

Term Deposit Customers

How to Identify Them

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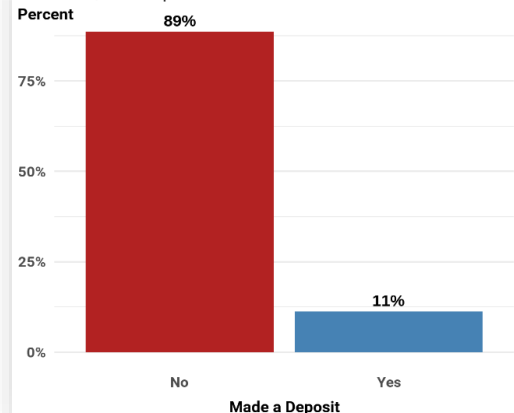
Tonatiuh de Leon

I. Amount of People That Deposited After our Marketing Campaigns

This dataset has around 37,000 rows, each representing a person. Around 11% of the people in our dataset made a deposit after our marketing campaigns. Given that we have a decent-sized dataset we can use the different characteristics of the people that deposited, as well as the state of the economy at the time, plus our actions as a bank to try to predict who from our future marketing campaigns will have the highest likelihood of depositing with us. This will offer us a better way to find people as compared to our current method which is really similar to blindly guessing. For example, if we blindly guessed from this 37k people, we'd only catch a client 11% of the times.

How Many People Made a Deposit?

Out of 37,069 respondents



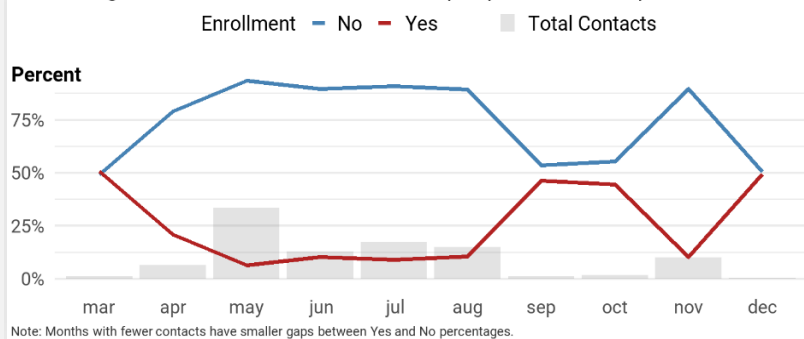
II. Success in Customer Reach per Month

Notice how some months have higher "Yes" counts than others. It is possible that this may be due to less people having been contacted in those months, however other factors may be driving the success in these months, for example taxes in Brasil having deadlines due March and April, a 13th monthly payment in December paid by companies in the country, and economic factors having had on average greater impacts during those months (periods with lower interest rates, less layoffs, and lower prices per basket).

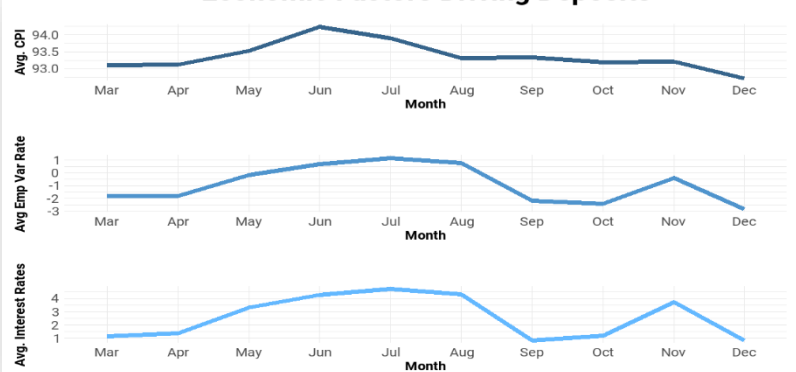
These are all things that we must consider and target when continuing our marketing campaigns and looking for clients.

Do Customers Prefer One Specific Month to Enroll?

Percentages derived from the number of people contacted per month.



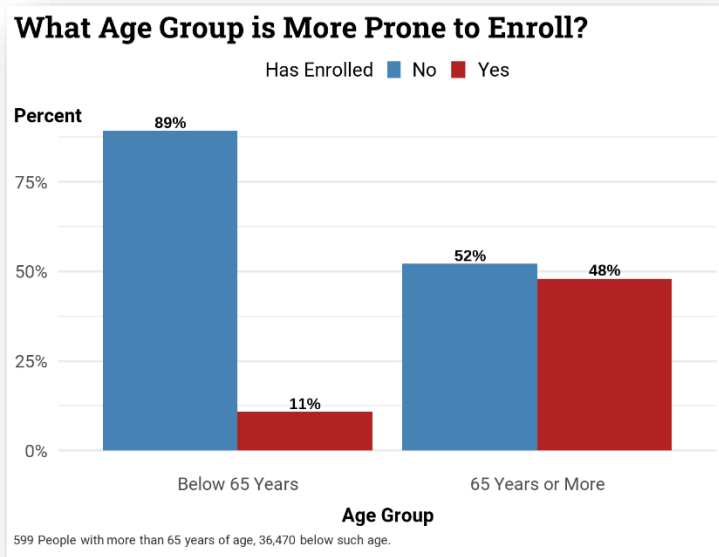
Economic Factors Driving Deposits



III. Success in Customer Reach per Age

We can also see the success of contacting older people. This might have many causes one of them being that we contacted significantly fewer older people as compared to other age groups, but there may be other underlying causes to this. Older people may want to deposit for longer terms in our banks to gain interest rates for retirement, or to save up for the rest of their families.

We also so similar results in the age group of less than 30 years. Students and young adults may be planning for retirement and be willing to deposit more often than other age groups.



IV. How to Tackle the Imbalance Problem

We can see that factors like the state of the economy, the people we contact, and their age have significant correlation to their deposit habits. Other factors such as their education and all the data available to us was used to determine who is most likely to make a deposit with us.

The results from computing our statistics show that the most important factors that lead to higher number of term deposits were economic factors such as employment numbers (also related to unemployment rate) and employment variability (related to layoffs), as well as interest rates. We should try to be very active in those periods of time and maybe try to target the population that appears to have the highest interest in depositing with us at such times (adults younger than 30, and older people 65 or more years of age)

From these results, we bring up the recommendations to continue our marketing campaigns as we've been doing, collect the same (and more data) and make our contacts without discrimination (get people from all ages, all education types, and all the time). This will help us prove this hypothesis that younger and older people are more likely to deposit with us while at the same time getting higher numbers of term deposits. We can then forecast for those people who are more prone to enroll with us and we'll get new clients around 50% of the time. This is significantly better to plain guessing with an 11% chance of finding a client as we've been doing.

V. Links to Work Notebooks and Predictions:

- Work Notebooks: [Link](#)
- Predictions: [excel](#)