

An Empirical Analysis on Digital Payment Economy in India

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Abstract:

Actual purpose of the work, behind any kind of service in business should aware the economy of that concept and present the world around the concept of card economy, so this paper can be support to analyze the percentage executions of annual turnover and outstanding of credit card and debit card and also ratio comparison of credit card and debit card in the means of turnover and outstanding for 7years, from the year of 2014 to 2021. There is the drastic growth in the turnover of credit card and debit card and same continued from 2014 to 2019 even balance of payments also observed accordingly and also found declined growth and inclined pending in pandemic period between 2020 to 2021

Keywords: Credit Card, Debit Card, Turnover, Outstanding.

I. Introduction

By measuring turnover Indian card system, had been aware the revenue of economy, credit volume, loan size, capital requirement, portion of investment, factors of micro economy level, domestic level, customer spending style, and by measuring the outstanding of Indian card system, have been understand that the problems facing like debt, bankruptcy, cost of credit, charges expense, timely payment, payment options like digital/POS, payment system like revolving and rotation periods, with services and facilities like digital payments and mode of transactions for lenders, customers, retailers, merchants and banks. Credit card/debit card transactions affects the revenue and turnover of the company (MG Saragih, 2019) credit card utilization is primary aspect in UK Finances (R Brown, 2019) before the intervention of card systems customer used ATM with draws to minimize expenses on their transactions (JW Wisniewski, 2012) For clearing the turnover volume and nominal in the transaction of E-money, ATM/Debit card/Credit card (LN Nasution, 2020).

A report by hardly increase their card payment turnover and suffer more of customer satisfaction in debit card services provided by Corporate Banks (T Truong, 2020) The disbursement of loans and the cost of credit can be analyzed with turnover (H.Kaur, 2018) over 5years, the employees FFCU turnover rate is very low (RG Taylor, 2015) Debit card transactions tend to be more costly for most merchants (K Occhiutto 2020) low charged debit card introduced in high volume is very low (R Pastusiak, 2017). the turnover between retailers shown significant difference (S.Chatoopadhyay, 2018) turnover of point of sale, turnover of debit card and turnover of credit card (C Floros, 2020) payment options, including credit and debit card transactions." With mobile payments, credit card and debit card turnover. Business Transaction Account with (P Skelton, 2015.) transactions, purchases, fees, outstanding payments made easy in electronic payment system and in card system (R Kumer, 2019)

The minimum payment amount is usually amounting from 10 to 20 percent of the outstanding balance. (MPS Pomantow,

2014) the services of debit card in US are different from merchants and consumers (YB Limbu, 2012). The cost to US merchants of taking payment on debit cards declined by more than \$7 billion the effective cost to issuers of providing debit-card services to consumers increased by a (DS Evans, 2015) price subsidy differences in card-to-card transaction (DS Evans, 2013) credit card debt/outstanding/ balances periodical payments (FN Chong, 2017) spending status of consumer can be observed with results of outstanding status (K Wilcox, 2011) strength of credit cards, debt/balance of credit cards, economic factors in micro level had been tested (L Wang, 2011)

However, the total amount of credit card outstanding. As at 30th June 2012, the total amount (R Ahmad, 2013) of credit cards outstanding bills credit card defaulters in term of demographic and credit card. Borrowing, transaction, spending, recovery and risk balances (A Horvath, 2021) according to FICO score year wise percentile differences in Credit card outstanding (J Linares, 2014) transaction volumes, variables and outstanding index varies (WA Barnett, 2017) basing on balance record, the future credit/loan can be issued (R Zainudin, 2019) revolving period basing on the payment of balances like main credit or interest charges on late payments (M Zhang, 2016) credit issue, existing credit, new credit issue to outstanding credit card balances (A Ponce, 2017) demographic characteristics affect young adults' credit card debt and student loan borrowing (J Kim, 2012). Delinquent credit/loan, credit card balances/total outstanding and default expense (GG Akin, 2011) end period payment or installment based payments are two types of balance of payments by card holders (M Pilina, 2011)

II. Objectives of the Study

1. To examine the turnover of credit card and debit card.
2. To analyze the outstanding of credit card and debit card.
3. To compare and interpret the results of credit card and debit card.

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III. Limitation of the Study

Huge data, which has been collected from websites in monthly based from each year of class interval and projected in this paper as annual based after long and rough in average methodology calculations for accurate and absolute/approximations.

IV. Literature Review

Problems and prospect of digital payments has been analyzed by

Deepak Gupta, Asha (2020), analyse the trends of payment card usage in India

Shilpa N.C and Dr. Amulya M; Analyzed favourite payment mode: cash/e-payment and favourite e-payment mode: debit card/credit.

Leena Bhatia and Bindu Jain (2013); found out awareness of credit cards; identify the problems faced by the clients in using credit cards; ascertain the relationship between demographic character and utilization of credit cards;

Identify critical factor perceived by the debit card holders regarding credit card and offer suitable suggestion for popularizing credit card by

K. Govindarajan, V. Vijay Anand and S. Balachandran (2012), Analyzed to understand the experience in offering banking transactions through electronic delivery channels and functions of E-Banking in India by

L. N. Jamaluddin (2013); analyzed Pain of paying and WTP (willing to pay; Convenience of paying; Technology adoption and convenience of paying and Convenience of paying and WTP by Joe Boden, Erik Maier, Robert Wilken (2020).

IV. Research Methodology and

Data Collection

The tables and charts that were shown in this paper as like the information has been collected from past ten year's research

publications to support the card payment system concepts and structures and data has been collected in the form of annual reports and card statistic from website of Reserve Bank of India to compare the annual turnover and outstanding;

Periodical data selected for seven annual years from 2014 to 2021; general mathematical formulae consumed for analysis like averages, percentages and ratios and graphs like bar charts and pie charts for interpretations.

V. Results and Interpretations

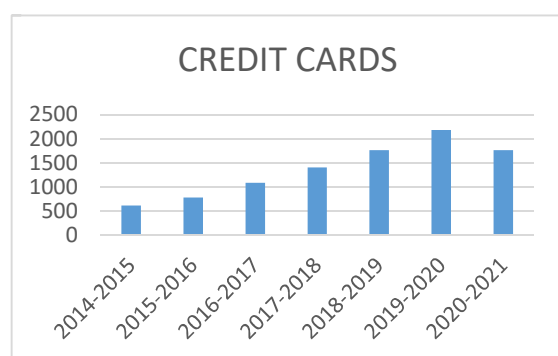
Table 1: Credit Card Annual Turnover (in Million and in Percentages)

YEAR	Credit card turnover (in millions)	Credit card turnover (in %)
2014-2015	615.1	100
2015-2016	785.7	127.7
2016-2017	1,087.1	176.70
2017-2018	1,405.2	228.40
2018-2019	1,762.6	286.55
2019-2020	2,177.3	353.97
2020-2021	1,764	287

Source: RBI Annual Reports

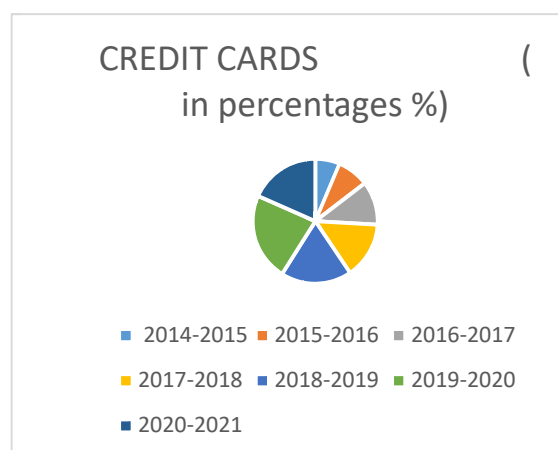
The Table1 indicates that the numerical values in million and in percentages of credit card seven annual turnovers from the year of 2014 to 2021 and also can observed that there is a fluctuate growth in first six years and declined in the year of 2020-2021.

Chart 1: Credit Card Annual Turnover in Million



Exclusively Bar- chart 1 given clearly to show differences in year wise credit card turnovers in millions

Graph 1 : Credit Card Annual Turnover in Percentages



Graph 1: For better understanding Pie-graph selected to show, percentage wise of credit card annual turnovers and also observed that there is a highest growth in annual year of 2019 to 2020 and slow down in the immediate annual year of 2020 to 2021.

Table 2: Debit Card Annual Turnover in Million and in Percentages

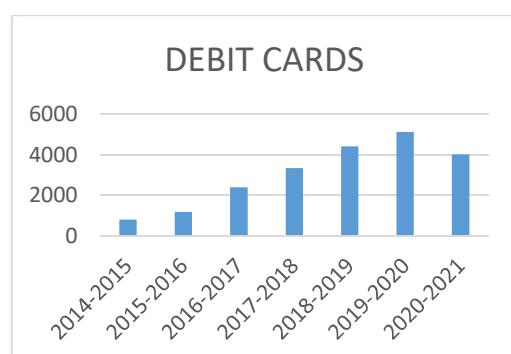
YEAR	Debit cards turnover (in millions)	Debit cards turnover (in %)
2014-2015	808.1	100
2015-2016	1,173.6	140.00
2016-2017	2,399.3	296.90
2017-2018	3,343.4	413.70
2018-2019	4,414.3	546.20
2019-2020	5,123.9	634.06
2020-2021	4,020.0	497.46

Source: RBI Annual Reports

The Table 2 indicates that the numerical values in million and in percentages of debit card seven annual turnovers from the year

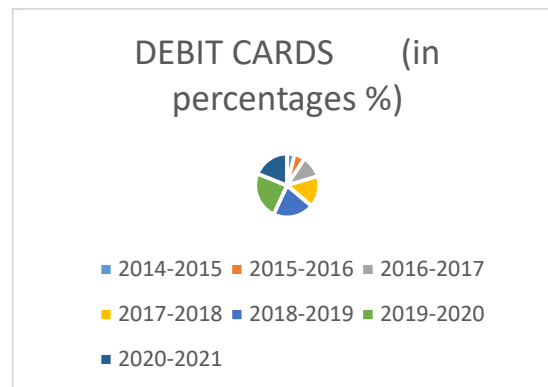
of 2014 to 2021 and also can observed that there is a fluctuate growth in first six years and declined in the year of 2020-2021.

Chart 2: Debit Card Annual Turnover in Million



Exclusively Bar- chart 2 given clearly to show differences in year wise debit card turnovers in millions

Graph 2: Debit card Annual Turnover in Percentages



Graph 2: For better understanding Pie-graph selected to show, percentage wise of Debit card annual turnovers and also observed that there is a highest growth in annual year of 2019 to 2020 and slow down in the immediate annual year of 2020 to 2021.

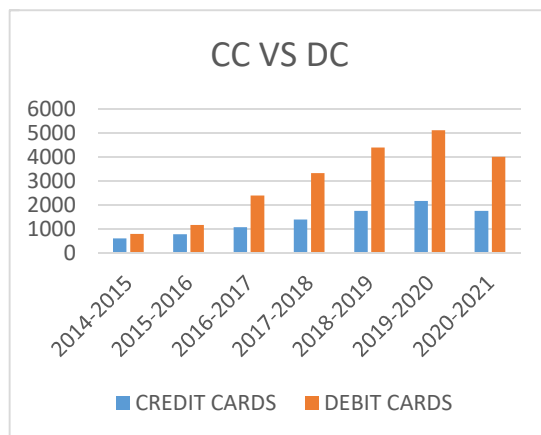
Table 3 : Comparative Analysis of Credit Card and Debit Card Annual Turnover in Numerical Values (in million & in Ratio's)

YEAR	Credit card turnover (in millions)	Debit card turnover (in %)	RATIO
2014-2015	615.1	808.1	0.76 : 1
2015-2016	785.7	1173.6	0.66 : 1
2016-2017	1,087.1	2399.3	0.45 : 1
2017-2018	1,405.2	3343.4	0.42 : 1
2018-2019	1,762.6	4414.3	0.39 : 1
2019-2020	2,177.3	5,123.3	0.42 : 1
2020-2021	1,764.0	4,020.0	0.43 : 1

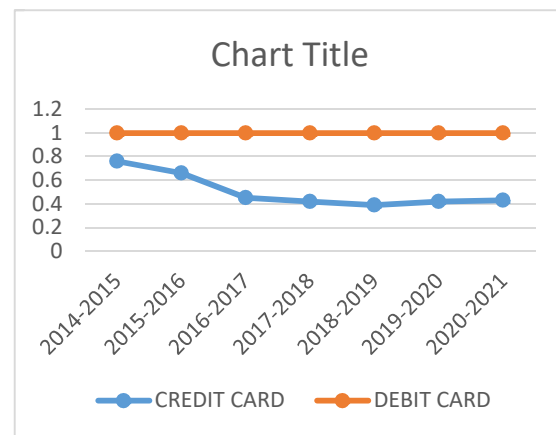
Source: RBI Annual Reports

The Table 3 indicates that the ratio wise comparative analysis between credit cards and debit cards in seven annual turnovers from the year of 2014 to 2021 and also can

observed that there is credit card applicability is more than 50% in between 2014 to 2016 and less than 50% in between the years of 2016 to 2021.

Chart 3: Credit Card and Debit Card Annual Turnover in Million

Exclusively Bar- chart 3 given clearly to show differences between credit card and debit card in year wise turnovers in millions

Graph 3: Credit Card and Debit Card Annual Turnover in Million

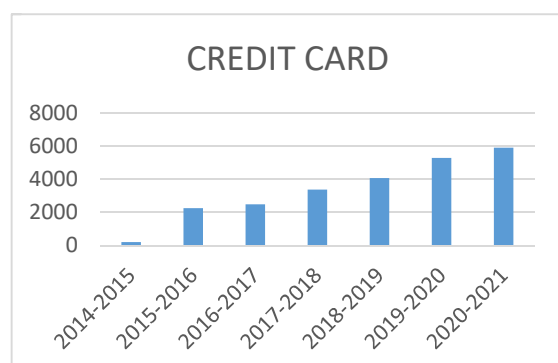
Graph 3: For better understanding Pie-graph selected to show the percentage wise of credit card and debit card annual turnovers.

Table 4: Credit Card Annual Outstanding in Million and in Percentages

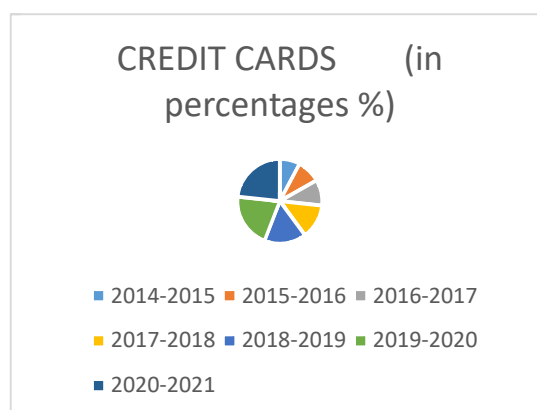
YEAR	Credit card outstanding (in millions)	Credit card outstanding (in %)
2014-2015	198.8	100
2015-2016	2269.4	114.1
2016-2017	2500	125.7
2017-2018	3375.4	169.7
2018-2019	4080	205.2
2019-2020	5294.2	266.3
2020-2021	5922.5	297.9

Source: RBI Card Statistics

The Table 4 indicates that the numerical values in million and in percentages of credit card seven annual outstanding from the year of 2014 to 2021 and also can observed that there is unpaid expenditures are inclined in all the years from 2014 to 2021.

Chart 4: Debit Card Outstanding in Million

Exclusively Bar- chart 4 given clearly to show differences in year wise credit card outstanding in millions.

Graph 4: Credit Card Annual Outstanding in Percentages

Graph 4: For better understanding Pie-graph selected to show, percentage wise of credit card annual outstanding.

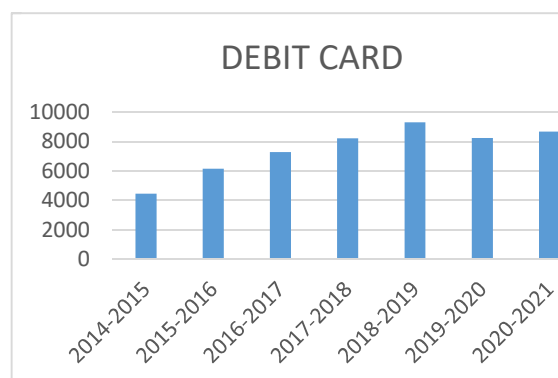
Table 5: Debit Card Annual Outstanding in Million and in Percentages

YEAR	Debit card outstanding (in millions)	Debit card outstanding (in %)
2014-2015	4461.6	100
2015-2016	6149.6	137
2016-2017	7294.8	163.5
2017-2018	8223.5	184.3
2018-2019	9310.8	208.6
2019-2020	8248.1	184.8
2020-2021	8682.9	194.6

Source: RBI Card Statistics

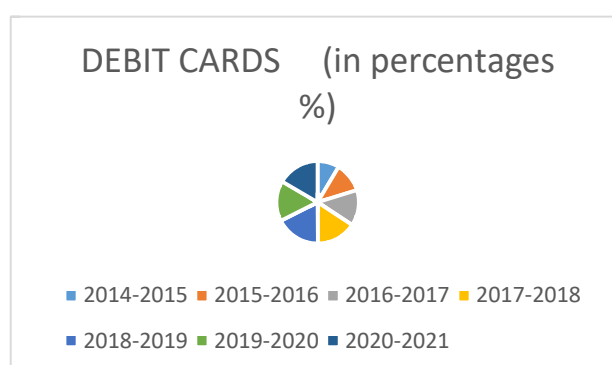
The Table 5 indicates that the numerical values in million and in percentages of debit card seven annual outstanding from the year of 2014 to 2021 and also can observed that there is unpaid expenditures are inclined in the years from 2014 to 2019, and can observed betterment in between 2019 to 2021 even inclined.

Chart 5: Debit Card Outstanding in Million



Exclusively Bar- chart 5 given clearly to show differences in year wise debit card outstanding in millions

Graph 5: Debit Card Outstanding in Million



Graph 5: For better understanding Pie-graph selected to show, percentage wise of Debit card annual outstanding.

Table 6: Comparative Analysis of Credit Card and Debit Card Annual Outstanding in Million and In Ratios.

YEAR	Credit card outstanding (in millions)	Debit card outstanding (in millions)	RATIO
2014-2015	1988	4461.6	0.44 : 1
2015-2016	2269.4	6149.6	0.36 : 1
2016-2017	2500	7294.8	0.34 : 1
2017-2018	3375.4	8223.5	0.41 : 1
2018-2019	4080	9310.8	0.43 : 1
2019-2020	5294.2	8248.1	0.64 : 1
2020-2021	5922.5	8682.9	0.68 : 1

Source: RBI Card Statistics

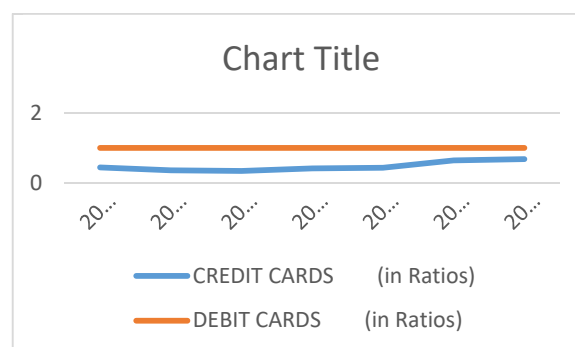
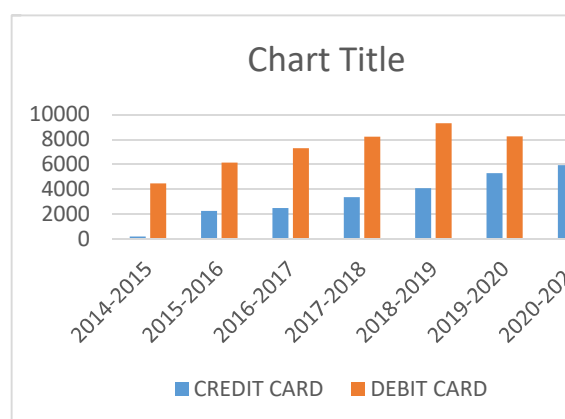
The Table 6 indicates that the ratio wise comparative analysis between credit cards and debit cards in seven annual outstanding from the year of 2014 to 2021 and also can

observed that there is credit card outstanding is less than 50% in between 2014 to 2019 and more than 50% in between the years of 2019 to 2021.

Exclusively Bar- chart 6 given clearly to show differences in year wise credit card and debit card outstanding in millions

Graph 6: Comparative Analysis of Credit Card and Debit Card Outstanding in Ratio's.

Chart 6: Comparative Analysis of Credit Card and Debit Card Outstanding in Million



Graph 6: For better understanding Pie-graph selected to show, ratio wise analysis of Credit card and Debit card annual outstanding.

Table 7: Comparative Analysis of Credit Card Annual Turnover and Annual Outstanding in Million and in Percentages

YEAR	TOTAL Credit CARDS	Credit cards turnover (in millions)	Credit cards outstanding (in millions)	Credit card turnover (in %)	Credit card outstanding (in %)
2014-2015	813.9	615.1	198.8	0.75	0.25
2015-2016	3055.1	785.7	2269.4	0.26	0.74
2016-2017	3,587.10	1,087.10	2500	0.31	0.69
2017-2018	4,780.60	1,405.20	3375.4	0.29	0.71
2018-2019	5,842.60	1,762.60	4080	0.31	0.69
2019-2020	7,471.50	2,177.30	5294.2	0.29	0.71
2020-2021	7,687	1,764	5922.5	0.23	0.77
2014-2015	813.9	615.1	198.8	0.75	0.24

Source: RBI Annual Reports & Card Statistics

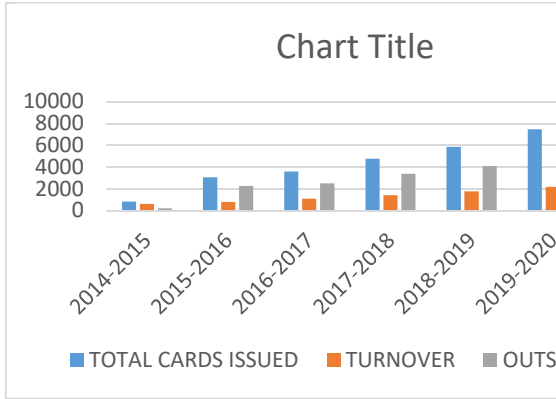
The Table 7 indicates that the percentage wise comparative analysis between credit

cards and debit cards in seven annual turnovers and also annual outstanding from

the year of 2014 to 2021 and also can observed that there is credit card applicability is more than 50% in between

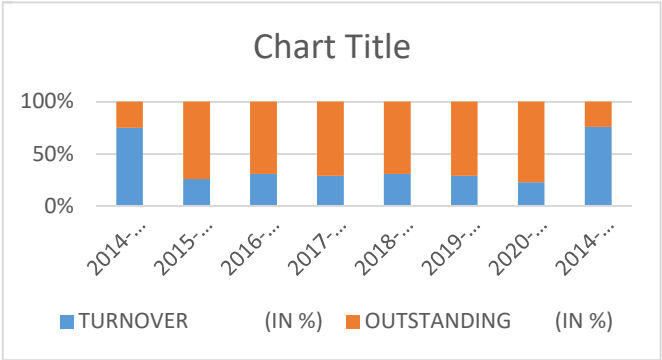
2014 to 2016 and less than 50% in between the years of 2016 to 2021.

Chart 7: Comparative Analysis of Credit Card Annual Turnover and Annual Outstanding in Million



Exclusively Bar- chart 7 given clearly to show differences in year wise credit card turnover and outstanding in millions

Graph 7: Comparative Analysis of Credit Card Annual Turnover and Annual Outstanding in Percentages



Graph 7: For better understanding Chart-graph selected to show, percentage wise turnover and outstanding analysis of credit card

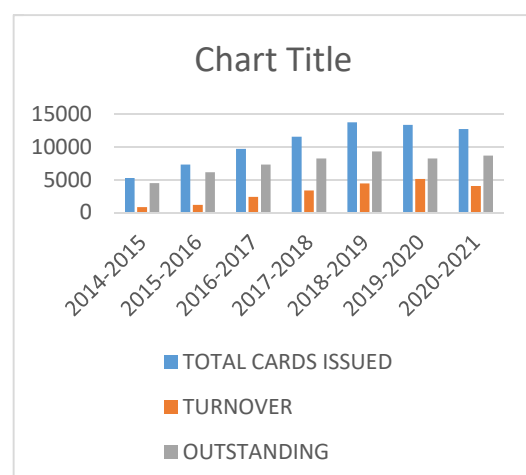
EAR	TOTAL DEBIT CARDS	Debit cards turnover (in millions)	Debit cards outstanding (in millions)	Debit card turnover (in %)	Debit card outstanding (in %)
2014-2015	5269.7	808.1	4461.6	0.16	0.84
2015-2016	7323.2	1173.6	6149.6	0.17	0.83
2016-2017	9,694.10	2399.3	7294.8	0.25	0.75
2017-2018	11,566.90	3343.4	8223.5	0.29	0.71
2018-2019	13,725.10	4414.3	9310.8	0.33	0.67
2019-2020	13,371.40	5,123.30	8248.1	0.39	0.61
2020-2021	12,703	4,020.00	8682.9	0.32	0.68

Table 8: Comparative Analysis of Debit Card Annual Turnover and Annual Outstanding in Million and in Percentages

Source: RBI Annual Reports and Card Statistics

The Table 8 indicates that the percentage wise comparative analysis between debit cards in seven annual turnovers and also annual outstanding from the year of 2014 to 2021 and also can observed that there is credit card applicability is more than 50% in between 2014 to 2016 and less than 50% in between the years of 2016 to 2021

Chart 8: Comparative Analysis of Credit Card Annual Turnover and Annual Outstanding in Million



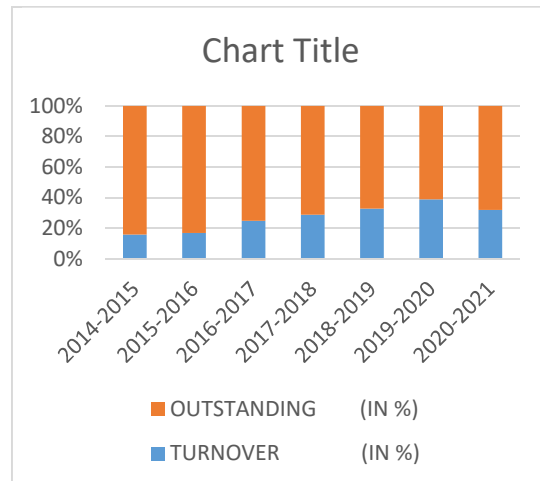
Exclusively Bar- chart 8 given clearly to show differences in year wise Debit card turnover and outstanding in millions

Summary and Conclusion:

The study is aimed to analyze the present card economy comparison in India. The data was collected from RBI website for period of seven years from 2014 to 2021. There is the drastic growth in the turnover of credit card and debit card and same continued

from 2014 to 2019 and even balance of payments also observed accordingly.

After observing all tables, graphs and charts expansions, can be observed the different results from 2014 to 2019 and different results in pandemic period from 2020 to 2021



Graph 8: For better understanding Pie-graph selected to show, percentage wise of Debit card turn over and outstanding annual outstanding.

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References:

Thomas, M., Desai, K. K., & Seenivasan, S. (2011). How credit card payments increase unhealthy food purchases: Visceral regulation of vices. *Journal of consumer research*, 38(1), 126-139.

Mathur, N. (2015). Perceived Risks towards Online Shopping. *Group*, 2(1.00), 262.

Bhatia, L., & Jain, B. (2013). Card bases payment mode—an accounting perspective: a comparison between credit card and debit card payment systems in India. *International Journal of Managerial and Financial Accounting*, 5(1), 33-44.

Stango, V., & Zinman, J. (2016). Borrowing high versus borrowing higher: price

Graph 8: Comparative Analysis of Credit Card Annual Turnover and Annual Outstanding in Million

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dispersion and shopping behavior in the US credit card market. *The Review of Financial Studies*, 29(4), 979-1006.

Lo, H. Y., & Harvey, N. (2012). Effects of shopping addiction on consumer decision-making: Web-based studies in real time. *Journal of Behavioral Addictions*, 1(4), 162-170.

Basnet, H. C., & Donou-Adonsou, F. (2016). Internet, consumer spending, and credit card balance: Evidence from US consumers. *Review of Financial Economics*, 30, 11-22.

Gurleen, K. (2012). Consumers' perception towards online shopping-the case of

Punjab. *International journal of management & Information Technology*, 1(1), 1-6.

Vaghela, P. (2014). A study on consumer perception towards online shopping. *International journal of Marketing and Technology*, 4(12), 200-210.

Bhatia, L., & Jain, B. (2013). Card bases payment mode—an accounting perspective: a comparison between credit card and debit card payment systems in India. *International Journal of Managerial and Financial Accounting*, 5(1), 33-44.

Alam, M. Z., & Elaasi, S. (2016). A study on consumer perception towards e-shopping in KSA. *International Journal of Business and Management*, 11(7), 202.

Shilpa, N. C., & Amulya, M. (2019). An Empirical Analysis of Payment Card Usage in India. *International Journal of Engineering and Management Research (IJEMR)*, 9(4), 54-60.

Saragih, M. G., Chin, J., Setyawasih, R., Nguyen, P. T., & Shankar, K. (2019). Machine learning methods for analysis fraud credit card transaction. *International Journal of Engineering and Advanced Technology*, 8(6), 870-874.

Banker, R. D., & Feng, C. (2019). The impact of information security breach incidents on CIO turnover. *Journal of information systems*, 33(3), 309-329.

Brown, R., Liñares-Zegarra, J., & Wilson, J. O. (2019). Sticking it on plastic: Credit card finance and small and medium-sized enterprises in the UK. *Regional Studies*, 53(5), 630-643.

Nasution, L. N., Ramli, R., & Sadalia, I. (2020). HOW FINTECH CONDITIONS IN INDONESIA DURING THE COVID-19 PANDEMIC?. *International Proceeding of Law and Economic*, 46-50.

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