Bank Analytics

Analyzing Key Performance Indicators For Strategic Insights

Group : 3

Data overview

Data Characteristics

Time period
2007-2016

Geographic Coverage
The data includes loans from various states across United States

Total Customers
40 K

Data set
40k rows
51 columns

Data Cleaning

- Merged the two data sets Fianance_1 and Finance_2
- Missing values were handled by imputation or removal, ensuring the dataset is complete and ready for analysis.

Objective

1. Year wise loan amount Stats

2. Grade and sub grade wise revol_bal

3. Total Payment for Verified Status Vs Total Payment for Non Verified Status

4. State wise and month wise loan status

5. Home ownership Vs last payment date stats

BANK LOAN ANALYSIS REPORT

DASHBOARD 1 **DASHBOARD 2**

$445.6M
TOTAL LOAN AMOUNT

$434.8M
TOTAL FUNDED AMOUNT

$389.0M
TOTAL RECEIVED PRINCIPLE

$89.9M
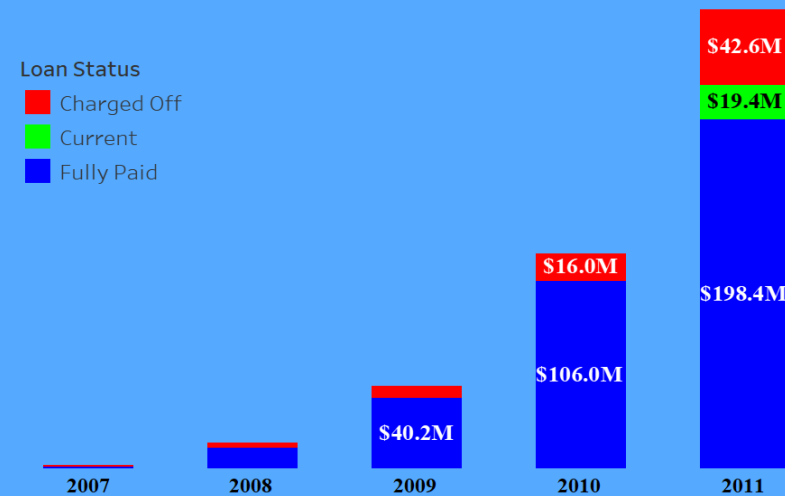TOTAL INTREST RECEIVED

$2.0M
TOTAL OUTSTANDING PRINCIPLE

BY YEAR
(All)

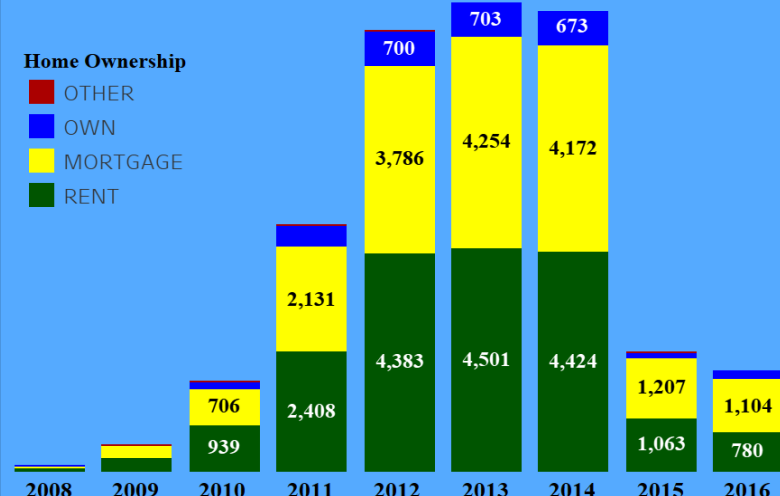## Year wise loan amount Stats

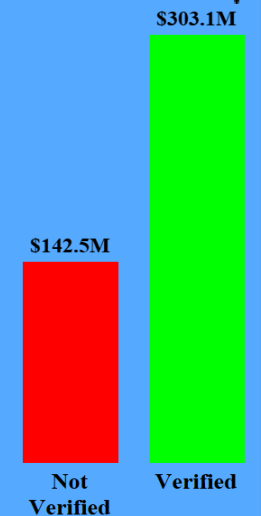Loan Status
- Charged Off
- Current
- Fully Paid

Year	Charged Off	Current	Fully Paid
2007			
2008			
2009			$40.2M
2010	$16.0M		$106.0M
2011	$42.6M	$19.4M	$198.4M

Home ownership Vs last payment date stats

Home Ownership
- OTHER
- OWN
- MORTGAGE
- RENT

Year	OWN	MORTGAGE	RENT
2008			
2009			
2010		706	939
2011		2,131	2,408
2012	700	3,786	4,383
2013	703	4,254	4,501
2014	673	4,172	4,424
2015		1,207	1,063
2016		1,104	780

Verified VS Not Verified

Not Verified	Verified
$142.5M	$303.1M

Grade and sub grade wise revol_bal

A					B					C					D					E					F					G				
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	E1	E2	E3	E4	E5	F1	F2	F3	F4	F5	G1	G2	G3	G4	G5
$11.4M	$14.0M	$19.5M	$34.6M	$35.3M	$21.8M	$26.5M	$39.7M	$35.4M	$37.9M	$29.4M	$27.3M	$20.5M	$16.9M	$16.0M	$12.1M	$18.6M	$16.8M	$13.7M	$13.3M	$11.1M	$10.2M	$9.0M	$8.0M	$7.7M	$5.8M	$4.5M	$3.2M	$2.6M	$2.2M	$1.8M	$1.7M	$0.8M	$1.4M	$0.7M

BANK LOAN ANALYSIS REPORT

DASHBOARD 1   **DASHBOARD 2**
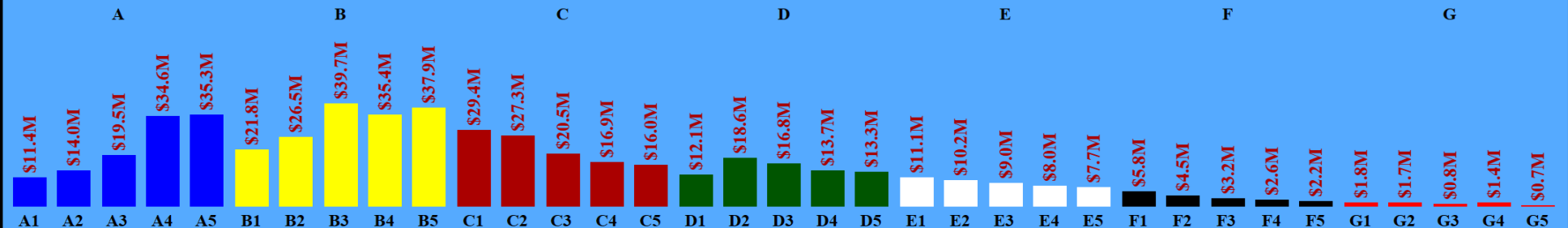
39,717
TOTAL CUSTOMERS

0.1202
AERAGE INTREST RATE

39,717
TOTAL LOANS ISSUED

$531.5M
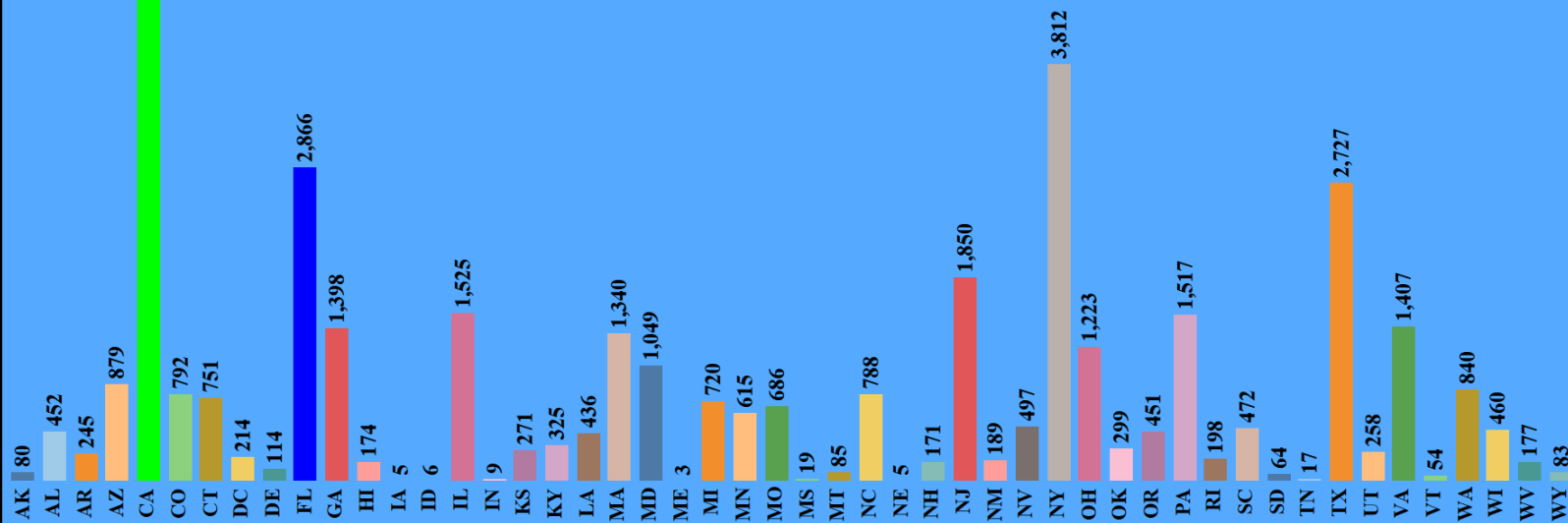TOTAL REVOLVING BALANCE

₹ 54,134.88
TOTAL LATE FEE RECIVED

BY YEAR
(All)

month
- (All)
- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

Loan Status
- (All)
- Charged Off
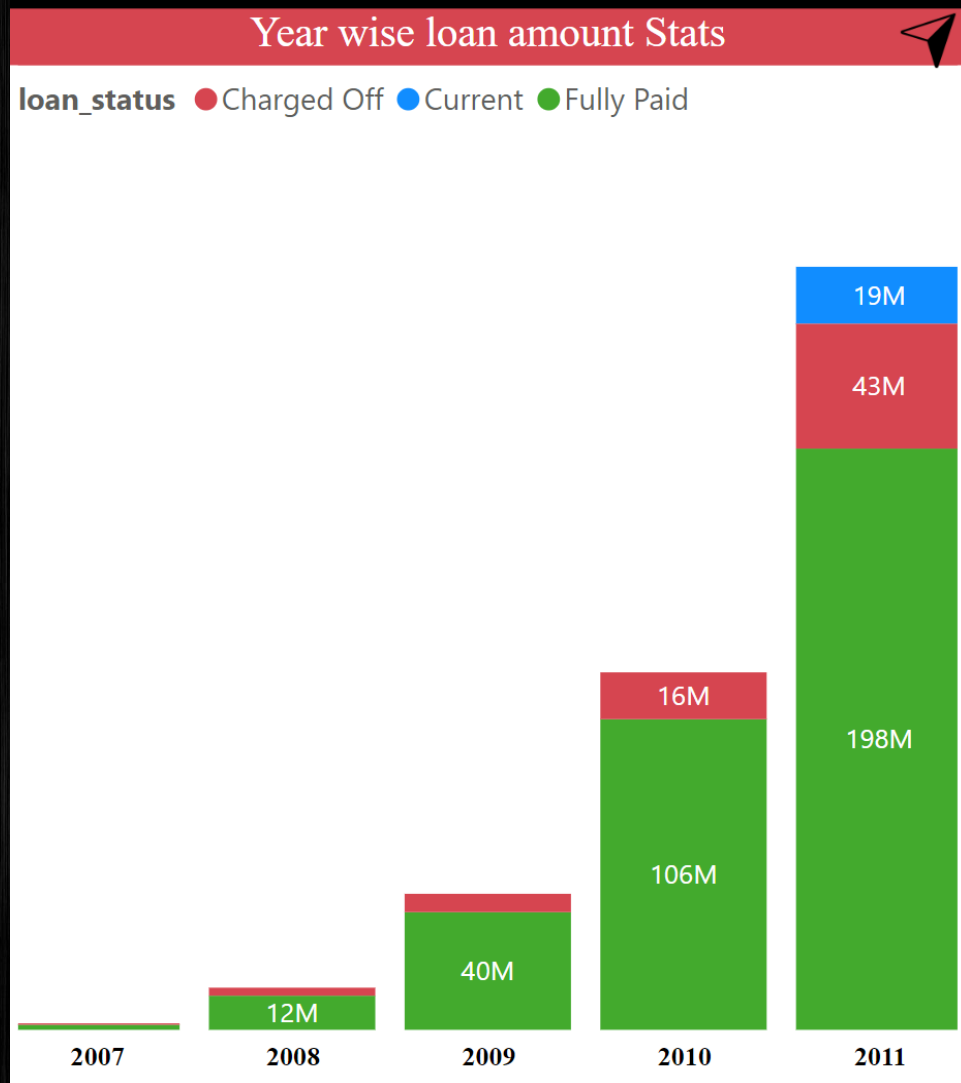- Current
- Fully Paid

State Month Wise Status

| State	Value
AK	80
AL	452
AR	245
AZ	879
CA	7,099
CO	792
CT	751
DC	214
DE	114
FL	2,866
GA	1,398
HI	174
IA	5
ID	6
IL	1,525
IN	9
KS	271
KY	325
LA	436
MA	1,340
MD	1,049
ME	3
MI	720
MN	615
MO	686
MS	19
MT	85
NC	788
NE	5
NH	171
NJ	1,850
NM	189
NV	497
NY	3,812
OH	1,223
OK	299
OR	451
PA	1,517
RI	198
SC	472
SD	64
TN	17
TX	2,727
UT	258
VA	1,407
VT	54
WA	840
WI	460
WV	177
WY	83

Objective

1. **Year wise loan amount Stats**

Summary:

- **Both Fully Paid and Charged Off loan amounts trended up significantly between 2007 and 2011.**

- **Anomalies in loan amounts were observed, particularly in Charged Off loans in 2011.**

- **Understanding these trends helps in better risk management and decision-making.**

- **The significant growth in Fully Paid loans indicates improved repayment behaviors or changes in lending policies.**

1. Year wise loan amount Stats

Year wise loan amount Stats

loan_status ● Charged Off ● Current ● Fully Paid
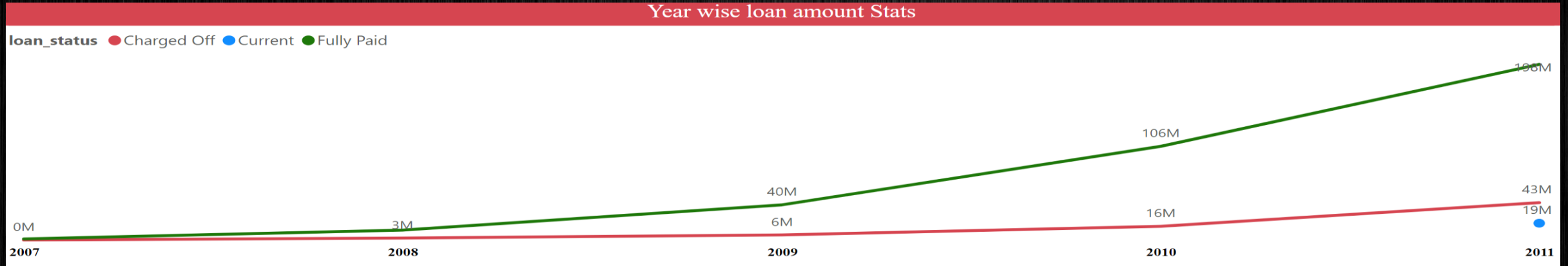
RECOMENDATIONS:

1. **Streamline Application Process:** Simplify and expedite the loan application process to make it more user-friendly.

2. **Customer Support:** Provide excellent customer support with multiple channels (phone, chat, email) for quick assistance.

3. **Incentivize Referrals:** Implement a referral program that rewards existing customers for bringing in new clients.

4. **Attractive Rates:** Offer competitive interest rates and terms to attract more customers.

5. **Mobile App:** Develop a mobile app to provide convenient access to loan services and account management.

6. **Strengthen Collections:** Develop proactive collections strategies and offer flexible repayment plans.

Objective

2. Grade and sub grade wise revol_bal

sub grade wise revol_bal

Summary:

The analysis of revolving balances across grades and sub-grades reveals diverse patterns and implications for credit risk management and portfolio optimization. Notably, higher revolving balances are concentrated in grades A and B, suggesting lower credit risk and potentially higher profitability. Understanding these distribution trends is crucial for tailoring lending strategies and optimizing portfolio performance.

2. Grade and sub grade wise revol_bal

RECOMENDATIONS:

1. **Focus on Grades A and B:** Prioritize lending and offer higher credit limits to these lower-risk, higher-profitability segments.

2. **Interest Rates:** Apply lower rates for grades A and B, and higher rates for riskier grades.

3. **Monitor Lower Grades:** Implement stricter monitoring for grades C and below.

4. **Regular Audits:** Conduct audits to maintain compliance and improve risk management.

Objective

3. Total Payment for Verified Status Vs Total Payment for Non Verified Status

Verified Vs Non Verified Status

Not Verified
142M (31.98%)
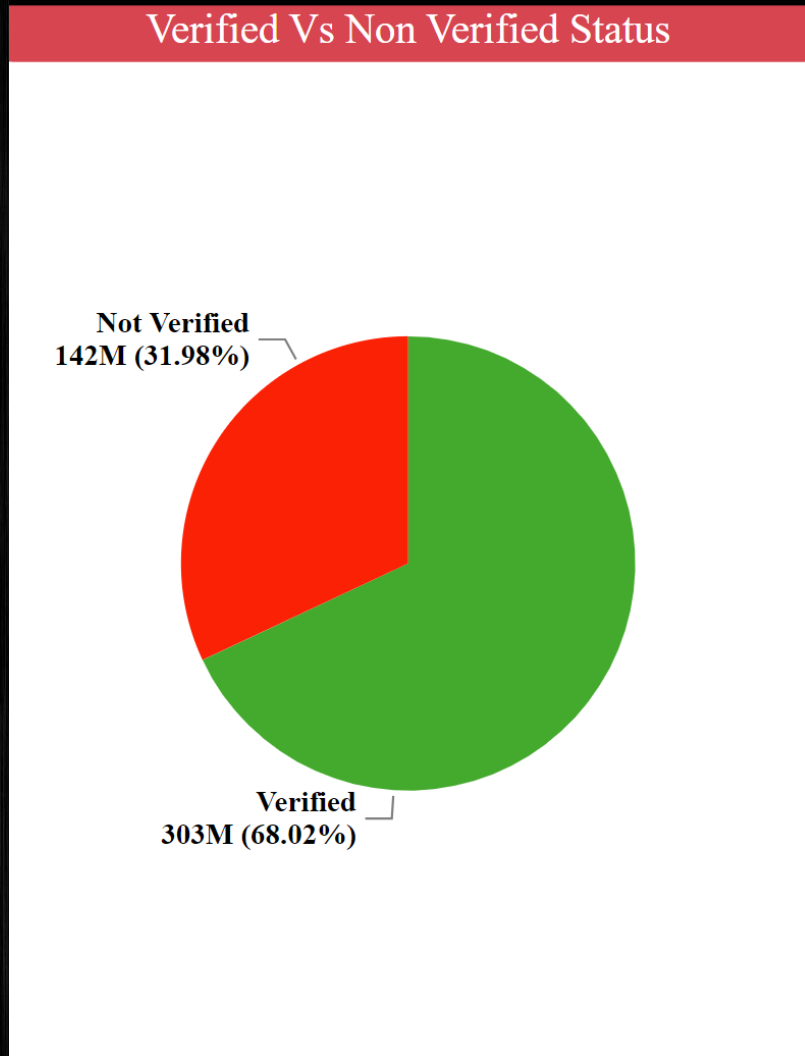
Verified
303M (68.02%)

Summary:

Verified customers contribute significantly higher total payments ($303M) compared to non-verified customers ($142M), indicating verified status as a reliable indicator of creditworthiness.

This insight guides risk assessment, lending strategies, and verification process optimization, enhancing portfolio performance and regulatory compliance. Verified status plays a pivotal role in decision-making, ensuring effective risk management and improved repayment outcomes.

3. Total Payment for Verified Status Vs Total Payment for Non Verified Status

RECOMENDATIONS:

1. **Enhance Verification Processes:** Implement multi-step verification with document, biometric, and identity verification services, using fraud detection algorithms.

2. **Tailor Engagement for Verified Customers:** Offer exclusive benefits like newsletters, loyalty programs, and preferential rates on financial products.

3. **Implement Risk-Based Pricing:** Offer lower rates or higher limits for verified customers using predictive analytics for accurate risk assessment.

4. **Monitor Repayment Behavior:** Utilize real-time transaction monitoring and automated alerts to identify default risks proactively.

5. **Educate Non-Verified Customers:** Launch educational campaigns on verification benefits and provide user-friendly guides for completion.

4. State wise and month wise loan status
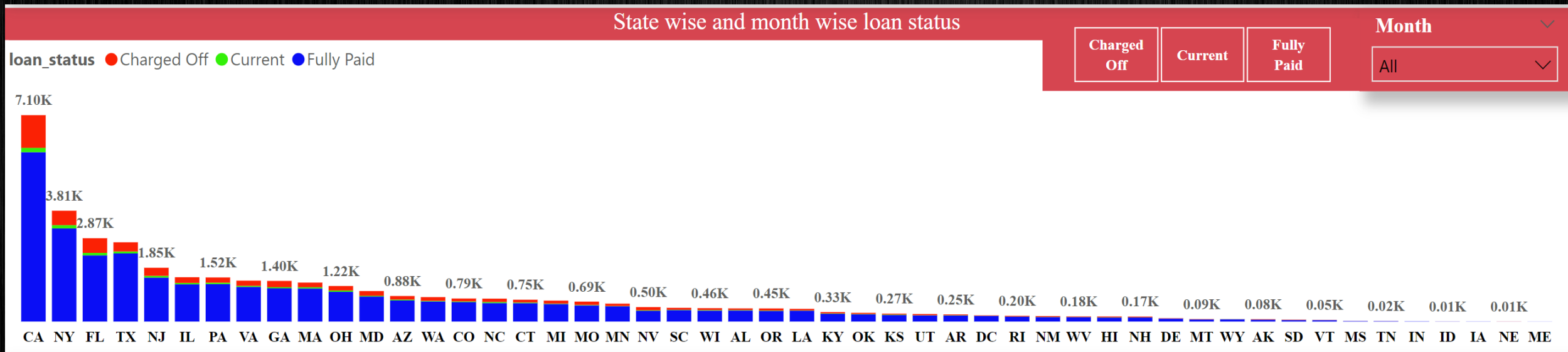
1. High Loan Activity States:

California (CA): Highest activity with 7.10K loans, mainly Fully Paid.

New York (NY) and Florida (FL): Significant activity with 3.81K and 2.87K loans, respectively, predominantly Fully Paid.
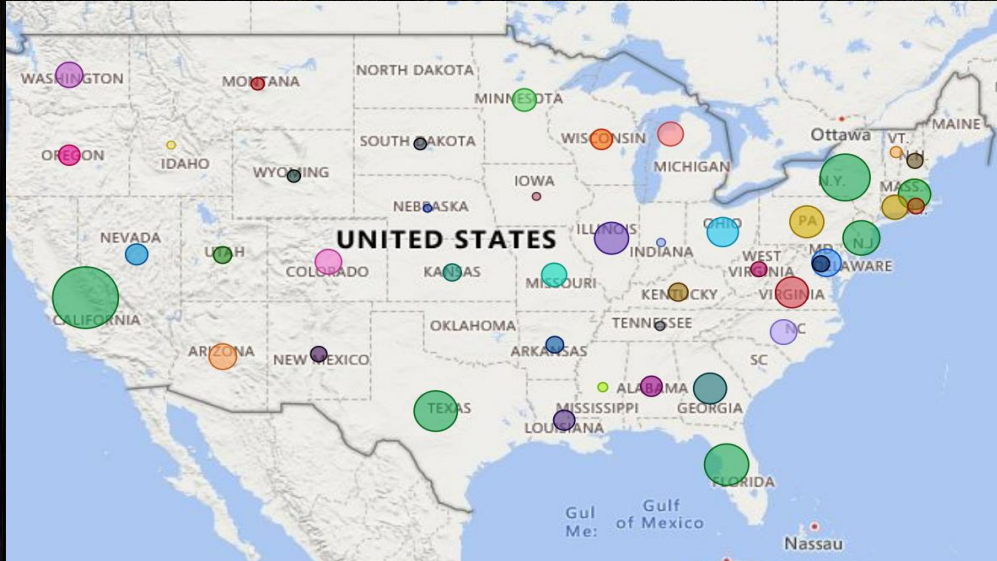
2. Moderate Loan Activity States:

Texas (TX), New Jersey (NJ), Illinois (IL): Moderate activity with a mix of Fully Paid and Charged Off loans.

3. Low Loan Activity States:

States like Rhode Island (RI), New Mexico (NM), Hawaii (HI):Low loan activity, fewer than 0.20K loans each.

4. State wise and month wise loan status

RECOMENDATIONS:

1. **Boost Marketing and Support:** Focus on CA, NY, FL to capitalize on high activity.

2. **Moderate Activity States:** Growth Strategies: Increase applications in TX, NJ, IL.
   Retention Programs: Offer incentives for timely repayments.

3. **Low Activity States:** Market Penetration: Increase marketing in states with low activity.
   Tailored Offerings: Customize loan products to local needs.

5. Home ownership Vs last payment date stats

Home ownership Vs last payment date stats

Home Ownership
- OTHER
- OWN
- MORTGAGE
- RENT
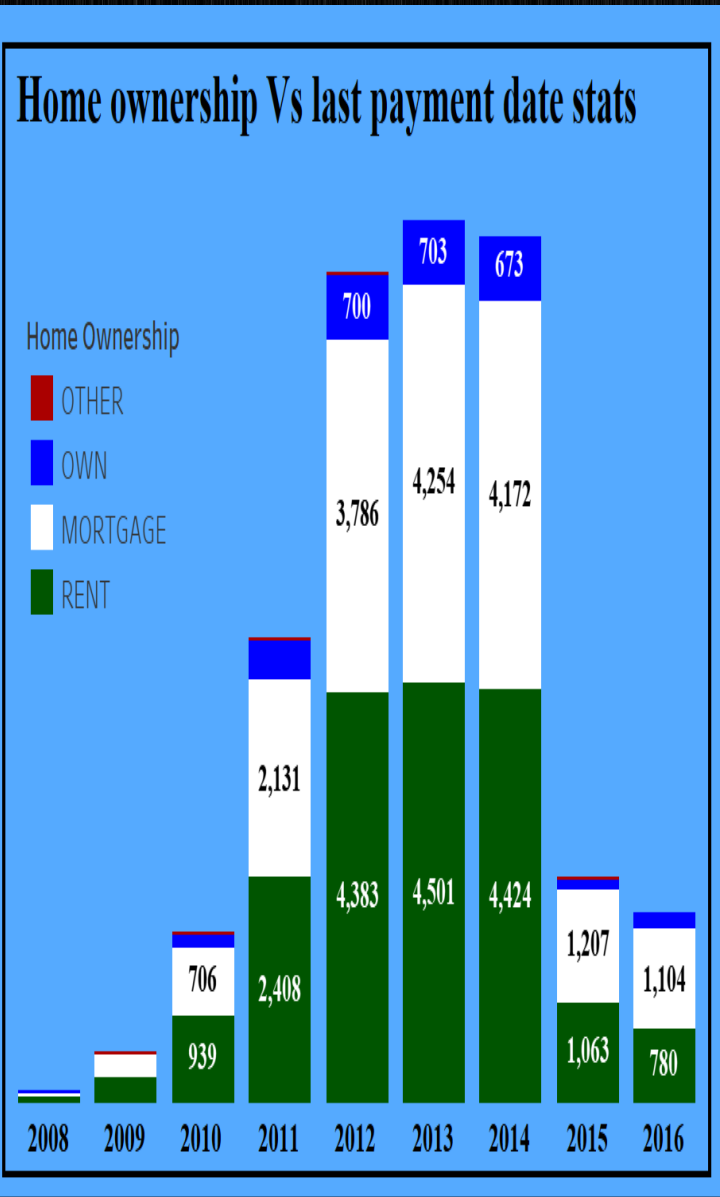
1. Trends in Home Ownership:

Mortgage: Dominates from 2011 to 2014, peaking in 2013 with 4,501 loans.

Rent: Significant presence, peaking in 2013 with 4,383 loans.

Own: Relatively low but consistent numbers, peaking in 2013 with 703 loans.

Other: Minimal presence throughout the years.

2. Yearly Patterns:

2011 to 2014: Highest loan volumes, with a peak in 2013.

2015-2016: Noticeable decline in overall loan numbers compared to the

2011- 2014 period.

2008-2010:Very low loan volumes, with a gradual increase leading up to 2011.

5. Home ownership Vs last payment date stats

RECOMENDATIONS:

1.Target Mortgage Holders:

Tailored Products - Develop loan products specifically for mortgage holders, as they form the largest segment.

Refinancing Options - Offer refinancing options to attract and retain mortgage borrowers.

2. Focus on Renters:

Rental Market Products: Create loan products that cater to renters, who also represent a significant portion of borrowers.

First-time Buyer Programs: Introduce programs to help renters transition to homeownership, which can be a new growth area.

3. Expand Ownership Loans:

Promote Home Ownership: Increase marketing efforts and incentives for homeowners to take loans,

potentially boosting this segment.

Loyalty Benefits: Offer benefits for homeowners who maintain long-term loans with consistent payments.

CONCLUSION

1. Loan Amount Trends (2007-2011): Significant increase in both Fully Paid and Charged Off loans, highlighting the need for better risk management and policy adjustments.

2. Grade and Sub-Grade Revolving Balances: Higher balances in grades A and B suggest lower credit risk and higher profitability, guiding risk-based pricing and targeted lending.

3. Verified vs. Non-Verified Status: Verified customers contribute significantly higher total payments, underscoring the importance of the verification process in risk assessment and lending strategies.

4. State-Wise and Month-Wise Loan Status: High loan activity in states like CA, NY, and FL indicates opportunities for focused marketing and regional strategies.

5. Home Ownership vs. Last Payment Date: Mortgage holders are the largest segment, necessitating tailored loan products and refinancing options.

Key Recommendations

➢ **Streamline Loan Applications :** Simplify the process for better user experience.

➢ **Focus on Grades A and B:** Prioritize low-risk, high-profit customers.

➢ **Enhance Verification :** Improve processes with multi-step methods.

➢ **Boost Marketing in High-Activity States:** Leverage existing demand.

➢ **Create Products for Renters:** Develop loan products for significant borrower segments.

Next Steps:

✓ **Implementation:** Apply strategies to enhance performance.

✓ **Future Monitoring:** Regularly update policies based on new data

Thank you

"In the world of banking,

data is the new currency.

Thank you for trusting us to turn insights into success."