# Summary:

I selected the Prosper Loan dataset for my Data Visualization in Tableau project.  I was very familiar with the data since I had already used this dataset for the Exploratory Data Analysis In R project.  I focused my visualizations in Tableau on differences in Prosper Loans before and after 2010 where they made a strategic change to the business.

# Design:

**Visualization 1: What is prosper marketplace?**
Visual Encoding:
The reset to the business in October of 2009.  I used the color blind palette and consistently used orange for "Before 2010" and blue for "After 2010".

Implementation:
I used a calculated field for each specific time range to get the colors.  Tooltips and Aliases were updated to be simple clear.

**Visualization 2: Where did Borrowers live?**
Visual Encoding:
Percentage of Loans Originated by State.  The three states that no longer supported peer to peer lending after the business reset in 2010.

Implementation:
Orange to blue transition palette for color blind support with 5 stages to get clearer delineation. An annotation to be clear which 3 states were no longer issuing loans.  Side by side maps for before and after 2010.
A link to the prosper news story is included in the tooltips on every selection.

**Visualization 3: How much were borrowers earning?**
Visual Encoding:
Before 2010, loans did not always have borrower Income data available. Comparison of income levels by percentage of loans before and after 2010.  There was a clear rise in income levels in borrowers after 2010

Implementation:
Red and Grey from the color blind palette.   Red for the one key insight and grey for the other values.  A side by side chart before and after 2010 with % rather than count so comparisons could be made.

**Visualization 4: What were their credit scores?**
Visual Encoding:

Starting in 2010, Prosper began setting the minimum credit score for Borrowers to 650. Bucketing credit scores to standard groupings "Bad", "Poor" etc

Implementation:
Red and Grey from the color blind palette.   Red for the one key insight and grey for the other values.  A side by side chart before and after 2010 with % rather than count so comparisons could be made. Bucketing credit scores to standard groupings "Bad", "Poor" etc

**Visualization 5: How much were they borrowing?**
Visual Encoding:
The top number of loans by loan amount before and after 2010.  Top loan amount.  Maximum loan amount before 2010 and after 2010.

Implementation:
Consistent use of Orange for before 2010 and Blue from after 2010 from the color blind palette. Annotations for popular loan amounts and max loan amounts.

**Visualization 6: How much interest were Borrowers paying?**
Visual Encoding:
Percentage of loans by Borrower APR.  The significant increase in borrower APR after 2010.

Implementation:
Side by side comparison before and after 2010.  A grey palette with dark grey for the APR rates for the highest percentage of loans.

**Visualization 6: What people were borrowing money for**
Visual Encoding:
Debt consolidation after 2010.  Before 2010 a majority of loans did not have a loan category set which isn't helpful for potential lenders.

Implementation:
Side by side bar chart in descending order by the number of loans.  I used annotations for key points.  Orange and Blue from the color blind palette were used.

**Visualization 7: Were borrowers keeping up with payments?**
Visual Encoding:
Highlighted the percentage of Bad vs Good loans in two separate charts - Before 2010 and After 2010.

Implementation:
Side by side bar chart for good and bad loans with percentages labeled so the user didn't have to guess at the size of each bar and there were only 4.  Used red and grey with red being the highlight color for the key point.

**Visualization 8: Lower Monthly payments make a big difference**
Visual Encoding:
Comparing the monthly loan payment across prosper ratings clearly shows that loans in good standing have a lower median for loan payments.  Lower payments are easier for borrowers

Implementation:
Side by side Boxplots by Prosper rating and by standing.  **Unfortunately, Tableau doesn't transfer box plots correctly to view in a browser.  The key element - the box is dropped.  I decided to use it anyway because it is the right type of graph.**

# Feedback:

Original version:
https://public.tableau.com/profile/mpetersen000#!/vizhome/TableauStoryforProsperLoans/ProsperLoanStory?publish=yes

Updated with Feedback:
https://public.tableau.com/profile/mpetersen000#!/vizhome/TableauStoryforProsperLoans-Version2/ProsperLoanStory2?publish=yes

**Visualization 1: What is prosper marketplace?**
Add the text "This report provides a view of specific metrics, before and after the business reset in 2010." so it is really clear what the story is about.

**Visualization 2: Where did Borrowers live?**
Change the map background from light to black so the 3 states with no loans after 2010 stand out.  The transition color palette used grey as one of the values and "none" was blending in rather than popping out.  Great feedback and suggestion!

Keep consistent tense in story captions at the top.  Change where do borrowers live to where did borrowers live since the data is from <= 2014.

**Visualization 3: How much were borrowers earning?**
Change text for "UnAvailable to "Unavailable" in the filter.

**Visualization 4: What were their credit scores?**
Change text for "Credit Scores to "credit scores" in the caption.

**Visualization 5: How much were they borrowing?**
The reviewer did not know Tableau and didn't see the scroll bar at the bottom.  It doesn't show up until the person clicks on the chart.  It is a design element of Tableau and I could not change it.  I did update the presentation to have as little scrolling as possible.

**Visualization 6: How much interest were Borrowers paying?**
No feedback.

**Visualization 6: What people were borrowing money for**
No feedback.

**Visualization 7: Were borrowers keeping up with payments?**
No feedback.

**Visualization 8: Lower Monthly payments make a big difference**
She noticed the slide didn't render correctly from Tableau so I shared the original. Too bad about boxplots since this visualization insight was key that lower monthly payments help keep loans in good standing.

# Resources:

[Exploratory Data Analysis In R Project](#)
[https://www.prosper.com](https://www.prosper.com)
[Prosper Loans Wikipedia](#)
[Prosper News Story](#)