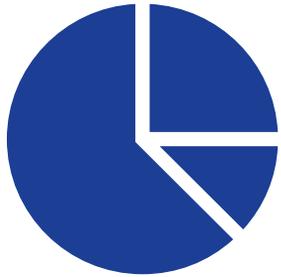


MATH 231.4 Final Project Presentation

Brian Godwin Lim, Terence Brian Tsai



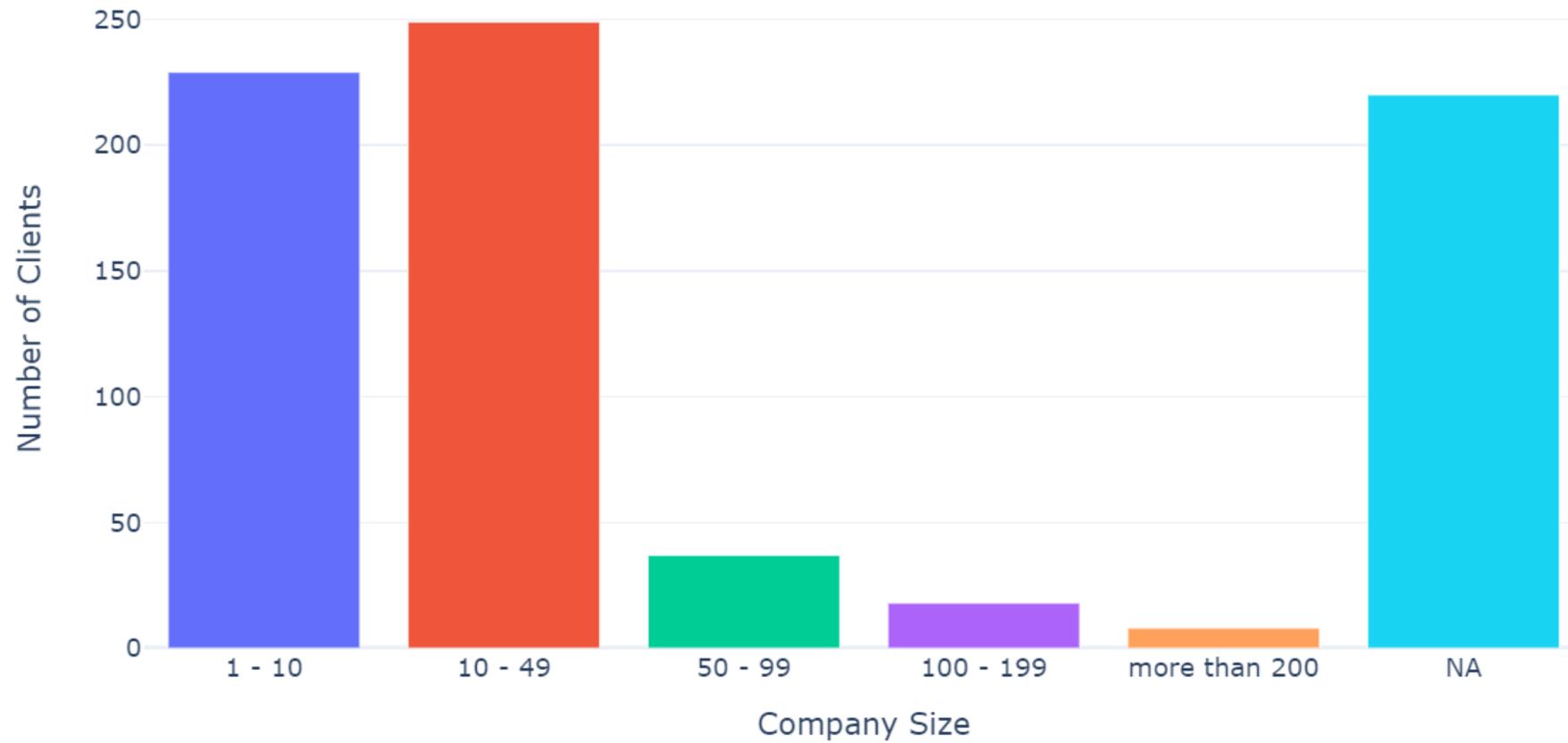
Overview

Overview of the Data and Clients

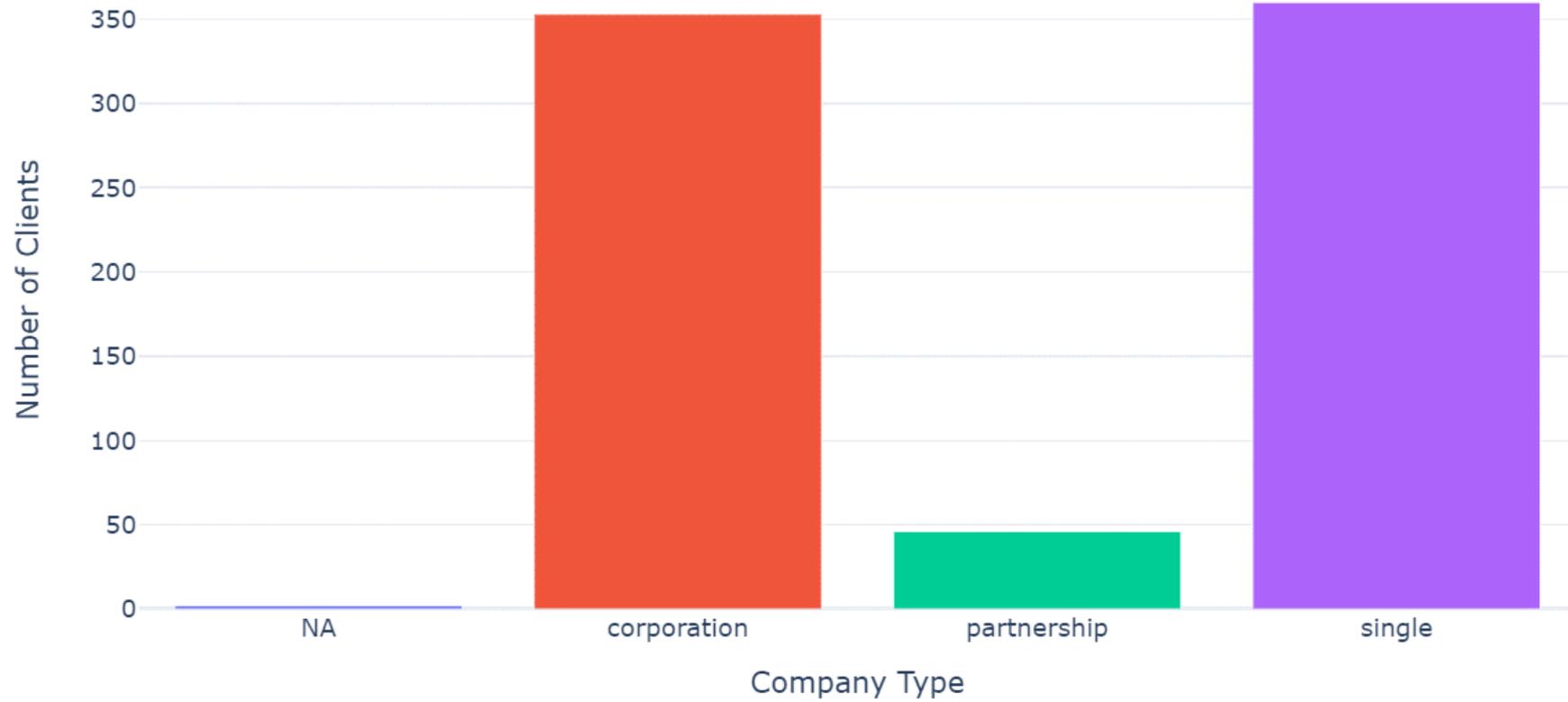
Dataset Used

- Data pulled on May 23, 2020
- Total of 761 clients
 - Company Size, Company Type, Industry, Subindustry
- Total of 6,500 loan accounts
 - Repayment Date, Current Principal, Current Interest, Times Rescheduled

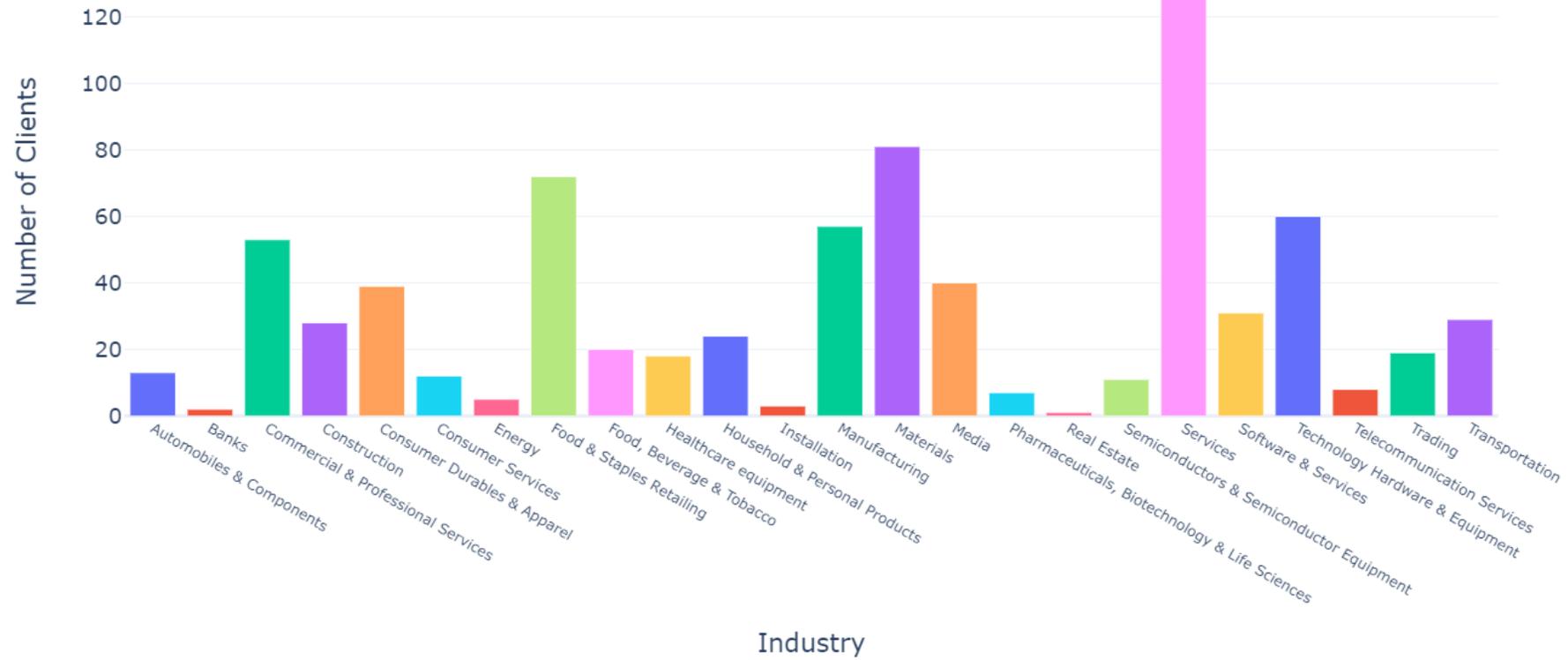
Client Profile



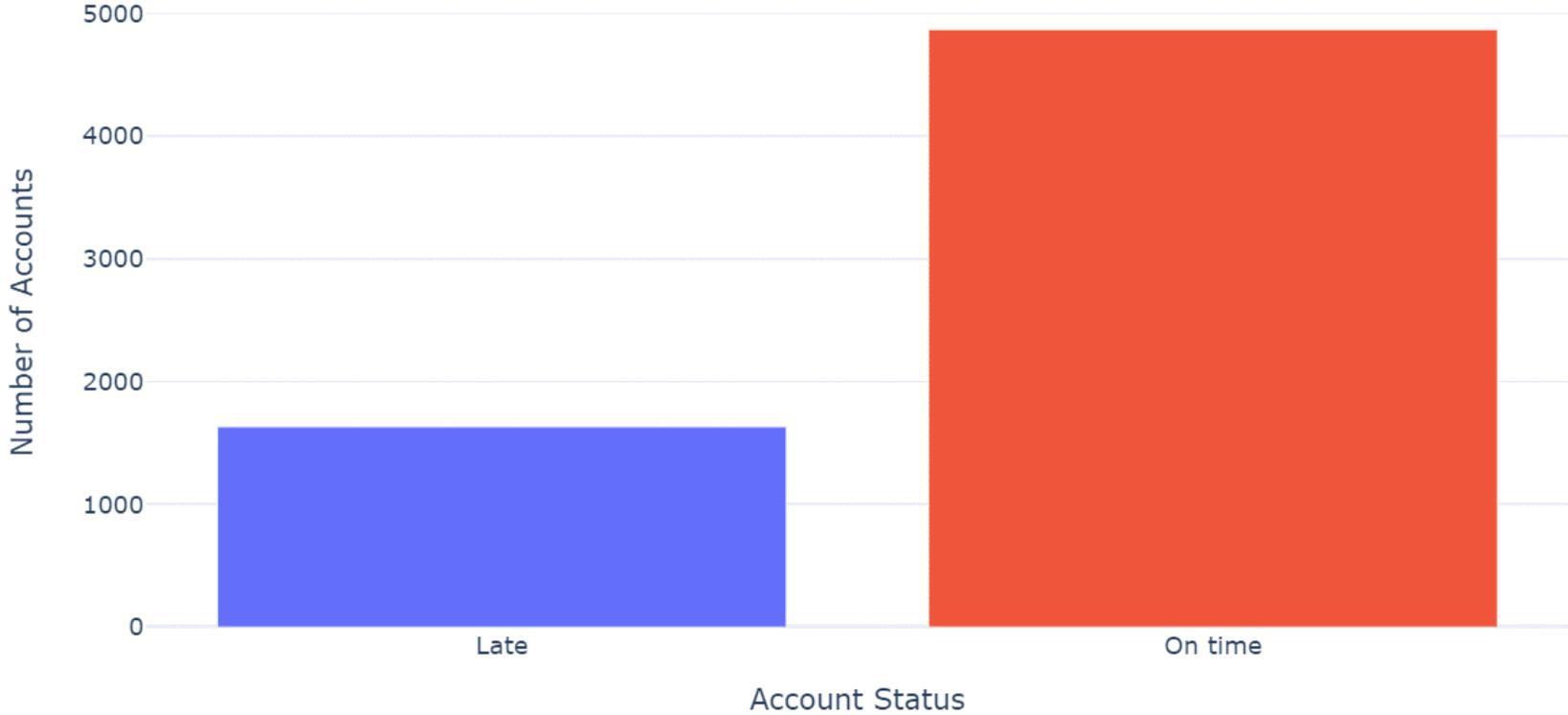
Client Profile

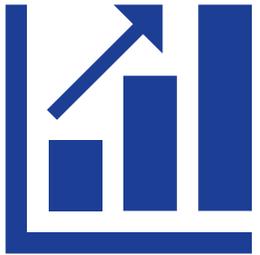


Client Profile



Account Status

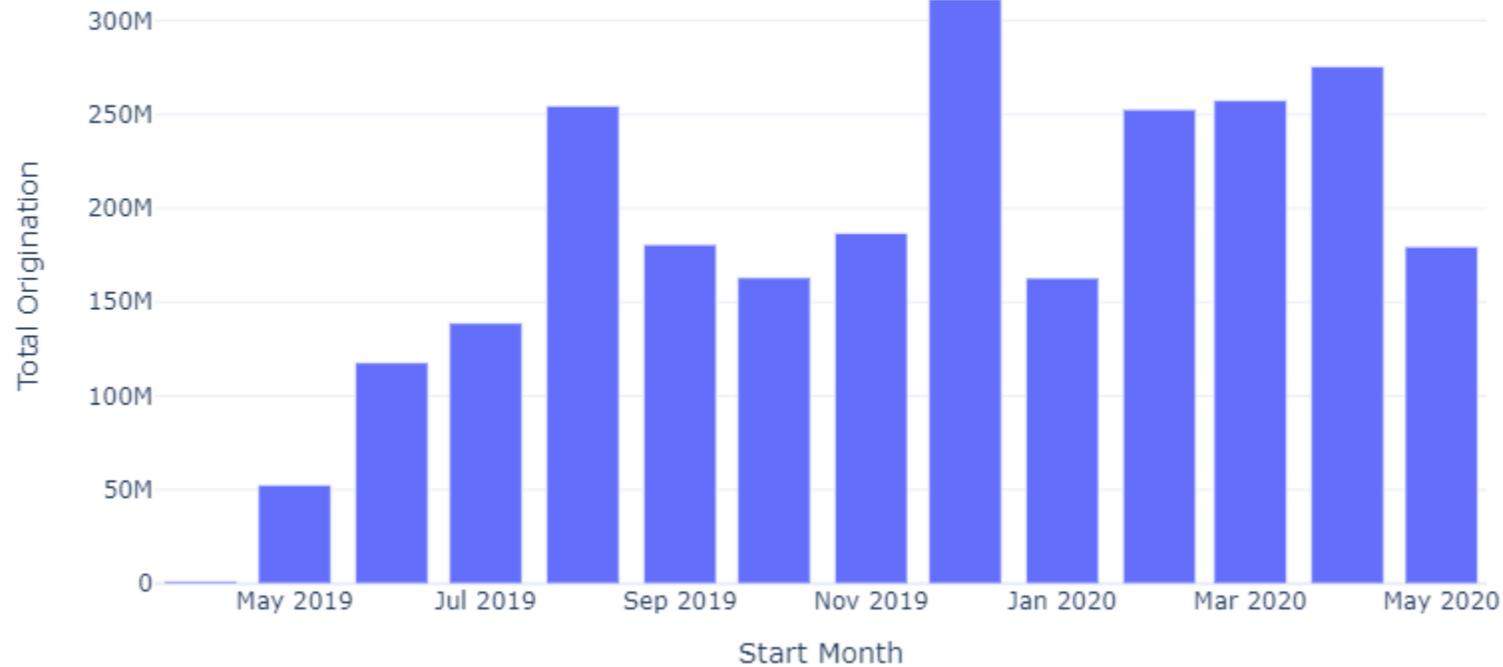




Sales Manager

Growth of Client Base, Sales Performance, Loan Contracts

Monthly Origination Is On An Upward Trend



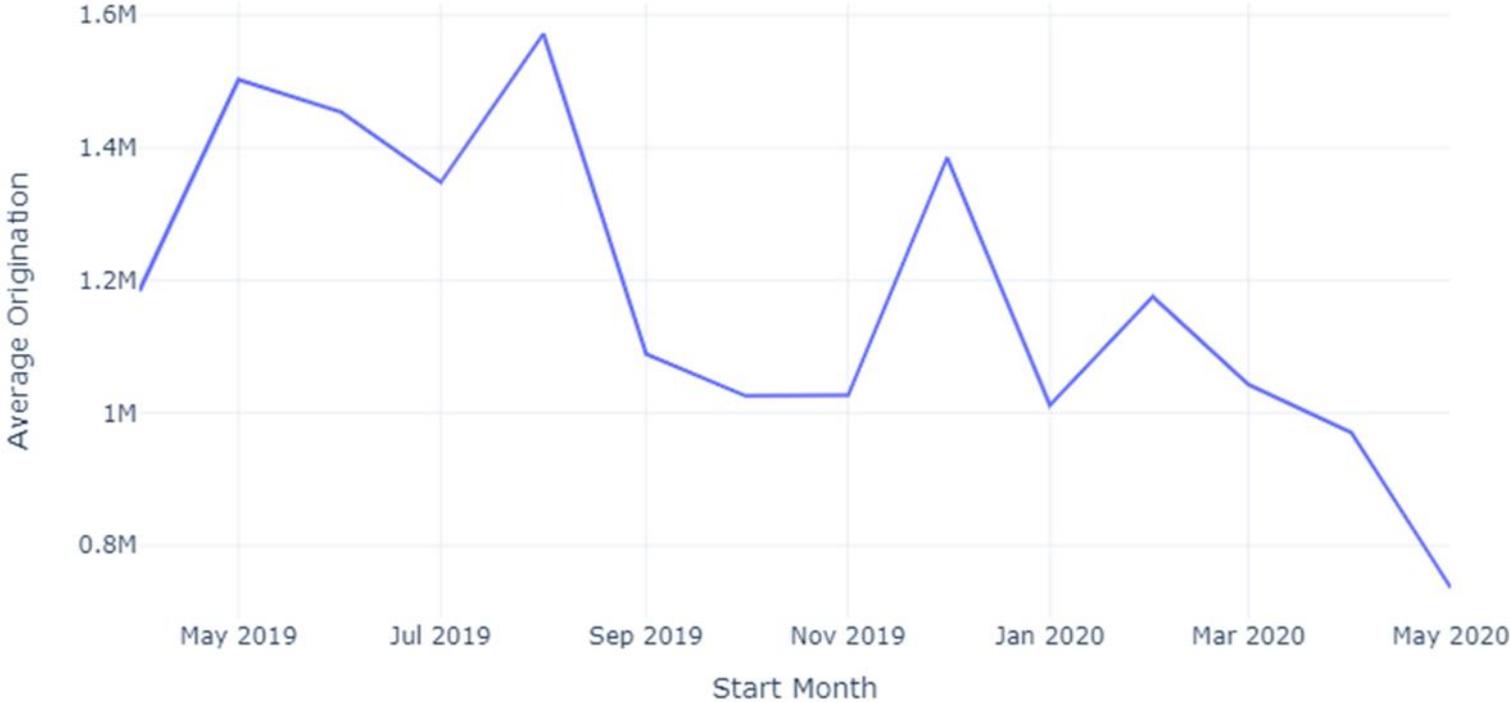
Taking A Deeper Look...

Monthly Origination

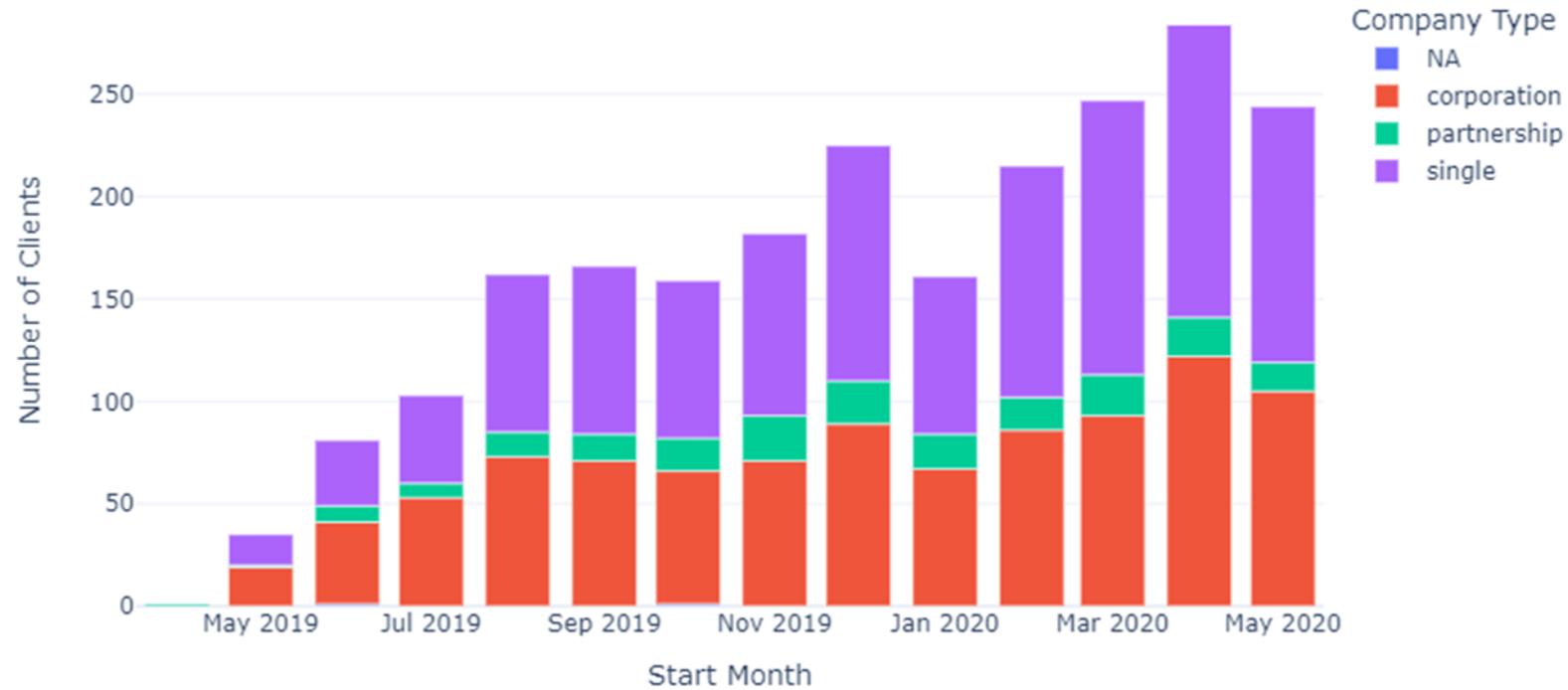
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Origination Amount per Client × Clients per Month

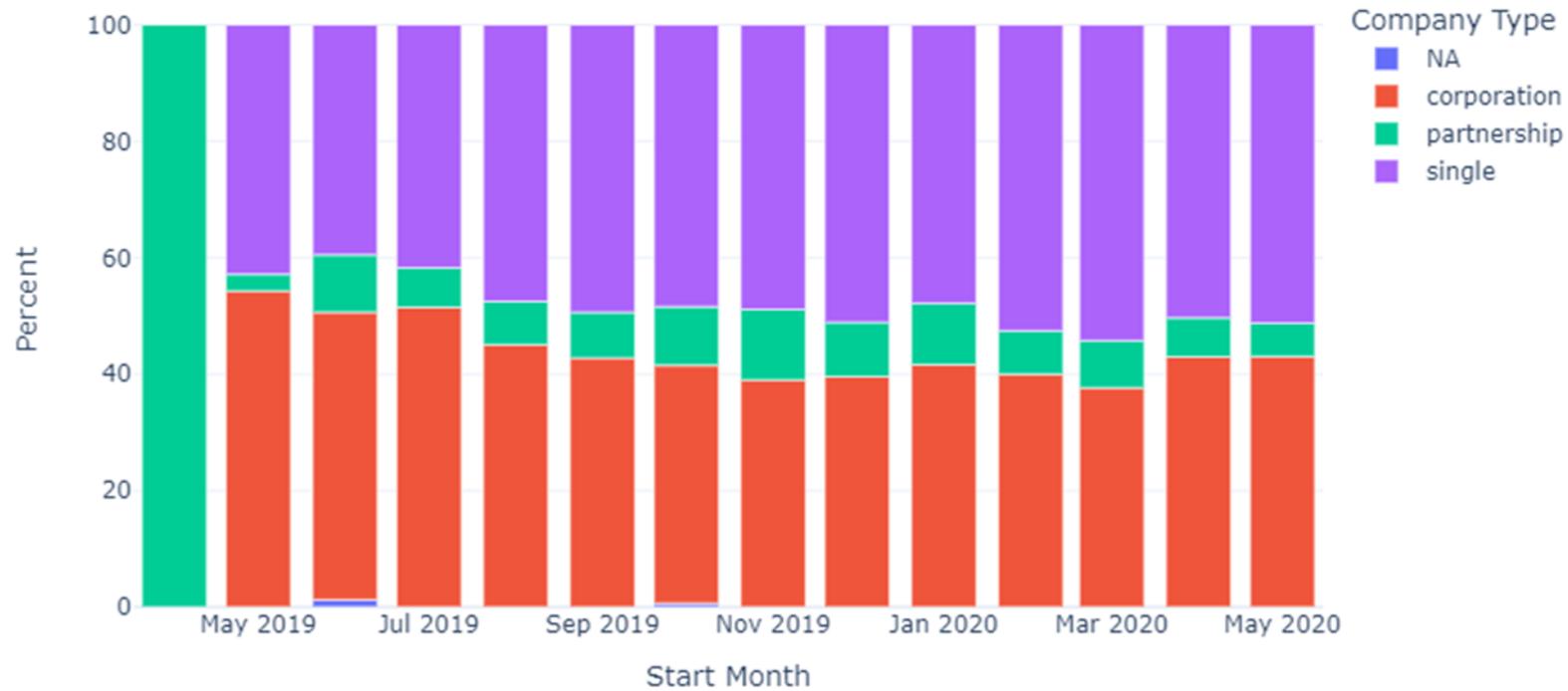
Taking A Deeper Look...



Taking A Deeper Look...



Taking A Deeper Look...



Taking A Deeper Look...

↑ Monthly Origination

=

↓ Origination Amount per Client × ↑ Clients per Month

Insights and Solutions

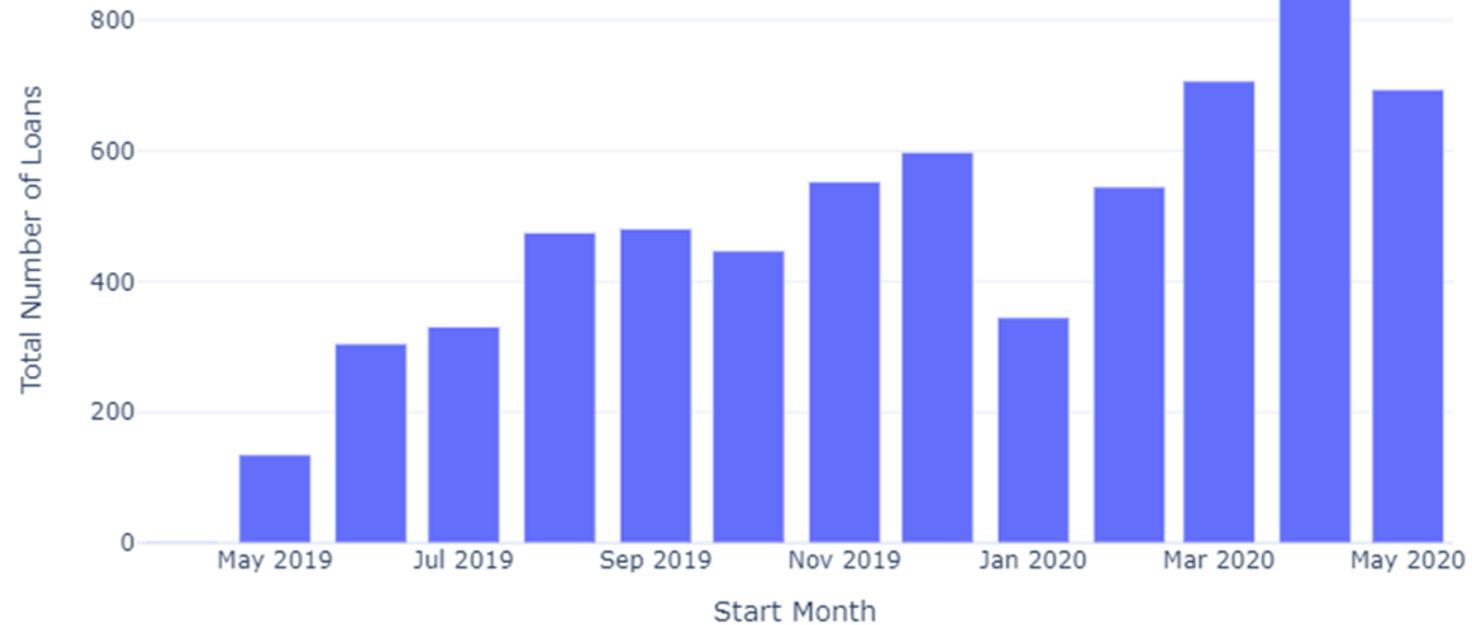
Insights

- Steadily growing client base
- Origination amounts per client are decreasing
 - Review interest rate and other charges, terms and conditions of the loans
 - Assess target market and purpose of loan
 - Market loans with large amount to clients with good creditworthiness

Solutions

- Market research to confirm if there are underlying causes
 - Make necessary improvements to increase origination per client
 - Compare terms with loans offered by other companies
 - Check if there is a need to expand target market

Monthly Number of Loans Is On An Upward Trend



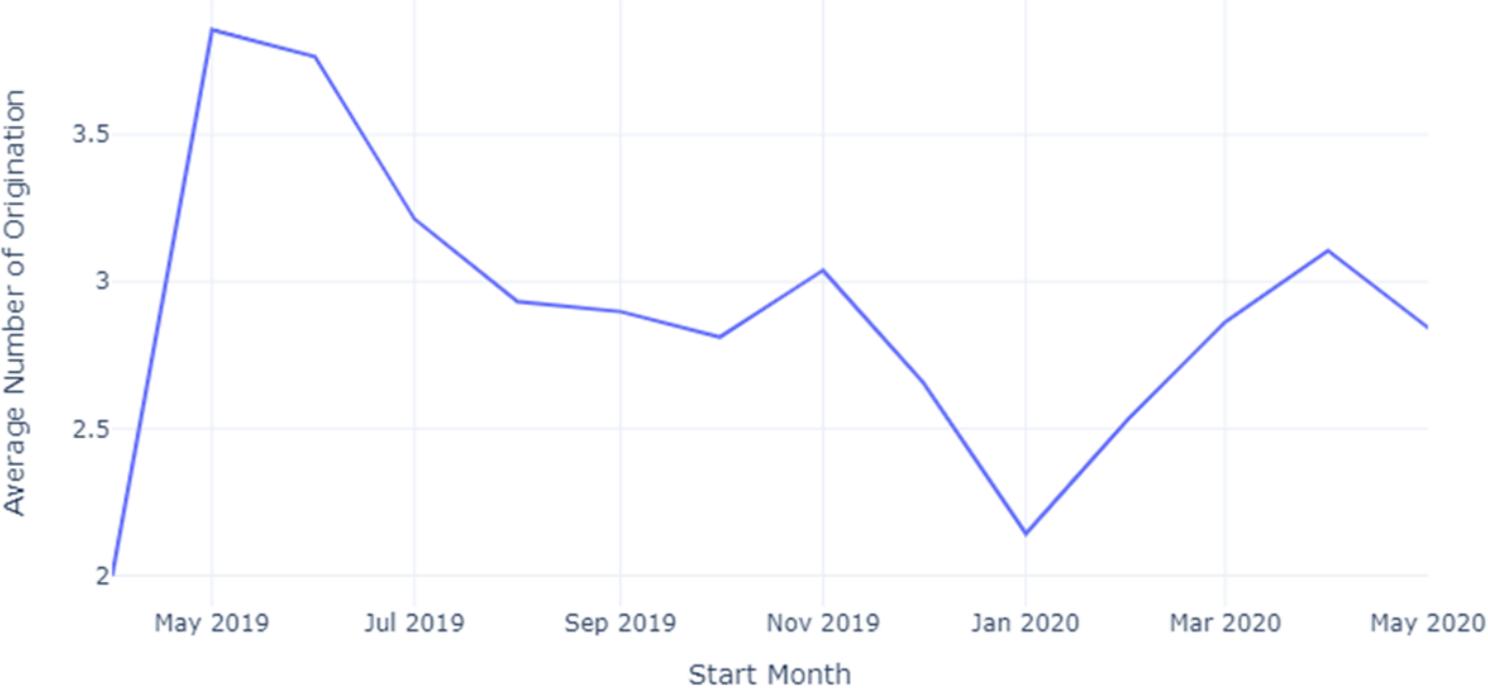
Taking A Deeper Look...

Monthly Number of Loan

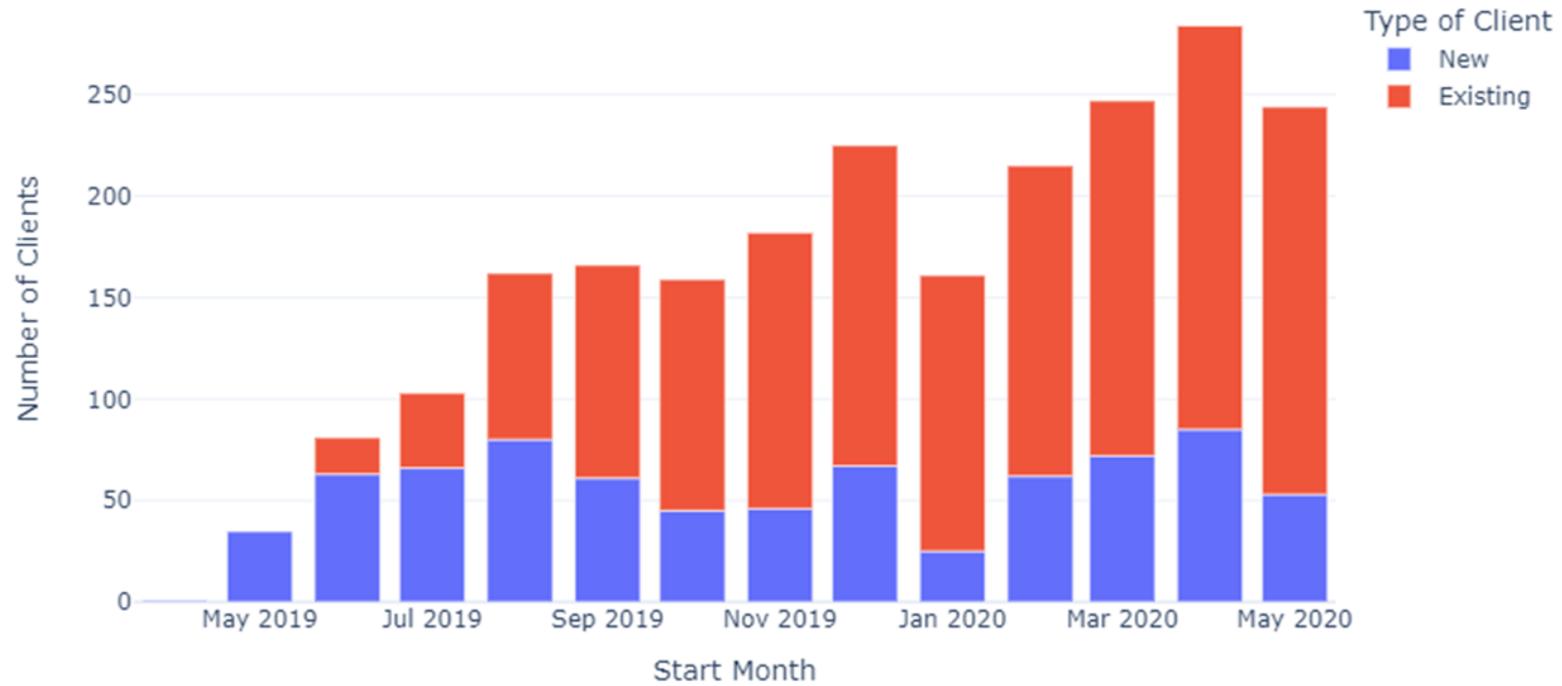
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Number of Loan per Client × Clients per Month

Taking A Deeper Look...



Taking A Deeper Look...



Taking A Deeper Look...

↑ Monthly Number of Loan

=

↓ Number of Loan per Client × ↑ Clients per Month

Insights and Solutions

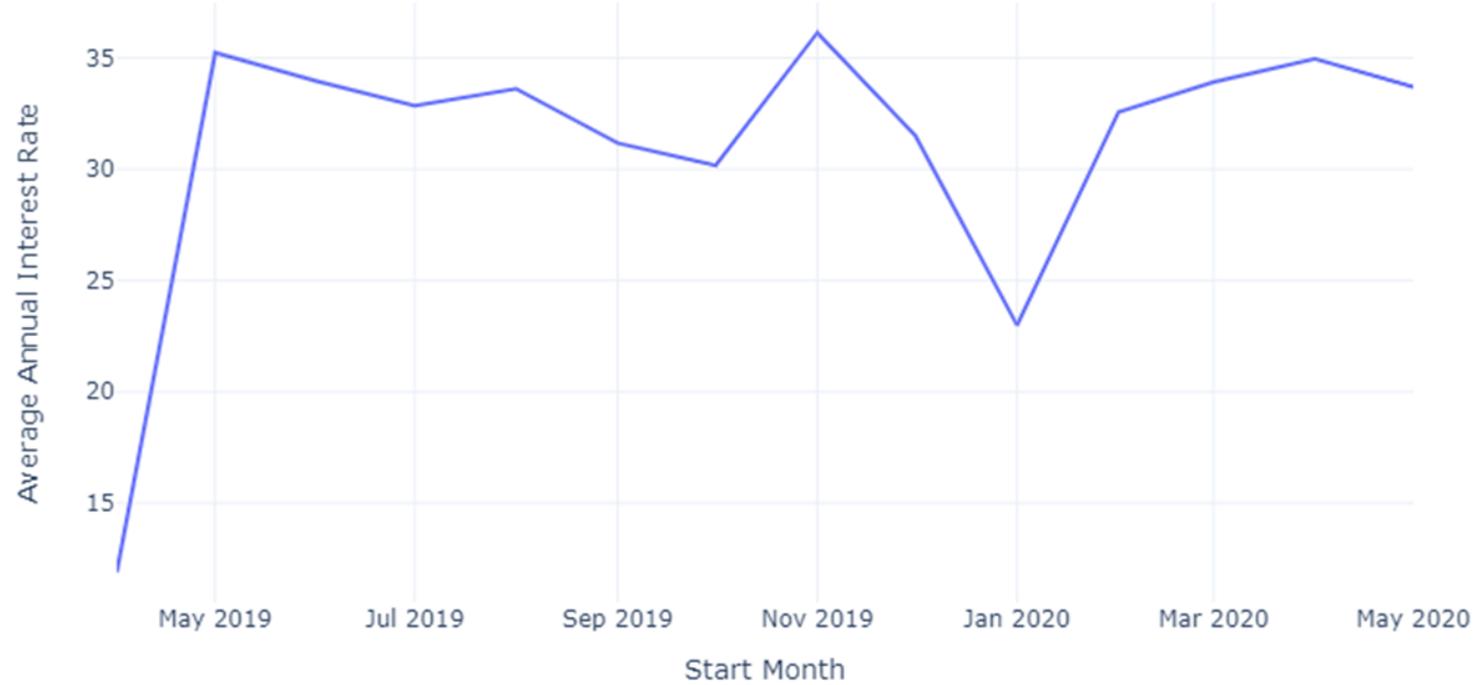
Insights

- We have a strong loyal client base
- Existing clients are availing less loans
 - Might be due to existence of competitors with better terms
 - Might be due to nature of loans

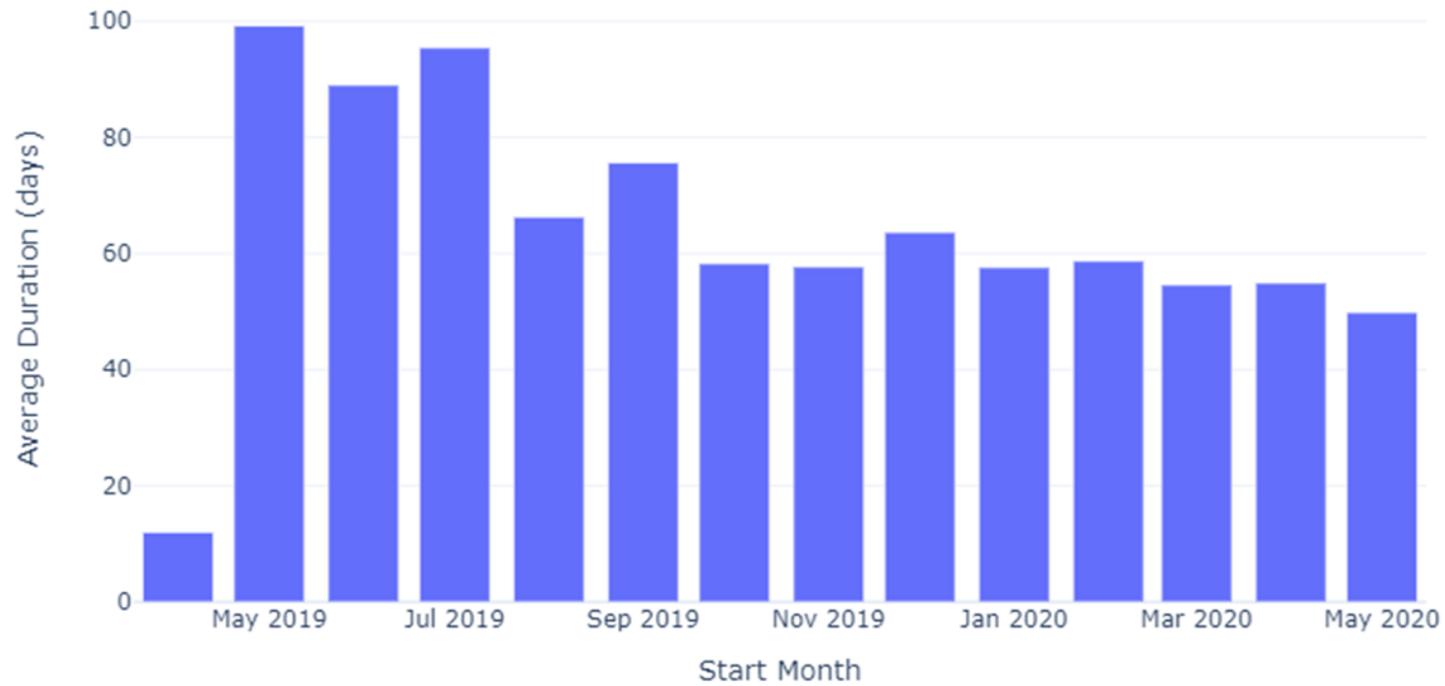
Solutions

- Satisfaction study
 - Research if clients are satisfied with current services
 - Feedback for improvements
- Revamping of services/features
 - Stay up-to-date with latest features and trends in terms of service

Adjustments Needed to Loan Contracts



Adjustments Needed to Loan Contracts



Insights and Solutions

Insights

- Average interest rates and duration is stable
 - Good cashflow management
- Focus on adjusting the terms of loan contracts that better suit clients

Solutions

- Competitor Analysis and Market Study
 - Compare the current values with other companies in the same industry
 - Check if the interest rate and duration match our current market
- Perform experiments (A/B Testing)
 - Check how much impact does easing/restricting loan contracts have



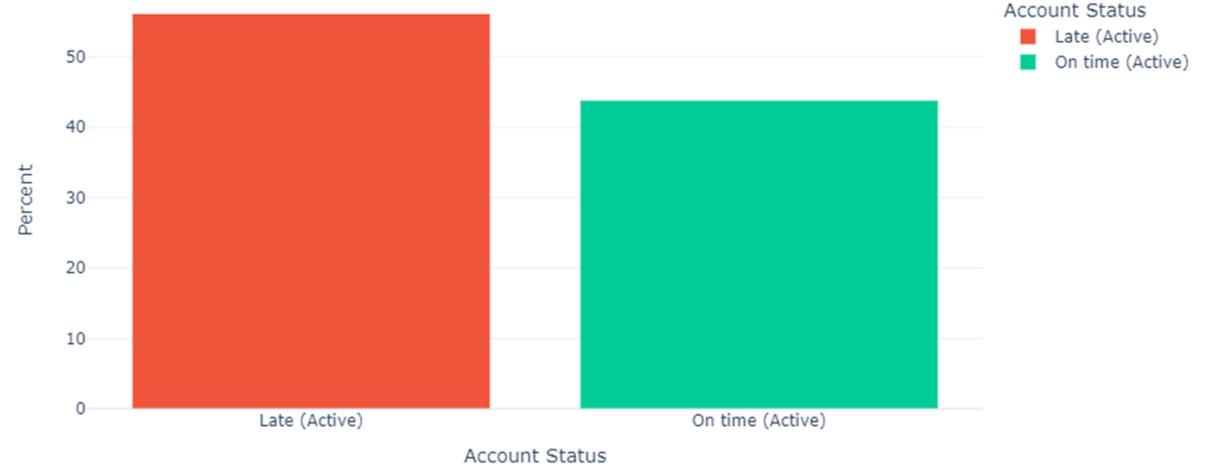
Risk Manager

Collection Performance, Risky Clients, Overdue Accounts

Poor Collection Performance

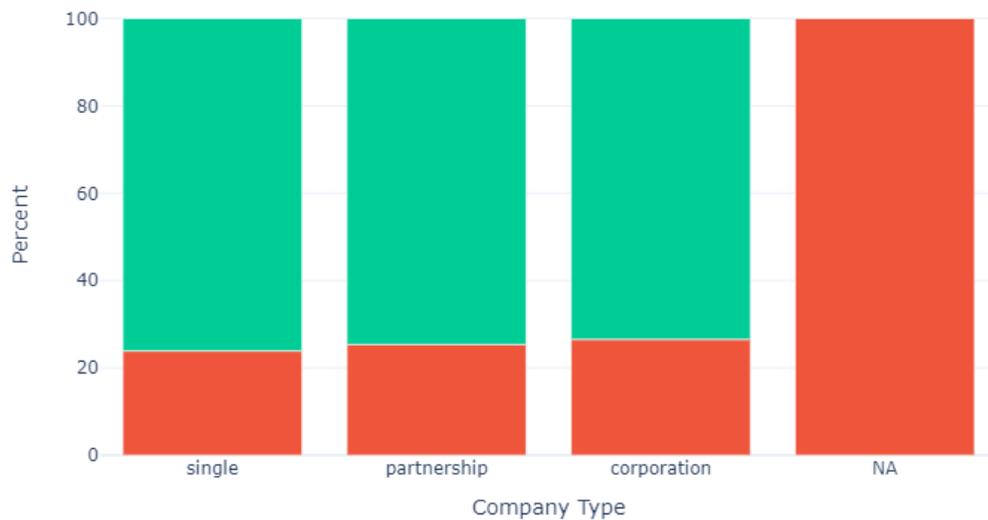


Percentage by
Number of Accounts



Percentage by
Origination Amount

Overdue Accounts: Corporations with High Loan Amounts have Highest Late Percentage

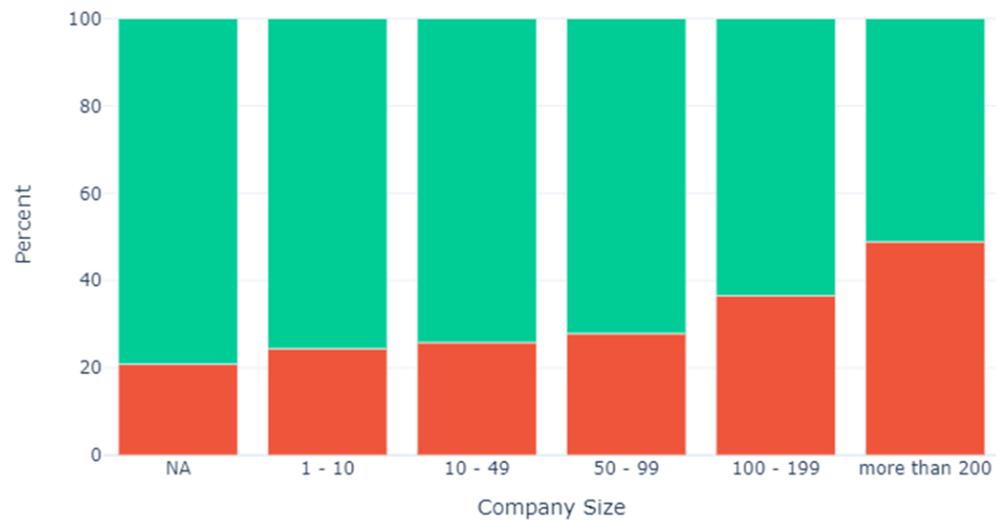


Percentage by
Number of Accounts

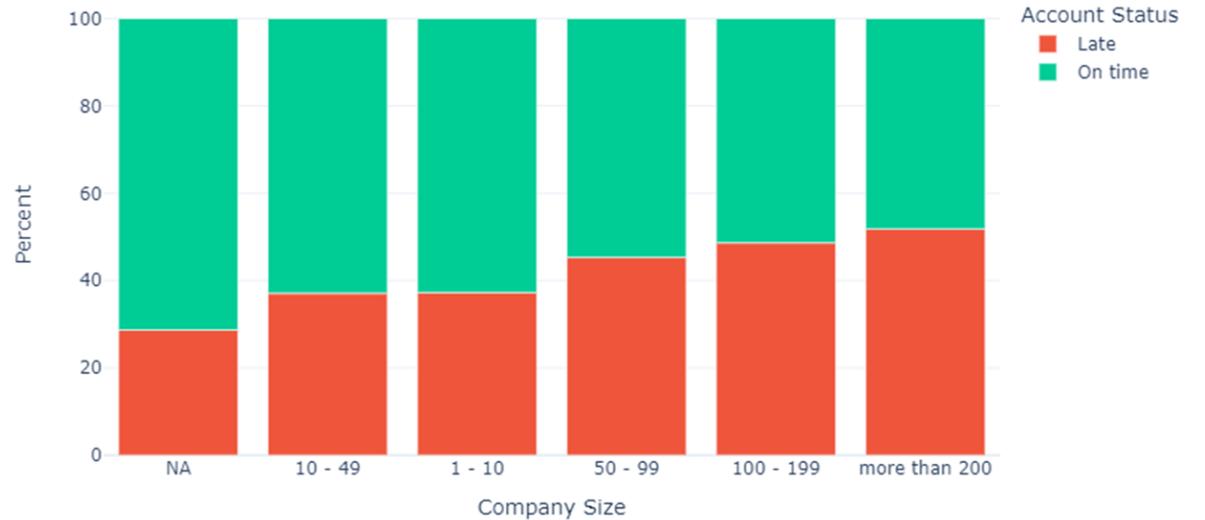


Percentage by
Origination Amount

Overdue Accounts: Small to Medium Companies



Percentage by
Number of Accounts



Percentage by
Origination Amount

Insights and Solutions

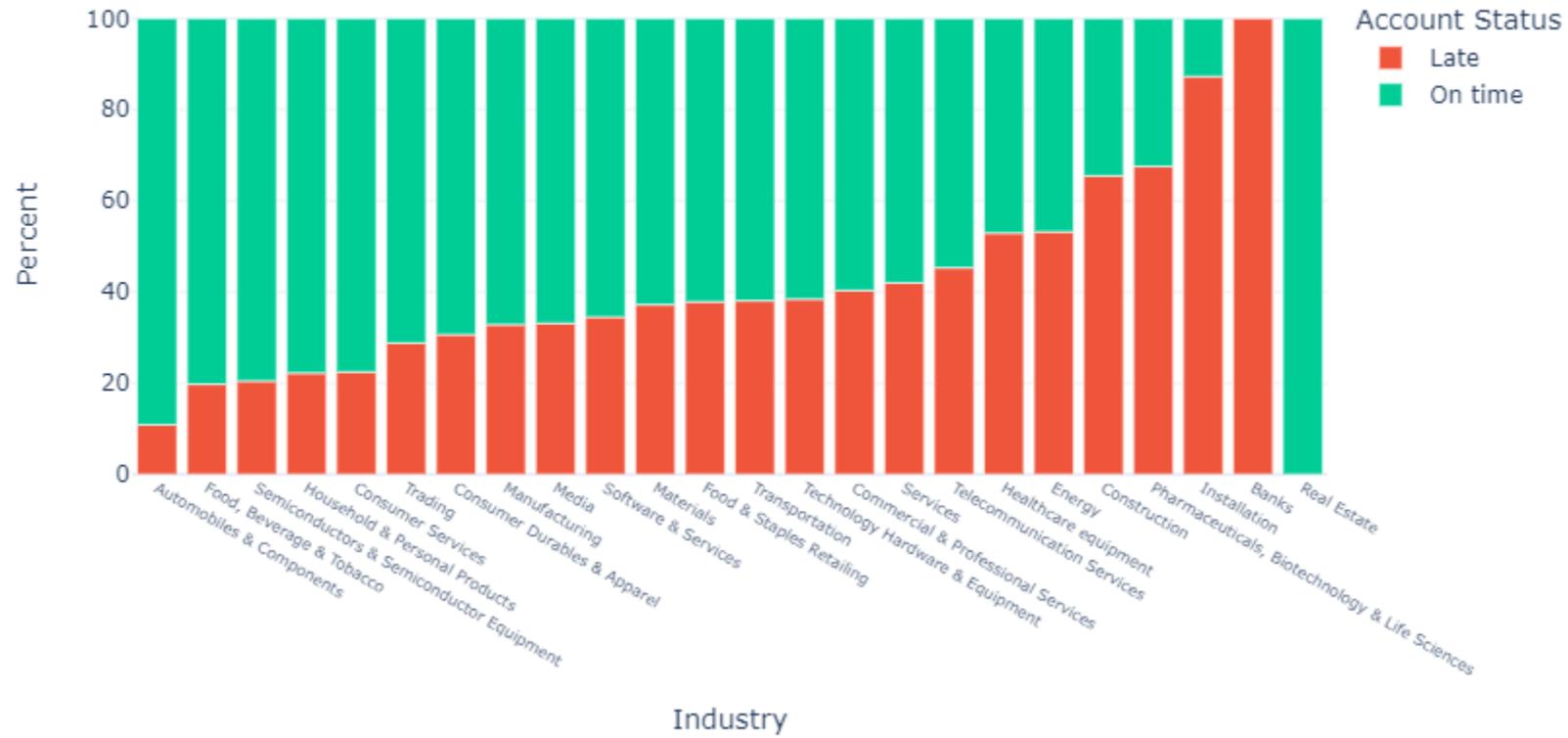
Insights

- Large portion of funds tied to overdue accounts
 - This drags down future revenues
- Many clients with larger loan amount are overdue
 - Problem of diversification of loan book

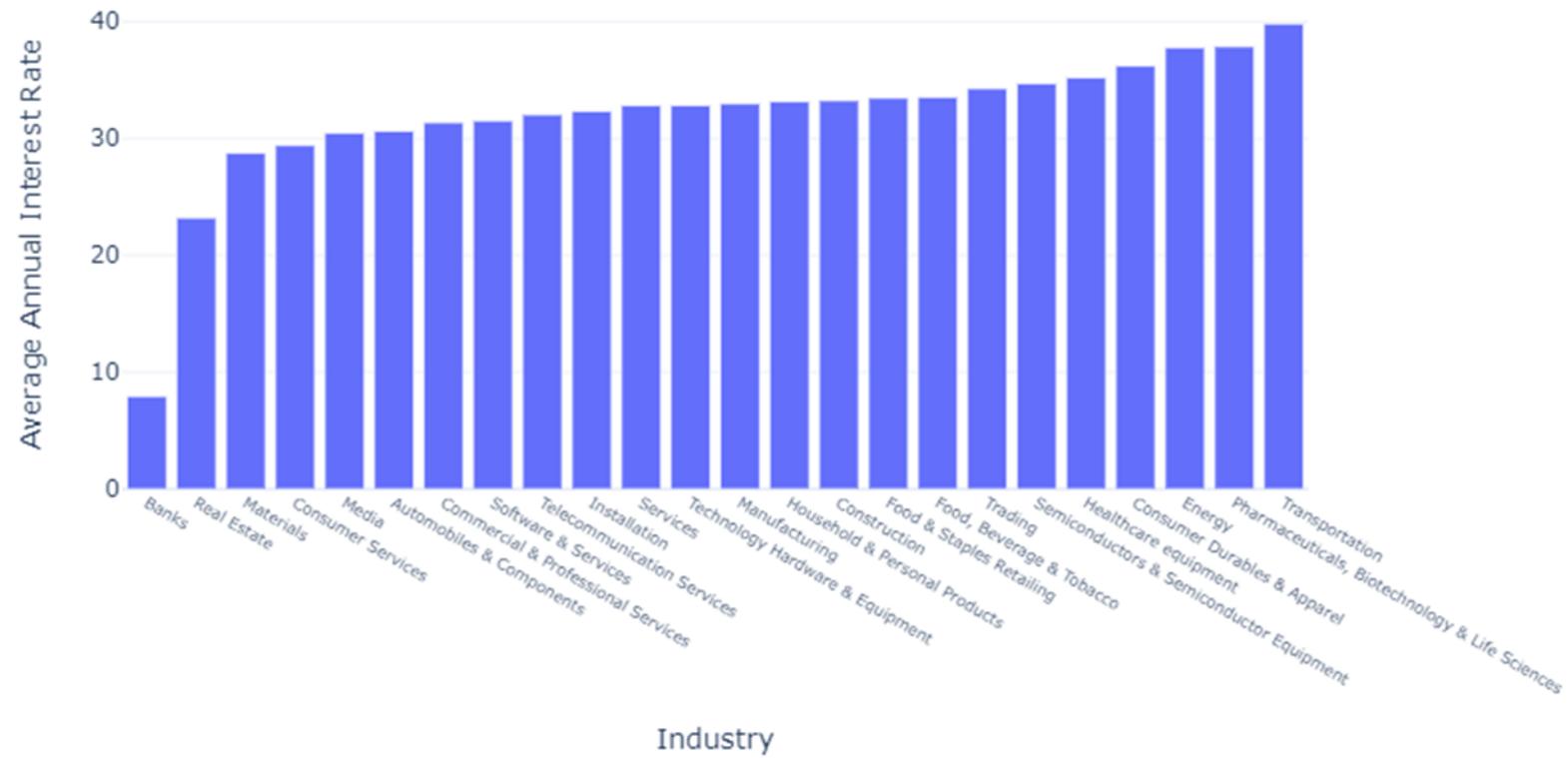
Solutions

- Stricter collection procedures
 - Impose higher interest based on credit history/customer profile
 - Impose large fees for overdue accounts
- Larger bad debt allocation
 - Better preparation for default
- Improvement of systems to determine potentially bad accounts
 - Make filtering of clients better earlier on
 - Prevent ballooning of bad accounts

Status of Loans per Industry



Status of Loans per Industry



Insights and Solutions

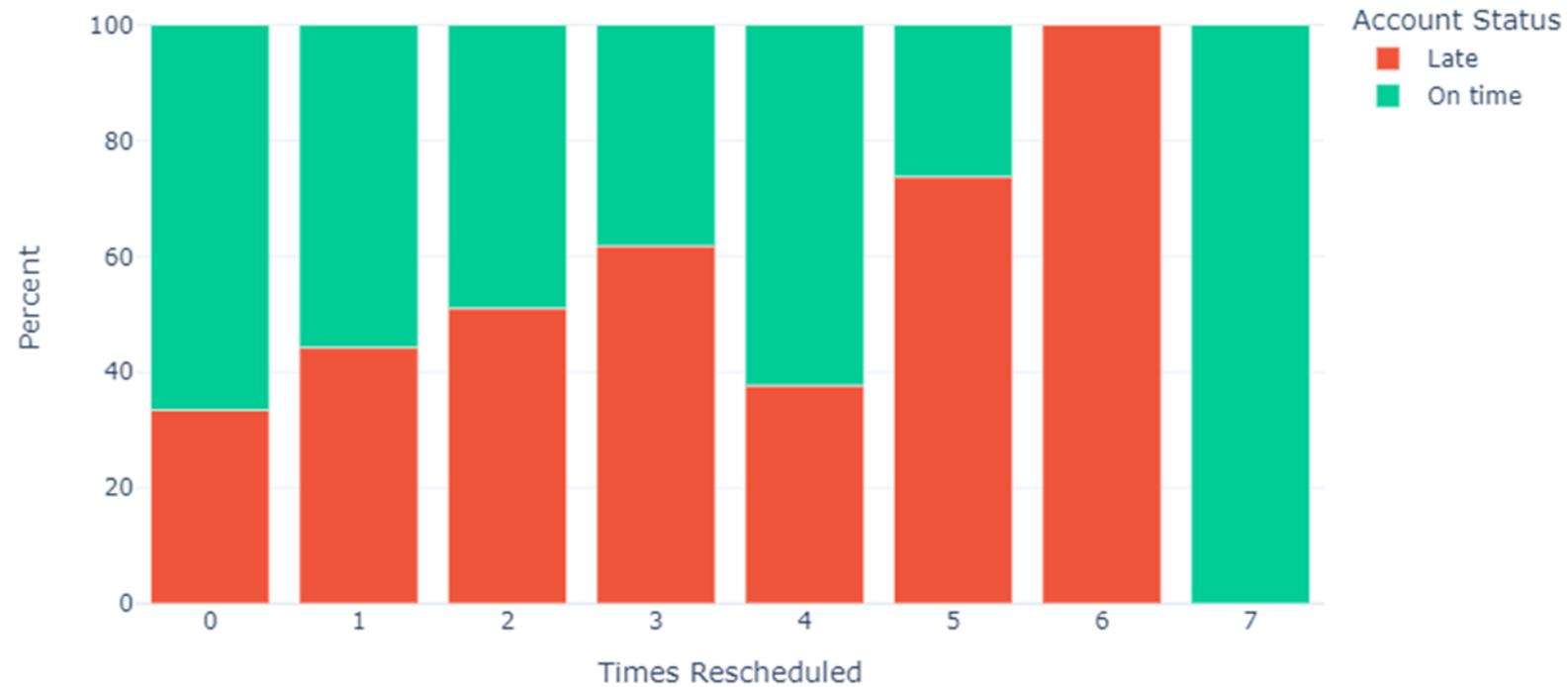
Insights

- Different Industries have a higher rate of late loans.
- Construction Companies are the ones with the highest percentage of late loans
- Average Interest rates do not balance the risk being taken based on industries

Solutions

- Rebalancing the interest rates given out to properly offset the risk of different industries
- Creating a segmented scorecard model to be able to better cater to the customer profiles across different industries.

Stricter Guidelines for Rescheduling Payments



Insights and Solutions

Insights

- Rescheduling is associated with higher probability of late payments

Solutions

- Redefine payment schedules
 - Staggered payment options
 - Require at least 50% payment before allowing rescheduling
- Close coordination with clients nearing due dates
- Impose penalties for those that reschedule within a month before due date
- Cap the rescheduling to 2 times at most