

Exploratory Data Analysis of Assets & Liabilities of LIC India

1 Introduction

1.1 Overview

The objective of the project is to permute the given data of Financial details of the Assets & Liabilities of the LIC, into meaningful visual representations, which summarizes the main characteristics of the data set. The Exploratory Data Analysis (EDA) outlines the major takeaway points from the dataset after several analysis operations and procedures through significant & easily understandable visualization methods. Life Insurance Corporation of India (LIC) is an Indian government owned insurance and investment corporation under the ownership of Ministry of Finance, Government of India.

1.2 Purpose

The purpose of the project is to raise awareness among key-decision making personnel around the globe, to Data Culture. "Data Culture - a shared mission to put data at the heart of every decision"

The project highlights the most influencing characteristics of the data sets which manipulate the variation of Assets & Liabilities fields. The EDA projects a seamless infographics included stories, which makes the viewer to easily comprehend the details visible on the screen.

- Summarize the Analysis on Data set into 3 key influencing points.
- Explore the capabilities of Tableau & make the most out of the data.
- Get a practical hands-on experience on the BI Tool Tableau.

2 Literature Survey

2.1 Existing Problem

Generally, if the given data set was to be analysed in the old-fashioned methods, such as using geometrical instruments to draw the graphs on a piece paper, using scales & graph papers to plot the variation of the data fields, etc. The process is not only old & slow, but it is inaccurate. Recently, there has been many software tools which help in modelling data in an understandable way.

Especially, when it comes to Financial Analysis, the production reports are required to be highly accurate and steadfast. The outputs of the process has to be extremely reliable. Because, there could be a million things to be done based on these outputs. Hence, the old approach to represent the Financial Analysis is obsolete in my opinion.

2.2 Proposed Solution

Unlike the old method, with the effective utilization of new cutting-edge technological innovative products like Tableau, we can deliberately perform the operations with high precision and reliability, with massive scalability.

The outputs from this new approach are significantly efficient in terms of reliability, cost, time, human work efforts, etc. Hence, Data Analysis using Business Intelligent tools like Tableau make the process easier and reliable. I was surprised to witness the ease-of-use of the software tool in processing the data according to the required craft.

Tableau DataViz Challenge 2021 - Project Document

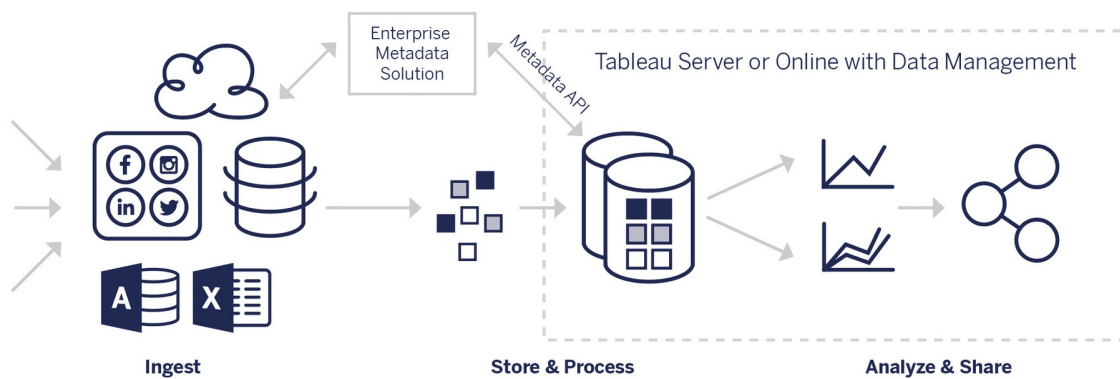
By Devavrath Tirukovela, devavrath.inc@gmail.com

3 Theoretical Analysis

3.1 Block Diagram

The Block Diagram represent the all-round perspective of the project detailing each and every component & process followed.

The flow of data through your analytics environment



3.2 Hardware/Software designing

The project is mainly processed through the softwares as detailed above. Even though the requirements of the project are very limited, I shall enlist the details.

Hardware requirements - PC/Laptop, Internet connection.

Software requirement - Supporting OS, Tableau Desktop, Tableau Public Account.

4 Experimental Investigations

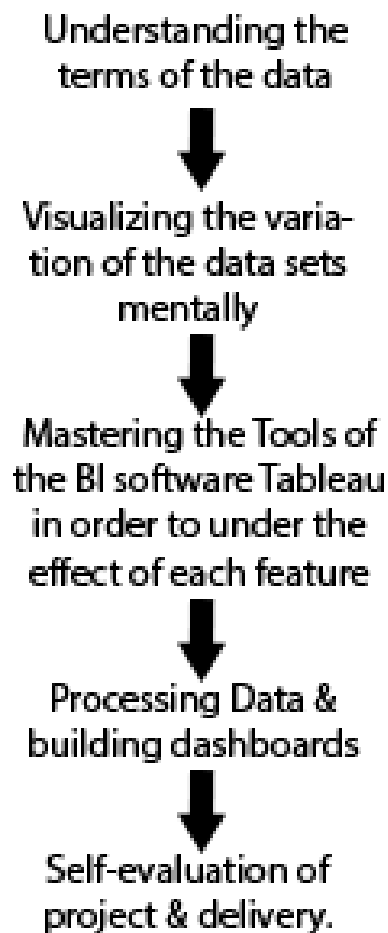
My initial goal of the project was to understand the raw data set and comprehend it completely. I believe that, "For a creator to produce something that meets the expectation level, the creator must master the knowledge & skills in his/her claimed domain."

I have spent considerable amount of time understanding the concepts, abbreviations, terms, functions, etc, of the data present in the data set. Terms like Assets, Liabilities, Life Insurance, Insurance, Default, Government securities, Funds, Agent Balances, Investments, Profit/Loss, Shares, Financial Years, Stocks, Annual reports, Valuations, Credit, Debit, Mortgage, etc.

After getting solid understanding on the dataset, I began experimenting on the dataset with the Tableau Desktop. The Tableau tutorials and elearning provided me help in pressing times. Finally, I accomplished the project with massive research beyond the appearance of the graphs and numbers.

5 Flowchart

The Flowchart describes the flow of data through the different processes and their outcomes. Flowchart gives a pictorial representation of the procedural undertakings.



The Flowchart visually represents the steps followed in accomplishing the project.

6 Result

The processing of the data has proven that, there are 3 major influencing factors that affect the variation in the Net worth. The LIC organization can focus on these proceedings to strategically analysis and make key decisions regarding their organization.

1. Assets - Govt. securities and Govt. guaranteed bonds including Treasury Bills

- ~From ₹12,83,855 Million in FY02 to ₹70,73,977 Million in FY13
- ~A record of 451% increase compared to the initial value.

2. Assets - Other investments

- ~From ₹1,85,848.7 Million in FY06 to ₹41,41,005 Million in FY13
- ~A record of 249% increase compared to the initial value.

3. Liabilities - Funds - Life insurance funds

- ~From ₹22,70,105 Million in FY02 to ₹1,30,98,498 Million in FY13
- ~A record of 477% increase compared to the initial value.

The takeaways from the project are the working capabilities of the Business Intelligence tool, Tableau, possessing enormous potential & features for Data Analysts to use. This summarized characteristical data can be used in formulating key decisions regarding the target accomplishment and objectives of the prospective organization.

7 Advantages & Disadvantages

The project is a evidence of the Data Visualization methods which the decision-making process for organizations easier, but we still have few drawbacks. Let's evaluate.

Advantages	Disadvantages
<ul style="list-style-type: none">• Easy data processing• Visualizations provide far better info than text or numbers• Less creating time & even less studying time for the produced content.• The tool has enormous capabilities in terms of data modelling.• The tool has plenty of features.	<ul style="list-style-type: none">• Data sets must be detailed• The visualizations must be accurate & reliable• The craft requires precise data sets & handling capabilities of the creator.• A good expertise on the tool should be achieved.• The price of the tool is relatively high.

8 Applications

There are wide variety of application for such a tool like this.

- Business Intelligence
- Data Visualization
- Data Collaboration
- Data Blending
- Real-time data analysis
- Query translation into visualization
- To import large size of data
- To create no-code data queries
- To manage large size metadata

The project provides huge accessibility to opportunities where the applications are limitless using the tool, which is the fastest growing data visualization tool on the market.

9 Conclusion

The project summarizes that, the 3 key points are major influencing factors throughout the given period of time, on the Assets & Liabilities of the LIC.

The project provides detailed procedure of the project, since the inception of the investigation regarding the terms of the data set and the final significant performance indicator. The process is an evidence to the question of reliable decision-making from data. The features of the Tableau Desktop does not limit one from accessing data sets around the world and make the most of it.

Tableau helps in simplifying raw data in a very easily understandable format. Tableau helps create the data that can be understood by professionals at any level in an organization. It also allows non-technical users to create customized dashboards.

10 Future Scope

The use of Data Analytics will yield in selection of better decisions which are good for business. People do not yet understand the potential of this field right now. It is going to be part of every industry ever thrived.

The impossible will become possible, and this may well lead to an autonomous decision-making process. Data analytics is expected to radically change the way we live and do business in the future. Already today we use the analytics in our technology devices, for many decisions in our lives.

Tableau is emerging as one of the hottest trends in business intelligence in 2020. The data visualization tool has been gaining popularity in companies big and small, and hence, Tableau careers are uber-in. Looking at google trends, it seems there can be no better time than “now” to get certified in Tableau and build a career in Business Intelligence and Data Analytics.

Apart from its high visualization functionality, users rate its overall performance as robust and reliable. The tool also operates fast even on big data, which makes its powerful performance an important point in the list of the advantages of Tableau.

Companies in the future does not have to depend on external data professionals in order to make better decisions for their company. They can process, analyze & enhance data to learn what is good and bad for the organization. The scope is endless.