



“Rupay”- The Future Payment Gateway Of India

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Abstract

This era is known to be the era of E-payment. India as the fastest growing economy in the developing nations and is one of the favourite destination for the investors. As result of the investment, trade more and more of transaction are taking. Most of the transactions that are done are mostly electronic in nature to fast up the transaction process, ensure more security, easy settlement, big volume, to simplify and to reduce the transaction cost. Mostly Visa and Master Card gateways are well known or most used payment gateways in the world. In the similar line of the Visa and Master card gateway, India introduced the RuPay payment gateway. This paper tries to give the overview of the Rupay card, discusses its future scope supporting data analysis and its advantages.

Index Terms:RuPay, Payment gateways, Credit card, Debit card, POS, ATM, E-Payment

Introduction

“RuPay” the word derived from the adhesion of the two words rupee and payment, the name indicates a sense of nationality. The RuPay icon or symbol consists of two colours saffron and green which denotes the colour of the Indian flag. The Rupay card was launched on 26th March, 2012 with the help of National payment systems in India. National payment systems in India, the pioneer institute in retail payment settlement in the India, described in the section (25) company in the company act. Initially IndiaPay was the name suggested instead of RuPay but to remove the naming conflict, the later was accepted. The main objective of introduction of RuPayby RBI is to offer the multilateral and domestic system to enable the Indian banks and financial institution to participate in the electronic payment. To make acceptance of the RuPay card globally National Payments Corporation of India enters into a strategic partnership with the Discover Financial Services. Finally on 8th May, 2014 Rupay card was dedicated to the present president of India, Pranab Mukherjee. The RuPay payment gateway linked to the 19 other payment links in the world that includes the countries like the US, UK, Singapore, China, Japan, Australia, Germany, South Africa, Canada etc. The RuPay supports the pin based transaction, it embedded with a microprocessor chip which contains the details of the card holders and highly secured as it is using EMV technology. The RuPay payment gateway is also similar to the other popular payment gateways like Visa and Master card. To make its application wider several steps has been adopted by the government by linking it various government incentive plans, to



financial institutions, door for financial inclusion etc. The Roadmap for the RuPay mainly divided into different phases as explained below, as most of the phases have been implemented successfully.

Phase	Details
First	Mainly accepting the ATMs and micro ATM cards
Second	Debit Cards; Pre paid cards to be accepted in the POS
Third	Acceptance of E-commerce and Virtual cards
Fourth	To make it a contactless card and specialised technology like EMV
Final Phase	Credit Cards

Table no. 1: RuPay Roadmap Phases

Some of the key features of the RuPay are as follows: In addition to 2 factor authentication it provides more security in terms of One Time Password, authentication based on image and anti-phishing measures; very user friendly and easy to adapt, and very simplified architecture promotes faster and reduce drop out transactions, in turn reduces the transaction cost.

Data And Methodology Used

Mainly Secondary data collected from the Reserve bank of India (RBI) database and National Payment Corporation of India website. For RBI data each data each year April to March data has been taken, for example year 2013 data is from April, 2013 to March 2014. Similarly for the year 2014 data is for five months April, 2014 to August 2014. For the National Payments Corporation of India the data mainly are monthly data for the year 2014. The research data includes the number of banks, usage of cards at ATM and POS, outstanding number of both debit and credit cards, mostly from year 2004 to 2014. For the year 2014 only up to the month of August is considered in most of the cases. Using different kind of graphs data analysed and interpreted.

Analysis And Discussion

NFS member banks and number of ATMs in India we have a very different kind of banking system as of the rest of the world mostly we have the branch banking.

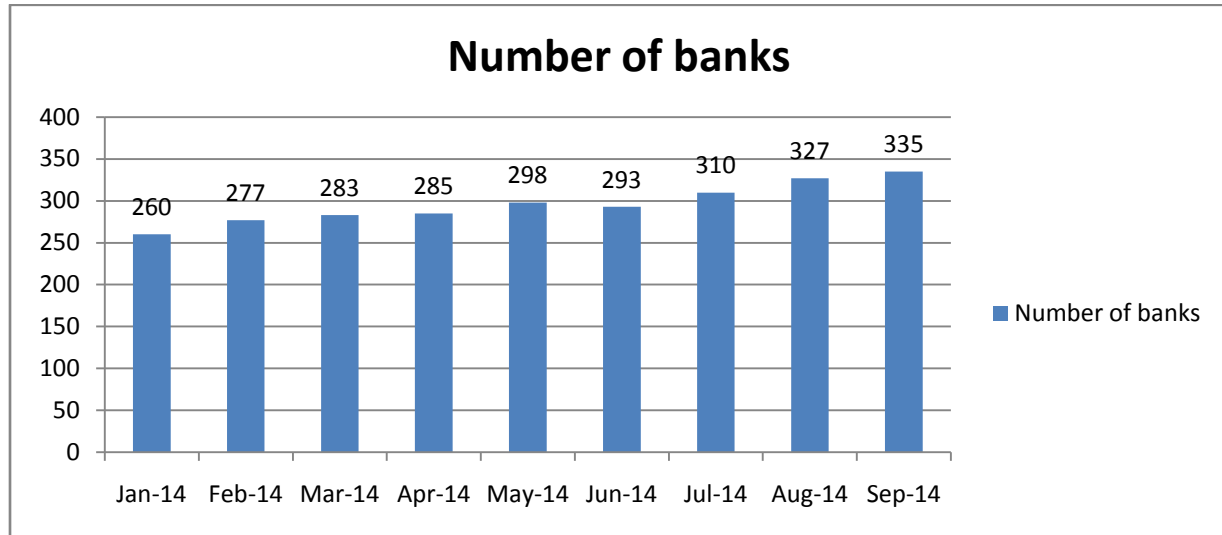


Figure No. 1: Year wise number of banks under NFS

Further Indian banking is classified as the RRBs, developmental banks, cooperative banks etc. The number of banks is increasing in each month in the NFS network. In future the same will dominate as RBI will give more banking licenses to the foreign and banks for micro areas of financing.

As the numbers of the member banks are increasing, as already discussed they are spreading by branch banking. Mainly banks are targeting the rural India especially as most of the population are excluded from the financial system. The contribution to GDP by the non-corporate sector in India is 45%, which includes much small business mostly in the rural India. So what the banking are doing rather than putting the whole branch they are establishing the number of ATMs and POS. The figure below showing the number of ATMs increases over the period of time.

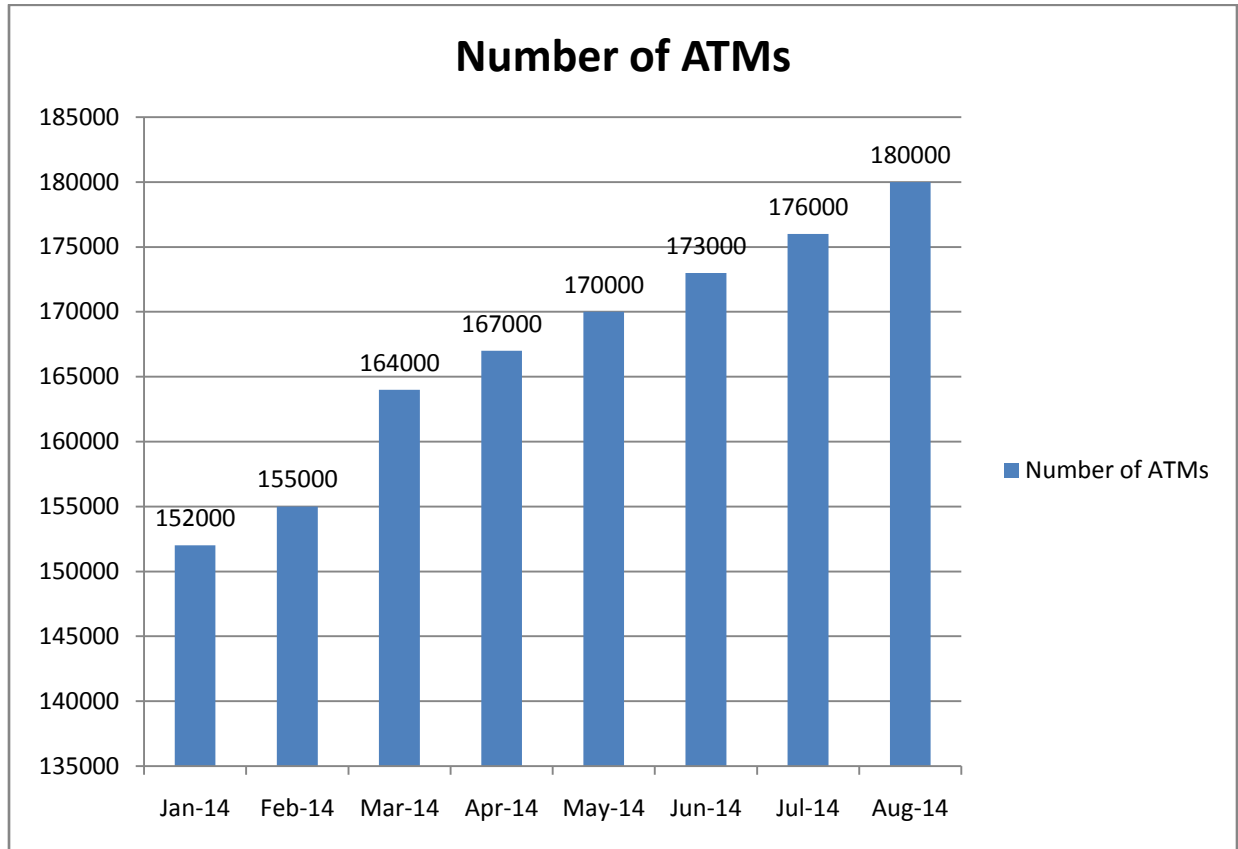


Figure No. 2: Year wise number of banks under NFS

From the above two graph it is very much clear that the RuPaypayment has huge market in the Indian scenario. Presently as of September 2014, it has 83 direct member banks with 1,75,066 numbers of ATMs; 196 sub member banks with 976 number ATMs; 49 RRB banks with 82 ATMs and 7 group of whit label ATMs with total 1,80,494 number of ATMs. the same trend is going to dominate in the near future also because major banks are working with the solution of different types of payment systems to make it easier for the customers or the user to give a wider range of options for payment.

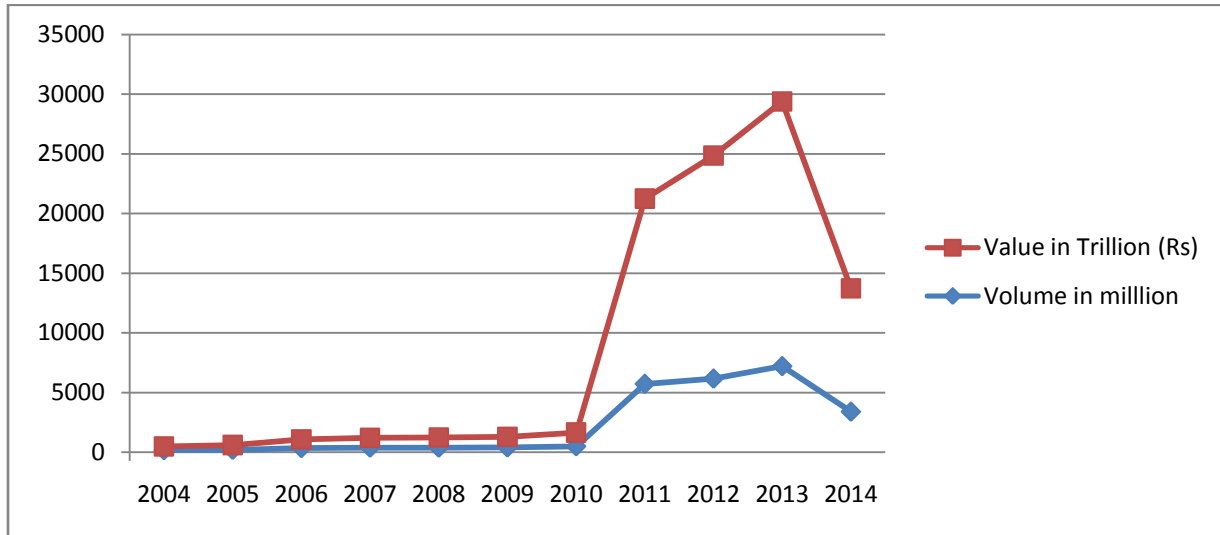


Figure No. 3: Year wise total Volume of cards used and their value of transactions

Further breakdown the analysis to number of times the cards has been used and the value of the transactions made. The above graph showing the year wise increases in the usage of card and value of the transaction has been increased significantly. Especially after the year 2010 onwards per transaction more value of amount transacted.

To get into the deeper the usage pattern of the credit and debit card has been studied. The figure below is showing the total number of times credit card usage in the Point of sale and ATM transactions. Two important observation made from the graph is that the over a period of time the usage of credit card in both POS and ATM transaction has been increased. But mostly credit cards are used for POS transactions.

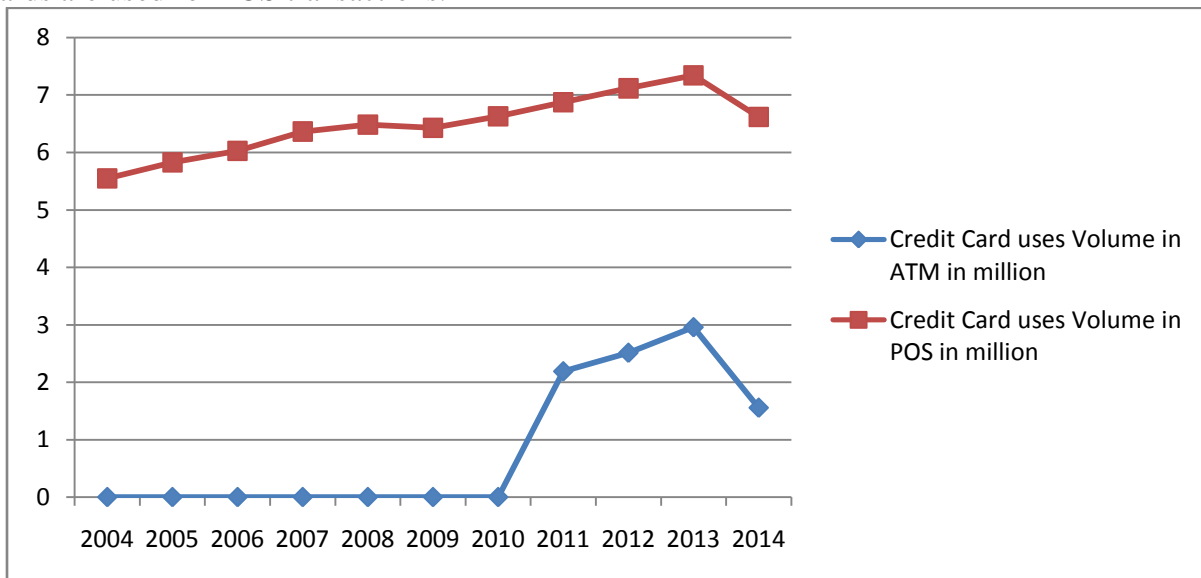


Figure No. 4: Year wise total Volume of credit cards used



Similarly in case of debit card also both the usage of card in ATM and POS transaction has been increased significantly year wise. But debit card are mostly used for the ATM transactions.

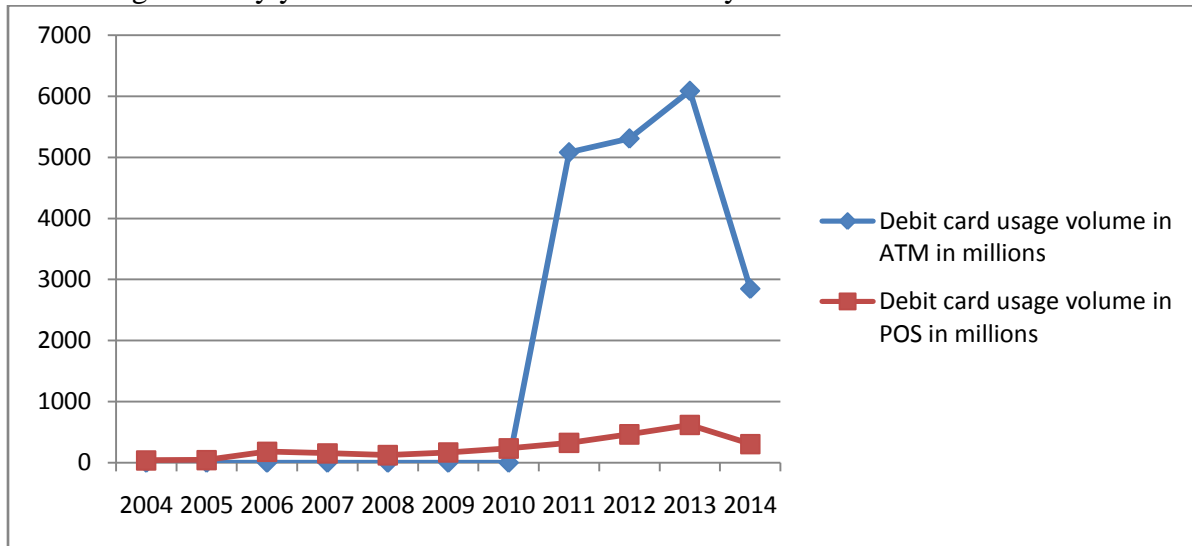


Figure No. 5: Year wise total Volume of debit cards used

Below graph showing the outstanding volume of the cards year wise, it is clearly seen that the growth of the debit card is more than that of the credit card.

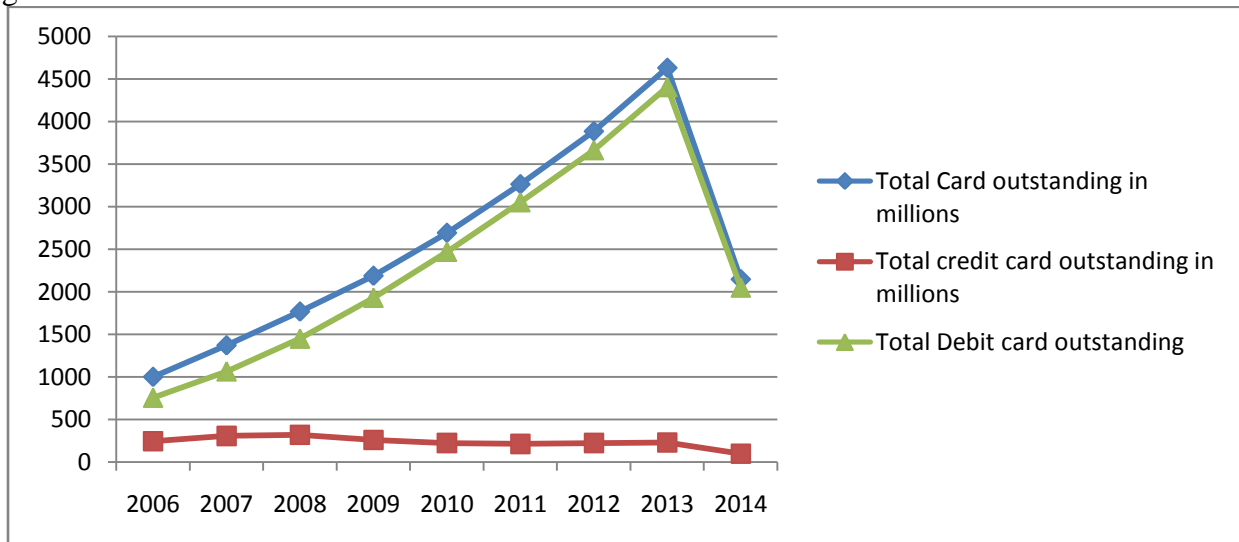


Figure No. 6: Year wise total number of outstanding cards

It is very much clear from the below table that the all total card, credit card and debit card growth rate has been declined since 2007. During the recession period the credit affected the most as it has negative growth rate in the year 2009, 2010 and 2010.



Year	Total card growth	Credit card growth	Debit card growth
2007	0.270468039	0.200892609	0.290452649
2008	0.224755424	0.039532404	0.265383341
2009	0.192340052	-0.230927356	0.24904596
2010	0.187405484	-0.162125806	0.218873656
2011	0.175076321	-0.049273036	0.190653201
2012	0.160079394	0.047268811	0.166931843
2013	0.161048727	0.021761703	0.168239691

Table No. 2: Year wise growth rate of cards both credit and debit

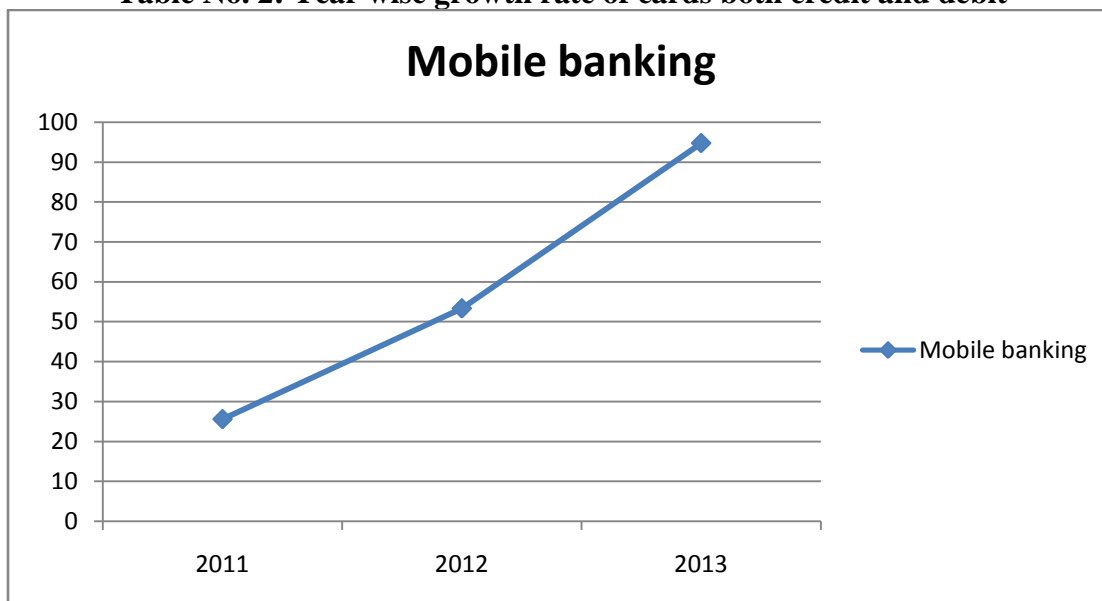


Figure no. 7:- Year wise mobile banking (in millions)

Due to the development of the e-commerce and internet usage the online payment has been increased significantly year wise. Similarly online ticketing, fees payment, ECS schemes, bill payment, salary payment etc., and usage of internet usage it also increase the mobile banking. The growth of mobile banking is increasing at very higher rate.

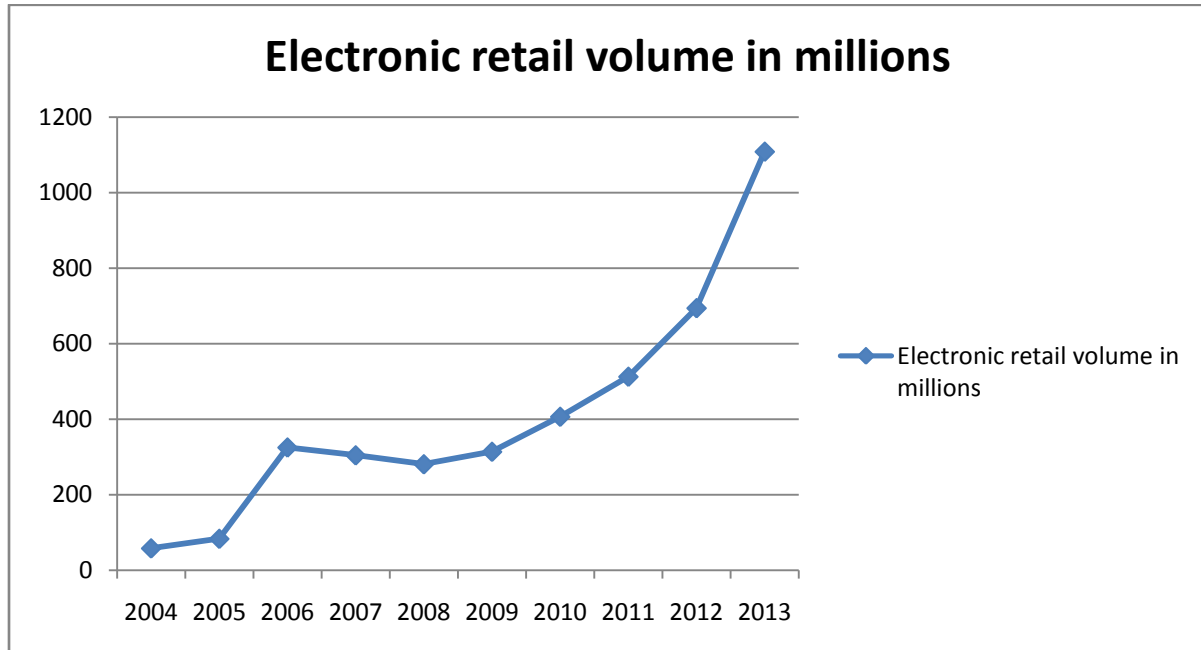


Figure no. 8:- Year wise Electronic retail volume (in millions)

Due to technological advances, ease of payment, more of the e-activities and more of secure transaction the retail transaction number increases in the graph rapidly as shown above. The trend will continue as due to e-commerce boom. Due to all of these activities the total volume of the Point of sales volume increase due to variety of payment options as shown below. The volume of these transactions will increase more in the future with the implementation of the dream project of our Prime Minister Narendra Modi. The 'make in India' programme, Jan DhanYogana schemes, other national programmes for empowerment and nation building will increase the volume of the total e-transactions.

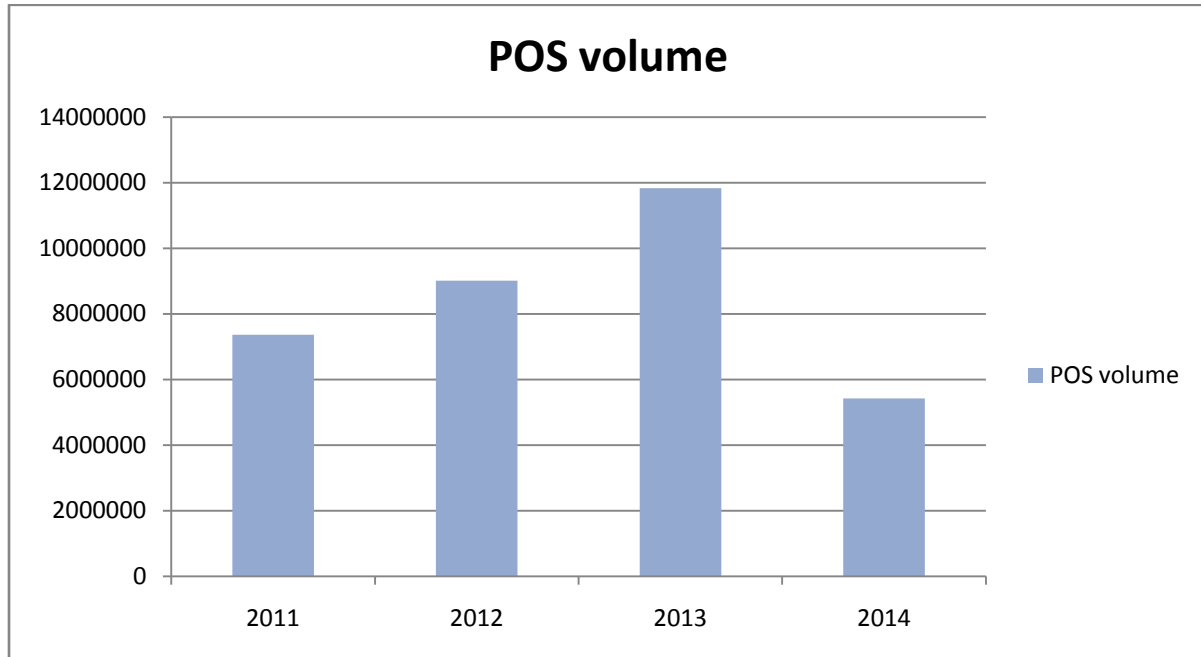


Figure no. 9:- Year wise POS Volume (in millions)

Similar pattern also seen in the forex transaction also, year wise the volume of the transaction is increasing. More flow of FIIs and FDI will increase the forex transaction growth in future.

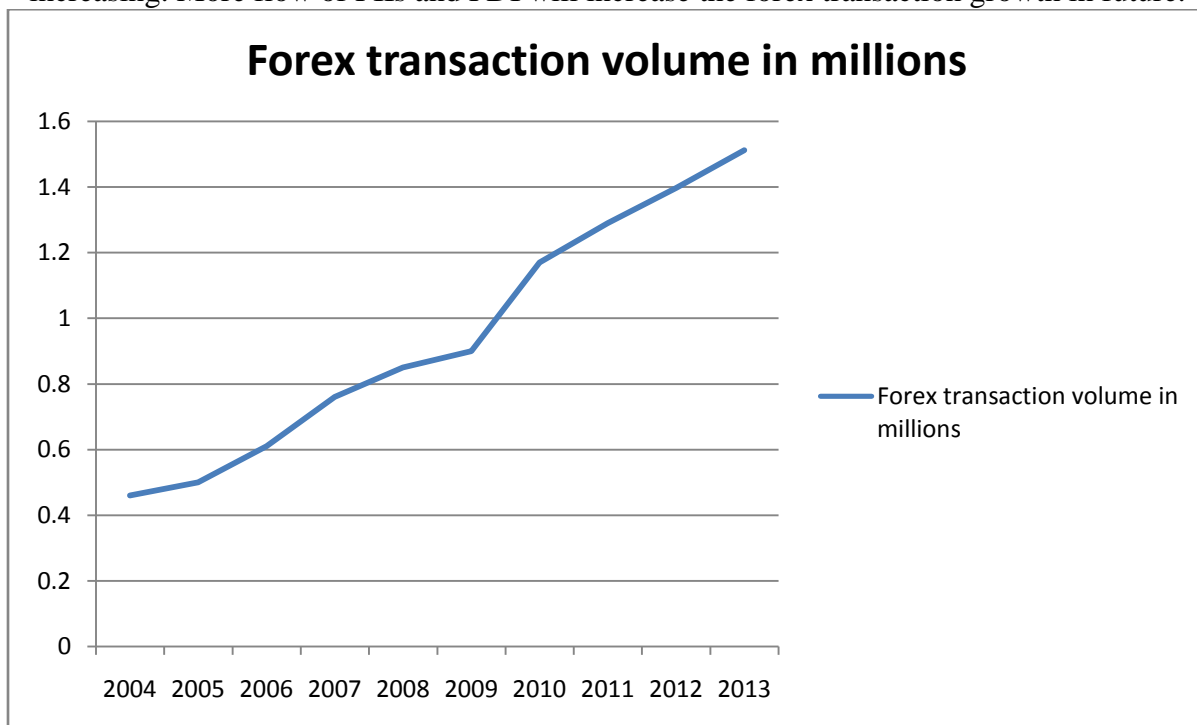


Figure no. 10:- Year wise Forex transaction Volume (in millions)



Conclusion

From the above discussion it is very much clear that the e-payment in any form is growing year wise and the need for it is more. We have accessed all critical aspect of e-payment and found that RuPay has large segment to grow. The e-commerce, e-banking, mobile banking, internet banking, e-ticketing, e-billing, more of government e-incentives will increase the need for the e-payment gateway. Some of the special characteristics of the RuPay payment gateway like the customisation, low transaction cost and affordability, conservation of home data and integration platform for other services will make it equally or more demands like Visa and Master Card.

Not only in the domestic transaction also in the forex transaction can RuPay have major shares to its counter parties.

To support it a strong and flexible IT infrastructure is need, to provide a smooth and secure transaction to sustain the competition from the world players like Visa and Master cards. Development of RuPay payment gateway helps to all banking and financial institution of India to reduce the overall cost and also to protect data in our country. In future it is going to be emerged as the future gate way of not only in India but also in the world.

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