Detailed Project Report (DPR) Analyze Debt Statistics

Document Version Control

Date Issue	Version	Description	Author
09/03/2023	1	Initial DPR - V 1.0	Abdul Jaweed
20/06/2023	2	Initial DPR - V 2.0	Abdul Jaweed Prateek Kumar Chaurasia

Objective

The objective of the project is to build an dashboard that will help to understand the International Debt Statistics data and its pattern.

Architecture

RAW Dataset

Exploratory
Data Analysis

Data
Preprocessing

Dashboard

About the Project

It's not that we humans only take debts to manage our necessities. A country may also take debt to manage its economy. For example, infrastructure spending is one costly ingredient required for a country's citizens to lead comfortable lives. The World Bank is the organization that provides debt to countries.

In this project, you are going to analyze international debt data collected by The World Bank. The data-set contains information about the amount of debt (in USD) owed by developing countries across several categories.

Dataset Information

The International Debt Statistics dataset contains a wide range of external debt data for countries around the world, including both developing and high-income countries. The dataset is maintained and updated by the World Bank, and it covers a time period of more than 50 years, with data available from 1970 to the present.

The dataset includes information on various aspects of external debt, such as the amount of debt owed by a country to external creditors, the composition of debt by type and creditor, debt service payments, and debt ratios. It also includes information on debt sustainability, debt restructuring, and debt relief initiatives.

Dataset Information

The data are sourced from a variety of international organizations, including the World Bank, the International Monetary Fund (IMF), and the Organization for Economic Cooperation and Development (OECD), as well as from national statistical agencies and central banks.

The dataset is available in several formats, including Excel, CSV, and XML, and it can be accessed and downloaded through the World Bank's website. The dataset is regularly updated with new data as it becomes available, and it is widely used by researchers, policymakers, and analysts to analyze and monitor external debt trends and issues.

Attribute Information

The International Debt Statistics dataset includes a range of attributes related to external debt for countries around the world. Some of the key attributes included in the dataset are:

Country: The name of the country for which the external debt data is reported.

Year: The year for which the external debt data is reported.

External Debt Stock: The amount of external debt owed by the country to external creditors at the end of the year.

Attribute Information

Long-term Debt Stock: The amount of long-term external debt owed by the country to external creditors at the end of the year.

Short-term Debt Stock: The amount of short-term external debt owed by the country to external creditors at the end of the year.

Debt Service Payments: The amount of debt payments made by the country during the year, including both principal and interest payments.

Debt Composition: The breakdown of external debt by type, such as bonds, loans, and trade credits.

Attribute Information

Creditor Composition: The breakdown of external debt by creditor type, such as multilateral organizations, bilateral lenders, and commercial banks.

Debt-to-GDP Ratio: The ratio of external debt stock to the country's gross domestic product (GDP), which is often used as an indicator of debt sustainability.

These attributes provide a detailed picture of a country's external debt situation, including the amount and composition of debt, the sources of financing, and the sustainability of the debt. They can be used to analyze and monitor external debt trends, assess debt sustainability, and inform policy decisions related to debt management and restructuring.

World Bank

Country Name	Sum of Debt
China	$285,793,494,734.2
Brazil	$280,623,966,140.8
South Asia	$247,608,723,990.6001
Russian Federation	$191,289,057,259.2
IDA only	$179,048,127,207.3
Turkey	$151,125,758,035.3
India	$133,627,060,958.4
Mexico	$124,596,786,217.3
Indonesia	$113,435,696,693.5
Cameroon	$86,491,206,346.6
Angola	$71,368,842,500.1
Kazakhstan	$70,159,942,693.9
Egypt, Arab Rep.	$62,077,727,756.9
Vietnam	$45,851,299,896.09999
Colombia	$45,430,117,605.2
Pakistan	$45,139,315,398.50001
Romania	$42,813,979,498.2
South Africa	$36,703,940,742.5
Venezuela, RB	$36,048,260,107.7
Bangladesh	$35,045,492,840.50001
Lebanon	$29,697,872,618.8
Ukraine	$28,490,304,100.3
Sri Lanka	$26,764,495,009.4
Philippines	$25,151,706,785
Peru	$24,091,780,491.9
Belarus	$23,273,359,790.9
Total	**$2,866,853,494,883.9**

Number Of Distinct Countries

124

Number of distinct countries

Total Debt Owed By Countries

$3.1T

Total Debt

iNeuron

Further Analysis

Distinct Debt Indicator Names

Indicator Name

PPG, bilateral (AMT, current US$)
PPG, bilateral (DIS, current US$)
PPG, bilateral (INT, current US$)
PPG, bonds (AMT, current US$)
PPG, bonds (INT, current US$)
PPG, commercial banks (AMT, current US$)
PPG, commercial banks (DIS, current US$)
PPG, commercial banks (INT, current US$)
PPG, multilateral (AMT, current US$)
PPG, multilateral (DIS, current US$)
PPG, multilateral (INT, current US$)
PPG, official creditors (AMT, current US$)
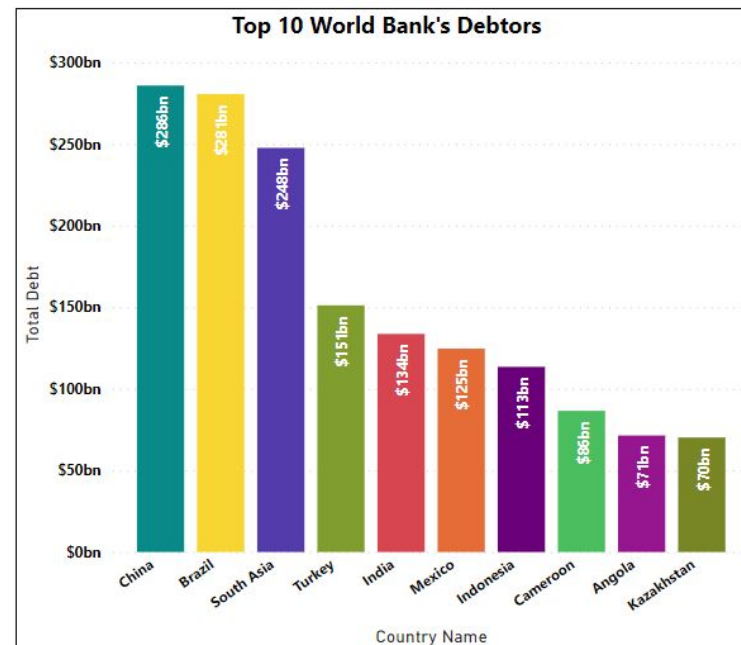PPG, official creditors (DIS, current US$)

Top 10 World Bank's Debtors

Country	Total Debt
China	$286bn
Brazil	$281bn
South Asia	$248bn
Turkey	$151bn
India	$134bn
Mexico	$125bn
Indonesia	$113bn
Cameroon	$86bn
Angola	$71bn
Kazakhstan	$70bn

Average Amount Of Debt Across Indicators

Indicator Code	Debt
DT.AMT.DLXF.CD	$5,904,868,401
DT.AMT.DPNG.CD	$5,161,194,334
DT.DIS.DLXF.CD	$2,152,041,217
DT.DIS.OFFT.CD	$1,958,983,453
DT.AMT.PRVT.CD	$1,803,694,102
DT.INT.DLXF.CD	$1,644,024,068
DT.DIS.BLAT.CD	$1,223,139,290
DT.INT.DPNG.CD	$1,220,410,844
DT.AMT.OFFT.CD	$1,191,187,963
DT.AMT.PBND.CD	$1,082,623,948
DT.DIS.MLAT.CD	$839,843,679
DT.INT.PBND.CD	$804,733,377
DT.AMT.PROP.CD	$746,888,800
DT.AMT.PCBK.CD	$734,868,743
DT.INT.PRVT.CD	$719,740,180
DT.AMT.BLAT.CD	$712,619,635
DT.AMT.MLAT.CD	$490,062,193
DT.DIS.PRVT.CD	$311,323,265
DT.INT.OFFT.CD	$297,677,339
DT.DIS.PCBK.CD	$293,305,196
DT.INT.BLAT.CD	$164,093,286
DT.INT.PCBK.CD	$156,647,613
DT.INT.MLAT.CD	$136,230,719
DT.DIS.PROP.CD	$81,135,161
DT.INT.PROP.CD	$34,250,651
Total	**$1,306,633,215**

Highest Amount of Principal Repayments

Country Name	Total Debt
Afghanistan	$680,943,227.1
Albania	$3,217,067,103.8
Algeria	$522,973,067.0
Angola	$71,368,842,500.1
Armenia	$3,834,876,451.5
Azerbaijan	$8,753,732,947.2
Bangladesh	$35,045,492,840.5
Belarus	$23,273,359,790.9
Belize	$607,062,668.8
Benin	$2,535,179,229.3
Bhutan	$1,692,237,860.4
Bolivia	$7,889,146,776.8
Bosnia and Herzegovina	$6,685,436,904.6
Botswana	$646,085,255.7
Brazil	$280,623,966,140.8
Bulgaria	$6,369,101,653.9
Burkina Faso	$2,419,206,260.7
Burundi	$281,989,671.6
Cabo Verde	$596,636,725.5
Cambodia	$4,229,626,566.6
Cameroon	$86,491,206,346.6
Central African Republic	$201,527,131.2
Chad	$1,575,430,132.8
China	$285,793,494,734.2
Colombia	$45,430,117,605.2
Comoros	$57,568,483.2
Congo, Dem. Rep.	$2,220,101,510.6
Total	**$3,079,734,487,675.8**

Note

We've excluded some of the rows which are the collection of small countries (Least Developed Countries) given that there's no info about the name of countries in the category. But as per analysis, We can conclude which countries going through Economic Crisis or Maybe the demand for loan is affected by the Development Projects. For concluding the report we're taking you to the conclusion table.

Most Common Debt Indicators

Indicator Code	Count of Indicator Code
DT.AMT.BLAT.CD	122
DT.AMT.DLXF.CD	124
DT.AMT.DPNG.CD	79
DT.AMT.MLAT.CD	124
DT.AMT.OFFT.CD	124
DT.AMT.PBND.CD	69
DT.AMT.PCBK.CD	84
DT.AMT.PROP.CD	54
DT.AMT.PRVT.CD	98
DT.DIS.BLAT.CD	113
DT.DIS.DLXF.CD	123
DT.DIS.MLAT.CD	120
DT.DIS.OFFT.CD	122
DT.DIS.PCBK.CD	51
DT.DIS.PROP.CD	19
DT.DIS.PRVT.CD	53
DT.INT.BLAT.CD	122
DT.INT.DLXF.CD	124
DT.INT.DPNG.CD	79
DT.INT.MLAT.CD	124
DT.INT.OFFT.CD	124
DT.INT.PBND.CD	69
DT.INT.PCBK.CD	84
DT.INT.PROP.CD	54
DT.INT.PRVT.CD	98
Total	**2357**

Conclusion Table

Debt by Country Name and Country Code

Countr... ● AFG ● AGO ● ALB ● ARM ▶

© 2023 TomTom. © 2022 Microsoft Corporation. Terms
Microsoft Bing   © OpenStreetMap
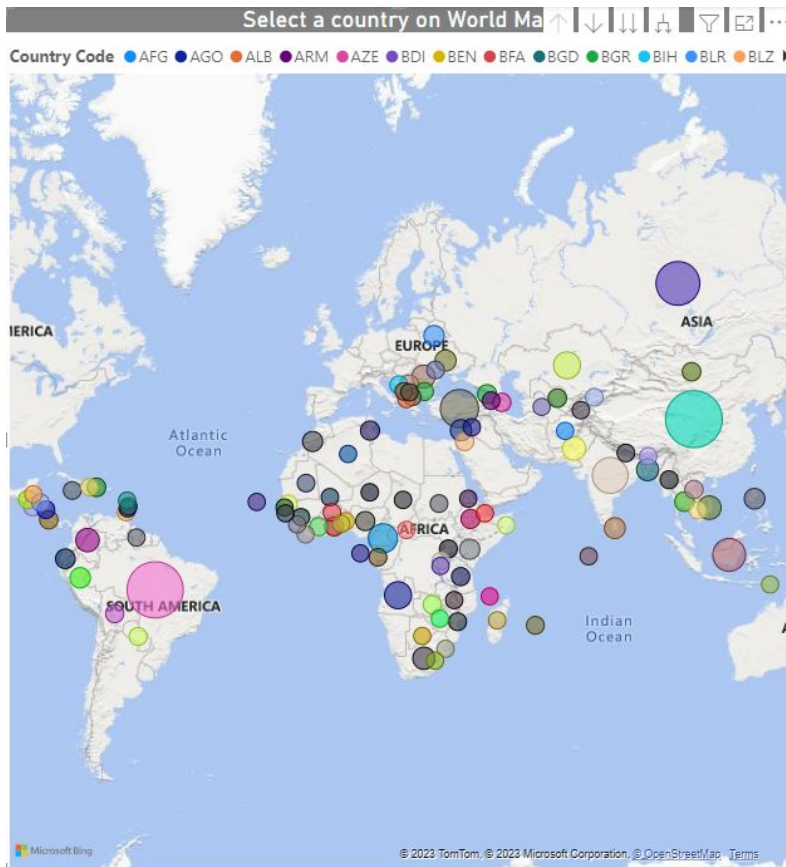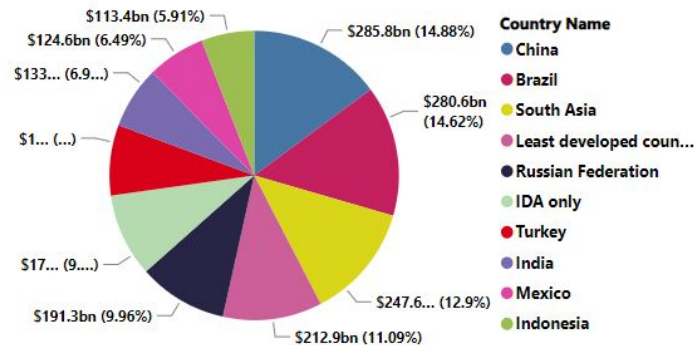
Q & A

Q1) What is the size of your data ?

The size of the data in terms of MB is 6.07, with with 71694 rows and 5 columns.

Q2) What are the data type ?

The columns consisted of both String and Integer values.

Q & A

Q3) What were the libraries that you used Python ?

I used Pandas, Matplotlib, Seaborn, Plotly and Streamlit.

Q4) What's the complete flow you followed in this Project ?

We had fetch the data using The World Bank API.

Q & A

Q5) Where did you get the data ?

The data was provided by The World Bank.

https://datacatalog.worldbank.org/search/dataset/0038015

THANK YOU