**Consumer Complaints Resolution**

Consumer complaint resolution is important to any business. For particular case we have been given details consumer complaints along with whether consumer disputed with the conclusion. If we are able to predict this, consumer likely disputed can be given more attention as to how the complaints are handled as well as how to convincingly convey the final conclusions to them.

Few things after executing Python:

1. Data is cleaned before performing visualization

2. Some columns are dropped due to more than 80% of data but if handled they can be used in text classification or NLP to get inferences about it

3. It doesn’t make sense to use ZIP CODES as a numeric variable hence its not used in visualization technique

**Inferences**

1. Data is quite biased towards disputes as most of the timely response data said “Yes” but consumer disputes also said “Yes” hence some inferences may be biased towards **timely resolution** data and **consumer\_disputed**.

2. After seeing data mortgage is the only product that have highest issue of Loan modification, collection, foreclosure.

3. Complainants have been seen an increasing trend from 2011 to 2016 but in April 2016 it has reached down by 7012.

4. Although the data is biased but company most of them has satisfied as the complaints have been closed and it carries 95.6% data.

5. California has seen the highest complaint among all states.

6. Also there is 79.83% consumers are disputed and they said yes.

7. Bank of America had received the highest complaint among all companies.

8. Most of the complaints has been closed with explanations and thus receive highest priority.

9. Highest consumer complaints are received via web and thus its considered to be primary medium.

10. Interestingly Bank of America, Wells Fargo & Company and Ocwen always occupy the top three in all of the ranking and all of them exceed 10% complaints at each ranking. That result may give a warning to these company to urge them taking action to improve their Mortgage for corresponding issues.

11. As there are many null values for few columns like consumer\_consent\_provided,company\_public\_response,consumer\_complaint\_narrative hence it’s not reliable to conclude any information regarding how people are satisfied to the complaints .

**Recommendations**

1. As there are 79.83% people who don’t have dispute with company but still 20% people which are having disputes this means that there are other attribute which causes disputation. We can carry forward to understand which variable is adding more importance by doing Post-hoc analysis of ANOVA.

2. Since data is more inclined to consumer complaints and if there is a dataset cover the feedback customer didn't complain, our task will become more meaningful and its easier to get insights

4.  Ensuring consumer to handle complaints in more robust way by handling complaints across various department of banks. Robust case management tools to relay accurate and timely information across internal departments can offer vital functionality to address these concerns.

5. Also bank can use some data and analytics not only to identify the challenges and barriers customers face, but also to find ways to resolve them before they become complaints.

6. After seeing the communication gaps from the consumer many problems have been arise due to customer expectation and service quality so service quality should be more focused on.

7. Some issues like Report improperly shared by CRC, Talked to a third party about my debt, Qualify for a better loan than offeredThe review indicates that most of these delays can be attributed to inefficient procedures and resources, such as third-level employees not having direct access to necessary bank records and lacking the decision rights necessary to resolve a customer complaint, such as issuing a reimbursement.