

# Download Power Bi

Saturday, June 15, 2024 9:39 PM

The screenshot shows the Microsoft Store interface. In the search bar at the top right, the text "powerbi desktop" is typed. On the left, there's a sidebar with categories: Apps, Gaming, Arcade, Entertainment, and AI Hub. The main area displays the "Power BI Desktop" app by Microsoft Corporation. It features a large icon of three yellow bars, the app name, developer information, and a prominent blue "Open" button. Below the button are average ratings of 4.8 stars and 8K reviews. A descriptive paragraph explains that Power BI Desktop puts visual analytics at your fingertips. To the right, there's a "Screenshots" section showing four different dashboard views with various charts and data visualizations.

The screenshot shows the "Untitled - Power BI Desktop" application window. The left sidebar has "Home" and "Open" buttons. The main area has two sections: "Select a data source or start with a blank report" and "Recommended". Under "Select a data source", there are six options: "Blank report", "OneLake data hub", "Excel workbook", "SQL Server", "Learn with sample data", and "Get data from other sources". Under "Recommended", there are two cards: "Getting started" (with icons for Home, Report, Data, and Page) and "You modified this" (with a card for "%change"). At the bottom, there are buttons for "Recent", "Shared with me", "Filter by keyword", and "Filter".

Click Blank report

Untitled - Power BI Desktop

File Home Insert Modeling View Optimize Help

Paste Cut Copy Format painter Get data Excel workbook OneLake SQL Server Enter Dataverse Recent sources Transform data New visual Text box More visuals Insert Calculations Sensitivity Publish Copilot

Clipboard Data Queries Insert Share Copilot

Add data to your report

Once loaded, your data will appear in the Data pane.

Import data from Excel Import data from SQL Server Paste data into a blank table Use sample data

Get data from another source →

Visualizations Build visual

Filters Values Add data fields here

Drill through Cross-report  Keep all filters  Add drill-through fields here

Page 1 of 1 Page 1 + 77%

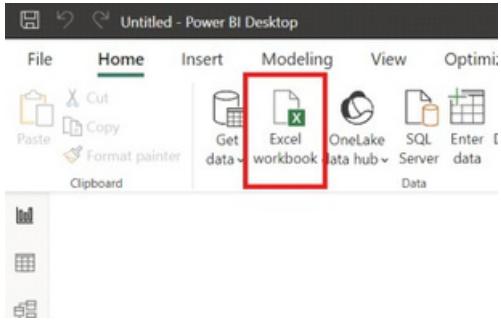
This screenshot shows the Microsoft Power BI Desktop interface. The top navigation bar includes File, Home, Insert, Modeling, View, Optimize, and Help. The Home tab is selected. Below the ribbon, there are sections for Clipboard, Data, and Queries. The main workspace displays a message "Add data to your report" and provides options to "Import data from Excel", "Import data from SQL Server", "Paste data into a blank table", or "Use sample data". A link "Get data from another source →" is also present. To the right, a large panel titled "Visualizations" contains a grid of icons for different types of charts and reports. Below this are sections for "Filters", "Values", and "Drill through" settings. At the bottom, a navigation bar shows "Page 1 of 1" and a zoom level of "77%".

# Import Data

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## Import Excel workbook

Click the **Excel workbook** this allow you to upload data from Excel



Then we click the Excel sheet we want to import

As the example I import my excel sheet call Obligations\_ULO\_NON\_ZERO\_01042024.xlsx and inside the sheet there are multiple sheet and now we only need Obligations

A screenshot of the Power BI Navigator interface. On the left, there is a list of sheets with several names redacted. The 'Obligations' sheet is selected and shown in the main preview area. A note at the bottom of the preview area states: 'The data in the preview has been truncated due to size limits.' At the bottom right of the interface, there are three buttons: 'Load' (green), 'Transform Data' (white), and 'Cancel' (white).

After that you can just click **Load** then whole data will import into the table (in power bi they call sheet = table )

But now we goanna clean the data before we import the data so click**Transform Data**



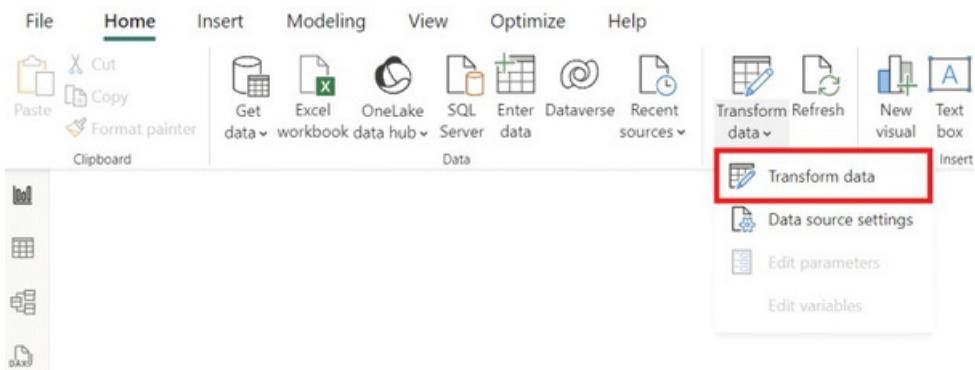
No items selected for preview

Load Transform Data Cancel

We now get into the Power Query Editor this allows us to do a lot of function, but now we only going to clean the column BFY since we only need data from 2019 to 2024 we will unselect the year we don't want and after unselect the year click **Close & Apply** to save our change. If you want to clean other data will be the same steps.

The screenshot shows the Microsoft Power Query Editor interface. The ribbon at the top has tabs for File, Home, Transform, Add Column, View, Tools, and Help. The Home tab is selected. The toolbar below the ribbon includes buttons for Close & Apply (highlighted with a red box), Source, Recent, Enter Data, Data source settings, Manage Parameters, Refresh, Preview, Advanced Editor, Choose Columns, Remove Columns, Keep Rows, Remove Rows, Reduce Rows, Sort, Split Column, Group By, Replace Values, and Transform. The main area shows a query named "Obligations" with a table titled "Organization". A context menu is open over the table, showing options like Sort Ascending, Sort Descending, Clear Sort, Clear Filter, Remove Empty, and Number Filters. A search bar is also visible. In the bottom right corner of the editor, there is a dialog box titled "List may be incomplete." with a "Load more" button, containing a list of years from 2019 to 2024, each with a checked checkbox. Buttons for "OK" and "Cancel" are at the bottom of the dialog.

That's said if you forget to clean the data or maybe you change your mind and wan to clean the data after you click the **Load**. You still can change the data by clicking the **Home -> Transform Data** this will bring you back to the Power Query Editor



We going to do the same steps for our comparison data

# Create Mapping

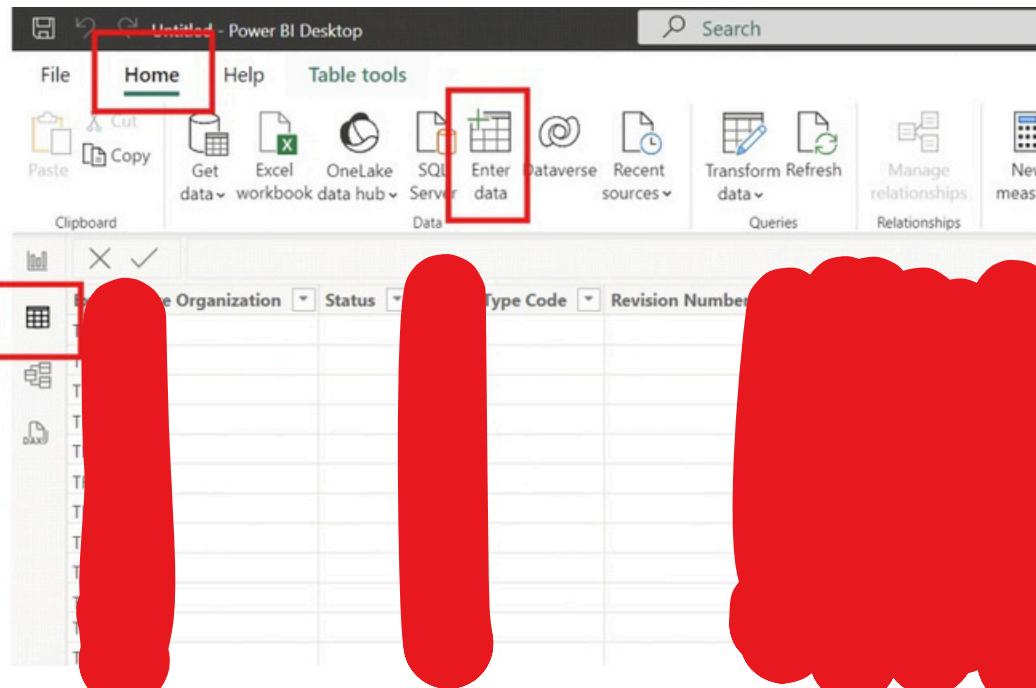
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To make our report more clean and organize, we see in the example on the left is the name in our data and the right is the name we want to have in our report



So now we need to create a new table for our mapping click **Table View -> Home -> Enter data**

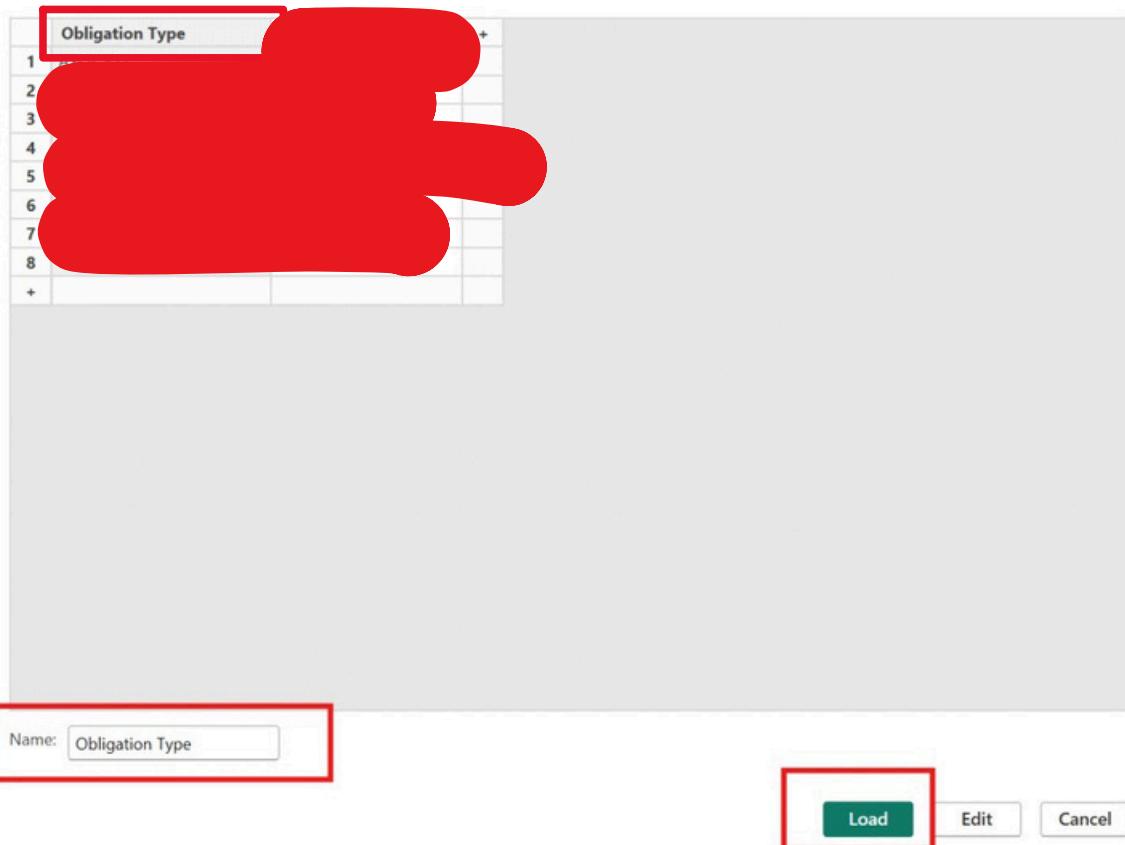
(You can find all your data inside the Table View)



When we create the mapping table make sure the column name need to match the original data and the left side is the name we want to show in the report. For the second column I just easy name it Obligation you definitely can change that.

At the bottom I name this table Obligation Type then click Load

## Create Table



Just repeat the steps to do other mapping for Fund

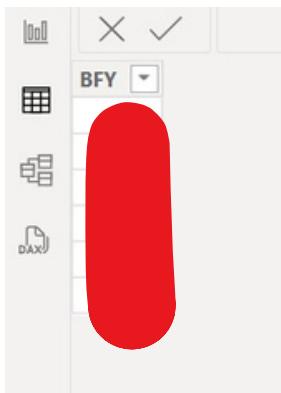


# Create relationship

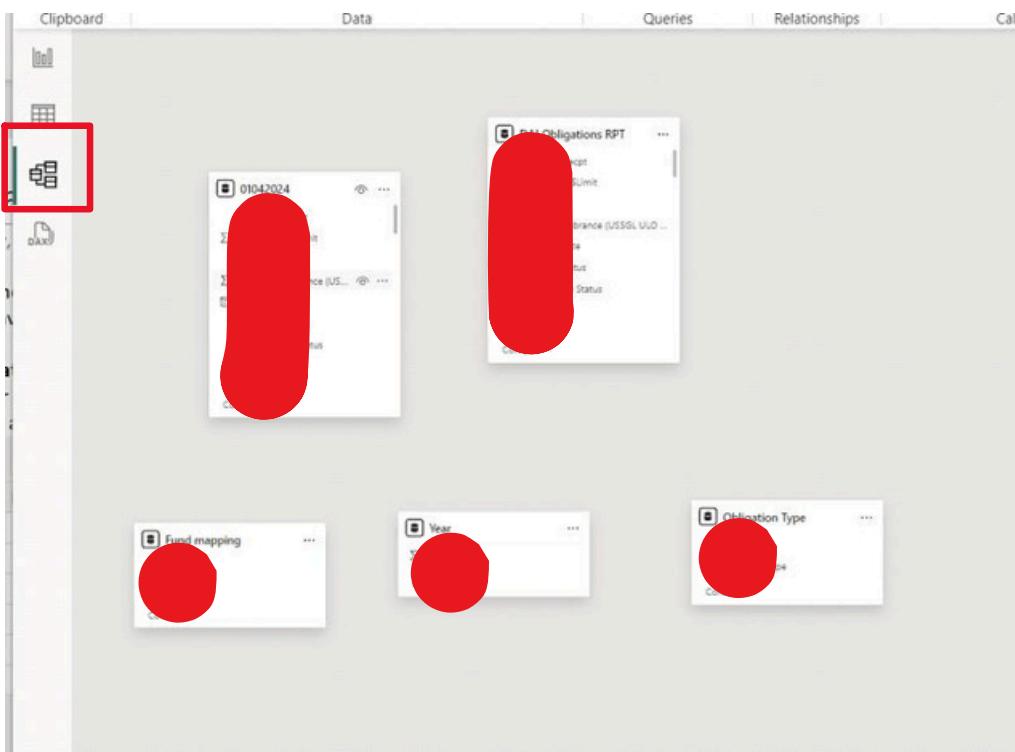
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Since now we have two data one is current and one is prior. We need to connect two data and just have one slicer, so when I click the bottom both of the data will display what I select.

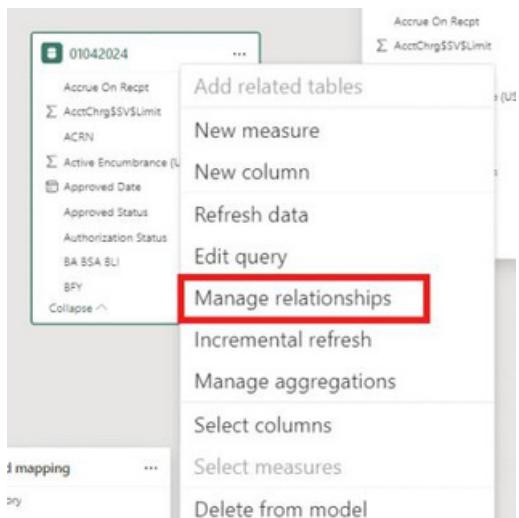
In **Create Mapping**, we create the new table for our report this also actually can be our slicer. But for our report we want to have three slicer the Obligation Type, Fund, and Year. We need to create a table for our year. Just need to make sure have the same column name from the data.



Now click **Model view** we can see all the data we create and import 01042024 and DAI are the two data we going to compare and at the bottom three is the slicer we are going to create and make the relationship with the data.



Right click the model and click **Manage relationships**



**Click+ New relationship**

### Manage relationships

The screenshot shows the 'Manage relationships' screen with the '+ New relationship' button highlighted by a red box. Below it are fields for 'From: table (column)' and 'To:' with dropdown arrows. A message at the bottom states 'There are no relationships defined yet.'

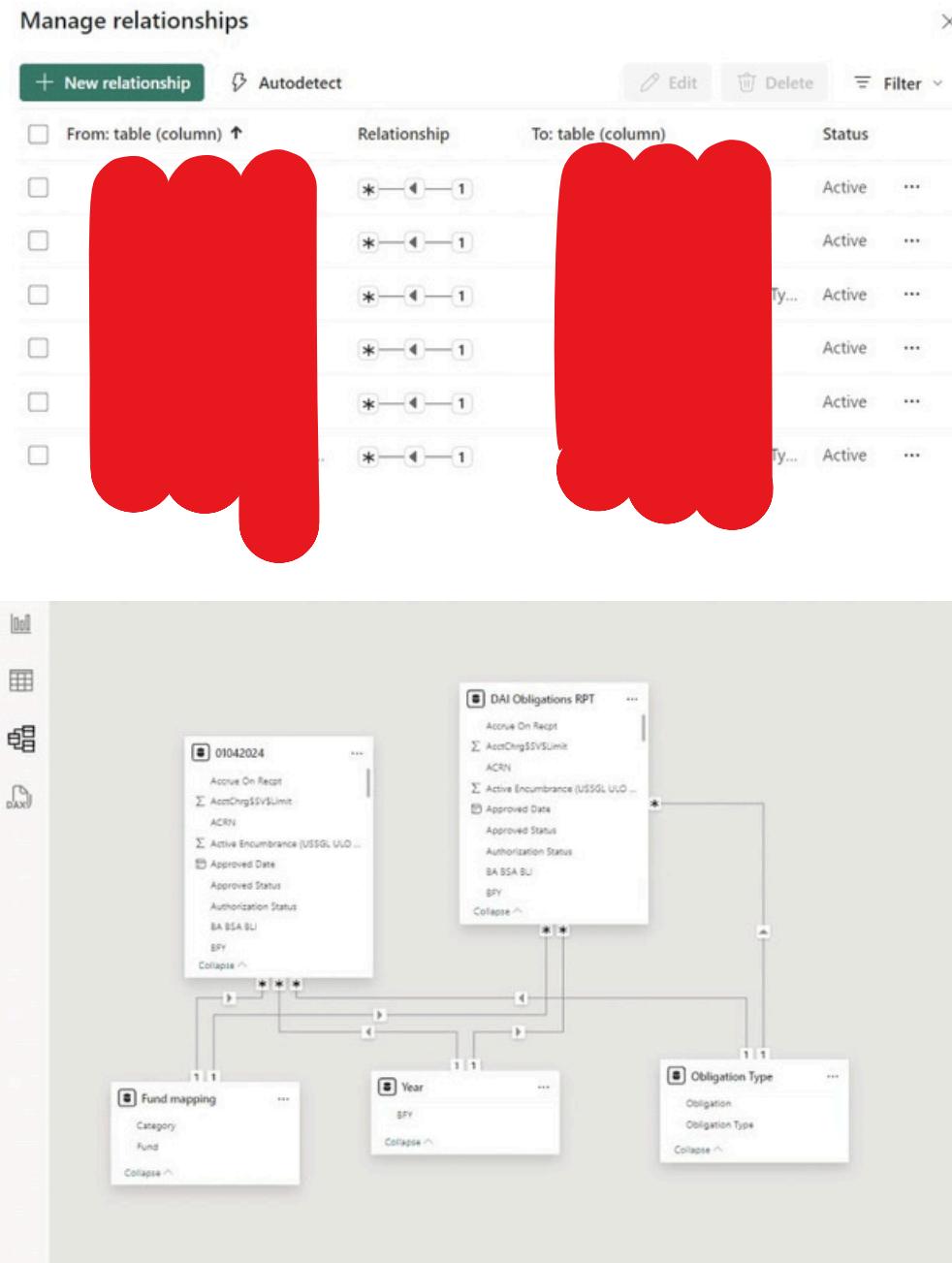
**From table** we need to pick our data and **To table** we need to pick the data we want to create the slicer. For the **Cardinality** we need to pick Many to one because in our data there are 2000+ row and **Cross-filter direction** just choice single. Make sure to select **active**

The screenshot shows the 'New relationship' configuration dialog. It includes sections for 'From table' (set to '01042024') and 'To table' (set to 'Obligation Type'). Below these are settings for 'Cardinality' (set to 'Many to one (\*:1)') and 'Cross-filter direction' (set to 'Single'). There are also checkboxes for 'Make this relationship active' (checked) and 'Assume referential integrity'.

**Save** **Cancel**

Now we need to connect rest of the slicer for two data repeat the same steps

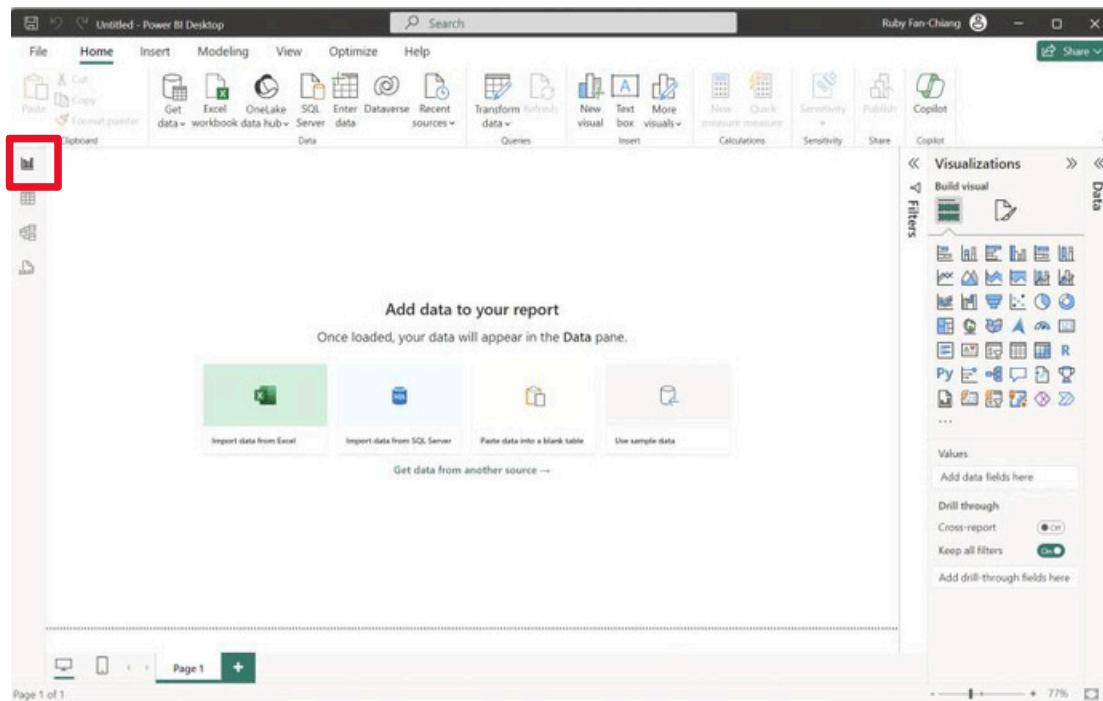
After you done should be looks like this



# Report-slicer

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Now we going back to Report view



To create a slicer click **slicer** then pull the data you want to Field, then you will see slicer on the left.

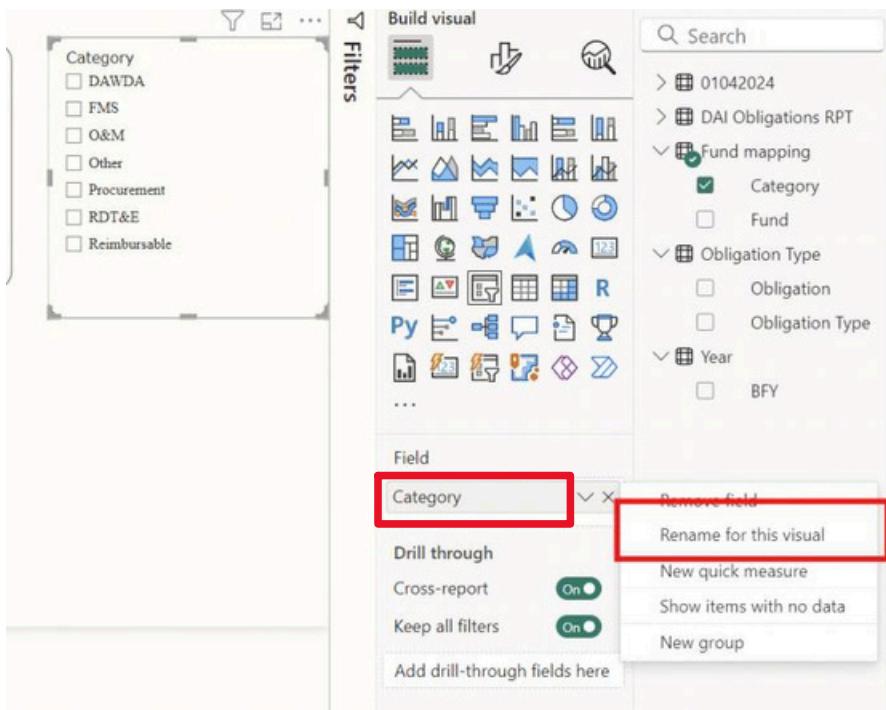
For this slicer Obligation is the name I create in the mapping and the Obligation Type is the original name from my data

This screenshot shows a report page with a large red circle obscuring sensitive data. The 'Data' pane is open, showing the 'Visualizations' and 'Data' sections. In the 'Data' section, the 'Field' dropdown is set to 'Obligation'. The 'Obligation Type' node is expanded, showing two options: 'Obligation' (with a checked checkbox) and 'Obligation Type' (with an unchecked checkbox). Other collapsed items in the tree view include 'DAI Obligations RPT', 'Fund mapping', 'BFY', and 'rear'.

And we will do the same steps for Fund and Year slicer

For my Fund slicer I name the mapping I create Category but now I want it to show title Fund in the report

Right click **Category** -> **Rename for this visual**



# Report-table

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After create the slicer now we can create the table in our report

Click **table** and pull the column you want to show in the table in to Columns. The order in Columns will be the order to show in the table.

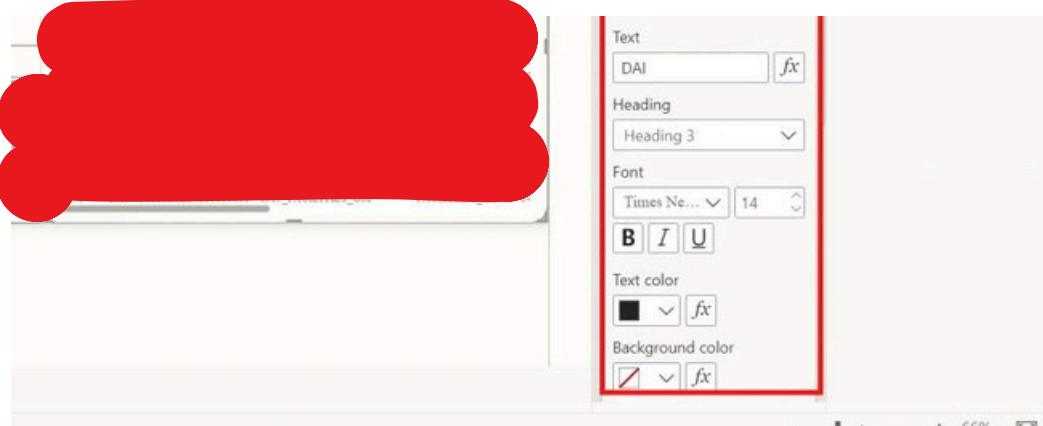
The screenshot shows the Power BI interface with a report containing several tables. On the right side, the 'Visualizations' pane is open, displaying various visualization icons. A red box highlights the 'Table' icon, which is selected. Below it, the 'Columns' pane shows a list of columns with red 'X' marks next to them, indicating they are not currently selected. A red box also highlights the 'Table' icon in the 'Columns' pane. The 'Data' pane on the far right shows a hierarchical list of data sources and filters, with a red box highlighting the 'Fund mapping' section under 'DAI Obligations RPT'. The 'Category' checkbox is checked, while 'Fund' is unchecked.

Repeat the steps for other data

Now we want to create a title for the table

Click the table you want to add title -> Format your visual -> General -> turn on Title -> Title -> Text

The screenshot shows the Power BI interface with a report containing a table visual. The 'Format visual' pane is open, with the 'General' tab selected. A red box highlights the 'Title' button, which is turned on. Another red box highlights the 'Text' input field, which contains the text 'DAI'. The 'Visual' tab is also highlighted with a red box.



Repeat the steps for other data

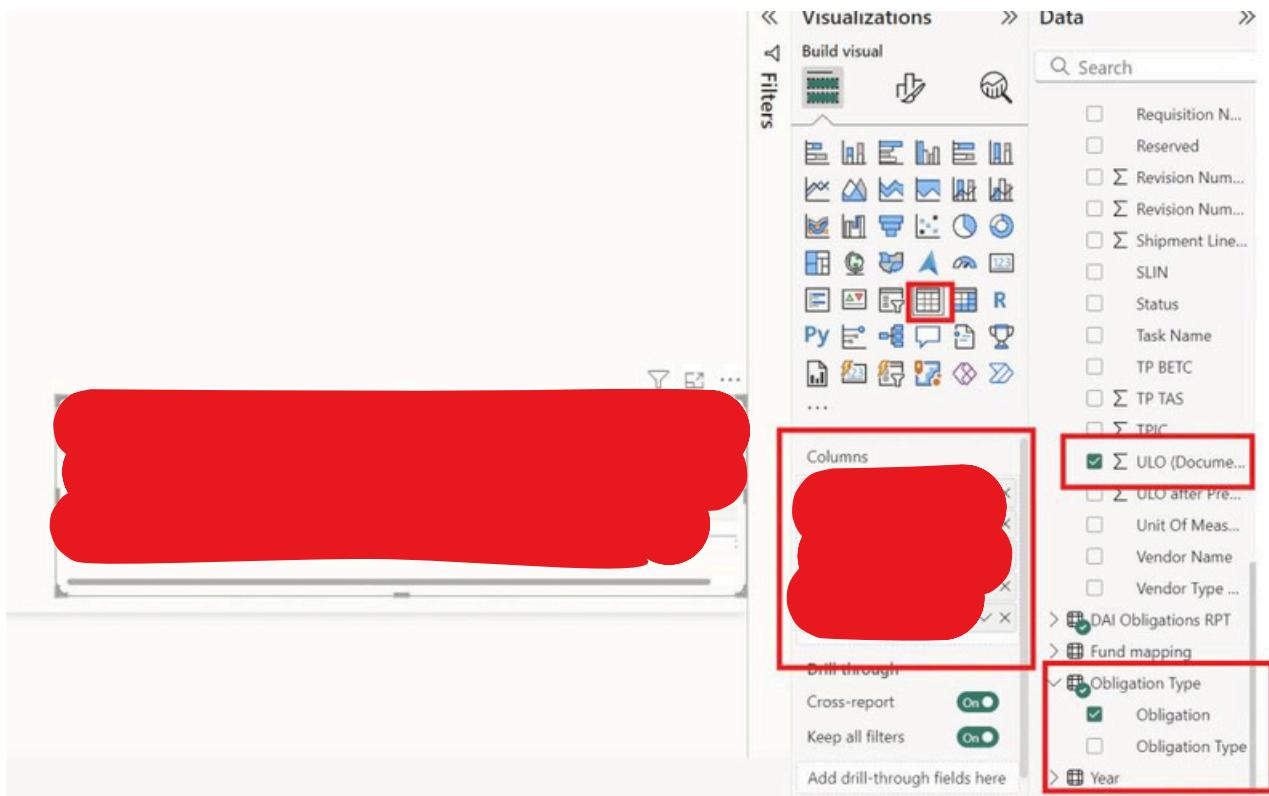
# Report-sum and count

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Now we need to create the table for ULO total and ULO count for both data, and the #change and % change between the total and count

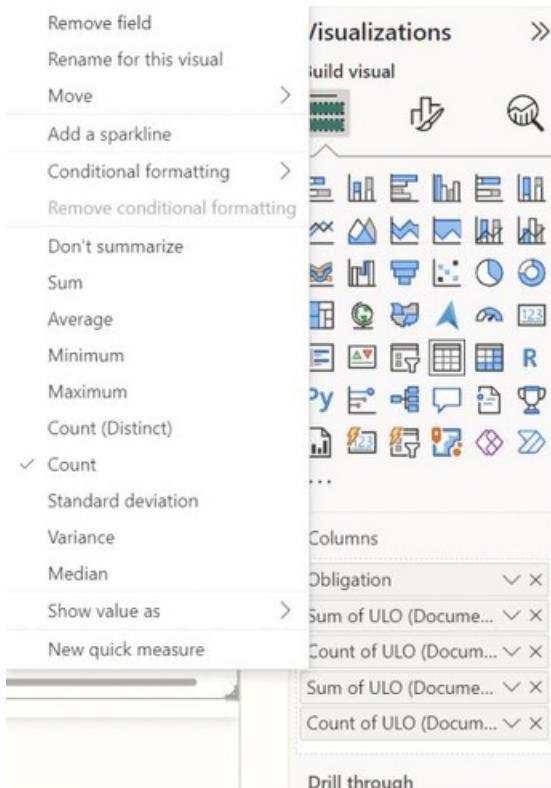
Click **table** and inside the Columns we need to pull ULO twice from same data one for sum and one for count, and don't forget pull the Obligation Type from the mapping we create.

Remember order matter



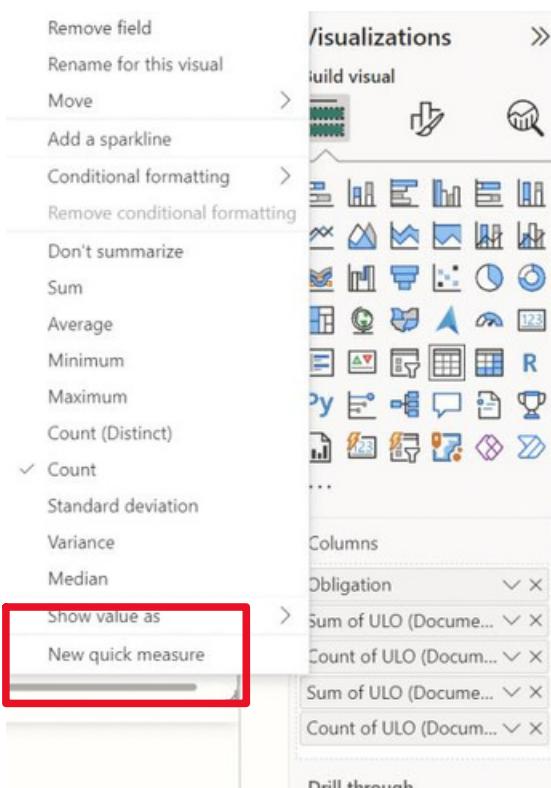
To change how it calculate the ULO

Right click the one you want to change and select the measurement you want.



Since we want to know the % change from DAI to 0104 which is  $0104\text{sum}/\text{DAIsum}$ .

We will right click the DAI sum-> New quick measure



Click Calculations-> Percentage difference -> add

If you right click the correct one, the Base value should from DAI data and Value to compare should from 0104 data it automatically put in for you already

Quick measure

Select a calculation to create a measure or describe the measure you need and we'll generate suggestions in DAX, which you can customize later.

**Calculations** Suggestions with Copilot

Percentage difference

Calculate the percentage difference between two values. [Learn more](#)

Base value ⓘ Sum of ULO (Document Amt) X | >

Value to compare ⓘ Sum of ULO (Document Amt) X | >

Blanks ⓘ Produce blanks in the output

Columns

- Obligation
- DAI sum
- DAI count
- 0104 sum
- 0104 count

Drill through

Cross-report  Keep all filters

Add drill-through fields here

Add

Way to double check

Text More visuals ▾

New measure Quick measure

Sensitivity Publish Share

Search

01042024

DAI Obligations RPT

- Accrue On Recpt
- Σ AcctChrg\$SV\$Limit
- ACRN
- Σ Active Encumbran...
- > Approved Date
- Approved Status
- Authorization Stat...
- BA BSA BLI
- BFY
- Buyer Name
- Σ Cancelled Amt
- Checkbook

Quick measure

Select a calculation to create a measure or describe the measure you need and we'll generate suggestions in DAX, which you can customize later.

**Calculations** Suggestions with Copilot

Percentage difference

Calculate the percentage difference between two values. [Learn more](#)

Base value ⓘ Sum of ULO (Document Amt) X | >

Value to compare ⓘ Sum of ULO (Document Amt) X | >

Blanks ⓘ

Summarization

Sum

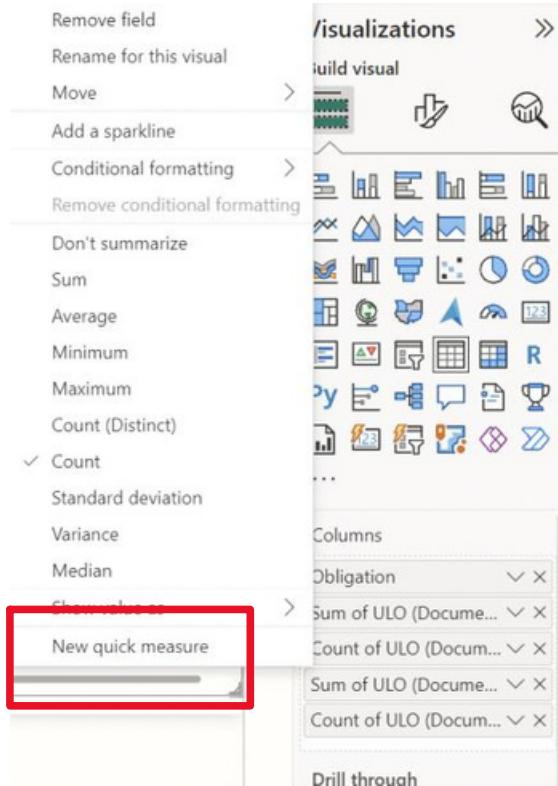
Columns

- DAI sum
- DAI count
- 0104 sum
- 0104 count

Add

Now we want to find the #change from DAI to 1014 which is DAI count - 1014 count

We will right click the **DAI count** -> **New quick measure**



Click **Calculations-> Subtraction -> add**

If it still show the sum of ULO just right click and change the measurement to count

### Quick measure

Select a calculation to create a measure or describe the measure you need and we'll generate suggestions in DAX, which you can customize later.

**Calculations** + Suggestions with Copilot

Subtraction

Calculate the difference between two values. [Learn more](#)

**Base value** ⓘ

Count of ULO (Document Amt)

**Value to subtract** ⓘ

Count of ULO (Document Amt)

Add

Visualizations

Build visual

...

Columns

Obligation

DAI sum

DAI count

0104 sum

0104 count

UL0 (Document Amt) ...

Drill through

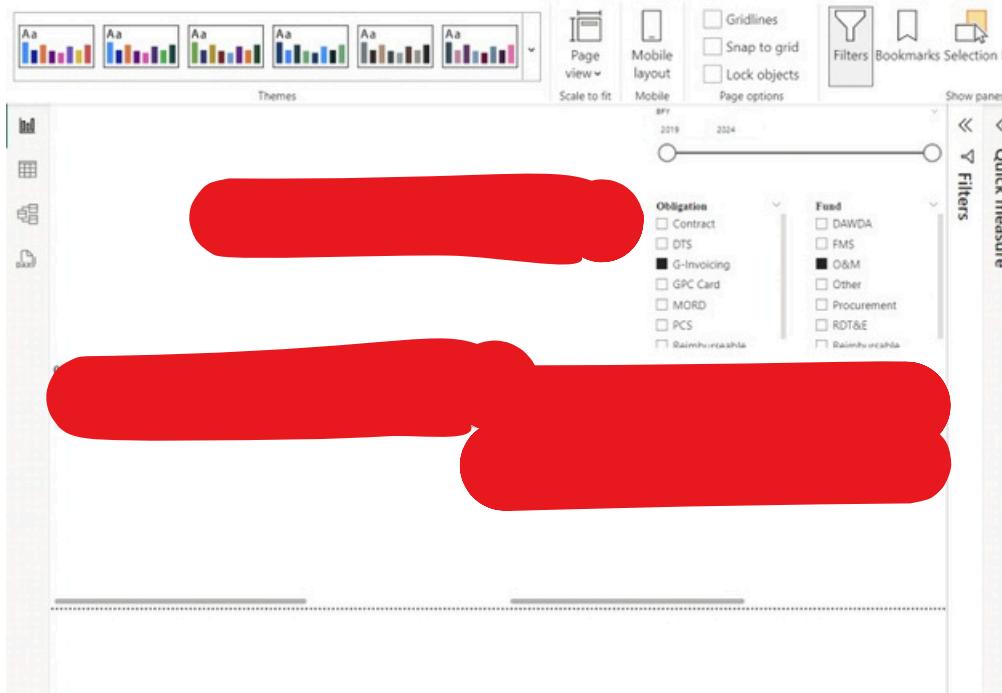
Cross-report

Keep all filters

# Report -design

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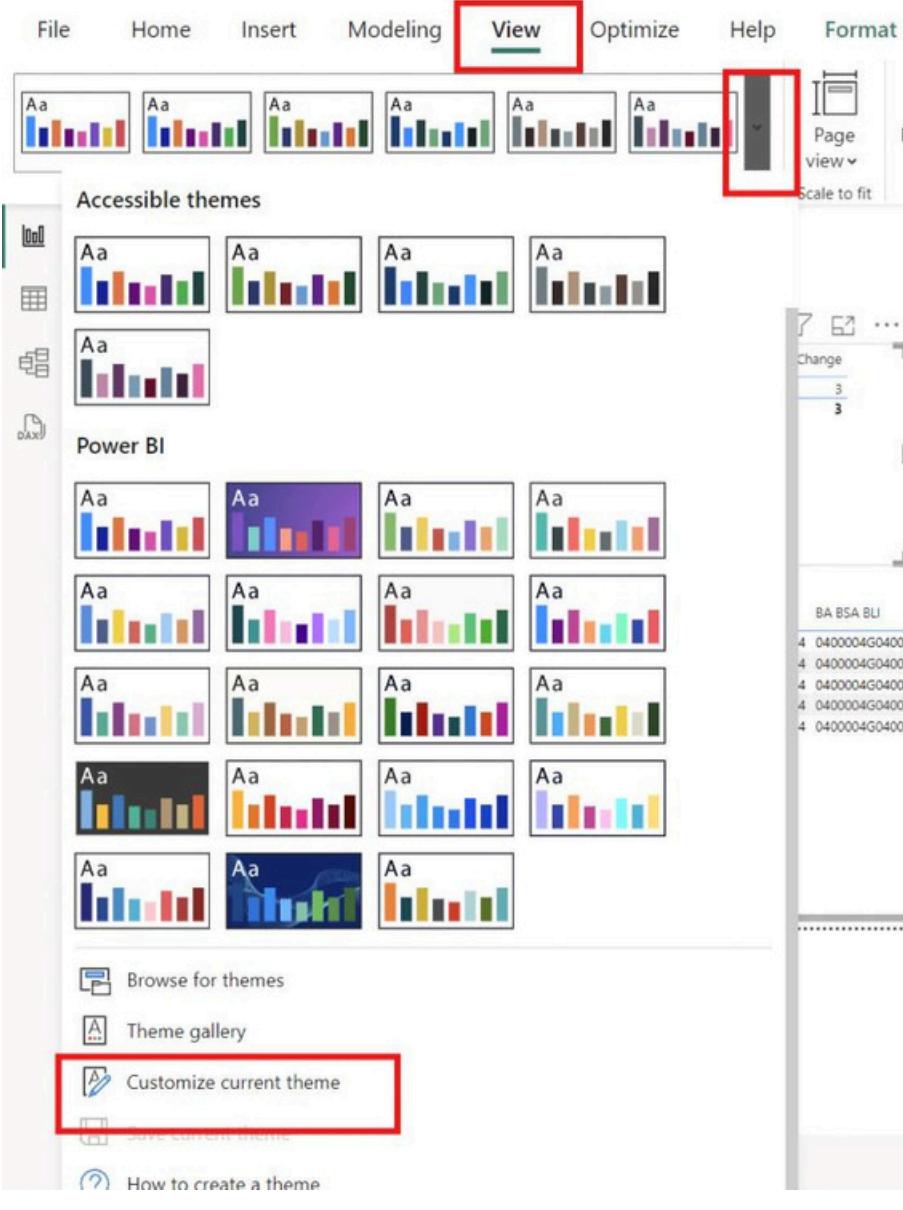
Now our report looks like this



To make it more clear with each section

Select one of the section

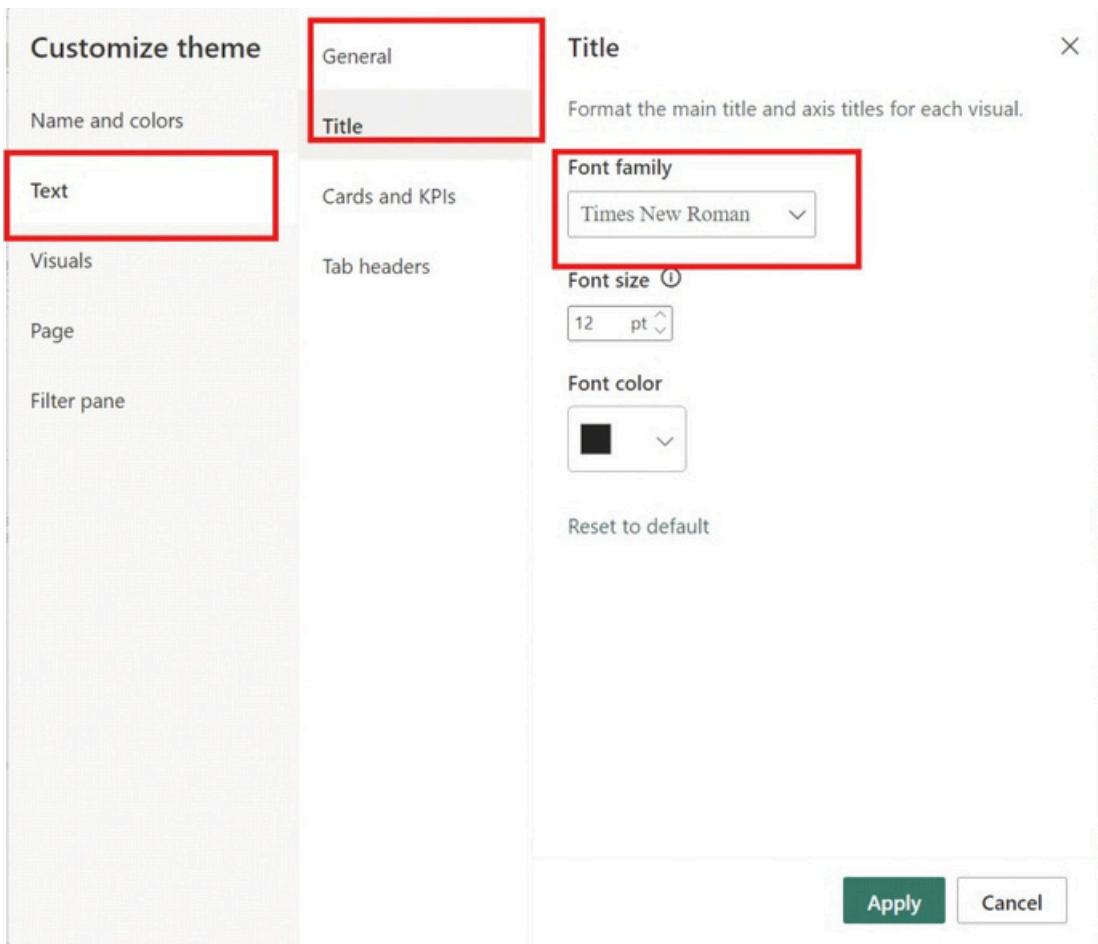
Click **View -> Themes -> Customize current theme**



Click **Visuals -> Border -> turn On -> Radius 20**

The screenshot shows the 'Customize theme' dialog box open over the Power BI ribbon. The dialog box has a sidebar on the left with categories: Name and colors, Text, Visuals, Page, and Filter pane. The 'Visuals' category is highlighted with a red box. The main area shows 'Background' and 'Border' settings. Under 'Border', there is a toggle switch labeled 'On' (which is turned on), a color picker set to black, and a 'Radius' input field set to 20 px. At the bottom right of the dialog are 'Apply' and 'Cancel' buttons, both of which are highlighted with red boxes. The Power BI ribbon at the top includes tabs: File, Home, Insert, Modeling, View (which is selected and highlighted with a green box), Optimize, and Help. Below the ribbon, the 'Themes' section shows six theme preview cards. On the right side of the ribbon, there are buttons for Gridlines, Snap to grid, Lock objects, Page view (with options for Mobile layout and Mobile), Page options, Filters, Bookmarks, and Show/Hide. A large red redaction box covers the main content area of the Power BI report.

If you want to change the font for whole report



Next time if want to use the same custom just click **custom**



We can insert the text box for our report name

Click Insert -> Text box

The screenshot shows the Microsoft Power BI desktop application. The ribbon at the top has tabs: File, Home, Insert (which is highlighted with a red box), Modeling, View, Optimize, and Help. Under the Home tab, there are buttons for New page, New visual, More visuals, Q&A, Key influencers, Decomposition tree, AI visuals, Paginated report, Power Apps, Power Automate, and Power Platform. On the right side of the ribbon, there is a 'Text box' button with a red box around it, and other options like Buttons, Shapes, Image, Elements, and Sparklines. Below the ribbon is a report canvas containing several cards. One card on the left is completely redacted. Another card contains a timeline from 2019 to 2024 with two circular markers. To the right of the timeline card are two filter panes: 'Obligation' and 'Fund'. The 'Obligation' pane includes checkboxes for Contract, DTS, G-Invoicing (which is checked), GPC Card, MORD, and PCS. The 'Fund' pane includes checkboxes for DAWDA, FMS, O&M (which is checked), Other, Procurement, and RDT&E. A large rectangular area in the center of the canvas is also heavily redacted.

This is final view of our report

The screenshot shows a Power BI report interface with the following elements:

- Clipboard:** Paste, Copy, Format painter.
- Data:** Get data, Excel, OneLake, SQL Server, Data, Data verse, Recent sources.
- Queries:** Transform, Refresh data.
- Insert:** New visual, Text box, More visuals.
- Calculations:** New measure, Quick measure.
- Sensitivity:** Sensitivity.
- Share:**
- Report Title:** Report
- Filters:** BFY (2019-2024), Obligation (Contract, DTS, G-Invoicing, GPC Card, MORD, PCS, Reimbursable), Fund (DAWDA, FMS, O&M, Other, Procurement, RDT&E, Reimbursable).
- Visuals:** A large redacted area and a smaller redacted area labeled "DAI".
- Bottom Navigation:** 0104, Dashboard, +.

# BFY can't create relationship

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Buy the time I import the data sometime they convert BFY to sum BEY ( $\sum$  BFY)

Click Table view -> BFY column -> Column Tools -> Summarization -> Don't summarize

The screenshot shows the Power BI desktop interface. The ribbon at the top has 'Table tools' selected. In the 'Column tools' section, the 'Summarization' dropdown is open, showing 'Sum' as the selected option. A red box highlights this dropdown. Below it, the 'Data category' is set to 'Uncategorized'. The 'Data' pane on the right lists various columns, and a red box highlights the 'BFY' column under the 'Data' section.

After change should looks like this

This screenshot shows the same Power BI interface after the change. The 'Column tools' tab is still selected. The 'Summarization' dropdown is now set to 'Don't summarize', indicated by a red box. The 'Data' pane on the right shows the 'BFY' column listed under the 'Data' section, with a red box highlighting it.

# Count doesn't match the table

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From the below example you can see that DAI suppose to have 6 rows only show 5 and 0104 should have 3 but only show 2

This is because inside the table while we pick the column there have 2 rows have exactly same name for all the columns, then the system only show one. To fix this we can just add the ULO into the table since we get the number of count from that.

The screenshot shows a Power BI dashboard with two main components. The top component is a card titled "Report" which displays financial data: Total 17,477,581.05, 2226, 01,092,163.30, and 33.02%. The bottom component consists of two side-by-side tables. The left table is titled "DAI" and the right table is titled "01042024". Both tables have columns for "Category", "Type", and "Sub-type". The "Fund" and "Obligation" sections on the right side of the dashboard are also visible, showing various categories like DAUNDA, FMS, O&M, Other, Procurement, RDT&E, Reimbursable, PCS, MORD, GPC Card, G-Invoicing, DTS, and Contract. The entire dashboard is set to the fiscal year BFY 2019-2024.

After add ULO into columns and make sure change to Don't summarize you will see the total row match the count

A screenshot of a Power BI report titled "Report". The report interface includes a top navigation bar with "Report", "BTFY" dropdown (2019-2024), "Filters", "Visualizations", and "Data". The main area displays a card visual with a large red redaction mark covering the content. To the right of the card is a context menu with several options:

- Remove field
- Rename for this visual
- Move
- Conditional formatting
- Don't summarize (highlighted with a red box)
- Average
- Minimum
- Maximum
- Count (Distinct)
- Count
- Standard deviation
- Variance
- Median
- New quick measure
- Show items with no data
- New group

The "Data" pane on the right lists various fields and measures, with some items highlighted with red boxes:

- DAI Obligations RPT (highlighted)
- JLO (Document Amt) (highlighted)

At the bottom of the Power BI interface, there are buttons for "Dashboard" and a green "+" button.

# Template

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