Business understanding and Data understanding are very critical first couple of steps for any data science project. Read the information given below and also refer to the data dictionary provided separately in an excel file to build your understanding.

**Problem Statement:**

A banking institution requires actionable insights from the perspective of Mortgage-Backed Securities, Geographic Business Investment and Real Estate Analysis.

The objective is to identify white spaces/potential business in the mortgage loan. The mortgage bank would like to identify potential monthly mortgage expenses for each of region based on factors which are primarily monthly family income in a region and rented value of the real estate. Some of the regions are growing rapidly and Competitor banks are selling mortgage loans to subprime customers at a lower interest rate. The bank is strategizing for better market penetration and targeting new customers. A statistical model needs to be created to predict the potential demand in dollars amount of loan for each of the region in the USA. Also, there is a need to create a dashboard which would refresh periodically post data retrieval from the agencies. This would help to monitor the key metrics and trends.

The dashboard must demonstrate relationships and trends for the key metrics as follows: number of loans, average rental income, monthly mortgage and owner’s cost, family income vs mortgage cost comparison across different regions. The metrics are described not to limit the dashboard to these few only.

**Dataset Description**

Following are the themes the fields fall under Home Owner Costs: Sum of utilities, property taxes.

* Second Mortgage: Households with a second mortgage statistics.
* Home Equity Loan: Households with a Home equity Loan statistics.
* Debt: Households with any type of debt statistics.
* Mortgage Costs: Statistics regarding mortgage payments, home equity loans, utilities and property taxes
* Home Owner Costs: Sum of utilities, property taxes statistics
* Gross Rent: Contract rent plus the estimated average monthly cost of utility features
* Gross Rent as Percent of Income Gross rent as the percent of income very interesting
* High school Graduation: High school graduation statistics.
* Population Demographics: Population demographic statistics.
* Age Demographics: Age demographic statistics.
* Household Income: Total income of people residing in the household.
* Family Income: Total income of people related to the householder.