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Prosper Loan data: Tableau visualization
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Tableau Public Link:

https://public.tableau.com/views/LoanProsper_0/ProsperLoanData?:embed=y&display_count=yes&publish=yes

Summary:

This visualization starts by showing a time-series graphs that display a dip in Median loan amount in 2007 and a spike in debt-to-income ratio, which is due to economic factors caused by the Great Recession. The next slides help to visualize what the important factors are to receiving a low APR and a high loan amount, which are maintaining a low debt-to-income ratio, and a high Credit Score. Lastly, the story explains what employment categories and income ranges have the highest credit score.

Design:

The main factors that went into designing this story were to consider what are the most important variables that help to earn the most favorable loan terms. That is, earning the lowest APR (cost of borrowing the money) and the highest loan amount (how much money is a person trusted with). I considered Income Range, Employment Status, Debt-to-income ratio, Credit Score, Prosper Rating, and Profession as variables that would explain a low or a high APR and the amount of money that Proper would be willing to loan to a person. All of the variables that I selected are factors that are taken into consideration when giving credit to a borrower.

Initial Design:

For the first graphs I wanted to show how credit terms have fluctuated over time, thus, I felt that a time-series graph would how that best. The time-series graphs show that Median Loan amounts dipped from 2007-2009 and recovered by 2014. The map of the United States is meant to display which state on average borrow the most money and sets the stage to discover how Prosper loan borrowers can obtain the best credit terms and borrow the most money.

A bar graph is also a good choice to show having a higher Income Range (categorical variable) is a factor to obtaining a low Borrower APR.

I choose to use a line graph to visualize the effect of relationship of credit score (quantitative variable) to Borrower APR and Loan Amount. I chose to have a dual axis on this graph to help visualize both of the main advantages of having a credit score that is above 700.

Since I found that having a high credit score gives a borrower the best borrower APR I thought that it would be interesting to show what occupation has earned the highest credit score. It is interesting to see that the top ten are all degree/license professionals. I chose a bar graph since occupation is a categorical variable.

To aggregate the data and to provide a summary on the advantages of having a high Prosper Rating I chose a bar graph since the column values are categorical. This is a good visual that displays the fact that borrower with a higher prosper rating also have a lower borrower APR and lower Debt to income ratio. Color was used to distinguish between the two categories of Avg. Borrower APR and Avg. Debt-to-Income Ratio.

Feedback:

After Receiving the Udacity feedback I noticed that I have a lot of clutter with filters that made the part of my story hard to understand. I decided to remove the filters on the sheet that has the caption 'A high credit score gives you the advantage of low APR and trust with higher loan amounts.' I also decided to separate the graphs to prevent a cognitive overload and improve the data-to-ink ratio. I was told by a colleague that, 'the changes have made the story more fluid and them message better is understood.'

I have reduced the story to six slides since it was suggested by a friend that two slides seemed to convey the same information. For example, the slide that has Prosper Rating with the APR and Debt to income ratio succinctly displays the advantages of having a high prosper rating.

One of the reviewers of my visualization had the question of: 'What group of professionals has the best credit score? '. I decided to include a bar graph that shows the Median Credit Score by profession since now we know that a good credit score earns a borrower a lower APR. It is interesting to see that degree/licensed professionals have the best credit scores, perhaps, since these borrowers have higher salaries and the luxury of lower debt-to-income ratio.

The slide that contains 'Income range is a big factor in earning a low APR' was removed because it didn't convey a clear message about how income range has an effect on earning a low APR.

Resources:

www.udacity.com

<https://www.tableau.com/tableau-data-extracts-part3>

<https://www.interworks.com/blog/ccapitula/2015/05/07/tableau-essentials-calculated-fields-aggregate-functions>