



BANK LOAN REPORT

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Dashboard Link:- https://app.powerbi.com/links/hQL8bmDLJZ?ctid=41731024-b886-4982-b789-eb33b1ffb746&pbi_source=linkShare

OVERVIEW

01

Problems

02

Visualization

03

Learning

Problems



PROBLEM STATEMENT

Dashboard 1: Summary

Key Performance Indicators (KPIs) Requirements:

- 1.Total Loan Applications:** We need to calculate the total number of loan applications received during a specified period. Additionally, it is essential to monitor the Month-to-Date (MTD) Loan Applications and track changes Month-over-Month (MoM).
- 2.Total Funded Amount:** Understanding the total amount of funds disbursed as loans is crucial. We also want to keep an eye on the MTD Total Funded Amount and analyse the Month-over-Month (MoM) changes in this metric.
- 3.Total Amount Received:** Tracking the total amount received from borrowers is essential for assessing the bank's cash flow and loan repayment. We should analyse the Month-to-Date (MTD) Total Amount Received and observe the Month-over-Month (MoM) changes.
- 4.Average Interest Rate:** Calculating the average interest rate across all loans, MTD, and monitoring the Month-over-Month (MoM) variations in interest rates will provide insights into our lending portfolio's overall cost.
- 5.Average Debt-to-Income Ratio (DTI):** Evaluating the average DTI for our borrowers helps us gauge their financial health. We need to compute the average DTI for all loans, MTD, and track Month-over-Month (MoM) fluctuations.

PROBLEM STATEMENT

Dashboard 1: Summary

Good Loan v Bad Loan KPI's

Good Loan:

1. Good Loan Application Percentage
2. Good Loan Applications
3. Good Loan Funded Amount
4. Good Loan Total Received Amount

Bad Loan

1. Bad Loan Application Percentage
2. Bad Loan Applications
3. Bad Loan Funded Amount
4. Bad Loan Total Received Amount

Loan Status Grid View

In order to gain a comprehensive overview of our lending operations and monitor the performance of loans, we aim to create a grid view report categorized by 'Loan Status.' By providing insights into metrics such as 'Total Loan Applications,' 'Total Funded Amount,' 'Total Amount Received,' 'Month-to-Date (MTD) Funded Amount,' 'MTD Amount Received,' 'Average Interest Rate,' and 'Average Debt-to-Income Ratio (DTI),' this grid view will empower us to make data-driven decisions and assess the health of our loan portfolio.

PROBLEM STATEMENT

Dashboard 2: Overview

CHARTS

- 1.Monthly Trends by Issue Date (Line Chart):** To identify seasonality and long-term trends in lending activities
- 2.Regional Analysis by State (Filled Map):** To identify regions with significant lending activity and assess regional disparities
- 3.Loan Term Analysis (Donut Chart):** To allow the client to understand the distribution of loans across various term lengths.
- 4.Employee Length Analysis (Bar Chart):** How lending metrics are distributed among borrowers with different employment lengths, helping us assess the impact of employment history on loan applications.
- 5.Loan Purpose Breakdown (Bar Chart):** Will provide a visual breakdown of loan metrics based on the stated purposes of loans, aiding in the understanding of the primary reasons borrowers seek financing.
- 6.Home Ownership Analysis (Tree Map):** For a hierarchical view of how home ownership impacts loan applications and disbursements.

Metrics to be shown: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'

PROBLEM STATEMENT

Dashboard 3: Details

GRID

Need for a comprehensive 'Details Dashboard' that provides a consolidated view of all the essential information within our loan data. This Details Dashboard aims to offer a holistic snapshot of key loan-related metrics and data points, enabling users to access critical information efficiently.

Objective:

The primary objective of the Details Dashboard is to provide a comprehensive and user-friendly interface for accessing vital loan data. It will serve as a one-stop solution for users seeking detailed insights into our loan portfolio, borrower profiles, and loan performance.

Visualization



BANK LOAN REPORT | SUMMARY



Summary

Overview

Details

Select Measure

Total Loan Appl... ▾

Good Vs Bad Loan

All ▾

Grade

All ▾

State

All ▾

Total Loan Applications

38.6K

MTD

4.3K

MoM

6.9%

Total Funded Amount

\$435.8M

MTD

\$54.0M

MoM

13.0%

Total Amount Received

\$473.1M

MTD

\$58.1M

MoM

15.8%

Avg. Interest Rate

12.05%

MTD

12.4%

MoM

3.5%

Avg. DTI

13.33%

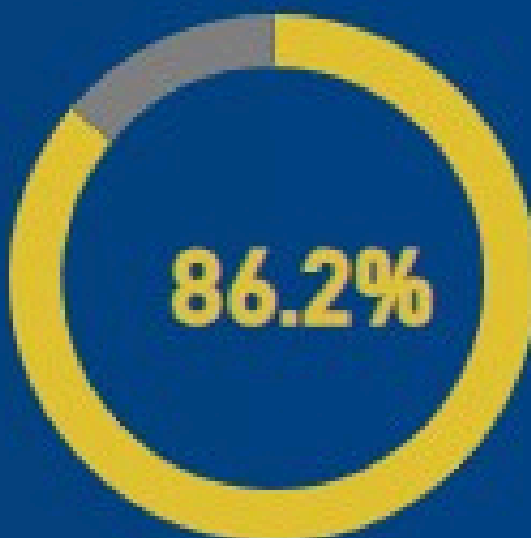
MTD

13.7%

MoM

2.7%

GOOD LOAN ISSUED



Good Loan Applications

33.2K

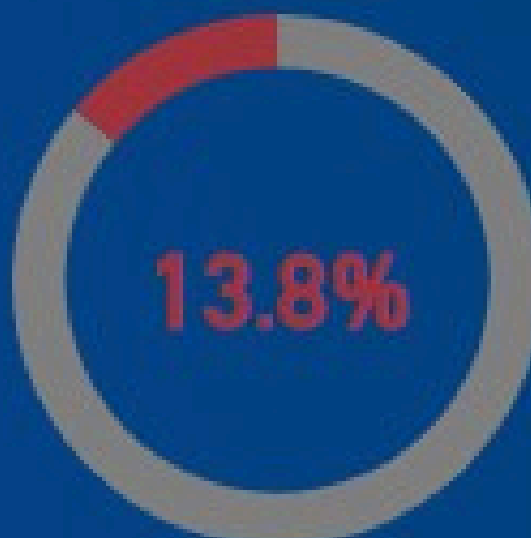
Good Loan Funded Amount

\$370.2M

Good Loan Recieved Amount

\$435.8M

BAD LOAN ISSUED



Bad Loan Applications

5.3K

Bad Loan Funded Amount

\$65.5M

Bad Loan Recieved Amount

\$37.3M

LOAN STATUS

Loan Status	Total Loan Application	Total Funded Amount	Total Amount Received	MTD Total Funded Amount	MTD Total Amount Received	Avg. Interest Rate	Avg. DTI
Fully Paid	32145	\$351,358,350	\$411,586,256	\$41,302,025	\$47,815,851	11.64%	13.17%
Current	1098	\$18,866,500	\$24,199,914	\$3,946,625	\$4,934,318	15.10%	14.72%
Charged Off	5333	\$65,532,225	\$37,284,763	\$8,732,775	\$5,324,211	13.88%	14.00%
Grand Total	38576	\$435,757,075	\$473,070,933	\$53,981,425	\$58,074,380	12.05%	13.33%

BANK LOAN REPORT | OVERVIEW



Summary

Overview

Details

Select Measure

Total Loan Appl...

Good Vs Bad Loan

All

Grade

All

State

All

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38.6K

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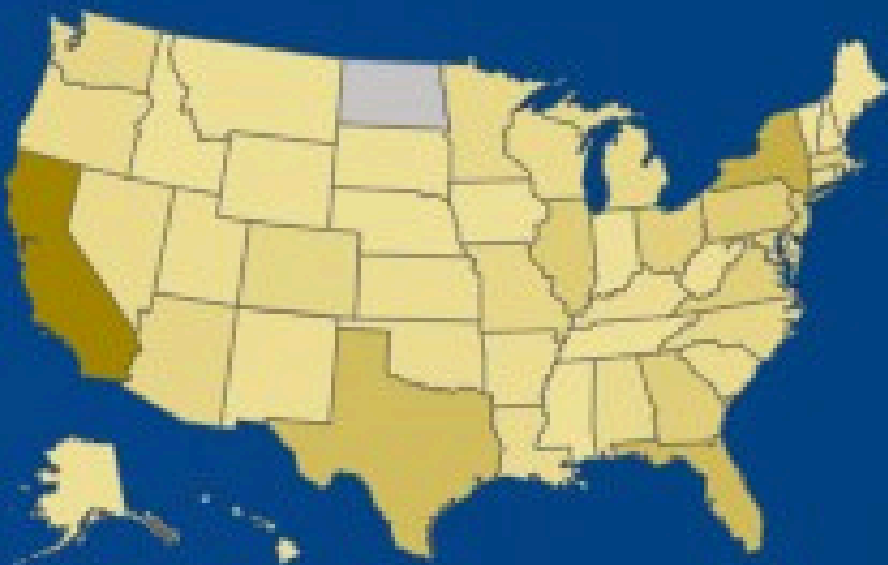
MoM

2.7%

Total Loan Application by Month

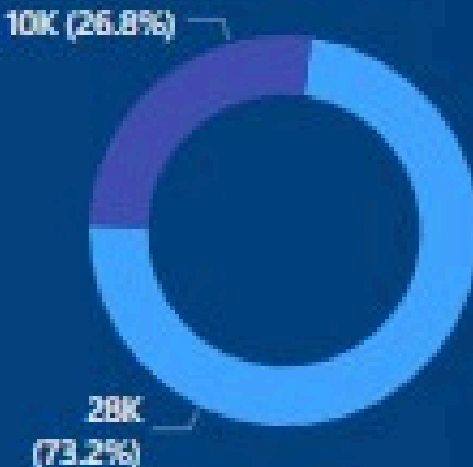


Total Loan Application by State

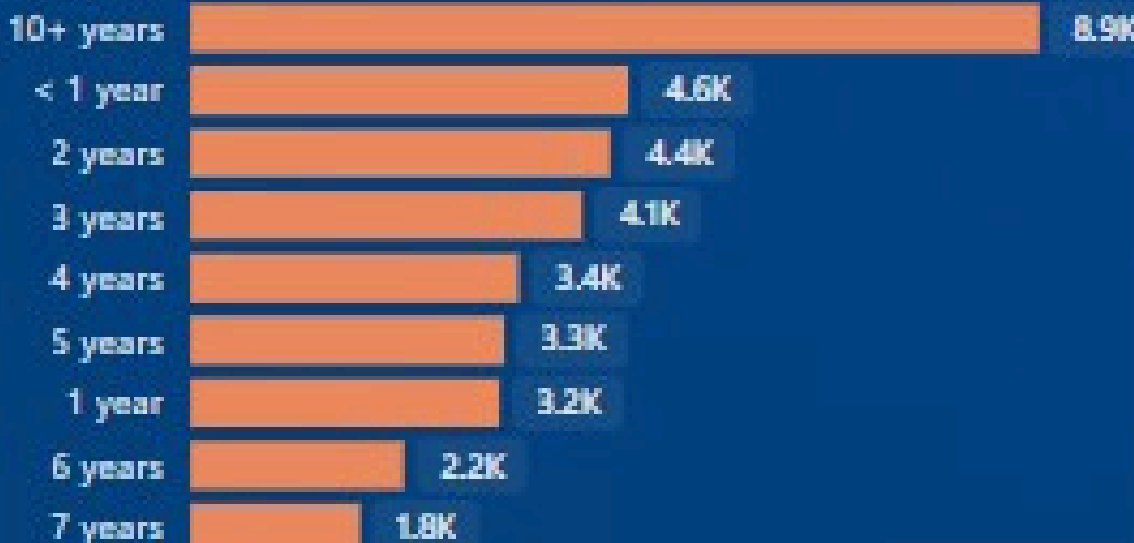


Total Loan Application by Term

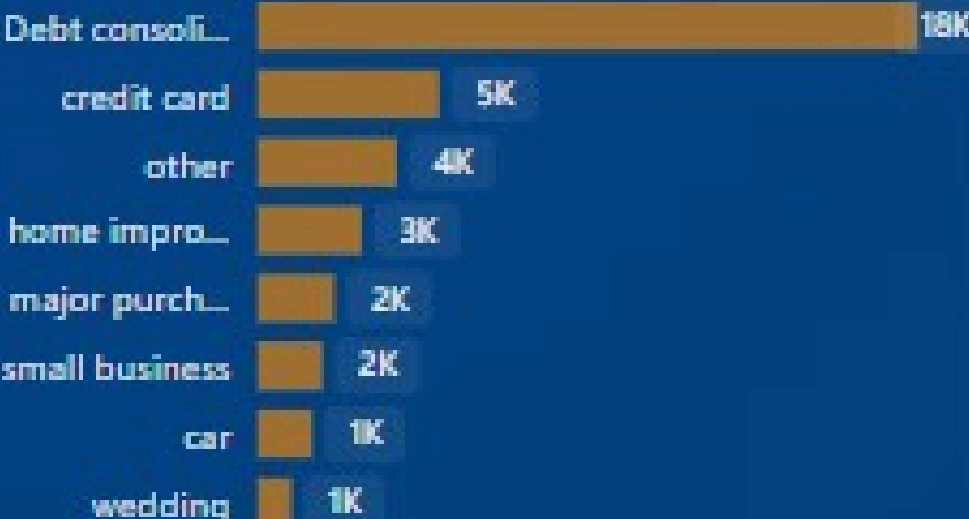
36 months 60 months



Total Loan Application by Employee Length



Total Loan Application by Purpose



Total Loan Application by Home Ownership

RENT

18K

MORTGAGE

17K



BANK LOAN REPORT | DETAILS

Total Loan Applications

38.6K

MTD

4.3K

MoM

6.9%

Total Funded Amount

\$435.8M

MTD

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MoM

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MTD

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MoM

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MTD

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MoM

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Avg. DTI

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MTD

13.7%

MoM

2.7%

Summary

Overview

Details

Good Vs Bad Loan

All



Grade

All



State

All



id	Purpose	Home Ownership	Grade	Sub Grade	Issue Date	Funded Amount	Int Rate	Installment	Amount Received
54734	Debt consolidation	RENT	B	B4	9 August, 2021	\$25,000	0.12	829.10	\$29,330
55742	credit card	RENT	B	B5	8 May, 2021	\$7,000	0.11	228.22	\$8,216
57245	Debt consolidation	OWN	C	C2	10 March, 2021	\$1,200	0.13	40.50	\$1,458
57416	Debt consolidation	RENT	C	C3	9 November, 2021	\$10,800	0.14	366.86	\$13,208
58915	Debt consolidation	RENT	B	B3	8 April, 2021	\$7,500	0.10	162.34	\$5,844
59006	credit card	MORTGAGE	C	C5	9 September, 2021	\$3,000	0.14	102.92	\$3,705
61390	credit card	MORTGAGE	A	A5	10 February, 2021	\$4,000	0.08	125.13	\$4,452
61419	Debt consolidation	RENT	D	D2	10 February, 2021	\$5,600	0.15	194.02	\$6,475
62102	Debt consolidation	RENT	B	B1	10 April, 2021	\$3,200	0.10	103.08	\$3,414
65426	car	MORTGAGE	B	B1	9 August, 2021	\$4,000	0.11	131.22	\$2,755
65640	home improvement	MORTGAGE	C	C2	8 May, 2021	\$5,000	0.11	87.19	\$3,154
66431	Debt consolidation	RENT	B	B5	9 February, 2021	\$2,525	0.12	84.12	\$3,028
66749	Debt consolidation	MORTGAGE	C	C4	8 December, 2021	\$10,625	0.13	360.43	\$12,975
66943	Debt consolidation	RENT	B	B4	10 August, 2021	\$2,800	0.11	61.57	\$3,144
66964	Debt consolidation	MORTGAGE	D	D3	8 June, 2021	\$7,500	0.13	253.58	\$9,129
67503	Debt consolidation	MORTGAGE	A	A4	9 October, 2021	\$10,000	0.09	316.11	\$11,280
68163	small business	MORTGAGE	A	A3	10 February, 2021	\$3,000	0.07	92.82	\$3,342
68381	Debt consolidation	RENT	A	A5	8 March, 2021	\$6,625	0.09	209.54	\$7,542

Learning



LEARNINGS

- **Creating Dashboards:** Developed interactive dashboards in Power BI for effective data visualization and user-friendly navigation.
- **Data Functions:** Leveraged SQL and DAX functions for complex calculations and improved data analysis.
- **SQL Queries:** Applied GROUP BY, ORDER BY, LIMIT, and CTE for data aggregation, sorting, filtering, and simplifying complex queries.
- **Data Cleaning:** Ensured data accuracy and reliability by handling missing values, duplicates, and inconsistencies.
- **Data Modelling:** Built robust data models in Power BI, designing star and snowflake schemas for optimized data retrieval.
- **Data Processing:** Executed efficient ETL processes using SQL for handling large datasets and workflows.

LEARNINGS

- **Power Query:** Imported, transformed, and loaded data into Power BI, applying various data transformations.
- **Data Tables:** Managed and structured data tables in Power BI, creating calculated tables and columns for enhanced insights.
- **Time Intelligence Functions:** Utilized DAX for time-based analysis, such as year-to-date and moving averages.
- **DAX (Data Analysis Expressions):** Mastered DAX formulas for advanced calculations, aggregations, and data manipulations.
- **Creating KPIs:** Defined and tracked key performance indicators, creating visual indicators for business performance metrics.
- **Formatting Visuals:** Customized Power BI visuals for clear and effective data presentation, following best practices.



THANKS FOR WATCHING



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