DSC 540

Term Project – Milestone 1

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For my term project this semester, I have chosen U.S. debt. I find this subject fascinating for a few reasons. One, this project discusses money, which is relatable to my work as I am in a sales organization. Secondly, debt is familiar to many of us (especially a college student) and this shows that impact on a much larger scale. Third, the economy and the government are the top of mind and news these days and I am curious to learn more about these datasets as well as present my findings.

I have three data sources for this project which I located on fiscaldata.treasury.gov/.

1. CSV File, titled “Debt to the Penny”:

<https://fiscaldata.treasury.gov/datasets/debt-to-the-penny/debt-to-the-penny>

This dataset includes data from 4/1/1993 – 1/14/2021 and lists a daily total of outstanding public debt. Debt is comprised of debt held by the public, intragovernmental holdings, and total public debt outstanding.

There are 11 variables and include:

* Record Date – date that data was reported.
* Debt Held by the Public – includes all federal debt.
* Intragovernmental Holdings – GAS (Government Account Series) & FFB (Federal Financing Bank) securities.
* Total Public Debt Outstanding
* Source Line Number
* Fiscal Year
* Fiscal Quarter Number
* Calendar Year
* Calendar Quarter Number
* Calendar Month Number
* Calendar Day Number

1. Website/table file titled, “Daily Treasury Statement (DTS)” – Operating Cash Balance:

<https://fiscaldata.treasury.gov/datasets/daily-treasury-statement/operating-cash-balance>

This dataset includes data from 10/3/2005 – 1/14/2021.The Operating Cash Balance table provides a balance of the Treasury General Account.

There are 16 variables and include:

* Record Date
* Type of Account
* Closing Balance Today
* Opening Balance Today
* Opening Balance This Month
* Opening Balance This Fiscal Year
* Table Number
* Table Name
* Sub Table Name
* Source Line Number
* Fiscal Year
* Fiscal Quarter Number
* Calendar Year
* Calendar Quarter Number
* Calendar Month Number
* Calendar Day Number

1. API titled, “Interest Expense on the Debt Outstanding”:

https://www.transparency.treasury.gov/services/api/fiscal\_service/v2/accounting/od/interest\_expense

<https://fiscaldata.treasury.gov/datasets/interest-expense-debt-outstanding/interest-expense-on-the-debt-outstanding>

This dataset includes data from 5/31/2010 – 10/31/2020. It shows the interest expense values by month and fiscal year.

There are 13 variables and include:

* Record Date
* Expense Category Description
* Expense Group Description
* Expense Type Description
* Current Month Expense Amount
* Fiscal Year to Date Expense Amount
* Source Line Number
* Fiscal Year
* Fiscal Quarter Number
* Calendar Year
* Calendar Quarter Number
* Calendar Month Number
* Calendar Day Number

The relationship amongst all three datasets is time. I have a few options. I can use fiscal year, fiscal quarter, calendar year or calendar quarter. I plan to use fiscal year as the data I am using for the API piece ends on October 31, 2020. To achieve all milestones for this project, I plan to use data that covers an approximate five-year fiscal period which provides most of the time during our current presidential administration. By joining the .csv file, table, and API data, it will show the operating cash balance versus the total debt owed and outstanding interest expenses. I will be removing rows of data since I am narrowing the time for this project. I will also be removing variables, so the data is all relevant. There will be data cleaning as I have already noticed some null values in various cells. Finally, once I have the data merged, I will be able to provide the visualization requirements to show the results.

Overall, the first milestone of this project was indeed the most difficult. However, I am excited to dive into the data and complete the next milestones! With previous experience on school projects, I have learned that an initial conception for a project sometimes requires adaptability. Once I start working on this project, I may discover something that I did not think of during this milestone. I realize this is all part of the learning journey.