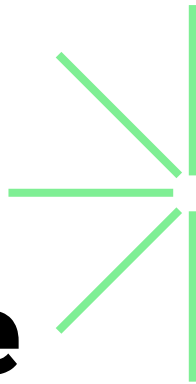


Exploring State Of Maryland Payment Data



OUR TEAM



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Did You Know?

The State of Maryland launched the Maryland Transparency Portal in 2018 after receiving a “D+” in a PIRG report on provision of online government spending data

“*One of our greatest challenges has been to find a way to convey information about the state budget that makes it easy for our citizens to understand where tax revenue is coming from, where it’s going, and why*”

- Larry Hogan, Governor of Maryland



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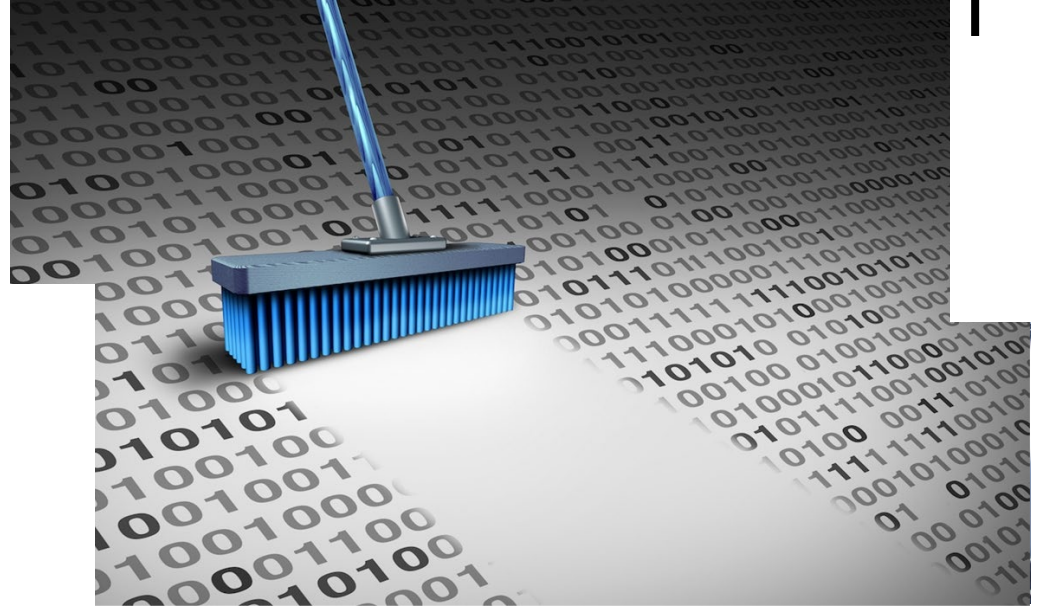
When did the data tell us
about payments in the state
of Maryland

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What type of data do we
want to see more of in the
future for better insights

01.

OUR Preparation



Data Description

Fiscal Year (Number): Describes the Year in which the funding of the entry occurred.

Agency Name (String): The name of the state agency that approved the funding

Vendor Name (String): The name of the vendor to how the funds have be allocated to.

Vendor Zip (Number): Vendor Location Pincode.

Amount (Number): Payment value of the transaction

Fiscal Period (Number): The duration when the funds were dispersed in years

Date (Date): Describes the Date in which the funding of the entry occurred.

Category (String): Code for agency



Data Cleansing Using Pandas & Excel

- Reduced the size of the dataset from 8 columns and 316,907 rows to **6 columns and 306,890 rows of data.**
- Got rid of the unnecessary columns such as **Date** and **Category**.
- Filtered out the data from the year 2023 since a lot of it was incomplete.
- Gave common names to agencies or vendors in instances where the same agency or vendor had different names in different years.
 - ◆ For example:
 - Maryland Department of Health to **Maryland Department of Health, MDH**
 - State Department of Education to **Maryland State Department of Education**
- Joined zip codes in data set to states to understand funding distribution across 53 regions.

Preprocessing :

Changing the agency names for health :

```
mask = df1['Agency Name'].str.contains('health', case=False, na=False)|  
df1['Agency Name'][mask].value_counts()
```

```
3]: MARYLAND DEPARTMENT OF HEALTH, MDH      25856  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE    11708  
MARYLAND DEPARTMENT OF HEALTH              2660  
MARYLAND HEALTH BENEFIT EXCHANGE           762  
DEPT OF HEALTH & MENTAL HYGIENE-CAPITAL     165  
MARYLAND HEALTH INSURANCE PLAN             130  
Name: Agency Name, dtype: int64
```

```
df2=df1.copy()
```

```
df2['Agency Name']=df2['Agency Name'].str.replace(r'(^.*HEALTH.*$)', 'MARYLAND DEPARTMENT OF HEALTH, MDH')
```

Zip to State Mapping in Excel

Get & Transform Data						Queries & Connections		Data Types	
Get Data	Refresh All	Properties	Edit Links	Queries & Connections	Properties	Currencies	Geography		
A2						21401			
	A	B	C	D	E				
1	Vendor, Arkansas								
2	21401	Maryland							
3	21093	Maryland							
4	21078	Maryland							
5	20785	Maryland							
6	20721	Maryland							
7	21206	Maryland							
8	20743	Maryland							
9	21230	Maryland							
10	03820	New Hampshire							
11	21740	Maryland							

02.

OUR Tools

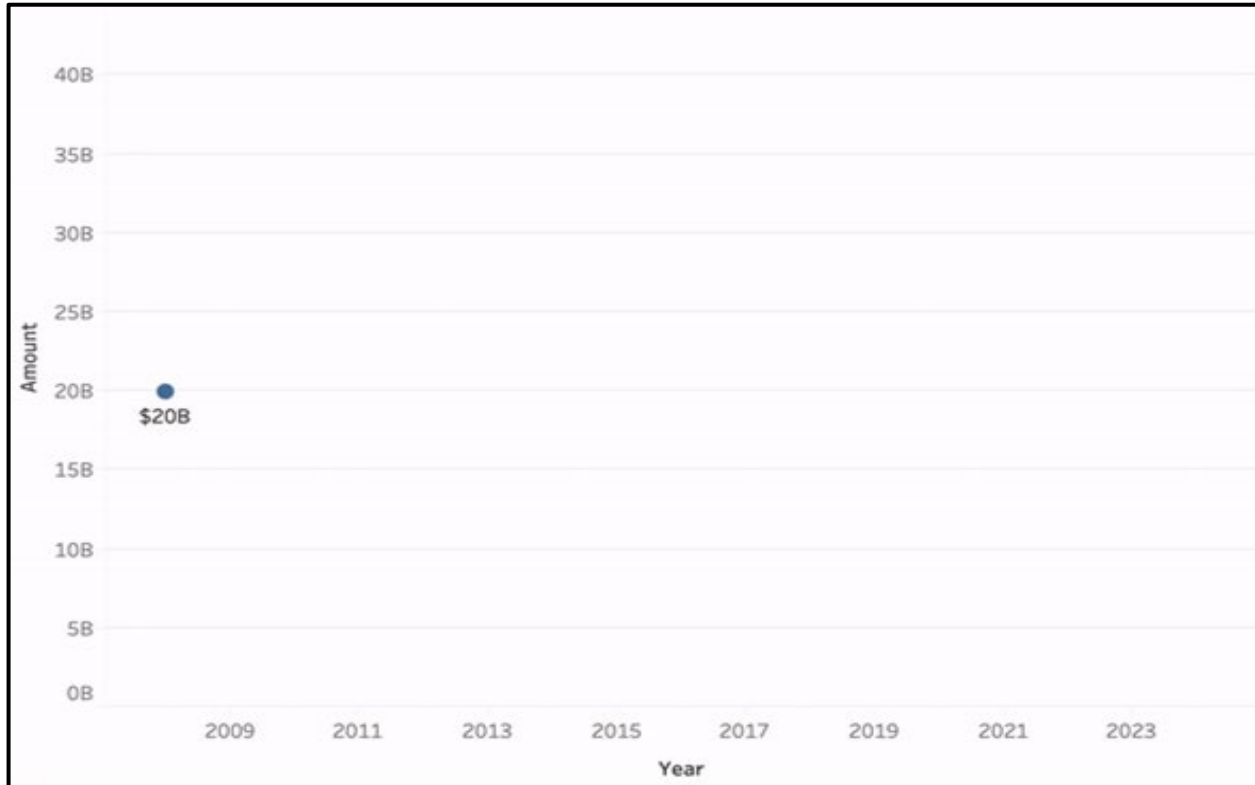


03.

OUR Findings

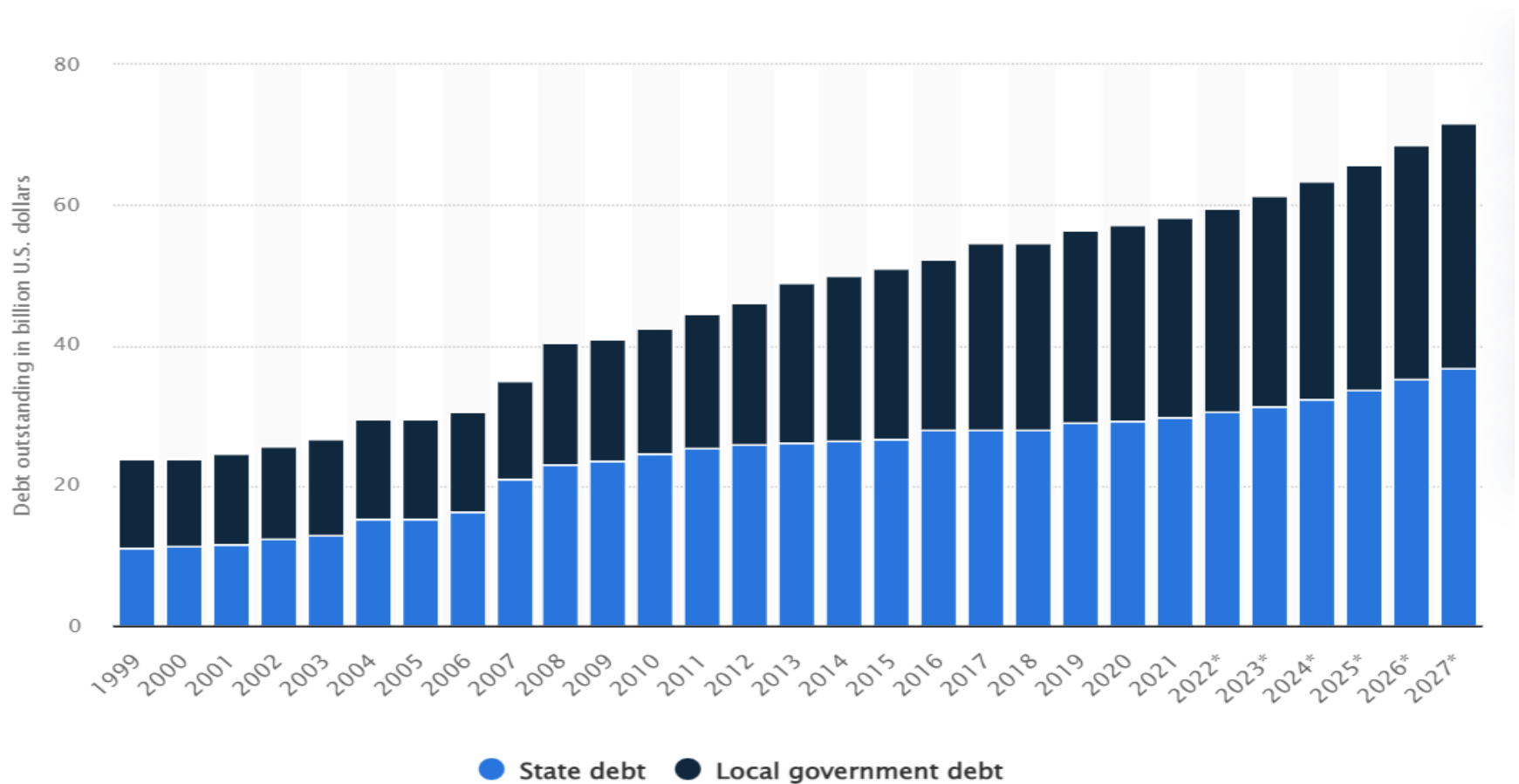


Payments have been trending upwards since 2009. By the end of fiscal year 2024, the total payment amount is expected to be \$39 Billion.



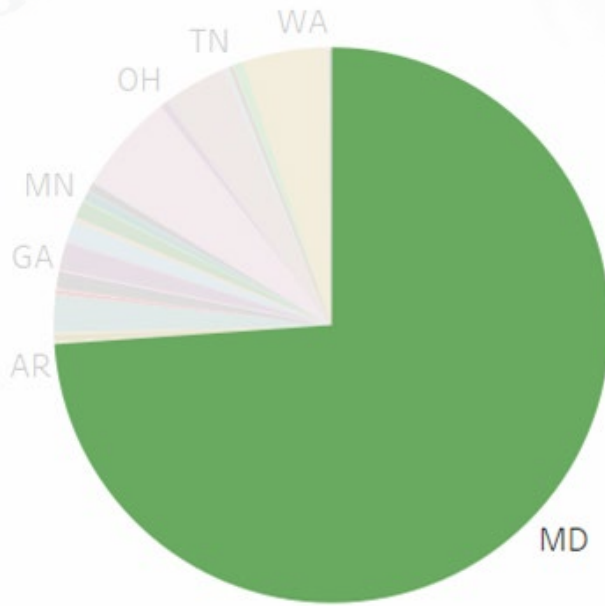


Maryland state deficit over the years



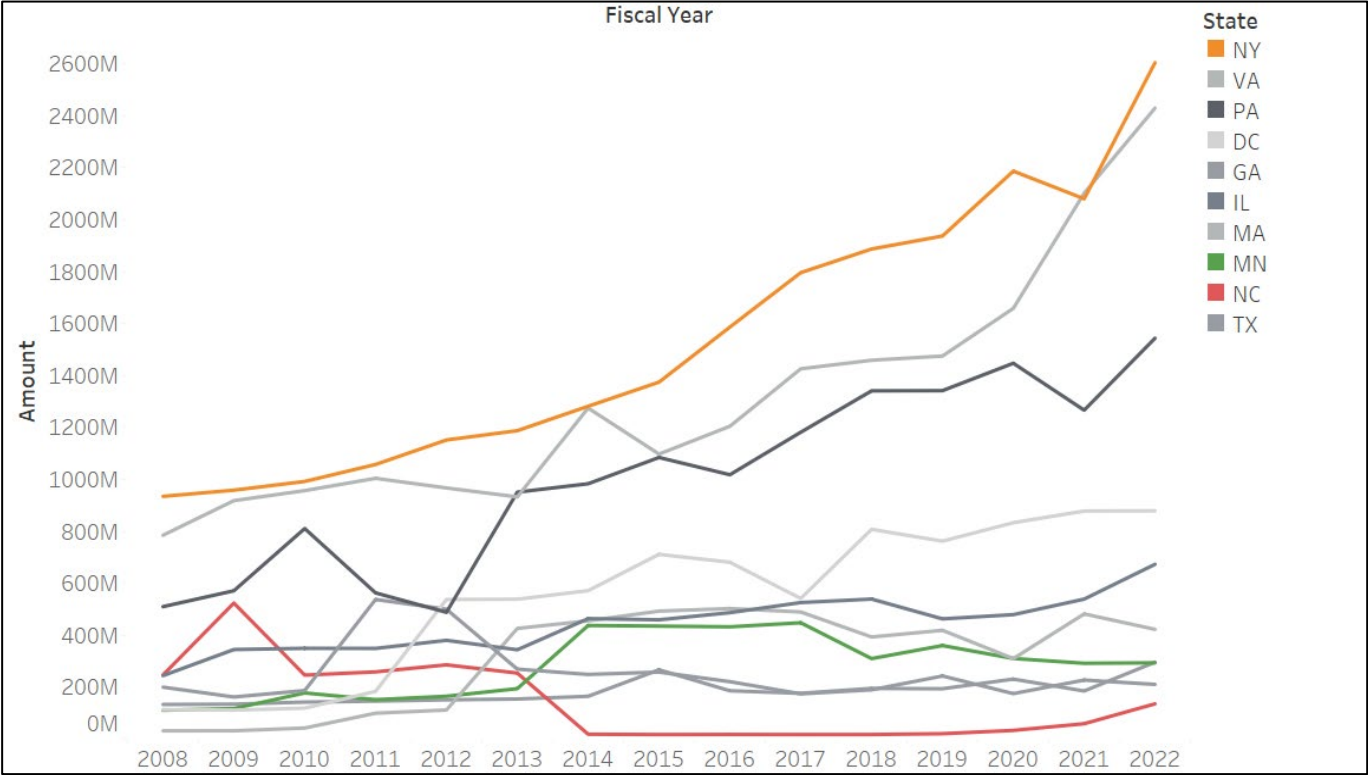
Maryland State Vendor distribution spreads all across USA

MD State agency vendors spread across 53 regions, which include all the 50 states of US along with Washington DC, Puerto Rico & Virgin Islands.



On an average, Maryland State Agencies spend **73.8%** of their funds on Local Vendors, which is around **\$20 Billion**.

New York, Virginia, Pennsylvania, and Washington DC follow Maryland in the % total fund utilization





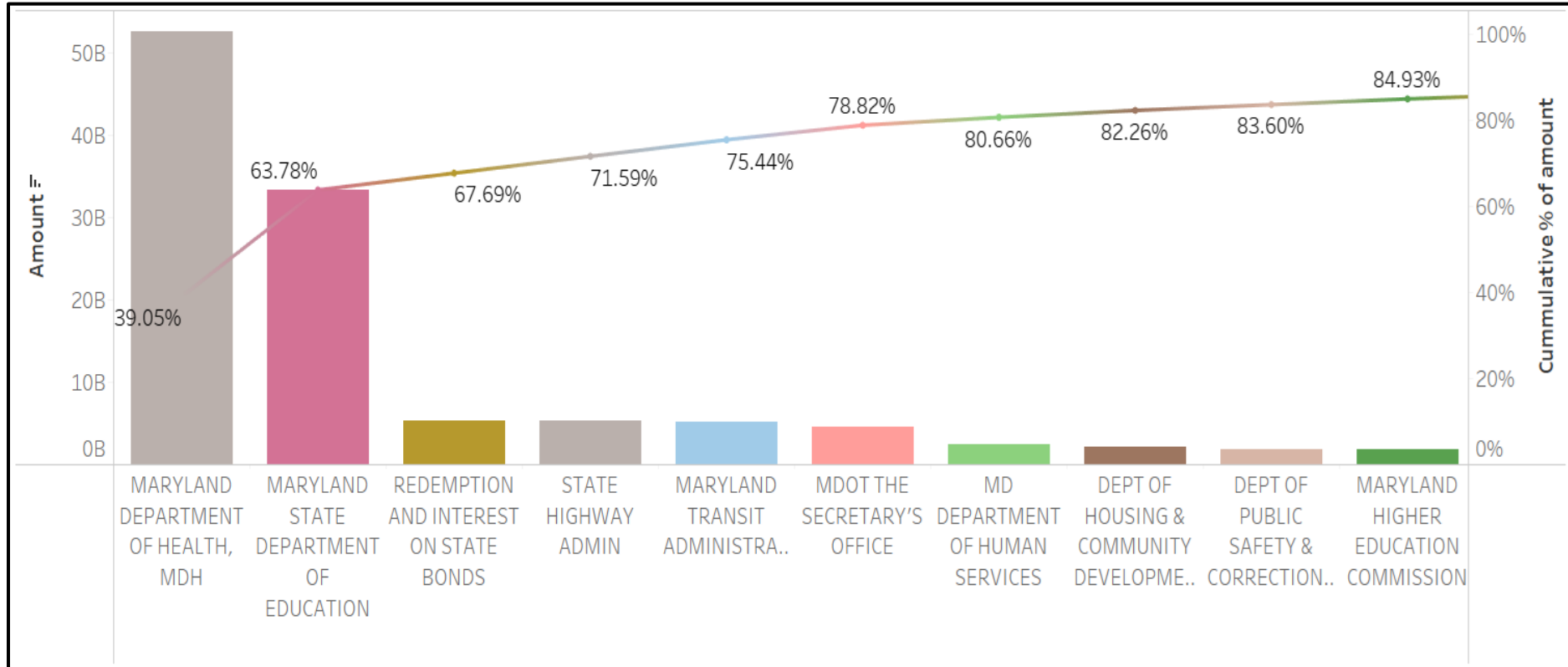
Observations :

On an average, **99.5%** funds from the
“**REDEMPTION AND INTEREST OF STATE BONDS**”
Agency are spent on New York based vendors

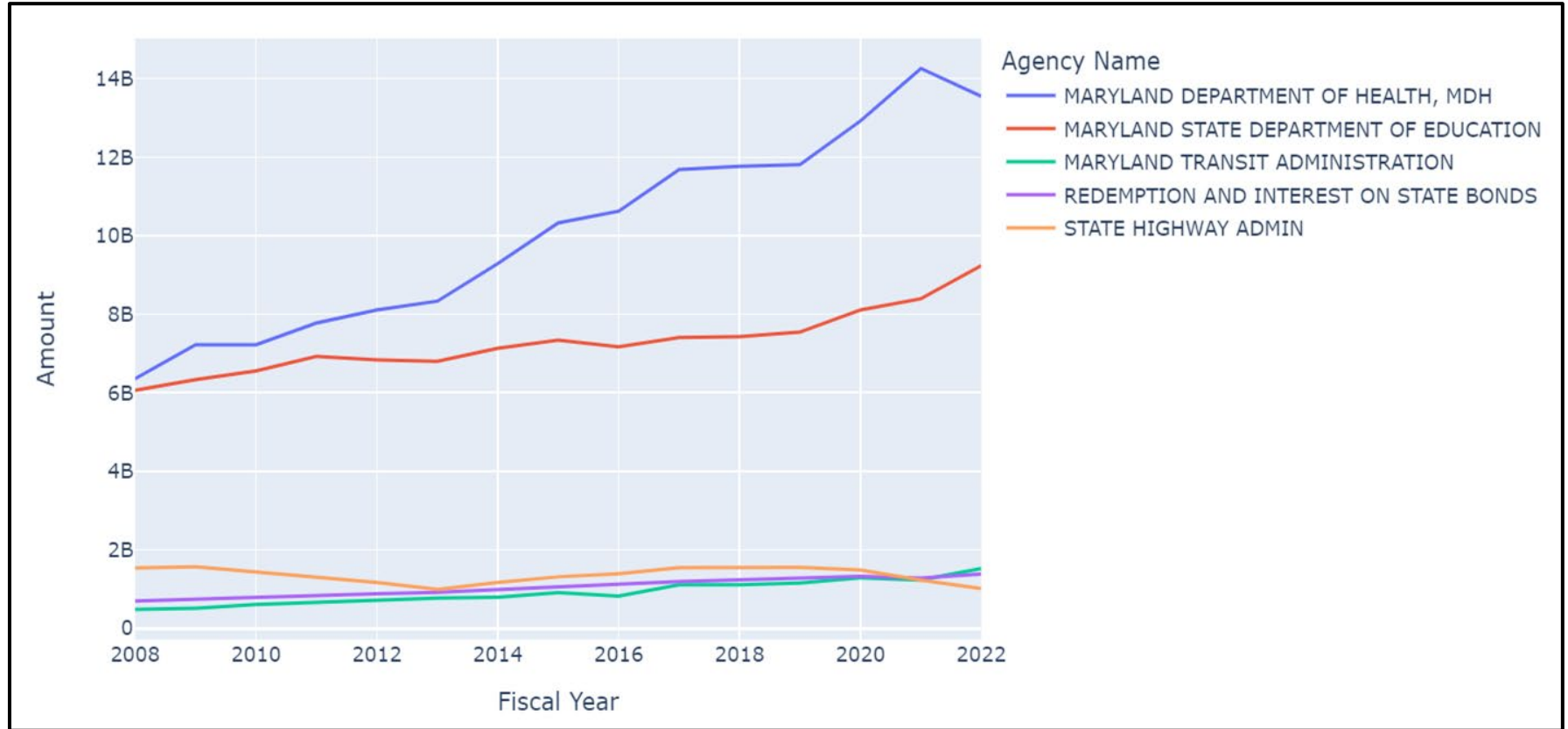


During the period 2012 - 2014 Minnesota has taken away
\$270M worth “**COMPTROLLER OF MARYLAND**”
Agency project from North Carolina as US Bank took over
the project from Bank of America

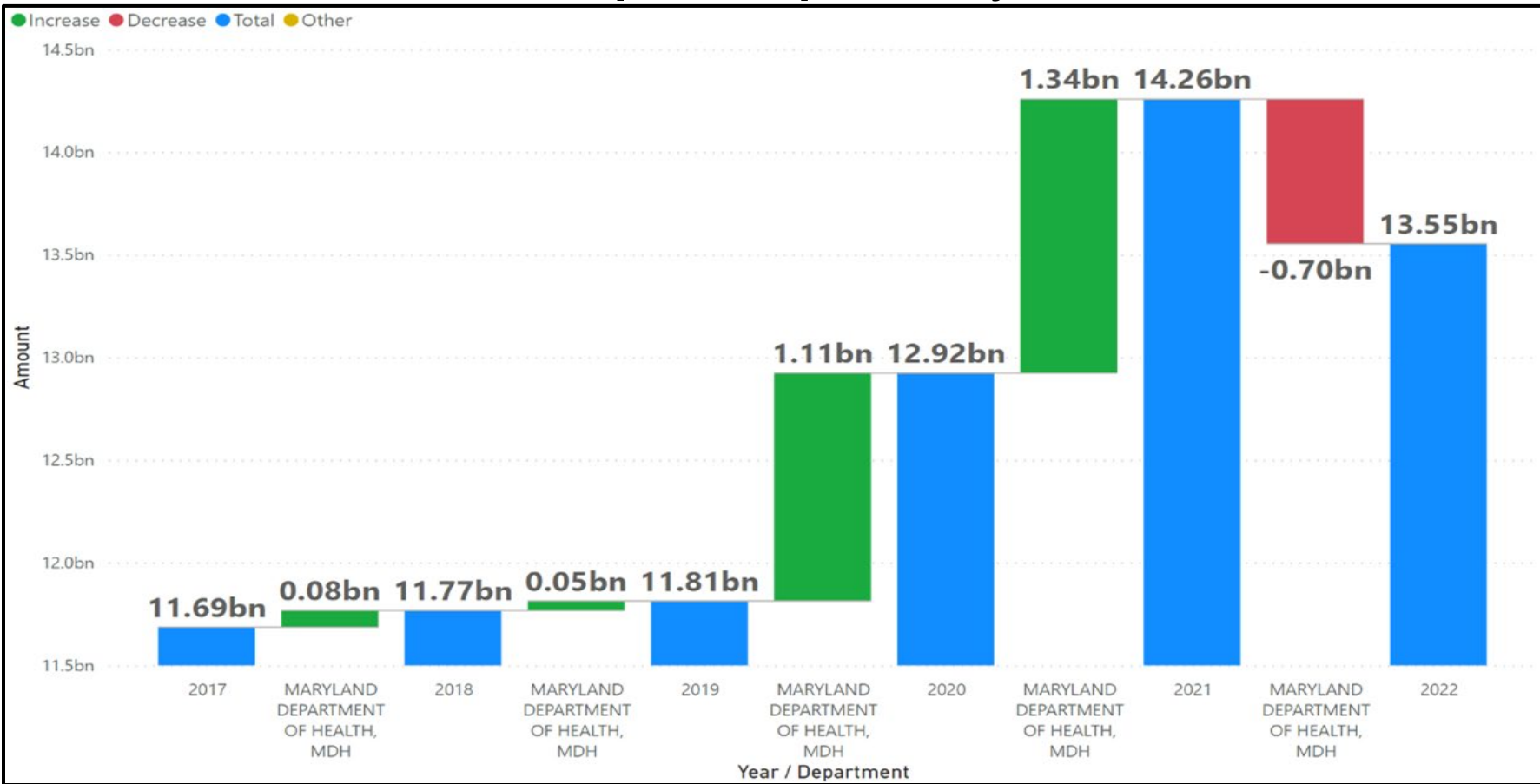
The top 5 agencies contributed 76% of the total amount spent in the last 15 years, with the Department of Health and Department of Education contributing 64%.



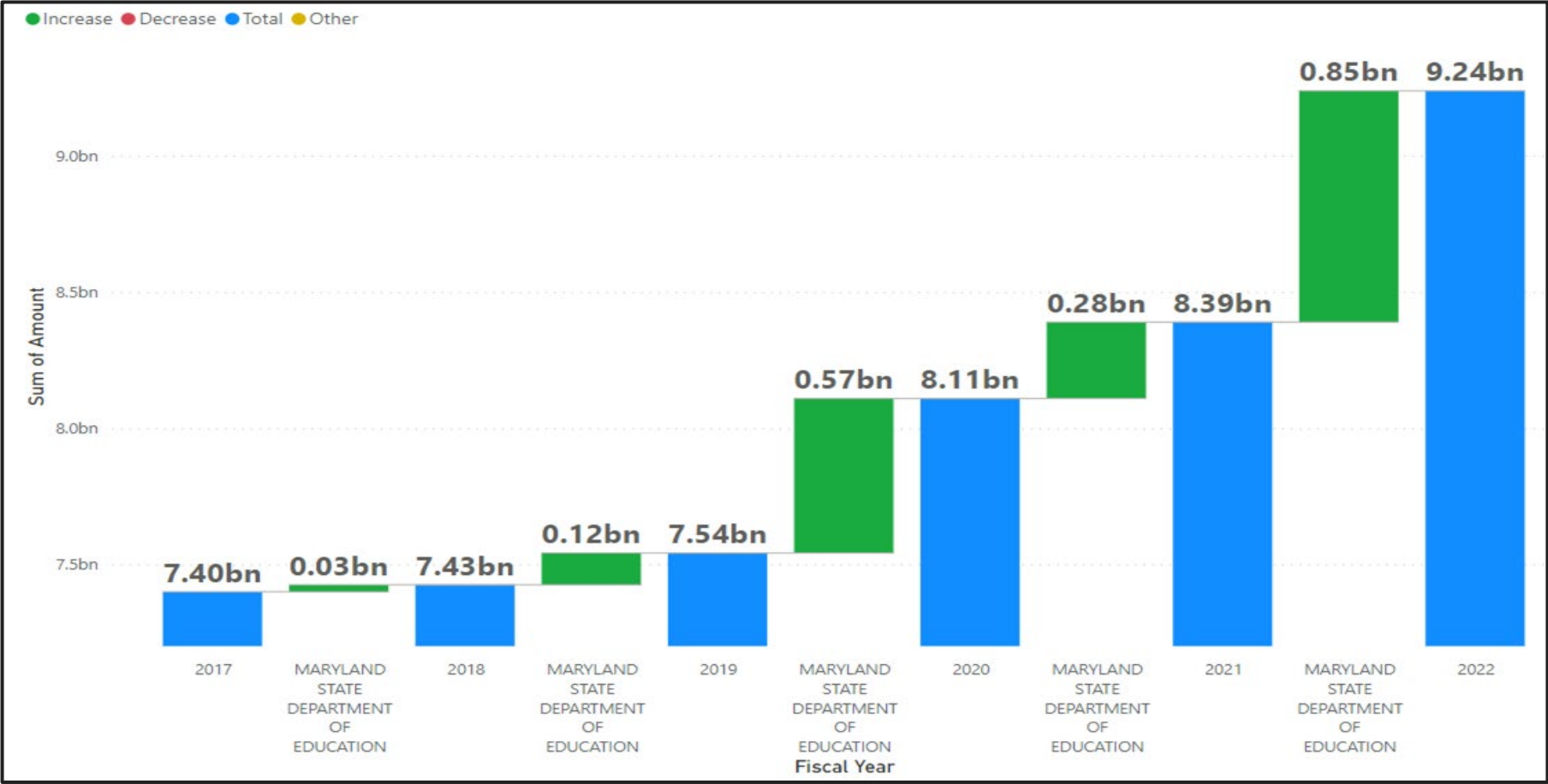
Health and Education are definitely given higher importance in Maryland



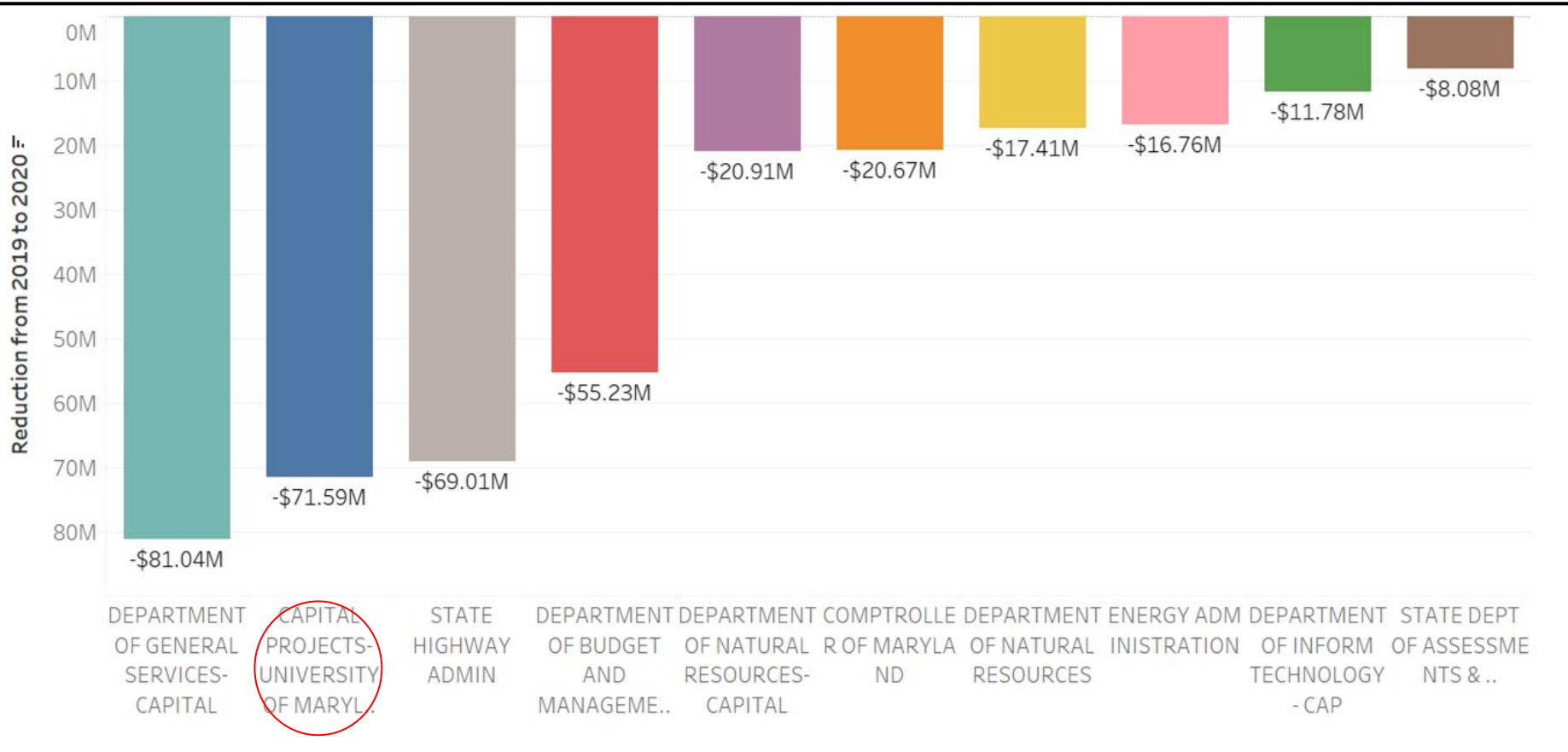
During COVID the amount spent on health has increased by **20** times compared to previous years.



The amount spent on education has also increased during the COVID times



Reduction in the amount spent from 2019 to 2020 for various agencies

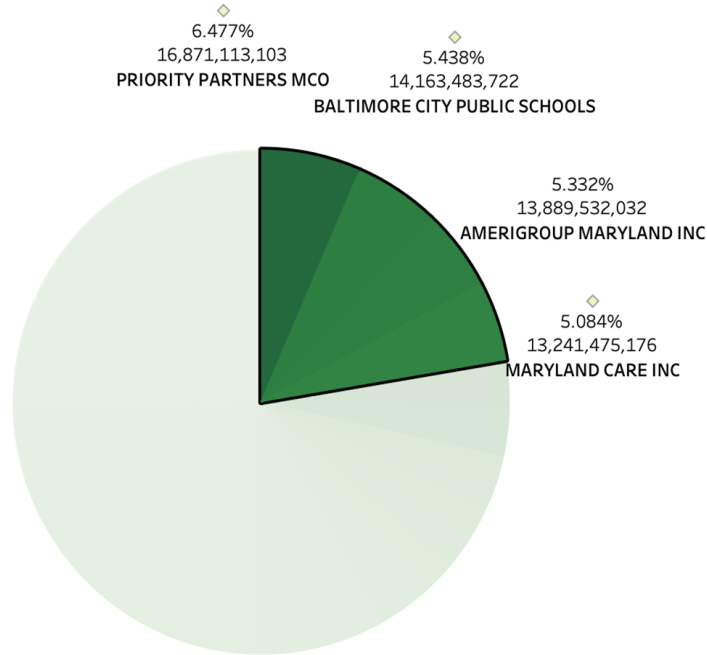




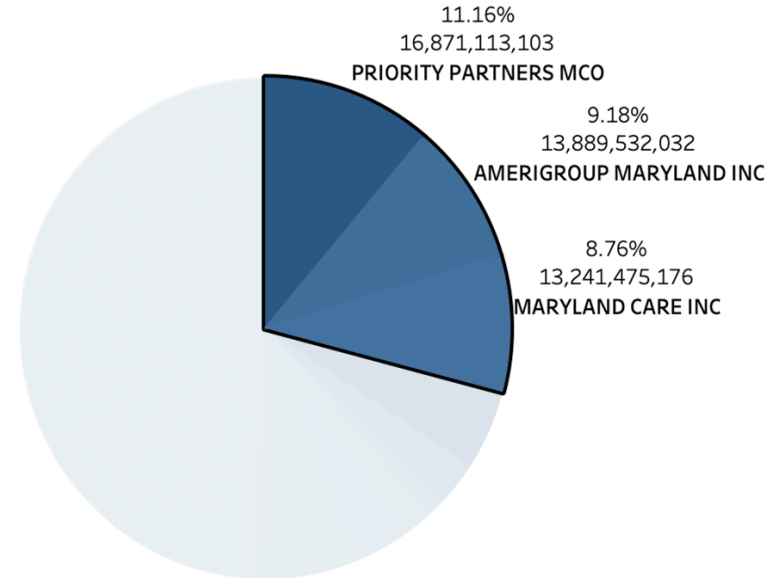
From 2008 to 2022, the top 5 vendors received 19% of the total money spent



MDH spent 29% of money while MDE spent 22% that going to Top 5 vendors with highest payment from Maryland Government



Payment distribution of MDE by vendors



Payment distribution of MDH by vendors

04.

OUR Conclusion



Conclusion

1. In 2024, it is projected that the Maryland budget will be \$39B, trending with state deficit amount
2. 74% of the funds are spent on Local Vendors
3. 64% of the money is spent on Education and Health, which is a good sign.
4. Univ. of Maryland funds are reduced during Covid.
5. AmeriGroup and Priority partners received most of the funds.

Future Scope

1. In-depth data for the amount spent in lower levels will give more understanding of amount spent
2. Break down of transactions by month/quarter will give inferences on seasonality of expenses
3. Data on income levels/outcomes of agencies will give information to prepare better public policies
4. Information about minority owned vendors

Question & Answers