World bank debt stats summary

The World Bank's International Debt Data

The data-set contains information about the amount of debt (in USD) owed by developing countries across several categories. We are going to find the answers to questions like:

- What is the total amount of debt that is owed by the countries listed in the data set?
- Which country owns the maximum amount of debt and what does that amount look like?
- What is the average amount of debt owed by countries across different debt indicators?

1. Overview of the 'international_debt' Table

Let's first SELECT *all* of the columns from the international_debt table. Also, we'll limit the output to the first ten rows to keep the output clean.

```
SELECT * FROM international_debt limit 10;
```

2. Finding the Number of Distinct Countries

From the first ten rows, we can see the amount of debt owed by *Afghanistan* in the different debt indicators. But we do not know the number of different countries we have on the table. There are repetitions in the country names because a country is most likely to have debt in more than one debt indicator.

Without a count of unique countries, we will not be able to perform our statistical analyses holistically. In this section, we are going to extract the number of unique countries present in the table.

```
SELECT COUNT(DISTINCT country_name) AS total_num_countries
FROM international_debt;
```

3. Finding Out the Distinct Debt Indicators

We can see there are a total of 124 countries present on the table. As we saw in the first section, there is a column called indicator_name that briefly specifies the purpose of taking the debt. Just beside that column, there is another column called indicator_code which symbolizes the category

of these debts. Knowing about these various debt indicators will help us to understand the areas in which a country can possibly be indebted to.

```
SELECT DISTINCT indicator_code AS debt_indicators
FROM international_debt
ORDER  BY  debt_indicators;
```

4. Totaling the Amount of Debt Owed by the Countries

As mentioned earlier, the financial debt of a particular country represents its economic state. But if we were to project this on an overall global scale, how will we approach it?

Let's switch gears from the debt indicators now and find out the total amount of debt (in USD) that is owed by the different countries. This will give us a sense of how the overall economy of the entire world is holding up.

```
SELECT SUM(debt) as total_debt_USD
FROM international_debt;
```

5. Country with the Highest Debt

Now that we have the exact total of the amounts of debt owed by several countries, let's now find out the country that owns the highest amount of debt along with the amount. **Note** that this debt is the sum of different debts owed by a country across several categories. This will help to understand more about the country in terms of its socioeconomic scenarios. We can also find out the category in which the country owns its highest debt. But we will leave that for now.

```
SELECT  country_name,
        ROUND(total_debt / 1000000000, 2) AS total_debt_Billion_USD
FROM (
    SELECT  country_name,
            SUM(debt) AS total_debt,
            RANK() OVER (ORDER BY SUM(debt) DESC) AS rnk
    FROM international_debt
    GROUP BY country_name
) AS ranked_debt
WHERE rnk = 1;
```

6. Average Amount of Debt Across Indicators

So, it was *China*.

We now have a brief overview of the data-set and a few of its summary statistics. We already have an idea of the different debt indicators in which the countries owe their debts. We can dig even further to find out on an average how much debt a country owes? This will give us a better sense of the distribution of the amount of debt across different indicator

```
SELECT indicator_code, indicator_name, ROUND(AVG(debt)/1000000000,2) as
    avg_debt_Billion_USD
  FROM international_debt
GROUP BY indicator_code, indicator_name
ORDER BY avg_debt_Billion_USD DESC;
```

7. The Highest Amount of Principal Repayments

We can see that the indicator DT.AMT.DLXF.CD tops the chart of average debt. This category includes repayment of long term debts. Countries take on long-term debt to acquire immediate capital. .

An interesting observation in the above finding is that there is a huge difference in the amounts of the indicators after the second one. This indicates that the first two indicators might be the most severe categories in which the countries owe their debts.

We can investigate this a bit more so as to find out which countries owe the highest amount of debt in the category of long term debts (DT.AMT.DLXF.CD). Since not all the countries suffer from the same kind of economic disturbances, this finding will allow us to understand that particular country's economic condition a bit more specifically.

```
SELECT country_name,
       ROUND(debt / 1000000000, 2) AS principal_repayment_debt_Billion_USD
FROM (
    SELECT country_name, debt,
           RANK() OVER (ORDER BY debt DESC) AS rnk
    FROM international_debt
    WHERE indicator_code = 'DT.AMT.DLXF.CD'
) AS ranked_data
WHERE rnk <= 5
ORDER BY debt DESC;
```

8. The Most Common Debt Indicator

China has the highest amount of debt in the long-term debt (DT.AMT.DLXF.CD) category. This is verified by The World Bank. It is often a good idea to verify our analyses like this since it validates that our investigations are correct.

We saw that long-term debt is the topmost category when it comes to the average amount of debt. But is it the most common indicator in which the countries owe their debt? Let's find

```
SELECT indicator_code, country_count
FROM (
    SELECT indicator_code,
           COUNT(*) AS country_count,
           RANK() OVER (ORDER BY COUNT(*) DESC) AS rnk
    FROM international_debt
    GROUP BY indicator_code
) AS ranked_indicators
WHERE rnk = 1;
```

9. Other Viable Debt Issues and Conclusion

There are a total of six debt indicators in which all the countries listed in our dataset have taken debt. The indicator DT.AMT.DLXF.CD is also there in the list. So, this gives us a clue that all these countries are suffering from a common economic issue. But that is not the end of the story, a part of the story rather.

Let's change tracks from debt_indicators now and focus on the amount of debt again. Let's find out the maximum amount of debt across the indicators along with the respective country names. With this, we will be in a position to identify the other plausible economic issues a country might be going through. By the end of this section, we will have found out the debt indicators in which a country owes its highest debt.

```
WITH max_debt_country AS
(
    SELECT country_name, MAX(debt) as max_debt
    FROM international_debt
    GROUP BY country_name
)
SELECT i.country_name, i.indicator_code, ROUND(i.debt/1000000000,2) AS
    debt_Billion_USD
FROM international_debt i
INNER JOIN max_debt_country
ON i.country_name = max_debt_country.country_name
AND max_debt_country.max_debt = i.debt
ORDER BY debt_Billion_USD DESC;
```