

BANK ANALYTICS

BY GROUP-3

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A photograph of a workspace setup. On the left, there's a spiral-bound notebook with a brown cover and white pages. Next to it is a white computer keyboard. To the left of the keyboard is a clear glass mug containing a dark liquid, likely coffee. The background is a plain, light-colored wall.

Project Overview

This project transforms raw Finance data into actionable insights to support informed business decisions.

- Objective: Analyze Finance data to derive business insights
- Dataset size: 39,700+ records
- Tools used: SQL, Excel, Tableau, Power BI

END-TO-END PROJECT WORKFLOW

This structured workflow ensured data accuracy and enabled reliable, actionable business insights.

- Data Understanding
- Data Cleaning & Transformation (Excel Power Query)
- KPI Identification
- Visualization & Dashboarding
- Business Insights & Recommendations



SQL KPI'S

YEAR WISE LOAN AMOUNT STATS

```

4
5 •   SELECT
6     YEAR(STR_TO_DATE(issue_d, '%d-%m-%Y')) AS issue_year,
7     SUM(loan_amnt) AS total_loan_amount
8   FROM finance_1
9   GROUP BY issue_year
10  ORDER BY issue_year;
11

```

issue_year	total_loan_amount
2007	2219275.00
2008	14390275.00
2009	46436325.00
2010	122050200.00
2011	260506575.00

```

28 •   select t1.verification_status, sum(t2.total_pymnt) as Total_Payment
29   from finance_1 f1
30   join finance_two f2 on f1.id=f2.id
31 WHERE f1.verification_status IN ('Verified', 'Not Verified')
32   group by f1.verification_status;
33

```

verification_status	Total_Payment
Verified	219892307.51083627
Not Verified	153541418.21059892

#TOTAL PAYMENT FOR
VERIFIED STATUS VS TOTAL
PAYMENT FOR NON VERIFIED
STATUS

GRADE AND SUB GRADE WISE REVOL_BAL

```

15
16 •   SELECT f1.grade, f1.sub_grade, SUM(f2_agg.revol_bal_sum) AS total_revol_bal_by_subgrade,
17   SUM(SUM(f2_agg.revol_bal_sum)) OVER (PARTITION BY f1.grade) AS total_revol_bal_by_grade
18   FROM finance_1 f1 JOIN (SELECT id, SUM(revol_bal) AS revol_bal_sum FROM
19   finance_two GROUP BY id) f2_agg ON f1.id = f2_agg.id
20   GROUP BY f1.grade, f1.sub_grade
21   ORDER BY f1.grade, f1.sub_grade;
22

```

grade	sub_grade	total_revol_bal_by_subgrade	total_revol_bal_by_grade
A	A1	11365196.00	114774099.00
A	A2	14004780.00	114774099.00
A	A3	19543922.00	114774099.00
A	A4	34557156.00	114774099.00
A	A5	35303045.00	114774099.00
B	B1	21842079.00	161308549.00
B	B2	26478439.00	161308549.00
B	B3	39723554.00	161308549.00
B	B4	35405811.00	161308549.00
B	B5	37858666.00	161308549.00
C	C1	29384926.00	110120710.00
C	C2	27321114.00	110120710.00

HOME OWNERSHIP VS LAST PAYMENT DATE STATS

```

43 •   select f1.home_ownership, f2.last_pymnt_d, count(*) as Total_Loans
44   from finance_1 f1 join finance_two f2 on f1.id=f2.id
45   group by f1.home_ownership, f2.last_pymnt_d
46   order by f1.home_ownership, f2.last_pymnt_d;
47

```

home_ownership	last_pymnt_d	Total_Loans
MORTGAGE		14
MORTGAGE	Apr-08	5
MORTGAGE	Apr-09	18
MORTGAGE	Apr-10	54
MORTGAGE	Apr-11	174
MORTGAGE	Apr-12	287
MORTGAGE	Apr-13	399
MORTGAGE	Apr-14	297
MORTGAGE	Apr-15	64
MORTGAGE	Apr-16	116
MORTGAGE	Aug-08	3
MORTGAGE	Aug-09	26

```

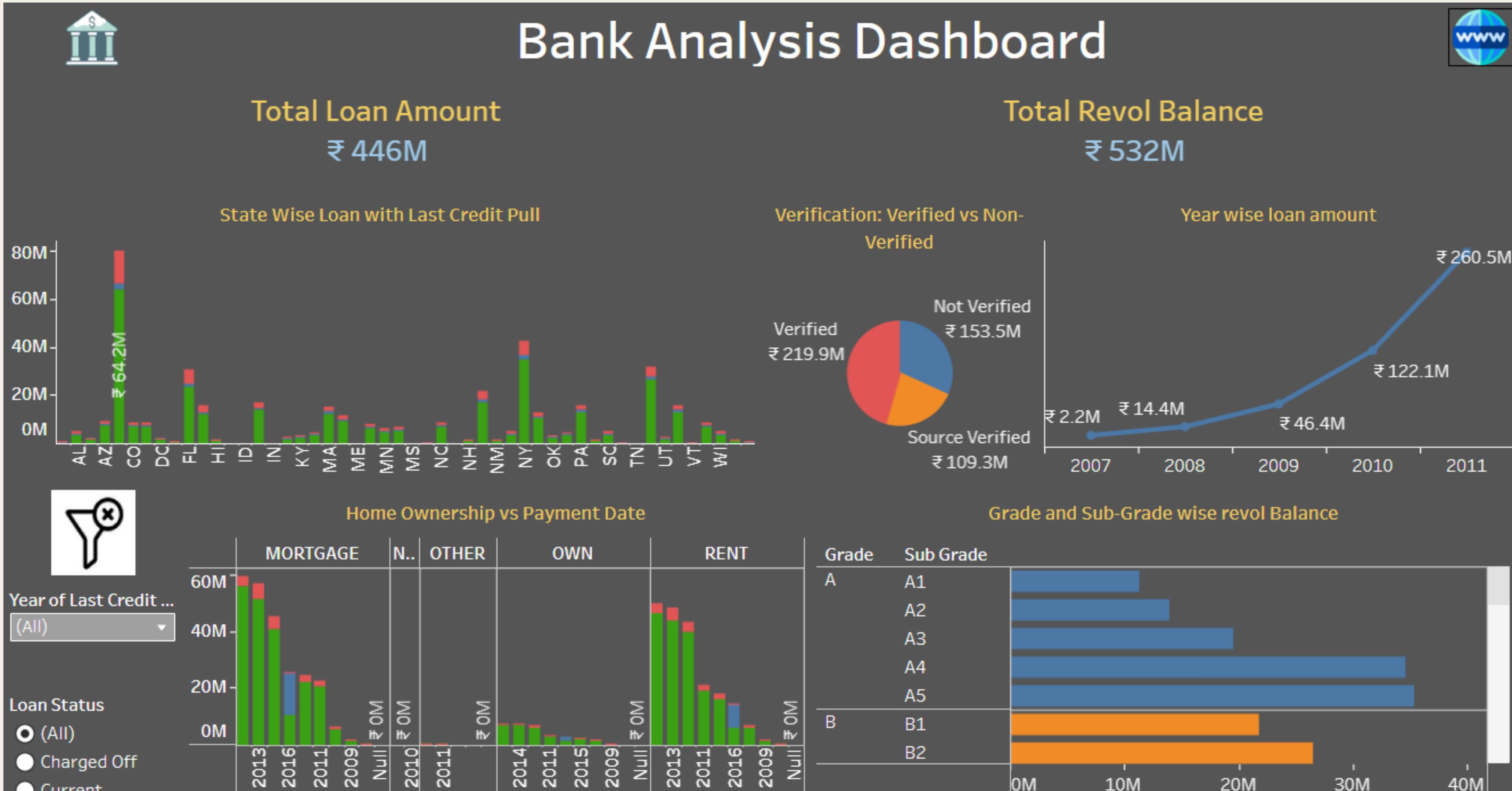
36 •   select f1.addr_state, f2.last_credit_pull_d, f1.loan_status, count(*) as Total_loans
37   from finance_1 f1 join finance_two f2 on f1.id=f2.id
38   group by f1.addr_state, f2.last_credit_pull_d, f1.loan_status order by f1.addr_state,
39   f2.last_credit_pull_d;
40

```

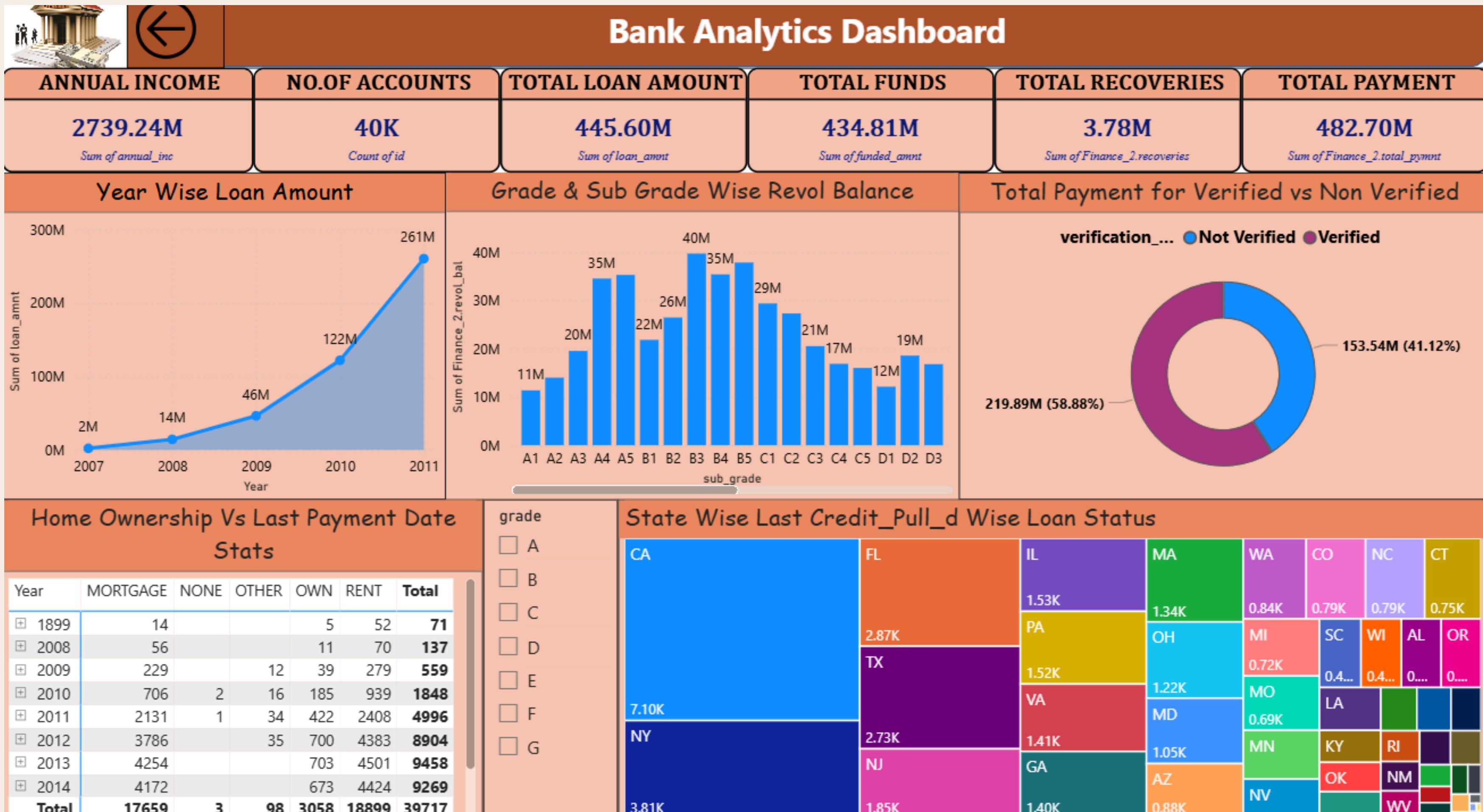
addr_state	last_credit_pull_d	loan_status	Total_loans
AK	Apr-12	Charged Off	1
AK	Apr-12	Fully Paid	2
AK	Apr-13	Fully Paid	1
AK	Apr-14	Charged Off	1
AK	Apr-14	Fully Paid	3
AK	Apr-16	Fully Paid	1
AK	Aug-12	Charged Off	1
AK	Aug-12	Fully Paid	2
AK	Aug-15	Charged Off	1

STATE WISE AND
LAST_CREDIT_PULL_D WISE
LOAN STATUS

Tableau Dashboard



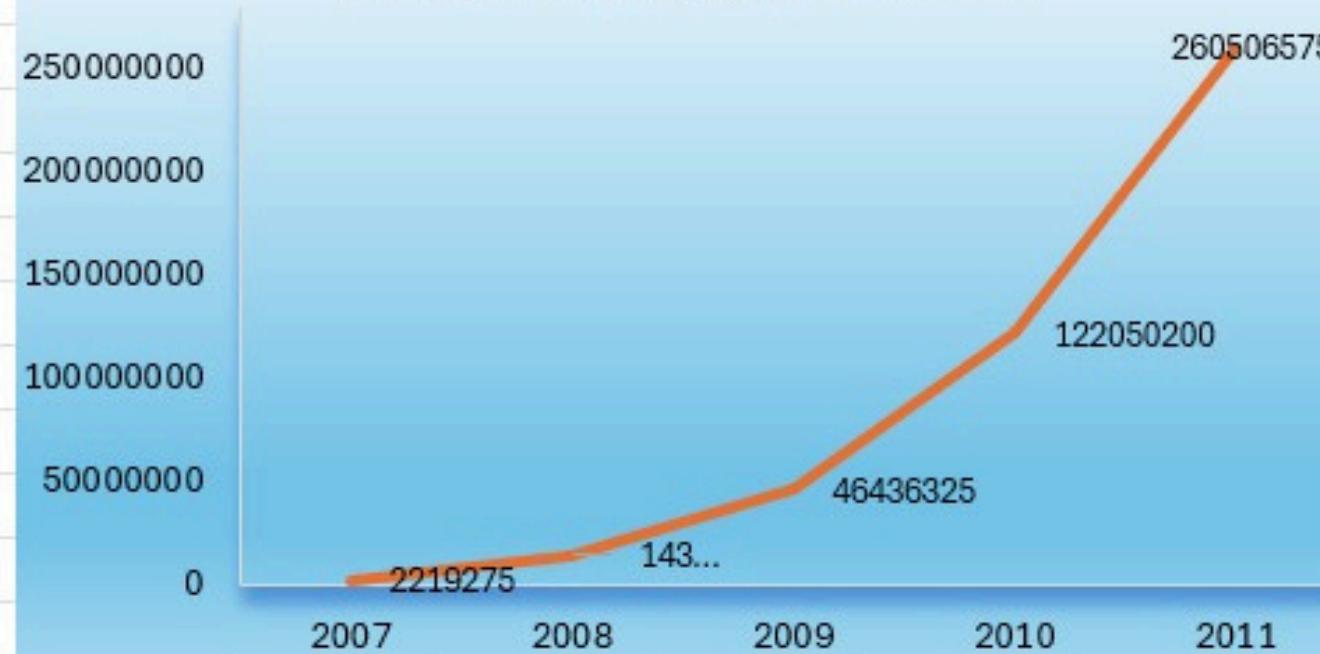
Powerbi Dashboard



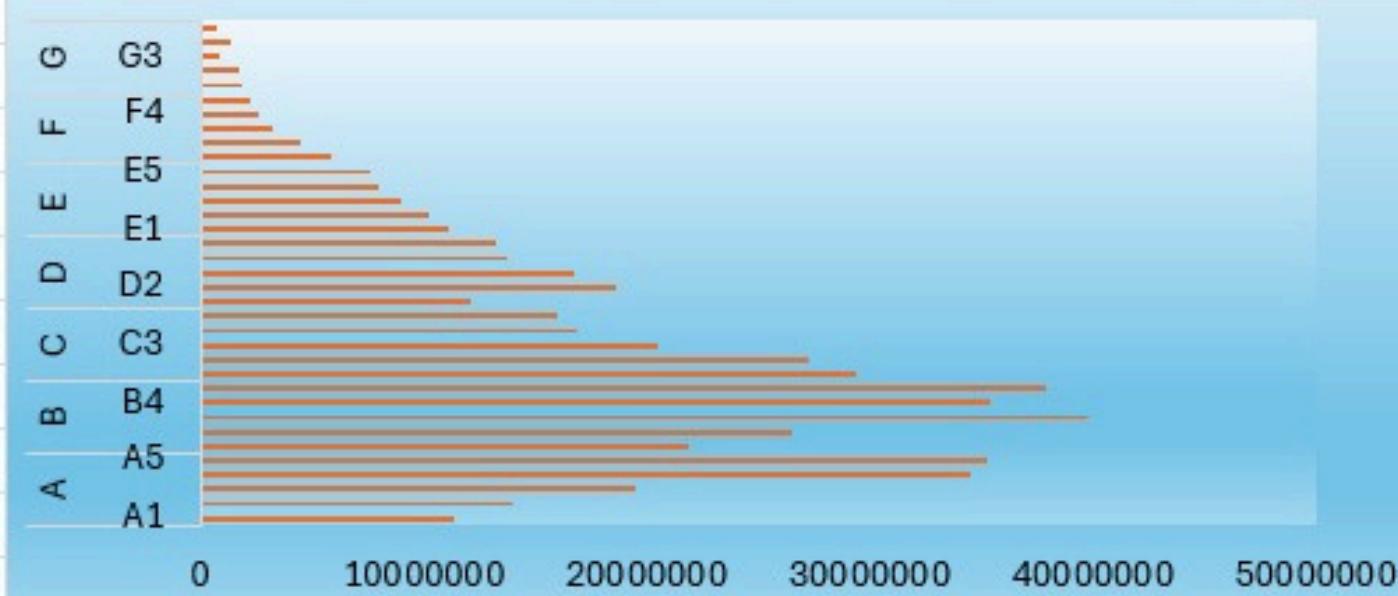
Excel Dashboard

DASHBOARD

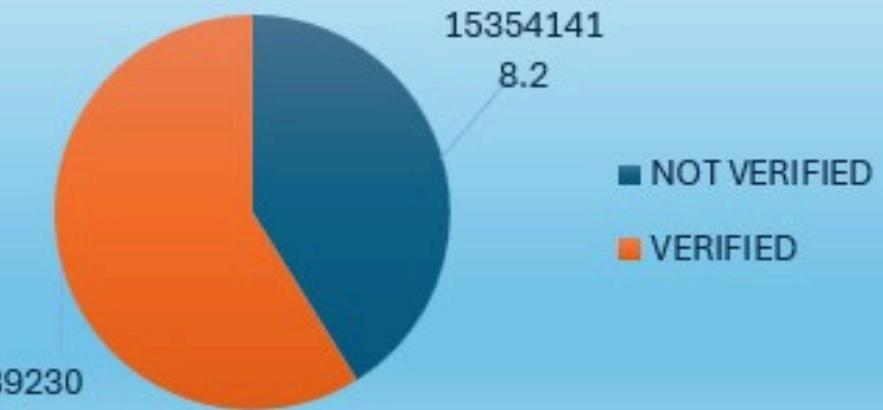
Yearwise Total Loan Amount



Grade and sub grade wise revol_balance



Total Payment for Verified Vs Non Verified Status



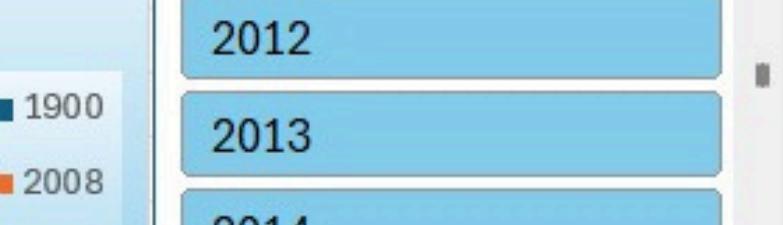
State wise and last_credit_pull_d wise loan status



Home ownership Vs last payment date stats



Years (Finance_tw...)



Months (Finance_t...)



Final Insights

In summary, my dashboard shows:

- Loan amounts increased every year
- Grades B, C, D have more balance
- Verified customers pay more
- Some states have better loan performance
- Mortgage and Rent customers make more payments

Key Learnings from the Project

This project strengthened our ability to approach data problems from raw data to actionable business insights.



- ☑Handling raw data efficiently
- ☑Selecting meaningful KPIs
- ☑Choosing the right visualization
- ☑Converting data into business insights
- ☑End-to-end analytical thinking

Conclusion

This project demonstrates how loan and customer data can be transformed into actionable KPIs that help banks improve credit risk management, optimize lending strategies, and enhance portfolio performance.



THANK
YOU.