INDIAN CREDIT & DEBIT CARD PAYMENTS

DATA ANALYSIS

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Objective:

To get the useful insights to the credit card and debt card payments statistics in INDIA. The data analysis has been performed with Tableau tool.

Tableau:

Tableau is one of the powerful and fastest growing data visualization tool used in the Business Intelligence Industry. It helps in creating interactive visualizations in the form of dashboards and worksheets.

Synopsis:

The Reserve Bank of INDIA (RBI), releases bank wise data every monthly. This data contains useful statistics about ATMs, Point of Sales (PoS), Credit Card, Debit Card , number of transactions etc.
The dataset is very useful to get insights on debit card and credit card payments trends.

Data:

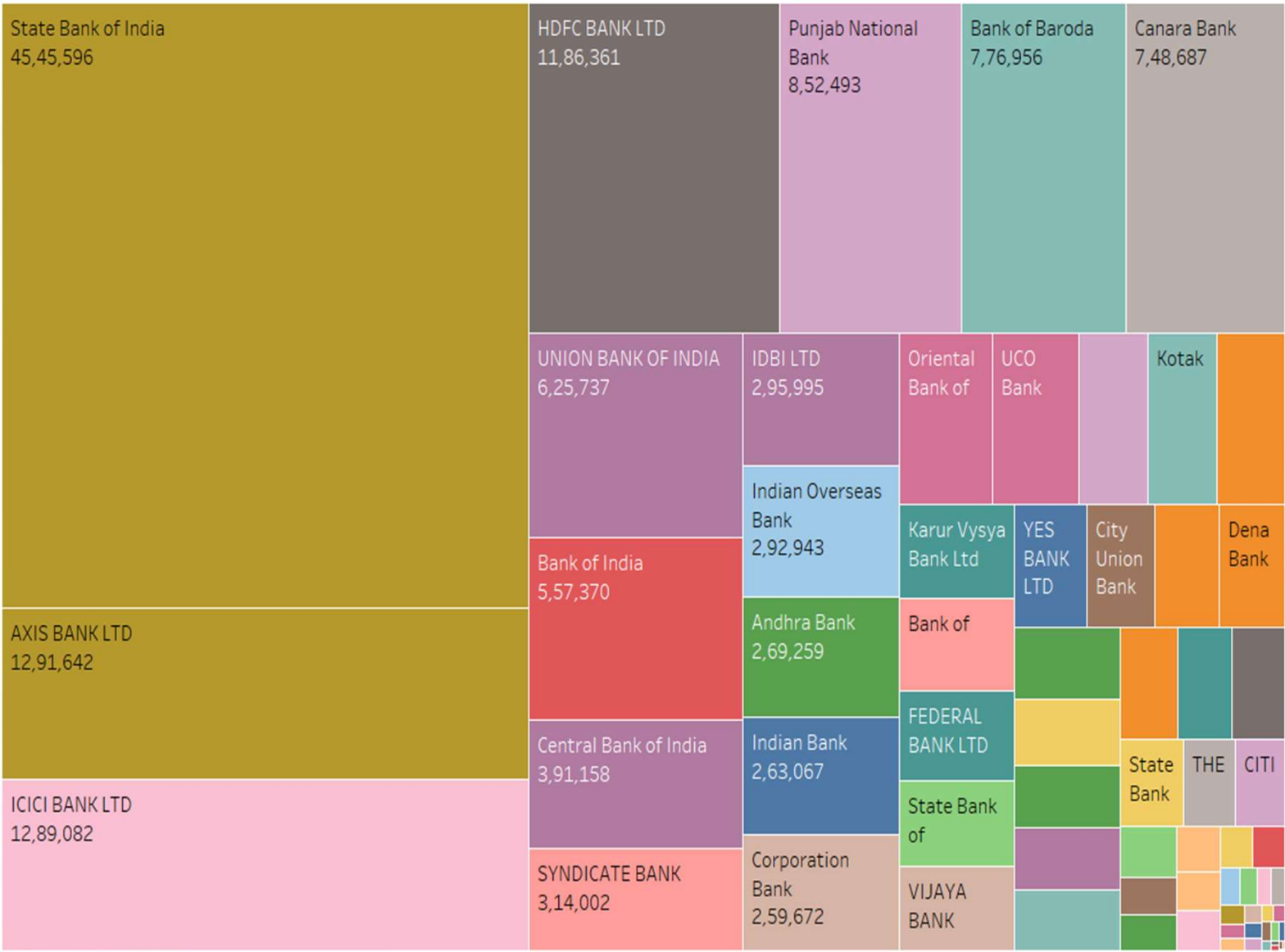Link to dataset

The dataset is available on monthly basis on RBI's site. Hence the gathering of data and integrate can be a challenging task. However the it has been documented i.e web scrapping, data cleaning etc. here

Columns in dataset *
1.Number of ATM deployed on site by the bank.
2.Number of ATM deployed off site by the bank.
3.Number of POS deployed online by the bank
4.Number of POS deployed offline by the bank
5.Total number of credit cards issued outstanding (after adjusting the number of cards withdrawan/cancelled).
6.Total number of financial transactions done by the credit card issued by the bank at ATMs
7.Total number of financial transactions done by the credit card issued by the bank at POS terminals
8.Total value of financial transactions done by the credit card issued by the bank at ATMs
9.Total value of financial transactions done by the credit card issued by the bank at POS terminals.
10.Total number of debit cards issued outstanding (after adjusting the number of cards withdrawan/cancelled).
11.Total number of financial transactions done by the debit card issued by the bank at ATMs
12.Total number of financial transactions done by the debit card issued by the bank at POS terminals
13.Total value of financial transactions done by the debit card issued by the bank at ATMs
14.Total value of financial transactions done by the debit card issued by the bank at POS terminals.

Total number of ATM center per Bank between 2011 & 2019

State Bank of India
45,45,596

HDFC BANK LTD
11,86,361

Punjab National Bank
8,52,493

Bank of Baroda
7,76,956

Canara Bank
7,48,687

UNION BANK OF INDIA
6,25,737

IDBI LTD
2,95,995

Oriental Bank of

UCO Bank

Kotak

Indian Overseas Bank
2,92,943

Bank of India
5,57,370

Karur Vysya Bank Ltd

YES BANK LTD

City Union Bank

Dena Bank

Andhra Bank
2,69,259

Bank of

FEDERAL BANK LTD

Central Bank of India
3,91,158

Indian Bank
2,63,067

State Bank of

State Bank

THE

CITI

SYNDICATE BANK
3,14,002

Corporation Bank
2,59,672

VIJAYA BANK

AXIS BANK LTD
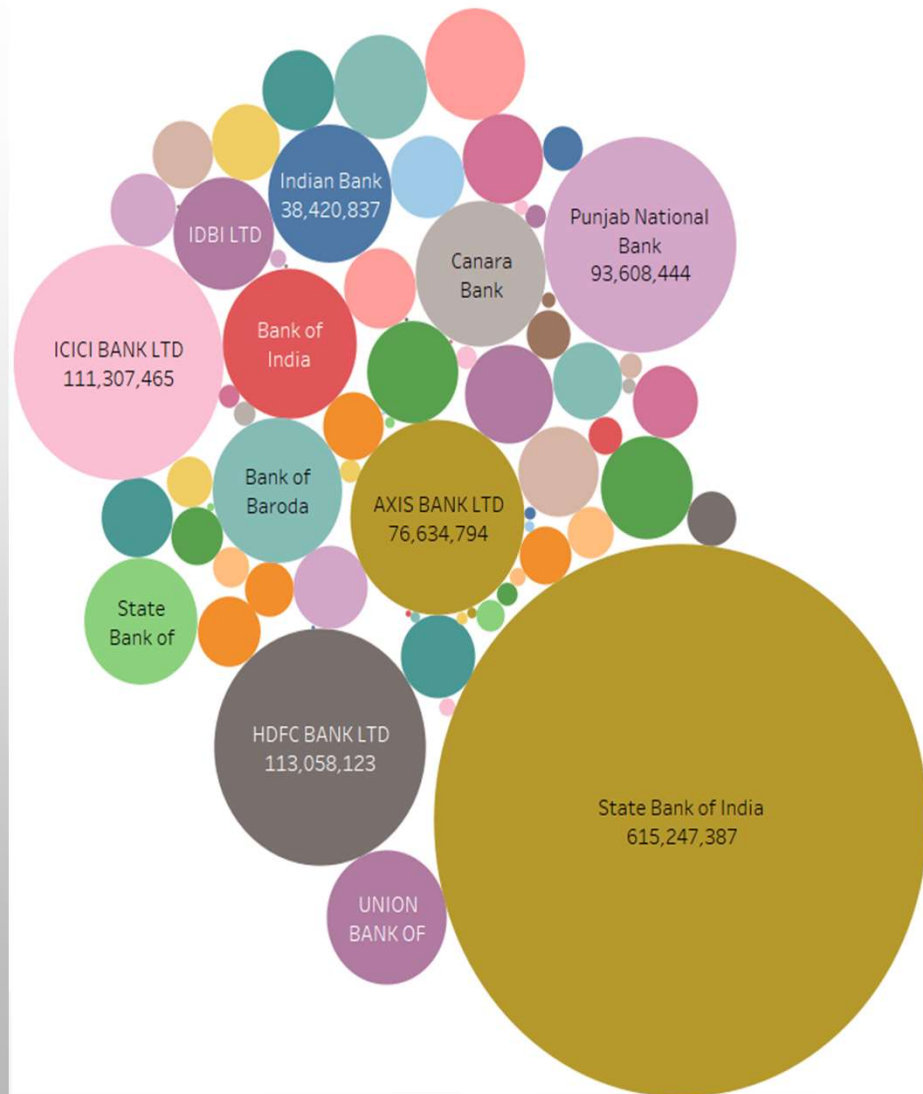12,91,642

ICICI BANK LTD
12,89,082

- The visualization depicts the ATM numbers for the BANKS between 2011 and 2019.

- We can see State bank of India (SBI) is having maximum number of ATM

- AXIS Bank. ICICI Banks and HDFC Banks are next with maximum numbers of ATMs.

- Out of top 4 banks, only one is government bank, rest are private banks.

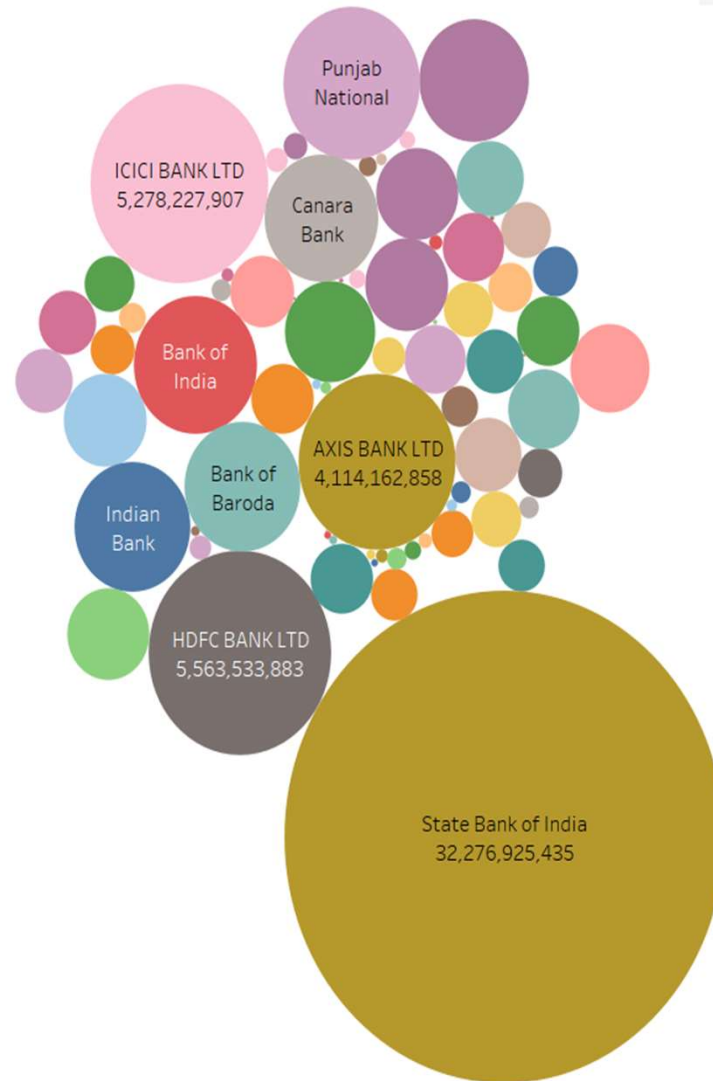- Although SBI alone have more ATM than the next few banks from top lists.

Dashboard Link

Note: you can see the bank name with the number of ATM by just a mouse hover the region.

Total Value (in mm) for Debit Card

Indian Bank 38,420,837

IDBI LTD

Canara Bank

Punjab National Bank 93,608,444

ICICI BANK LTD 111,307,465

Bank of India

Bank of Baroda

AXIS BANK LTD 76,634,794

State Bank of

HDFC BANK LTD 113,058,123

State Bank of India 615,247,387

UNION BANK OF

Total number of Debit Card Transactions

Punjab National

ICICI BANK LTD 5,278,227,907

Canara Bank

Bank of India

AXIS BANK LTD 4,114,162,858

Indian Bank

Bank of Baroda

HDFC BANK LTD 5,563,533,883

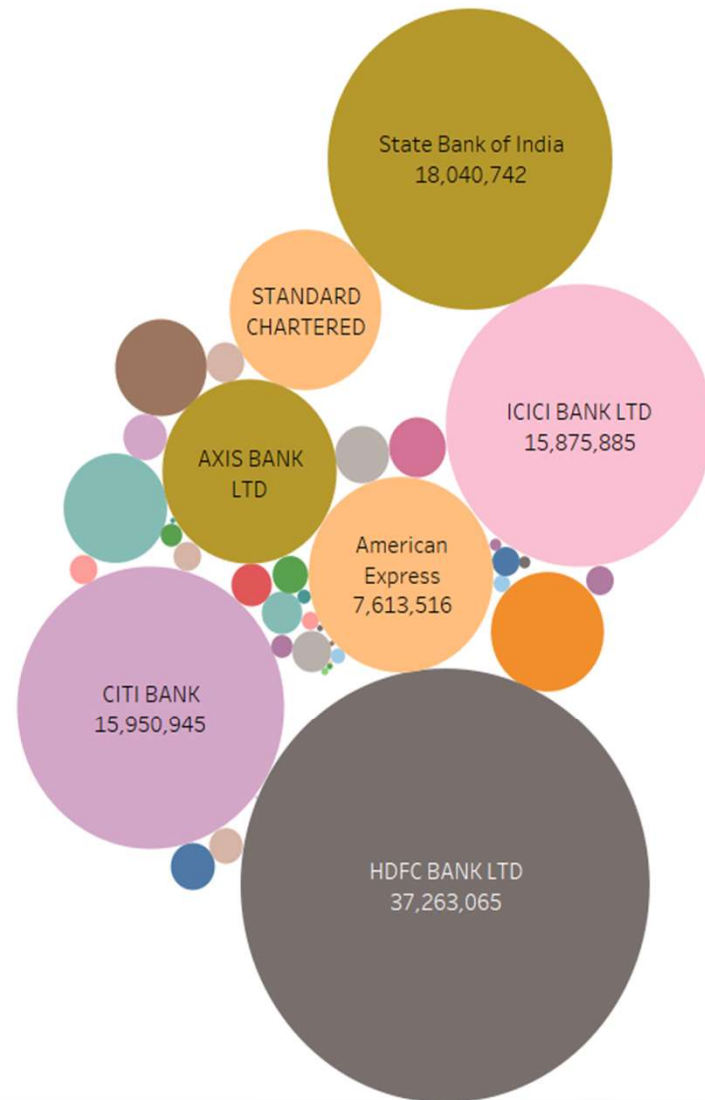State Bank of India 32,276,925,435

- In the visualization, the left bubbles shows the total value of transactions done for the debit card. The values are in million from 2011 to 2019.

- The right bubbles shows the total number of transactions done for the debit card.

- We can see State Bank of India dominates the numbers.

- SBI if follow by HDFC, ICICI PNB & AXIS banks in terms of value.

- In terms of numbers of transactions, we have SBI, HDFC, ICICI, AXIS and PNB banks

- Although Axis bank debit card was swiped more than PNB but transactions value is more for PBN.
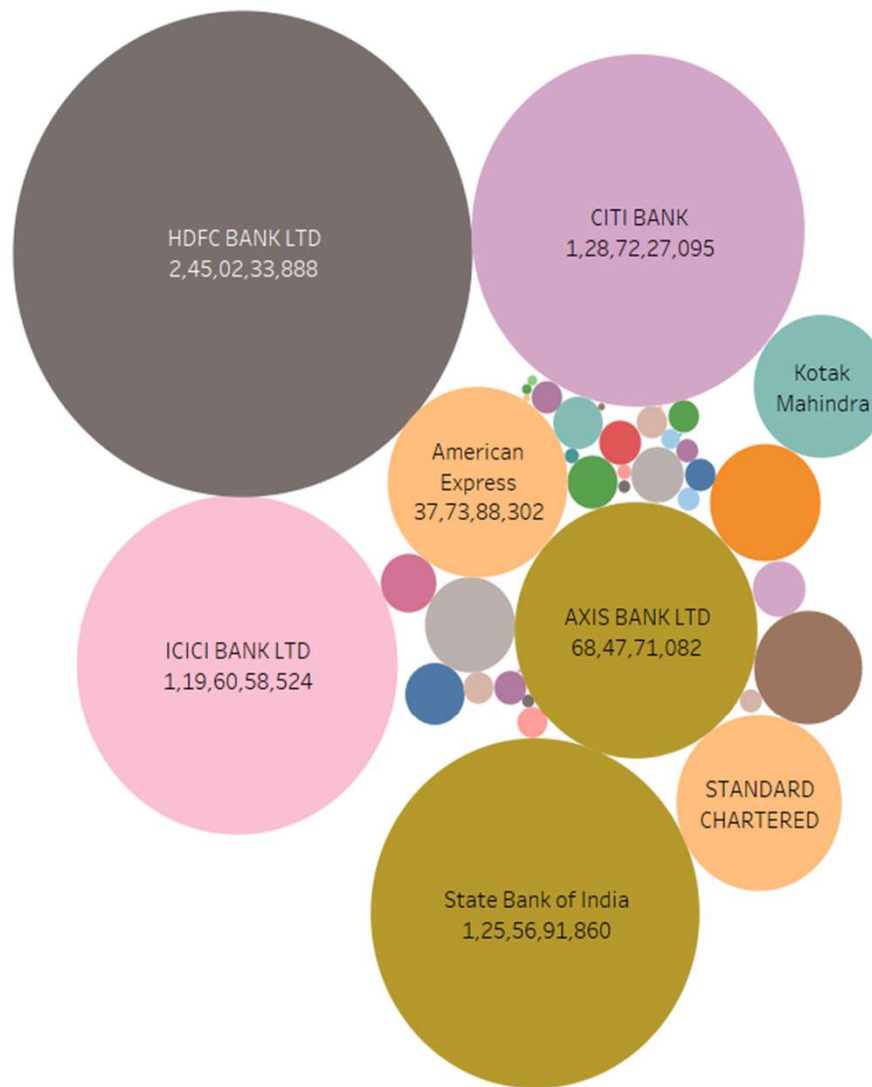
- The swipe data includes usage at ATM as well as PoS.

Dashboard Link

Note: hover over on the bubble to see the details.

Total Value (in mm) for Credit Card

State Bank of India
18,040,742

STANDARD CHARTERED

ICICI BANK LTD
15,875,885

AXIS BANK LTD

American Express
7,613,516

CITI BANK
15,950,945

HDFC BANK LTD
37,263,065

Total number of Credit Card Transactions

HDFC BANK LTD
2,45,02,33,888

CITI BANK
1,28,72,27,095

Kotak Mahindra

American Express
37,73,88,302

AXIS BANK LTD
68,47,71,082

ICICI BANK LTD
1,19,60,58,524

STANDARD CHARTERED

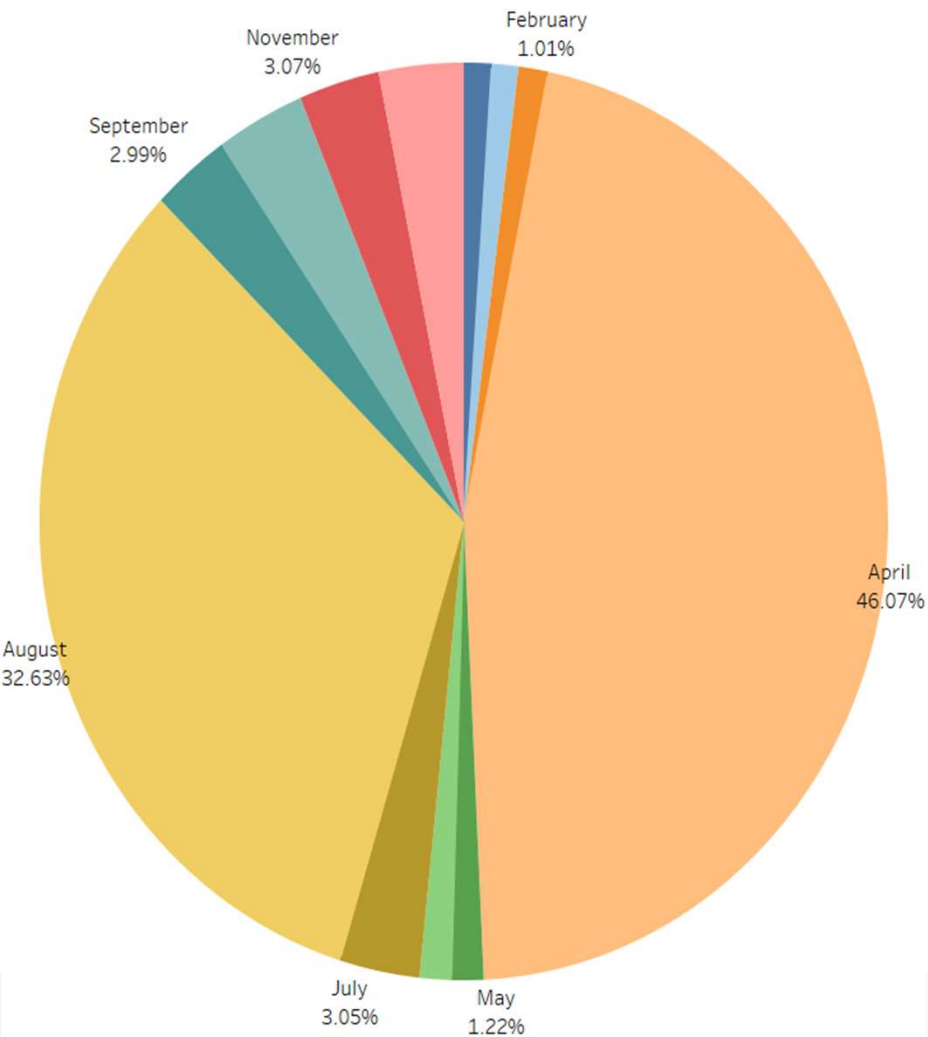State Bank of India
1,25,56,91,860

- In this visualization, the left bubble shows the total value of transactions done for the credit card. The values are in million from 2011 to 2019.

- The right bubble shows the total number of transactions done for the credit card.

- We can see domination of HDFC.

- HDFC is followed by SBI, CITI and ICICI for the value of transactions.

- In terms of numbers of transactions, we have HDFC followed by SBI,CITI,ICICI and AXIS banks.

- Although SBI manage to hold 2nd spot, credit card business is primarily, dominated by private banks compare to Governments.

- We see new entrance like American Express and Standard Charters which are totally absent in debit card business.

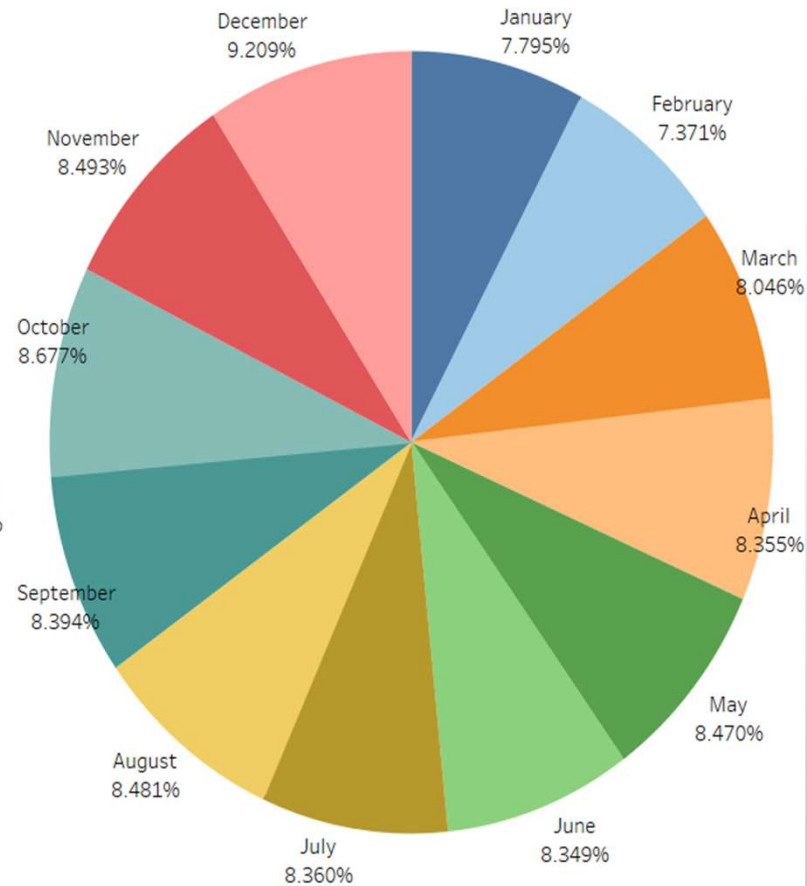- The swipe data includes usage at ATM as well as PoS.

Dashboard Link

Note: hover over on the bubble to see the details.

Monthly Debit Card Transaction Value in %

- February 1.01%
- November 3.07%
- September 2.99%
- August 32.63%
- July 3.05%
- May 1.22%
- April 46.07%

Monthly Debit Card Number of Transaction %

- January 7.795%
- February 7.371%
- March 8.046%
- April 8.355%
- May 8.470%
- June 8.349%
- July 8.360%
- August 8.481%
- September 8.394%
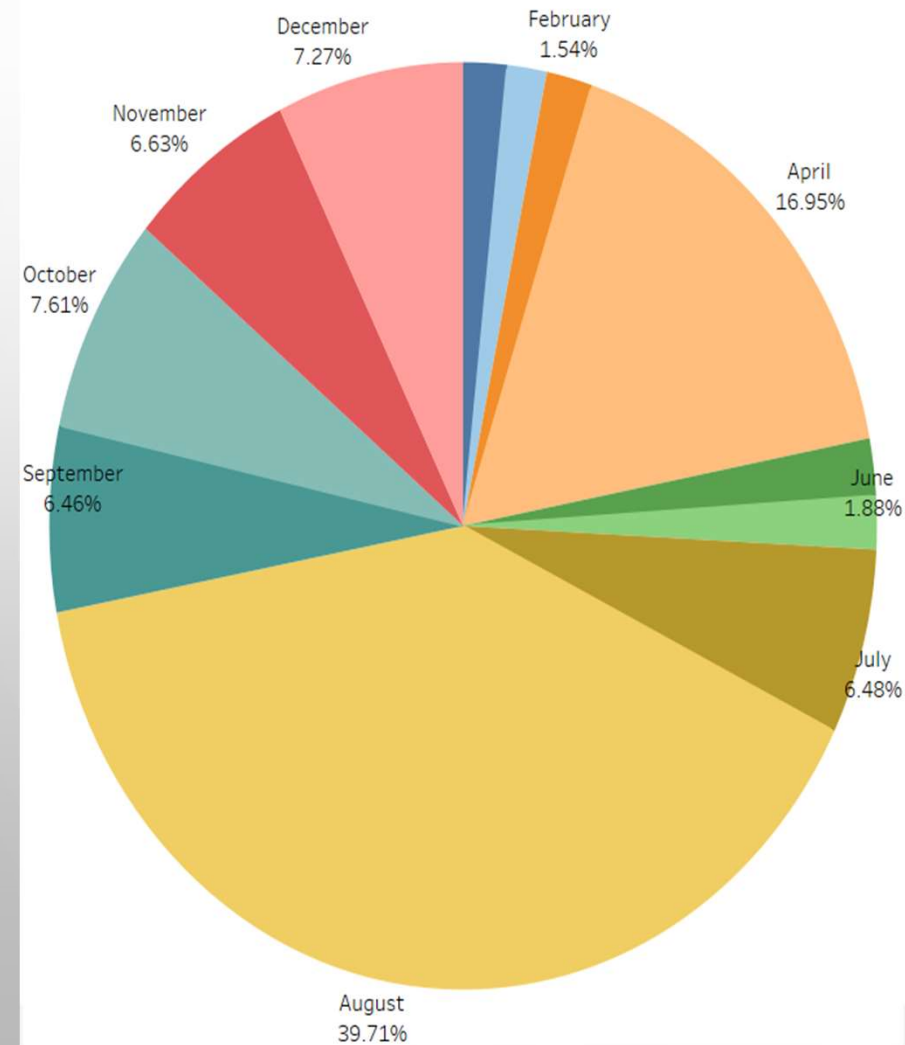- October 8.677%
- November 8.493%
- December 9.209%

- In this visualization, the left pie chart shows the transaction value on monthly basis.

- The right pie chart shows the number of transaction done on monthly basis.

- We can see that in terms of value, highest amounts were spent in month of April (~46%) and August (~33%).

- This makes sense as in India main holiday & wedding season starts in April.

- The start of festive season, seems to be reason behind the numbers for August.

- Also, if we see at the number of transactions chart, it is almost spread equally throughout the year.

- Event the number of transaction were nearby though out the year, the amount spend in April & August are big amounts.
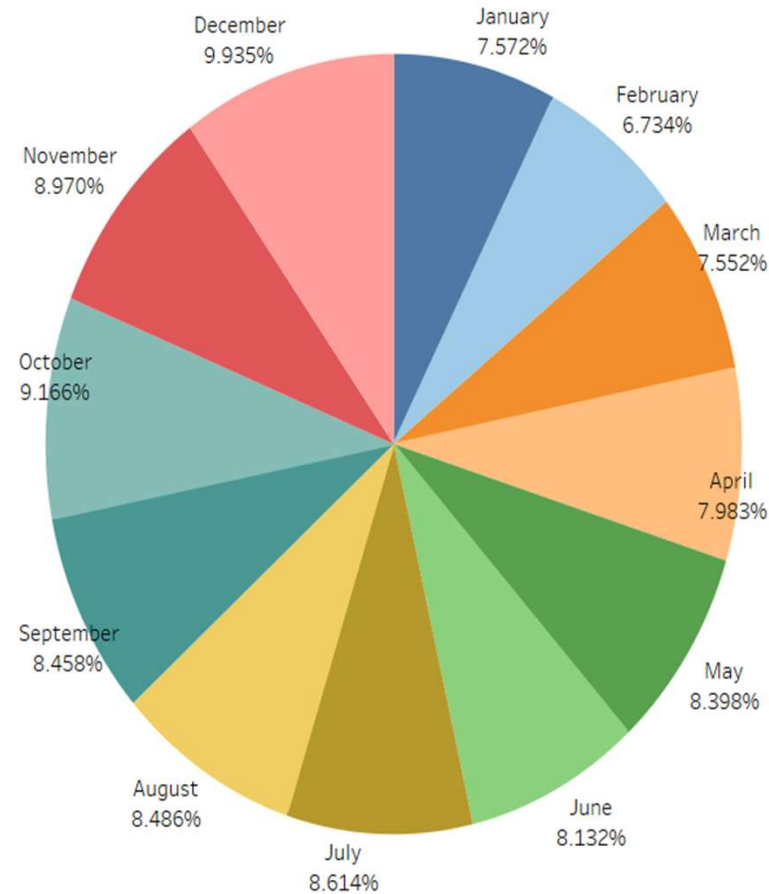
- The swipe data includes usage at ATM as well as PoS.

Dashboard Link

Note: hover over on the bubble to see the details.

Monthly Credit Card Transaction Value in %

- February 1.54%
- April 16.95%
- June 1.88%
- July 6.48%
- August 39.71%
- September 6.46%
- October 7.61%
- November 6.63%
- December 7.27%

Monthly Credit Card Number of Transaction %

- January 7.572%
- February 6.734%
- March 7.552%
- April 7.983%
- May 8.398%
- June 8.132%
- July 8.614%
- August 8.486%
- September 8.458%
- October 9.166%
- November 8.970%
- December 9.935%

- In this visualization, the left pie chart shows the transaction value on monthly basis for Credit Card

- The right pie chart shows the number of transaction done on monthly basis for Credit Card.

- Again we see top months are Apri(17%)l and August(40) in terms of transaction value.

- However, compare to debit card it's other way around, August is top and April is on 2nd spot.

- The reasoning behind top spend in April and August seems to be same i.e. start of holiday , wedding season in April and Festival season for August.

- For number of transactions trend show similar trend throughout the year, matching with Debit card trend.

- The swipe data includes usage at ATM as well as PoS.

Dashboard Link

Note: hover over on the bubble to see the details.