Digitalization of Payments in India: What has happened in the last five years?

The International Monetary Fund (IMF) and the World Bank group launched, on October 11, 2018, the Bali Fintech Agenda- a set of twelve policy elements that would help all countries, and more particularly emerging and low-income nations, to harness the 'benefits and opportunities of rapid advances in financial technology that are transforming the provision of banking services while at the same time managing the inherent risks'[1]. One of the agenda is to promote financial inclusion through use of fintech. Fintech could play a significant role in achieving financial inclusion target of a country by leveraging technology to increase access, awareness and depth of financial services. There are an estimated 1.7 billion adults in the world without access to financial services[2]. However, there is a silver line- it is now possible to include many people within the fold of formal financial services much faster with the use of technology. Penetration of smart phones and other mobile devices, presence of payments banks, and agents have revolutionized the notion of banking.

India has done well in the recent past in terms of providing formal access of banking services to a large section of the population. Similarly, India has the second highest fintech adoption rate in the world[3]. Therefore, India should be able to effectively use fintech to promote financial inclusion. India has witnessed, in the past five years, serious government initiatives to push forward digital payments and financial inclusion. Use of technology in finance invites serious challenges to the traditional service providers and also threats to the security and safety of money. Therefore, a vibrant and reliable financial services need a responsive and fair regulatory system.

Financial Inclusion and Digital Payments

Financial inclusion, ever since the term was used in 2005[4], has been a distant dream in India. The rural Indian population was heavily dependent on money lenders and other informal financial channels to meet their financial needs. The access to formal banking services was limited due to bank's inability to reach the rural poor, and lack of awareness. In order to bring the poor and particularly women into banking fold, the Government of India had announced a major scheme, called *Pradhan Mantri Jan-Dhan Yojana* (PMJDY), on 15 August 2014, as a national mission for financial inclusion. Under PMJDY, every Indian household will have at least one bank account and access to credit and other financial services. If one measures financial inclusion by access (number of bank accounts) alone, the PMJDY is a huge success. When the scheme was launched in 2014, about 53% of Indian population (above 15 years old) had formal bank account. The PMJDY brought almost 80% of population under formal banking- a significant achievement[5]. The government has used successfully the bank accounts of the poor to transfer several benefits (e.g., pension, subsidies) and this has resulted in sizable reduction in leakages. Each account holder under PMJDY gets a debit card (RuPay) as part of the deal and hence if one looks at the number of debit card issuance in India, it grew significantly post PMJDY. For example, in July 2014, the number of outstanding debit cards was 414 million In India and it crossed 500 million mark in next six months- registering a growth of 20%. The number of credit cards grew by only 4% during this period (Table 1). However, payments using plastic (debit) cards offer a mixed picture. While the total value of debit card

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[1] The Bali Fintech Agenda, IMF Policy Paper. October 2018.
[2] Christine Lagarde, Managing Director, IMF.
[3] EY's Fintech Adoption Index 2017
[4] Dr. Y.V. Reddy. RBI Annual Policy Statement for the year 2005-06
[5] Global Financial Inclusion Index, The World Bank

transactions have increased significantly over the past five years, the per transaction value has actually declined during the same period (Table 1). Even the ticket size per transaction using UPI (Unified Payment Interface[6]) has declined since its launch (Table 3). But UPI total transaction volume tells a different story.

Table 1: Usage of Plastic Cards in India: Point of Sales (POS) Transactions

	Debit Cards				Credit Cards			
Month	# of Cards	Volume	Value(Rs.)	Size (Rs.)	# of Cards	Volume	Value(Rs.)	Size (Rs.)
Apr-11	230.26	22.46	37055.43	1649.73	17.78	23.23	70553.98	3037.48
Mar-14	394.42	56.98	85770.65	1505.24	19.18	46.11	145487.31	3155.54
Jul-14	413.92	64.66	99081.23	1532.27	19.61	50.92	152667.98	2998.44
Dec-14	500.08	73.62	111006.57	1507.86	20.36	56.09	171865.26	3064.00
Dec-15	643.19	108.12	145831.93	1348.82	22.75	69.37	211941.38	3055.35
Dec-16	764.43	415.46	580312.50	1396.79	28.32	116.08	311491.20	2683.35
May-17	790.36	269.85	377777.90	1399.98	30.86	115.33	361406.80	3133.66
Aug-17	810.87	267.62	356653.80	1332.67	32.65	115.33	362987.80	3147.48
Dec-17	842.47	292.39	407603.00	1394.05	35.50	123.77	418636.70	3382.40
Dec-18	958.15	386.69	530214.00	1371.17	44.21	158.34	542347.00	3425.16
Mar-19	924.63	407.57	530111.00	1300.68	47.09	162.41	576511.00	3549.70

Source: NPCI. # of cards denote cumulative number of outstanding cards. Volume and value are in million. Size refers to INR value of an average transaction.

Overall, the number of outstanding debit cards have grown four folds in the past eight years, but the number of credit cards grew by only two-and-half times during the same period. Increase in debit card numbers has been largely involuntary- driven by automatic issue of RuPay cards to account holders under PMJDY scheme. Credit card usage indicates voluntary digitalization of payments and that number has not increased much. It may be noted that the average usage of credit cards (denoted by *size* in Table 1) has marginally increased since the government's drive against cash payments. In fact, immediately after demonetization[7], payments through credit cards had actually declined – see the December 2016 figures. Payments through debit cards did marginally increase immediately after demonetization.

However, demonetization effect can be easily seen in the ATM usage (Table 2). There was a significant fall, as expected, in the cash withdrawals in December 2016- both in terms of volume and size. Many ATM counters had gone dry after demonetization and it took several months for these outlets to restore cash availability. Use of cash, which saw a dip in December 2016, had gone up to the pre-demonetization level in six months (May 2017). While payments through cards did not significantly increase after November 2016, use of cash for meeting regular expenses bounced back within a very short time. Debit card ATM value of transactions have gone up from Rs. 0.85 trillion in December 2016 to Rs. 3.13 trillion in December 2018 almost four-folds increase in two years. An estimate shows that only 4 percent of personal consumption expenditure in India happen digitally. Therefore, if one examines the growth of digital

[6] UPI is a real-time payment system for facilitating inter-bank transactions.
[7] Announced on November 8, 2016

payments via cards, it may appear that efforts of the central government to push digital payments have not produced desired results. But digital payments do not involve payments through cards alone.

Table 2: ATM Usage in India

	Debit Cards			Credit Cards		
Month	Volume	Value(Rs.)	Size (Rs.)	Volume	Value(Rs.)	Size (Rs.)
Apr-11	399.55	1061653.47	2657.10	0.17	963.72	5603.74
Mar-14	571.50	1796098.93	3142.79	0.30	1661.70	5603.48
Jul-14	583.12	1855244.74	3181.56	0.32	1729.61	5408.99
Dec-14	591.06	1897693.28	3210.68	0.44	2505.79	5720.56
Dec-15	708.00	2204614.96	3113.86	0.53	2748.53	5146.15
Dec-16	630.47	849340.90	1347.16	0.38	880.90	2343.17
May-17	655.47	2163917.80	3301.31	0.55	2609.00	4774.89
Aug-17	718.41	2352957.20	3275.23	0.66	3045.50	4619.55
Dec-17	761.93	2640389.20	3465.39	0.71	3340.60	4682.89
Dec-18	914.31	3139013.00	3433.21	0.88	4032.00	4606.79
Mar-19	891.42	2889992.00	3242.00	0.86	3983.00	4616.70

Source: NPCI. Volume and value are in million. Size refers to INR value of an average transaction.

One needs to look beyond debt and credit transaction volume to appreciate the extent and depth of digital payments in India. While, total value of monthly credit card transactions has increased eight folds (from Rs. 70554 million in April 2011 to Rs. 576511 million in March 2019) in as many years, the increase has been much larger (14 times) for value of monthly debit card transactions. But there are other two competitors to the card payments- e-wallets and UPI. The UPI helps one to instantly transfer funds between two bank accounts on a mobile platform. UPI is completely interoperable on the 'send' and 'receive' side.The transaction volume through UPI, launched in April 2016, has been growing at a phenomenal pace from a mere Rs. 69 billion in 2016-17 to a whopping Rs. 8.8 trillion in 2018-19- increase of 126 times in just two years (Table 3). UPI has launched its upgraded version (UPI 2.0) in August 2018 which would further improve peer-to-merchant transactions. In the earlier version of UPI, payments could be made only from savings bank accounts. But under UPI 2.0, merchants are allowed to withdraw money even when there is no credit balance in their account- overdraft facility. Therefore, UPI has made peer-to-merchant transactions easier which is not a good news for the other digital payment platforms.

Table 3: Usage of RuPay and UPI

	RuPay Cards			UPI Transactions			Cards	E-Wallets
Year	Volume	Value(Rs.)	Size (Rs.)	Volume	Value(Rs.)	Size (Rs.)	Value (Rs.)	Value (Rs.)
2014-15	6.09	11270.00	1850.57	0.00	0.00	0.00		
2015-16	35.64	50510.00	1417.23	0.00	0.00	0.00		
2016-17	282.78	349290.00	1235.20	17.86	69470.00	3889.70	6582890	532420
2017-18	667.66	654320.00	980.02	915.23	1098320.00	1200.05	9190350	1086750
2018-19	1127.08	1175130.00	1042.63	5353.40	8769700.00	1638.16		

Source: NPCI and RBI. Volume and value are in million. Size refers to INR value of an average transaction.

Growth in UPI indicates trouble for other digital payment methods (e-wallets, debit and credit cards). Popularity of e-wallets had gone up immediately after demonetization, but the e-wallet transaction volume dropped after launch of UPI. Customers who prefer payments through e-wallets point out that they do not want to provide direct access to their bank accounts and hence e-wallets act as an additional layer of security. But others, who use UPI for payments, mention that UPI is much hassle free and easier to operate. In 2016-17, UPI transaction value was 14 percent of e-wallets volume. But UPI has almost caught up with e-wallets in terms of value of transactions in just a year. Similarly, payments through cards (both debit ad credit) was almost 100 times of UPI payments during 2016-17. The gap has significantly narrowed down to less than 10 times in 2017-18 (Table 3). If one looks at monthly data, things were more competitive. For example, while credit card transactions in April 2018 were about 1.5 times the UPI transactions, by February 2019 the value of credit card transactions were less than half of those done under UPI platform[8].

The Use of RuPay (debit) card has been on the rise. In 2014-15, it started with a modest value of Rs. 11.3 billion and it reached a volume of Rs. 1.2 trillion during 2018-19- a ten-fold increase in five years. Yet, the RuPay volume is about 20% of total value of debit cards transactions during 2018-19. RuPay has lot of potential to fight it out with multinational players like Visa, MasterCard.

Therefore, digitalization of finance is fast catching up in India and the real focus has shifted away from cards business to payment through mobile banking (UPI) and e-wallets. That does not mean that cash has lost its dominating position. Cash still rules in India.

[8] UPI sets searing pace while e-wallets wobble. The Hindu, April 14, 2019