronological from oldest)


Sanitising distortions in digital payments


Sanitising distortions in digital payments


http://www.visa.co.in/aboutvisa/research/include/Digital_Payments_India.pdf
Appendix A

Demonstration of cross-subsidisation

An illustration to demonstrate how payments made through Debit cards or other credit-less payment modes cross-subsidise the hidden cost of credit embedded in the payment system since the merchant's bank imposes a credit cost of 1.04% to the merchants accepting Credit cards who in turn pass this cost to all consumers by fixing a universally higher selling price of their products and services to absorb this cost.

As a simplistic illustration covering only the credit cost in the digital payment space, consider an item which has a selling price of ₹100. For the merchant, the net cost price of the product (excluding payment cost) is ₹96.

Consider 2000 people buying this item, of which 1000 people buy the item using Debit card and the merchant gets ₹100 each, giving him a net profit of ₹4. The other 1000 people buy the item using Credit card and the merchant gets ₹99 each (considering 1% as the credit cost), giving him a net profit of ₹3.

The merchant's net profit is 1000 x 4 + 1000 x 3 = ₹7000 after paying ₹1000 to his bank as payment cost for Credit card acceptance at his shop. Merchant's average net profit in selling the item is 7000/2000 = ₹3.50 per item. He is happy to do business with such profit margins.

Now with a satisfactory profit margin of ₹3.50 for the merchant, if the merchant is no longer required to pay to his bank the 1% fee for payments received through Credit cards, his selling price would be Cost Price + Profit = 96 + 3.50 = ₹99.50.

In other words, in the present scenario, Debit card users are cross-subsidising for the cost associated with the Credit card system to the tune of ₹0.50 for every item purchased or ₹1000 for the 2000 items.

All merchants usually arrive at their selling price after accounting for the costs and deciding on a profit margin. In the above example, the merchant makes a fair estimate about all his costs which includes wholesaler’s price, premises cost, electricity cost, employee cost, taxes for doing business, etc. and additionally the estimated card payment cost to arrive at his net cost price of ₹96.50. To this he adds his profit margin of ₹3.50, to finally sell his product for ₹100.
Another way to substantiate the above argument is to question the rationale behind card payment network bending its rules and accommodating MDR rules for select merchants. Among few other countries, in India, every time a Credit card is used at petrol station, the issuing bank charges about 2% of the bill amount to the card user. The official reason for the same is that the Oil companies do not pay the MDR to their banks since oil prices are government controlled and thus these merchants do not have the freedom to adjust the selling price to accommodate the cost associated with the MDR. The same applies for purchase of Railway tickets.

Since the banks impose this credit cost of 1% to the merchants accepting Credit cards, the merchants in turn pass this cost to all consumers by fixing a universally higher selling price or absorb this cost. This way digital payments like Debit card, Net banking, etc. (other than Credit cards) or merchants cross-subsidise the hidden cost of credit embedded in the payment system.

The above example is a global phenomenon where merchants unintentionally discriminate consumers on the price tag based on the digital payment mode used (though consumers may not be able to see it). The payment system has designed the coexistence of credit and credit-less digital retail payments in such a way that the payment pricing model are thrust onto the merchants and there are rules set by card payment networks not to discriminate between payments made by different cards having markedly different MDR. The card payment networks may have given the liberty of providing discounts on retail transactions in cash, but that is history since we have in focus only digital retail payments.

Furthermore, even if allowed, the merchants may not wish to show different pricing though they may realise different profits from two different digital payment modes; both serving the same purpose of efficiently receiving the money from the customer. Additionally, there is inherent inconvenience and menu cost concerns for merchants to show upfront different pricing of their products (based on different digital payment modes). It should ideally be the responsibility of the payment system of every country to get this corrected. The European Union appears to have taken a lead to do this for consumer Credit and Debit cards when they keep the interchange fee differentials as low as 10 basis points (which is possible since in the European Union the credit cost is only 0.10% of the transaction amount, or equivalently, about 1% per annum).

Australia and New Zealand are the major ones among a few countries, to have given freedom to their merchants to surcharge separately when payments are made through Credit cards. The European Union and several states in the US also allow the same.
Appendix B

The consumer survey questionnaire

Cashless payments - Do you have a choice?

Among the digital payment space, this survey aims to gather your perception as a consumer on the credit cost included in the purchase price for our digital payment system. It also attempts to understand the preference of the users of digital payments and awareness towards its associated cost. Please undertake this survey to provide guidance.

(Conducted by Ashish Das of IIT Bombay, India. Contact: ashishdas.das@gmail.com)
For more details see http://www.math.iitb.ac.in/~ashish/workshop/Payment_April_24_2016.pdf

*Required

1. Profile *
   Mark only one oval.
   - Student
   - Salaried
   - Self employed / Business
   - Housewife
   - Retired / Unemployed

2. I have, *
   Mark only one oval.
   - Debit card
   - Credit card
   - Both Debit and Credit card
   - Neither Debit or Credit card

3. For my walk-in shopping of less than Rs 1000, I PREFER using, *
   Mark only one oval.
   - Debit card
   - Credit card more than Debit card
   - Cash over Debit or Credit cards

4. For my walk-in shopping of Rs 1000 or more, I PREFER using, *
   Mark only one oval.
   - Debit card
   - Credit card more than Debit card
   - Cash over Debit or Credit cards
5. For my online purchases I PREFER using (may select MULTIPLE options). *
   Tick all that apply.
   - Debit card
   - Credit card
   - Net banking
   - Pre-paid mobile wallets or cards (Paytm, Airtel money, ItsCash, etc.)
   - Cash on delivery

The cost of the free loan (for 20 to 52 days) enjoyed while using a Credit card is about 1% of the transaction amount. However, payments made through Debit card, Net banking, Cash, etc., DO NOT HAVE this additional credit cost.

6. If you do not use Credit card but instead use Debit card, Net banking, etc. for shopping, are you aware that you would be unconsciously paying for this credit cost inbuilt in the selling price of products? *
   Mark only one oval.
   - Yes
   - No

Since the banks impose this credit cost of 1% to the merchants accepting Credit cards, the merchants in turn pass this cost to all consumers by fixing a universally HIGHER selling price to absorb this cost. This way DIGITAL payments like Debit card, Net banking, etc. (other than Credit cards) cross subsidize the hidden cost of credit embedded in the payment system.

7. As a user of the digital payments, which of these measures do you think will be most effective to overcome this cross-subsidization? *
   Mark only one oval.
   - merchants discouraging Credit card by charging the extra 1% from only the Credit card users
   - banks not charging the merchants the extra 1%, instead Credit card holders' bank taking it in the Credit card monthly statement
   - Either of the two above
   - None of the above

8. This survey aims at understanding the present mood of the users of digital payments and awareness towards its associated cost. Your comments are welcome.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Appendix C

Summary data of 1530 responses

Responses to Questions 1 and 2

<table>
<thead>
<tr>
<th></th>
<th>Student</th>
<th>Salaried</th>
<th>Self employed / Business</th>
<th>Housewife</th>
<th>Retired / Unemployed</th>
<th>All profiles</th>
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<td>186</td>
<td>9</td>
<td>5</td>
<td>12</td>
<td>808</td>
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<tr>
<td>Credit card</td>
<td>10</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>35</td>
</tr>
<tr>
<td>Both Debit and Credit card</td>
<td>150</td>
<td>461</td>
<td>28</td>
<td>4</td>
<td>33</td>
<td>676</td>
</tr>
<tr>
<td>Neither Credit or Debit card</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>11</td>
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<tr>
<td>All card-types Combined</td>
<td>763</td>
<td>666</td>
<td>39</td>
<td>11</td>
<td>51</td>
<td>1530</td>
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Responses to Question 3

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<th>Less than Rs 1000</th>
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<th>Credit card</th>
<th>Cash</th>
<th>Total</th>
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<td>3</td>
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<td>Both Debit and Credit card</td>
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<td>676</td>
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<td>0</td>
<td>1</td>
<td>10</td>
<td>11</td>
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<tr>
<td>All card-types Combined</td>
<td>501</td>
<td>290</td>
<td>739</td>
<td>1530</td>
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Responses to Question 4

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<th>Rs 1000 or more</th>
<th>Debit card</th>
<th>Credit card</th>
<th>Cash</th>
<th>Total</th>
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<td>105</td>
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<td>Credit card</td>
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<td>All card-types Combined</td>
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<td>523</td>
<td>157</td>
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Responses to Question 5

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<th>Online preference</th>
<th>Debit card</th>
<th>Credit card</th>
<th>Net banking</th>
<th>Pre-paid wallet</th>
<th>Cash on delivery</th>
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</thead>
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<td>Debit card</td>
<td>476</td>
<td>16</td>
<td>461</td>
<td>181</td>
<td>415</td>
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<td>Credit card</td>
<td>0</td>
<td>18</td>
<td>14</td>
<td>3</td>
<td>17</td>
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<td>Both Debit and Credit card</td>
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<td>331</td>
<td>150</td>
<td>186</td>
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<tr>
<td>Neither Credit or Debit card</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>All card-types Combined</td>
<td>646</td>
<td>492</td>
<td>812</td>
<td>335</td>
<td>625</td>
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</table>

Responses to Question 6

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<th>Awareness on cross-subsidization</th>
<th>Aware</th>
<th>Not aware</th>
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<td>Debit card</td>
<td>158</td>
<td>650</td>
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<td>Credit card</td>
<td>14</td>
<td>21</td>
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<tr>
<td>Both Debit and Credit card</td>
<td>241</td>
<td>435</td>
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<tr>
<td>Neither Credit or Debit card</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>All card-types Combined</td>
<td>416</td>
<td>1114</td>
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### Responses to Question 7

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<tr>
<th>Control measures</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
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</thead>
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<td>Debit card</td>
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<td>264</td>
<td>251</td>
<td>131</td>
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<td>Credit card</td>
<td>3</td>
<td>6</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>Both Debit and Credit card</td>
<td>129</td>
<td>185</td>
<td>184</td>
<td>178</td>
</tr>
<tr>
<td>Neither Credit or Debit card</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>1</td>
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<tr>
<td>All card-types Combined</td>
<td>297</td>
<td>458</td>
<td>446</td>
<td>329</td>
</tr>
</tbody>
</table>
Appendix D

Summary for 1553 responses

1. Profile

- Student: 769 (49.5%)
- Salaried: 681 (43.9%)
- Self employed / Business: 41 (2.6%)
- Housewife: 11 (0.7%)
- Retired / Unemployed: 51 (3.3%)

2. I have,

- Debit card: 815 (52.5%)
- Credit card: 43 (2.8%)
- Both Debit and Credit card: 684 (44%)
- Neither Debit or Credit card: 11 (0.7%)

3. For my walk-in shopping of less than Rs 1000, I PREFER using,

- Debit card: 508 (32.7%)
- Credit card more than Debit card: 296 (19.1%)
- Cash over Debit or Credit cards: 749 (48.2%)

4. For my walk-in shopping of Rs 1000 or more, I PREFER using,

- Debit card: 862 (55.5%)
- Credit card more than Debit card: 533 (34.3%)
- Cash over Debit or Credit cards: 158 (10.2%)

5. For my online purchases I PREFER using (may select MULTIPLE options),

- Debit card: 653 (42%)
- Credit card: 500 (32.2%)
- Net banking: 823 (53%)
- Pre-paid mobile wallets or cards (Paytm, Airtel money, ItsCash, etc.): 338 (21.8%)
- Cash on delivery: 633 (40.8%)
Sanitising distortions in digital payments

The cost of the free loan (for 20 to 52 days) enjoyed while using a Credit card is about 1% of the transaction amount. However, payments made through Debit card, Net banking, Cash, etc., DO NOT HAVE this additional credit cost.

6. If you do not use Credit card but instead use Debit card, Net banking, etc. for shopping, are you aware that you would be unconsciously paying for this credit cost inbuilt in the selling price of products?

- Yes: 425 (27.4%)
- No: 1128 (72.6%)

Since the banks impose this credit cost of 1% to the merchants accepting Credit cards, the merchants in turn pass this cost to all consumers by fixing a universally HIGHER selling price to absorb this cost. This way DIGITAL payments like Debit card, Net banking, etc. (other than Credit cards) cross subsidize the hidden cost of credit embedded in the payment system.

7. As a user of the digital payments, which of these measures do you think will be most effective to overcome this cross-subsidization?

- Merchants discouraging Credit card by charging the extra 1% from only Credit card users: 303 (19.5%)
- Banks not charging the merchants the extra 1%, instead Credit card holders' bank taking it in the Credit card monthly statement: 462 (29.7%)
- Either of the two above: 482 (29.1%)
- None of the above: 336 (21.6%)
Appendix E

The data on Debit and Credit cards

Table: India’s Credit and Debit card statistics for 2013-14 through 2015-2016

<table>
<thead>
<tr>
<th>Volume in Million and Value in ₹ Billion</th>
<th>2013-14</th>
<th>2014-15</th>
<th>2015-16</th>
<th>Growth Y-o-Y %</th>
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<tbody>
<tr>
<td>Credit card Outstanding (No.)</td>
<td>19</td>
<td>21</td>
<td>25</td>
<td>10</td>
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<tr>
<td>Debit card Outstanding (No.)</td>
<td>394</td>
<td>553</td>
<td>662</td>
<td>40</td>
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<tr>
<td>Credit card Transactions at POS (No.)</td>
<td>509</td>
<td>615</td>
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<tr>
<td>Debit card Transactions at POS (No.)</td>
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<td>808</td>
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<td>31</td>
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<td>Credit card Transactions at POS (Amt.)</td>
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<td>Debit card Transactions at POS (Amt.)</td>
<td>955</td>
<td>1213</td>
<td>1589</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: RBI Bulletin

Table: India’s Credit and Debit card statistics for 2015-16 and April-September 2016

<table>
<thead>
<tr>
<th>Volume in Million and Value in ₹ Billion</th>
<th>2015-16</th>
<th>2016</th>
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</thead>
<tbody>
<tr>
<td>Credit card Outstanding (No.)</td>
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</tr>
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<td>Debit card Outstanding (No.)</td>
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<td>668</td>
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<td>Credit card Transactions at POS (No.)</td>
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<td>Debit card Transactions at POS (No.)</td>
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<td>Credit card Transactions at POS (Amt.)</td>
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<td>227</td>
</tr>
<tr>
<td>Debit card Transactions at POS (Amt.)</td>
<td>1589</td>
<td>148</td>
</tr>
</tbody>
</table>

Source: RBI Bulletin

As of August 2016, there were over 1.5 million POS terminals (in actuals)

Of the Debit cards Outstanding, over 300 million are RuPay Debit cards

Table: India’s RuPay Debit card statistics for April-September 2016

<table>
<thead>
<tr>
<th>RuPay Debit card usage</th>
<th>Apr-16</th>
<th>Sep-16</th>
<th>Period April-September 2016</th>
<th>April to Sept Growth (%)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Volume</td>
<td>Value</td>
<td>Volume</td>
<td>Value</td>
</tr>
<tr>
<td>at POS</td>
<td>3.83</td>
<td>6.07</td>
<td>5.16</td>
<td>7.95</td>
</tr>
<tr>
<td>at eCom</td>
<td>2.78</td>
<td>1.27</td>
<td>5.20</td>
<td>2.57</td>
</tr>
<tr>
<td>at both POS and eCom</td>
<td>6.61</td>
<td>7.34</td>
<td>10.36</td>
<td>10.52</td>
</tr>
</tbody>
</table>

Source: Retail Payments Statistics on NPCI Platforms

From an average of 0.4 million POS and eCom transactions per day before November 9, 2016, on an average over 1 million transactions per day are recorded as of November 21, 2016.
Appendix F

Why Debit card MDR reduction had no impact for smaller merchants to go digital?

Visa Inc. (2016) report has indicated that the regulation controlling Debit card MDR may have been more of an impediment for the development of the card acceptance infrastructure. A reason as to why reduction in Debit card MDR had no impact for smaller merchants to go the digital way is the acceptance model itself. The POS acceptance model is too expensive for smaller merchants to embrace since it is not MDR alone which dictated fees imposed on them.

There is a cost for the POS terminal and accordingly a monthly fee, to the tune of ₹0-₹700 (depending on the bank-merchant business relationship), is usually imposed for the POS rental/maintenance. However, despite the MDR mandates set for Debit cards in India, typically there is a concept of an additional fee being imposed by banks for low monthly card business at POS. Such a turnover based practice inherently increases the effective MDR for Debit card transactions as shown in Table 3. Depending on the bank, typical low monthly card transactions at POS may attract fees in the range of ₹100 to ₹400 per month. Thus, though on one hand the regulation has conceived to keep MDR low for merchants having small ticket size, the banking system has devised alternatives to nullify the same by charging extra from smaller merchants who are expected to have small ticket sizes and thus low monthly business done over digital payments. This is bound to dissuade merchants despite RuPay formulating an informed and conscious pricing policy and providing for a significant cushion of 0.30% - 0.35% to incentivise deployment of POS terminals in the country by acquiring banks.

Table 3: Effective MDR for Debit card transactions with low output on POS

<table>
<thead>
<tr>
<th>Total monthly transactions not exceeding ₹</th>
<th>Monthly Fee (₹)</th>
<th>Minimum additional MDR</th>
<th>Minimum MDR on ≤ ₹2000</th>
<th>Minimum MDR on &gt; ₹2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>15000</td>
<td>400</td>
<td>2.67</td>
<td>3.42</td>
<td>3.67</td>
</tr>
<tr>
<td>25000</td>
<td>300</td>
<td>1.20</td>
<td>1.95</td>
<td>2.20</td>
</tr>
<tr>
<td>50000</td>
<td>200</td>
<td>0.40</td>
<td>1.15</td>
<td>1.40</td>
</tr>
<tr>
<td>100000</td>
<td>100</td>
<td>0.10</td>
<td>0.85</td>
<td>1.10</td>
</tr>
</tbody>
</table>

*Mandated cap on MDR for ≤ ₹2000 is 0.75% and for larger ticket size is 1% of the transaction amount.*

The effective MDR for online Debit card transactions can be similarly worked out given that for monthly business of less than ₹200000 on eCom the fee is ₹500 per month.