# **Designing and Development of Payment System in India**

Abhaya Prasad Hota



"Free Enterprise was born with man and shall survive as long as man survives".

- A. D. Shroff Founder-President Forum of Free Enterprise

#### M.R. PAI (1931 – 2003)

Mangalore Ranga Pai, noted champion of public causes and consumer activist, obtained his M.A. (Political Science) securing the First Rank and the Candeth Gold Medal. Later he obtained his Master's degree in Journalism from the University of California at Los Angeles, USA. He also edited a newspaper at Carlsburg, California.

Pai was the first Publicity Officer of New India Assurance Company. When the late A.D. Shroff decided to establish the Forum of Free Enterprise, Pai joined it even before it was formally launched on 18th July 1956. Pai was Forum's Secretary till 1976 when he resigned and became its Hon. Vice-President which position he held until his demise on 3rd July 2003. Along with the late Nani A. Palkhivala, whom he 'discovered' in 1957, Pai was instrumental building the Forum as a highly reputed organization.

Pai successfully fought innumerable battles for the consumer with telephone department, banks, Indian Airlines and several institutions – long before consumer courts were set up under the Consumer Protection Act 1985. Thanks to him thousands of consumers all over the country benefited. Such was his stature that the

"Reader's Digest" featured Pai on its October 1995 issue under the title "M.R. Pai, Champion of the Consumer and paid glowing tributes to his work.

Pai was associated with the All-India Bank Depositors' Association (Mumbai) since its inception and was also a Vice-President of the Mumbai Graham Panchayat. He was a member of the Government of India High-Level Committee on reorganization of Telecommunications; a member of the RBI Committee on Customer Service in Banks; a member of the UTI Social Audit Committee; was a Trustee of Volkart Foundation, Economics Research Centre, The A.D. Shroff Memorial Trust, The Dadabhoy Naoroji Memorial Prize Fund and a few other Trusts; and Director of a few Companies.

M.R. Pai Foundation was established in 2004 as a registered charitable trust with Mr. Ajay G. Piramal as its Chairman. The other Trustees are: Mr. Adi B. Godrej, Mr. Shreyas K. Doshi, Mr. Raju Barwale, Mrs. Swarn Kohli, Mrs. Gita R. Pai, Mr. Ashok Ravat, Mr. Shivanand V. Salgaocar, Mr. Nalin Shah and Mr. Vikram Sarda.

### Message of the Honourable Minister Mr. Suresh Prabhu

Mr. M.R. Pai is someone who can never be forgotten – as a personality or an institution is a question! He was both, a great person, a great human being, caring for family, caring for society, loving his friends, helping anyone who needed it. An extremely ethical person, all the while in his life set an example for others to emulate, devoted to a cause, a great human being. His loving wife will tell us so many other stories about her great husband. She in her own right, is a great lady.

So, we know him as a person, as a human being. We also know him as an institution. The number of activities he conducted in his lifetime is something which we can never ever imagine. He fought for the bank depositors; he fought for the cause of free enterprise; he fought for so many causes which were dear to his heart — not because he was obsessed with those ideas, but only because he liked them. He had this great understanding about these causes and their implications on the people. He was not only fighting for a cause, but he was fighting for the people for whom those causes were very important as well. He created institutions.

He had a very good colleague, Mr. Divakara. They worked tirelessly, selflessly, dedicatedly and also constantly, they did not give up. Most of the time they had to fight their own battle, not for themselves, but for others. Even when they were not joined by as many people who would ultimately be the beneficiaries of that battle, still they kept on fighting.

Mr. M.R. Pai will always be remembered by those who met him, like me, but also many others for his contribution to society for social causes which he fought, which he fostered, which he developed and which today have become mainstream part of society. Today people feel that there should be free enterprise but when he started talking about it, nobody believed it. He was ahead of his time in many areas.

I am, therefore, really very grateful to the organizers for inviting me to join in this program. In fact, honestly, it was my earnest desire to come and meet each one of you and also pay my personal tribute to such a great individual. I wish to offer my great respect, regard, tribute to such a great individual and I hope we perpetuate his memory, not only through such programs that is organized today, but through many others that we need to do to ensure that his ideals, his ideas,

his beliefs, his convictions which are good for the society and for the betterment of large number of people, are taken forward.

I sincerely offer my best wishes to his family, his friends, his well-wishers, his colleagues, and I count myself as each one of these. He is also part of my family; he was my very good friend; he has been a colleague; and we worked together in some areas. Also, I would call myself as a follower of his ideas. So, I really look forward to all of you doing a good job in taking it forward. I wish to congratulate all of you. Again, I offer my sincere apologies for not being there personally present, and please accept this as a compromise between what I would have loved to do to be there in person, and something which at least I can now pay my tribute through this medium. Thank you very much. All the best.

#### **Editorial**

All-India Bank Depositors' Association [AIBDA] was, indeed, privileged to have had Mr. Abhaya Prasad Hota, Former Chief General Manager, RBI and former MD & CEO, National Payments Corporation of India [NPCI] as the most deserving awardee of the 13<sup>th</sup> M. R. Pai Memorial Award for the year 2017. This award is instituted by Punjab and Maharashtra Cooperative Bank in the memory of late Mr. M.R. Pai, who passed away on 3<sup>rd</sup> July 2003, and is given to an outstanding consumer activist or journalist or any person who has made a difference to the quality of life of the common man.

Mr. Hota surely belongs to such class of personalities, who have made difference to the quality of life of the common man. This comes out eloquently from his commitment and involvement, as part of his professional career, in designing and development of payment and settlement systems in India, which is very crucial for bank customers. His several major achievements span from being instrumental in starting computerisation of cheque clearing operations in the eighties, introduction of MICR based cheque clearing in the nineties, and adoption of cheque truncation system during

2006-08 to a more recent development of Unified Payments Interface, helping the customers to send or collect money with just an email like financial address. During his tenure at the NPCI, Bharat Interface for Money [BHIM] – an UPI application – was launched by the Honourable Prime Minister on 30<sup>th</sup> December, 2016.

Against this backdrop, it was most appropriate for Mr. Hota to reminisce and reflect in his acceptance speech on the sequence of payment system initiatives undertaken by the RBI and Govt. of India during the last about three decades, and how his own work had a direct bearing on servicing the bank customers. The FORUM is, therefore, delighted to publish the text of his written speech for a wider circulation for benefit of all the stakeholders of our financial system. Our effort is also to reach out to students, researchers and all those engaged in public policy making to create greater awareness and interest about some of the key transformative changes in the banking and financial environment.

As an integral part of his thematic presentation, apart from offering a historical perspective, the author delineates five significant stages in the evolution of payments system in India. These are: [a] the very traditional form of payments – cheque

clearing; [b] money transfers, RTGS, NEFT, IMPS, UPI, BHIM and \*99; [c] universalisation of card payment system, including the arrival of RuPay card; [d] creation of Aadhaar Payment platform and leveraging of its potential by building quite a few key services around it, including direct benefit transfers; and [e] the creation of ECS platform in the late nineties and its improvement after it was taken over by NPCI in 2010.

Going forward, Mr. Hota also assures that "life of a bank customer is going to be easier with large scale use of Tap & Go payments, toll & transit payments and bringing all the utility billers under the Bharat Bill Payment System (BBPS)". While acclaiming how technology based payment systems have brought about a lot of operational simplicity, Mr. Hota cautions about the "risk of cybercrime and account being hacked" and rightly makes a case for education and training of customers. He further points out that "banks have a major responsibility to build awareness programs on Dos and Don'ts of electronic banking" ... and also calls upon AIBDA to ensure that "banks implement the RBI decision in letter and spirit and don't put the customers to difficulties. Thankfully, the burden of proving that the customer was negligent, rests with banks".

AIBDA and FORUM are both aware of imperatives of financial literacy, which should truly become an integral part of the efforts of Govt. of India and the RBI towards financial inclusion. All in all, this booklet would prove to be very valuable for all those engaged in and concerned with functional and operational aspects of our existing and evolving payments system in the country.

Before concluding this introduction, the AIBDA and the FORUM would like to take this opportunity to place on record their special gratitude to the Honourable Minister of Commerce and Industry, Mr. Suresh Prabhu for sending a recorded message through a video clip paying his rich tributes to late Mr. M. R. Pai and expressing his warm wishes for the success of the function. This clip was played right at the beginning of this award function. All those present greatly appreciated his sincere and heartfelt sentiments towards late Mr. M. R. Pai. The Honourable Minister was to grace this function as the Chief Guest, but could not make it due to his unexpected and urgent official engagement in New Delhi. Some excerpts from his message are set out separately in this booklet.

> Sunil S. Bhandare Editor

### Designing and Development of Payment System in India

#### Abhaya Prasad Hota\*

Association for honouring me with the MR Pai Memorial Award for the year 2017. I am deeply honoured and humbled by this award. It is a great feeling of being associated with the cause that late Shri M. R. Pai stood for. He had crusaded for the rights of the consumers in banking and telecom and inspired a generation of activists, journalists and NGOs. I am overwhelmed that the past recipients had been persons of eminence like the former Governor Y.V. Reddy and are organisations of repute like SEWA and Money Life.

<sup>\*</sup> The author is Former CGM Reserve Bank of India and former MD & CEO, NPCI. The text is based on his talk at the Thirteenth M. R. Pai Memorial Award Function, sponsored by Punjab & Maharashtra Co-operative Bank Ltd. and arranged by All-India Bank Depositors' Association (AIBDA) jointly with Forum of Free Enterprise on 21st August 2017, in Mumbai. The Award was presented to Mr. A. P. Hota.

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I accept the award and dedicate this to my wife who is present in the Hall and daughter who had always felt that I placed greater importance to work than family all these years. This dedication may perhaps be a recognition of how much of sacrifice they have made for me.

My work at Reserve Bank of India for twenty-seven years and at National Payments Corporation of India for eight years were very close to the cause that Shri M R Pai stood for. My activities were one of design and development of payment systems that helped simpler, easier, faster, more secure and cost-effective payment between person to person or person to organisation or organisation to person or organisation to organisation. Fortunately, my activities were of a leveraging nature- action taken centrally at RBI or at NPCI level directly impacts the ability of the banks to serve their customers better. A small improvement at the central level reaches the customers in a magnified way.

Let me give a short description of some of the payment system initiatives where I was directly involved during the past three decades and how my work had a direct bearing on servicing the bank customers.

First, let me talk about the very traditional form of payments - Cheque Clearing. In good old days, there used to be clearing houses in every city and town. For cheques payable locally, cheques used to be presented in local clearing house and clearing time used to be three days. For outstation cheques, time taken used to be as much as a month. Banks were obliged to pay interest only when time taken was more than twenty-one days. MICR clearing solved the problems of banks in reconciliation of transactions: but customers' issues remained. The real change came when, by regulatory directions, outstation cheques were to be treated like local cheques and to be presented in the local clearing house. A couple of years later, cheque processing was brought under Cheque Truncation system. Now nearly ninety percent of cheques are cleared under truncation mode. Two days is all that requires for clearing of any type of cheque. Cheque clearing has become much smoother for all concerned - banks, clearing house as well as the customers. Though volume of cheques is gradually declining due to onset of digital payments, traditional system is now robust.

The second area that the bank customer often struggles is money transfer. RTGS, NEFT, IMPS,

UPI, BHIM and \*99#, - a wide range of products are now available for money transfer. In good old days, it used to be inter-bank cheques for large value payments and drafts for other payments. I remember that in 2004, a host of banks were charging as much as Rs.10,000 for remitting Rs. 1 crore through inter-bank funds transfer. As more and more banks became participants of RTGS system, money transfer became faster and cheaper. NEFT was introduced in 2005. Paper based inter-bank clearing was stopped and RBI intervened on pricing of RTGS and NEFT. After NPCI was operational in 2010, Immediate Payments Service (IMPS) was introduced which made money transfer still easier. By its characteristics of 24x7 real time funds transfer, it was an instant hit. I remember that in 2010, while I used to make preliminary presentations to banks on the need for IMPS. there used to be questions as to who needs money to be moved in the middle of night? Can the customer not wait till eight am next morning for RTGS to be opened? Who wants money transfer on a holiday? Today, everyone needs real time instant money transfer. In 2010, India was the first country to have such a 24x7 real time system. The UK had introduced faster payments; but banks had the choice to delay

credit to customers by two hours. India became the leader for real time 24x7 remittance system. Today, there are more than thirty countries with IMPS like system. With improved technology and greater simplicity, we have now Unified Payments Interface, whereby a customer can send or collect money on a real time basis with the customer being identified with an email like address or with mobile or Aadhaar numbers, as the address. At the instance of the Government of India, BHIM app has been developed by NPCI and is available in twelve languages. For feature phone based customers, USSD channel of telecom companies have been used in a very innovative way. Money transfer is now as easy as sending an email. Service is available to the customers of nearly one hundred and fifty banks and the number is increasing.

The Third is universalisation of card payment system. Till the arrival of RuPay, card payment instrument was available to the customers of only fifty-five banks. It is only the large public-sector banks, a few private banks and a few co-operative banks which had access to the card payment network. Access fees were prohibitive. Today eight hundred plus banks are in a position to offer card payment service to their customers. All the ATMs in the country

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are inter-operable and the customers of even the Regional Rural banks are in a position to swipe their RuPay debit cards at Point of Sale terminals or buy goods online. RuPay card was issued as the default debit card to all the two hundred, twenty-five million Jan Dhan Account holders in addition to about one hundred and fifty mainstream customers. RuPay card penetration has really made debit card a mass payment instrument. With RuPay credit card, which was launched just two months back, similar impact is likely to be observed in a year or two.

The Fourth is the creation of Aadhaar Payment platform that not only helped cash benefits under various government benefit programs to reach the intended beneficiaries but also helped the customers without card or mobile phones to make day to day transactions securely at remote locations. Leveraging Aadhaar, NPCI built a few services - one service is to credit the bank account just with Aadhaar as the reference number and the other service is to facilitate day-to-day transactions like deposits, withdrawal, money transfer etc., with biometric authentication of the customer. NPCI also provides gateway services to the banks for e-KYC. The experiment of financial inclusion through business correspondent became a success only after micro ATMs were set up and authentication issue was addressed. NPCI's Aadhaar payment platform played a critical role in financial inclusion.

The Fifth area of payment system, I had the opportunity of being closely involved, is the creation of ECS platform in the late nineties and its improvement after it was taken over by NPCI in 2010. ECS (Credit) and ECS (Debit) has helped bank customers to migrate to electronic platform for receiving the periodic payments like salary, pension and dividends and payments like utility bills. Paper based payments are not only inconvenient for banks; but inconvenient for customers as well. NPCI is well on its way to replace the paper mandates by e-Mandates. Initial experiments have been very good and e-Mandate will address the common issue of "signature differs". Bank customers will be able to join a mutual fund scheme or make any investment in a much easier way than at present.

Apart from these major payment systems, life of a bank customer is going to be easier with large scale use of Tap & Go payments, toll & transit payments and brining all the utility billers under the Bharat Bill Payment System (BBPS). Technology based payment systems have brought a lot of operational simplicity. However, risk of cybercrime and account being hacked has also increased. My personal experience is that it has a lot to do with education and training of customers. Banks have a major responsibility to build awareness programs on Do's and Don'ts of electronic banking. Very recently, RBI has brought out the circular on liability in case of cybercrime - responsibility of the customers to report in time and the accountability of the banks to compensate the customers. I believe, in the years to come, the All- India Bank Depositors' Association would have a lot of work to do in ensuring that banks implement the RBI decision in letter and spirit and don't put the customers to difficulties. Thankfully, the burden of proving that the customer was negligent rests with banks.

I thank the All-India Bank Depositors' Association once again for this Award and look forward to a situation where banks would come forward in protecting the interests of the depositors in their own interest. Banks should not forget that customers are the purpose for which they exist. Else, the disruptions being unleased by Fintech companies would make the banks less relevant than today.

I am also thankful that I could be a part of the event where champions of Forum of Free Enterprise are present. I subscribe to the spirit of the Forum and I thank them to be partnering with the cause that late M. R. Pai stood for.

The views expressed in this booklet are not necessarily those of the Forum of Free Enterprise.

#### This booklet is sponsored by



"People must come to accept private enterprise not as a necessary evil, but as an affirmative good".

- Eugene Black Former President, World Bank

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In recent years the Forum has also been focusing on the youth with a view to developing good and well-informed citizenship. A number of youth activities including essay and elocution contests and leadership training camps are organised every year towards this goal.

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