Bank Loan Analysis

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Problem Statement

The bank lacks a centralized and interactive reporting system to effectively monitor and analyze its loan portfolio performance. Key metrics such as **Loan Applications, Funded Amounts, Repayments, Interest Rates, And Borrower Risk Indicators (DTI)** are currently not available in a consolidated, time-driven, and comparative format. This makes it difficult for stakeholders to track **Month-to-Date (MTD) performance, analyze Month-over-Month (MoM) trends, distinguish between good and bad loans, and assess regional and borrower-level patterns.**

The objective of this project is to design comprehensive dashboards that provide clear visibility into overall **Lending Performance, Loan Quality (Good Vs Bad Loans), Regional And Demographic Trends, And Detailed Loan-Level Information**. These dashboards will enable data-driven decision-making, risk assessment, and strategic planning by offering accurate, timely, and actionable insights into the bank's lending operations.

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1) Summary Dashboard

Requirements

- Display overall loan performance at a glance
- Track Total Loan Applications, Total Funded Amount, and Total Amount Received
- Show Month-to-Date (MTD) values and Month-over-Month (MoM) changes
- Monitor portfolio risk using Average Interest Rate and Average DTI
- Compare Good Loans vs Bad Loans to assess loan quality
- Provide loan status–wise performance breakdown

Visuals Used

- KPI Cards (Applications, Funded Amount, Amount Received, Avg Interest Rate, Avg DTI)
- Donut Charts (Good Loan % and Bad Loan %)
- Tabular Grid (Loan Status analysis)

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Bank Loan Analysis Summary

Summary

Overview

Details

State: All

Grade: All

Purpose: All

Clear Filters

Total Loan Applications	Total Funded Amount	Total Amount Received	Average Interest rate	Average DTI Ratio
38.6K	$435.8M	$473.1M	12.0 %	13.3 %
MTD 4.3K / MoM 6.9 %	MTD $54.0M / MoM 13.0 %	MTD $58.1M / MoM 15.8 %	MTD 12.4 % / MoM 3.5 %	MTD 13.7 % / MoM 2.7 %

Good Loans Issued

Good Loan Applications: 33K

Good Loan Funded Amount: $370.2M

Good Loan Received Amount: $435.8M

Bad Loans Issued

Bad Loan Applications: 5K

Bad Loan Funded Amount: 65.5M

Bad Loan Received Amount: $37.3M

Loan Status

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

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2) Overview Dashboard

Requirements

- Identify monthly lending trends and seasonality
- Analyze regional performance across states
- Understand loan distribution by term length
- Assess impact of employment length on funded amount
- Analyze loan purposes and home ownership patterns

Visuals Used

- Line Chart (Total Funded Amount by Month)
- Filled Map (Total Loan Applications by State)
- Donut Chart (Funded Amount by Loan Term)
- Bar Chart (Funded Amount by Employment Length)
- Bar Chart (Funded Amount by Loan Purpose)

Tree Map (Funded Amount by Home Ownership)

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Bank Loan Analysis Overview

Summary

Overview

Details

Select Measure

Total Funded Amount

State

All

Grade

All

Good Loan Vs Bad Loan

All

Clear Filters

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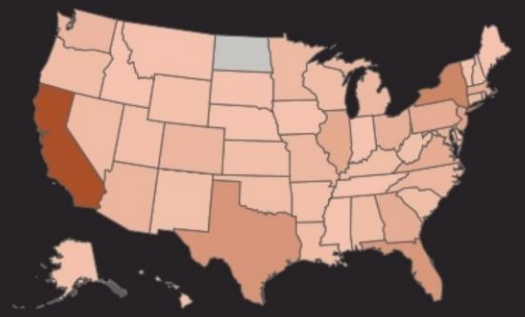
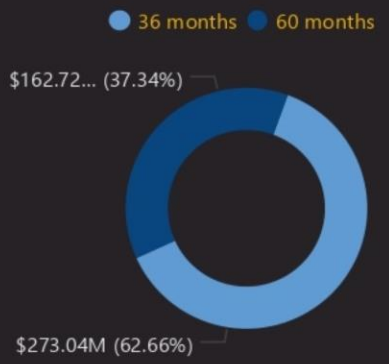
Total Funded Amount by Month

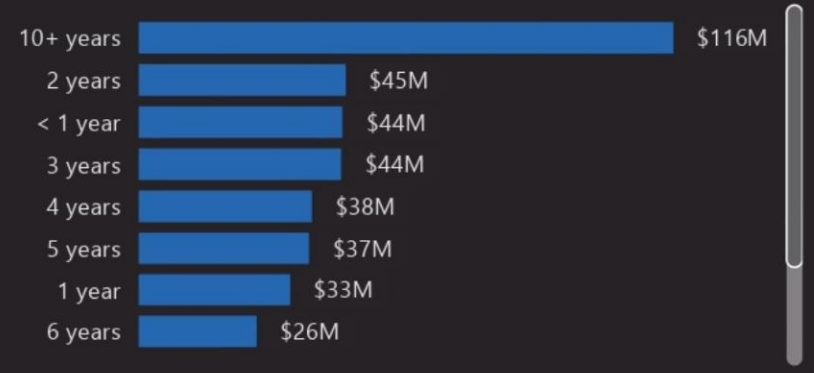
Total Loan Applications by State



Total Funded Amount by Term



Total Funded Amount by Emp Working Year



Total Funded Amount by Purpose

Total Funded Amount by Home ownership

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3) Details Dashboard

Requirements

- Provide a comprehensive loan-level view for detailed analysis
- Enable validation and drill-down into individual loan records
- Support filtering by state, grade, and loan quality
- Allow users to inspect borrower, loan, and repayment details

Visuals Used

- Detailed Table / Grid (Loan-level data)
- Slicers (State, Grade, Good vs Bad Loan)

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Bank Loan Analysis Details

Summary

Overview

Details

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State

All

Grade

All

Good Loan Vs Bad Loan

All

Clear Filters

ID	Purpose	Home Ownership	Grade	Sub Grade	Issue Date	Funded Amount	Interest rate	Installments	Amount Received
54,734	Debt consolidation	RENT	B	B4	9 August, 2021	$25,000	0.12	829.10	$29,330
55,742	credit card	RENT	B	B5	8 May, 2021	$7,000	0.11	228.22	$8,216
57,245	Debt consolidation	OWN	C	C2	10 March, 2021	$1,200	0.13	40.50	$1,458
57,416	Debt consolidation	RENT	C	C3	9 November, 2021	$10,800	0.14	366.86	$13,208
58,915	Debt consolidation	RENT	B	B3	8 April, 2021	$7,500	0.10	162.34	$5,844
59,006	credit card	MORTGAGE	C	C5	9 September, 2021	$3,000	0.14	102.92	$3,705
61,390	credit card	MORTGAGE	A	A5	10 February, 2021	$4,000	0.08	125.13	$4,452
61,419	Debt consolidation	RENT	D	D2	10 February, 2021	$5,600	0.15	194.02	$6,475
62,102	Debt consolidation	RENT	B	B1	10 April, 2021	$3,200	0.10	103.08	$3,414
65,426	car	MORTGAGE	B	B1	9 August, 2021	$4,000	0.11	131.22	$2,755
65,640	home improvement	MORTGAGE	C	C2	8 May, 2021	$5,000	0.11	87.19	$3,154
66,431	Debt consolidation	RENT	B	B5	9 February, 2021	$2,525	0.12	84.12	$3,028
66,749	Debt consolidation	MORTGAGE	C	C4	8 December, 2021	$10,625	0.13	360.43	$12,975
66,943	Debt consolidation	RENT	B	B4	10 August, 2021	$2,800	0.11	61.57	$3,144
66,964	Debt consolidation	MORTGAGE	D	D3	8 June, 2021	$7,500	0.13	253.58	$9,129
67,503	Debt consolidation	MORTGAGE	A	A4	9 October, 2021	$10,000	0.0		

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