



FY 2024 BARS Training

Ad Hoc Reporting for Agencies

This training will be recorded and made available in the calendar invite link, and the PowerPoint presentation is attached to the calendar invite.

Office of Budget Analysis

August 4, 2022



Welcome to Training

- Trainer: Nathan Bowen, Assistant Director, DBM-OBA
- Today's presentation will be a combination of instructions and demonstration. Attendees are asked to follow along with the demonstration and ask clarifying questions when needed.
- There will be a Q&A opportunity at the end, time permitting. Please provide those questions in the chat box on the right. Some critical questions may be answered mid-presentation.
- Please mute yourself as soon as you enter the call. Participants will be muted manually if unable to mute themselves in a timely manner.



Overview

- Introduction
 - What is ad hoc?
 - Information Source: Data Dictionary
- BARS Key Concepts for Ad Hoc
- Pivot Table Basics
- Setting Up Ad Hoc Reports
- Accessing Ad Hoc Reports
- Discussion and Questions



INTRODUCTION



Key Concepts - What is Ad Hoc?

- Ad Hoc is an Excel tool that allows you to view up-to-date data directly from BARS using pivot tables, enabling users to configure a multitude of data views to obtain desired reports.
- Once you have created an Ad Hoc report that you are happy with, it can be saved and used again in the future.
- Every time you refresh the data or your connection the numbers will update. It takes about five minutes for data entered into BARS to show up in Ad Hoc upon refresh (right click, Refresh in the Ad Hoc).



Key Concepts - What is Ad Hoc?

- Any ad hoc tab can be copied or moved to another spreadsheet and the data connection will remain. You can also have more than one ad hoc tab in a single Excel file.
- That means you can start with one ad hoc that you want to keep, copy it, then reconfigure that new copied ad hoc tab to show an entirely different data view.
- The report you have created can also be shared with other users. Of course, they will only have access to data that they have permissions to see. But this will allow them to use your template as a starting point for their own analysis.



Primary Informational Resource - Data Dictionary

- As BARS captures many types of data across different time periods and versions, the field choices can be a bit daunting at first.
- The [Data Dictionary](#) explains the fields available, with detailed descriptions of those fields and their suggested use within an Ad Hoc report, helping users to select the best options for the data views they want.
- The Data Dictionary can be found in BARS under the “Support” tab on the Worktray/Homepage. It is also available on DBM’s budget instruction’s website, titled [BARS Ad Hoc Reporting](#), and is accompanied by an instruction video.



BARS KEY CONCEPTS



Key Concepts - Adjustments

- An adjustment in BARS is a collection of information documenting the modification of financial, position, or fund data related to the overall development, analysis and management of the State Budget.
- BARS captures all data as an adjustment to a baseline. The baseline is the starting point of the fiscal year's data. For FY 2024 as an example, the baseline is a copy of the FY 2023 Legislative Appropriation.



Key Concepts - Stages

- The Stage field identifies the various parts of the budget development life cycle through fiscal year end.
- For example, an over-the-target request may be created by the agency as part of the Request. OBA analysts may change it as part of the OBA Recommendation, and the Governor may change it yet again as part of the Allowance.
- Adjustments are cumulative and incorporate all changes made in previous stages as well as the current stage.
- Stages allow for highly detailed analysis of budget data at a specific point in the process. In ad hoc and reports, users can query data by time period, e.g. the highly detailed stages, so budget and personnel data can be analyzed over time.



Agency Budget Year Stages



Key Concept - Statuses

- The Adjustment Status identifies the readiness or completeness of an individual adjustment, indicating the level of approval as the adjustment is submitted/processed and the status is updated.
- Each adjustment has one status at any one point in time.
- Can be changed every time you 'submit.'



Agency Adjustment Statuses

- **Agency Draft:** Contains any data which has been created at an agency user but has not been through any approval. Items default to draft when they are started in BARS.
- **Agency Void:** Contains items which have been sent to void by an agency. Void is the closest to deleted that items can get in BARS. They can still be viewed in Ad Hoc for reference, but they will not be part of the official agency submission or printed in the Budget Books, nor can they be brought back from Void to be edited.
- **Program Approved:** Includes data which has been approved at the Program level by an agency (i.e. submitted past draft).



Agency Adjustment Statuses

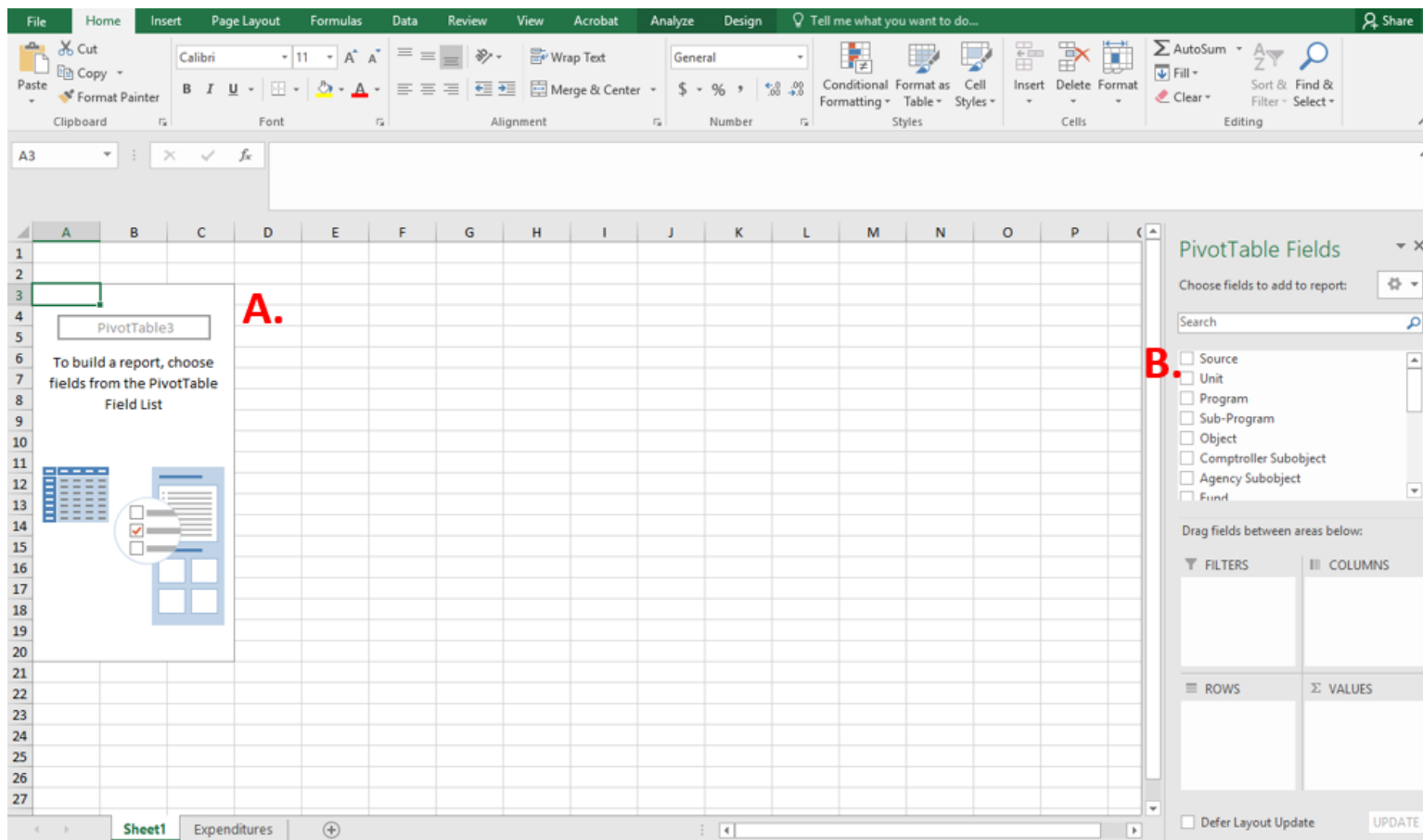
- **Unit Approved:** Includes data which has been approved at the Unit level by an agency. This is the status at which items are pulled into the Budget Request Submission (BRS) module in BARS to be submitted to OBA as part of an agency's official budget submission.
- **Agency Approved:** Items which have been approved at the Agency level by an agency. When agencies use the BRS to submit their budget, certain adjustment types that require further review by OBA (Over-the-Targets, Deficiencies, and Reduction options) go to Agency Approved and OBA processes them from there.
- **Released:** Contains adjustments which were included in the budget and are finalized. Agencies can submit Position Reconciliation adjustments to Released, and all adjustments that are not of the type that go to Agency Approved through the BRS (Over-the-Targets, Deficiencies, and Reduction options) are Released upon BRS submission.



PIVOT TABLE BASICS



Parts of a Pivot Table

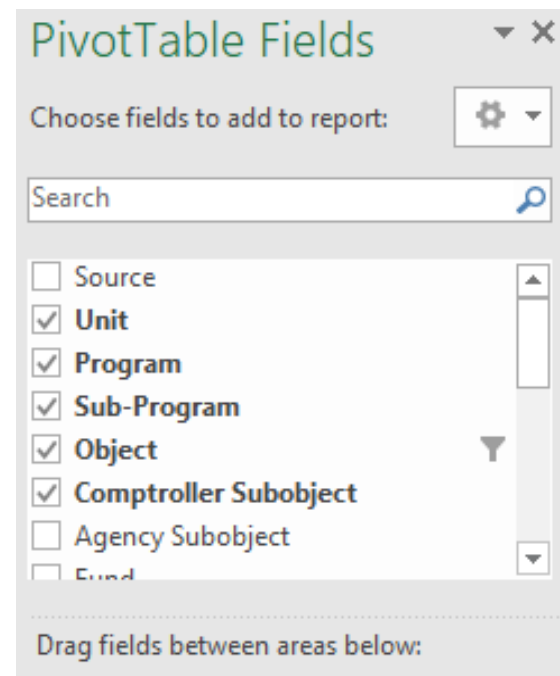


- **A** represents the “canvas” for a Pivot Table. **B** are the fields the user selects from to build the Pivot Table.

Parts of a Pivot Table

B is broken up into five main parts:

- **Fields:** Each of these “fields” represents a data field in BARS. In the example, each of the fields are the direct column headers found in the Expenditures grid in BARS. Users use their computer mouse to select the field options, dragging them down to define Filters, Rows, Columns, or Values.



Parts of a Pivot Table

The screenshot displays an Excel PivotTable with the following data:

Object	Unit	Program	Sub-Program	Comptroller Subobject	Sum of FY 2018 Actuals	Sum of FY 2019 Working	Sum of FY 2020 Current	Sum of FY 2020 Adjustment
A01	01	1111	0902		0	0	35000	1397
A01	01	1111	0903		0	0	16600	662
A01	01	1111	0912		0	0	20000	798
A01	01	1111	0914		0	0	65000	2594
A01	01	1111	0915		0	0	45997	1836
A01	01	1111	0933		0	0	7500	299
A01	01	1111	1002		0	0	17640	704
A02	01	1111	1015		0	0	25000	998
A03	01	1111	1019		0	0	1500	60
A04	01	1111	1034		0	0	16340	652
Grand Total					0	0	250577	10000

The PivotTable Fields task pane on the right shows the following configuration:

- Filters:** Object
- Columns:** Σ Values
- Rows:** Unit, Program, Sub-Program, Comptroller ...
- Values:** Σ Values

Parts of a Pivot Table

- **Filters:** Fields dragged into this box create an overarching filter that allows data to be pre-selected (or excluded) and adjusted based on the needs of the user. Multiple fields can be added into this piece of the layout, such as both “adjustment status” and “unit.”
- **Rows:** Fields dragged into this box divide up the displayed data as independent factors in the reporting (i.e. set them as rows in the Pivot Table). The fields in the “Rows” layout box represent the data inputs which ultimately produce the data outputs in the “Values” layout box. The chart of accounts of an agency, such as Unit, Program, Sub-Program, and Comptroller Subobject are often used to display the familiar line item detail structure found in the original worksheet as well as the Expenditures tab in BARS.



Parts of a Pivot Table

- **Values:** The Fields in the “Values” layout box represent these data type users which to see, defined by the layout created in the “Rows” and “Columns layout boxes. In BARS ad hocs, the most common Value used is “Dollars”—the field that pulls adjustment numbers from the Expenditure grid in BARS.
- **Columns:** Fields dragged into this box divide up the displayed data based on *type*, such as “Fiscal Year Stage” or “Fund Type Name” or “Status” in the case of certain data pulled from BARS. Based on certain detail dragged into the “Values” layout box, this box will automatically populate with the column type most appropriate for that selection.



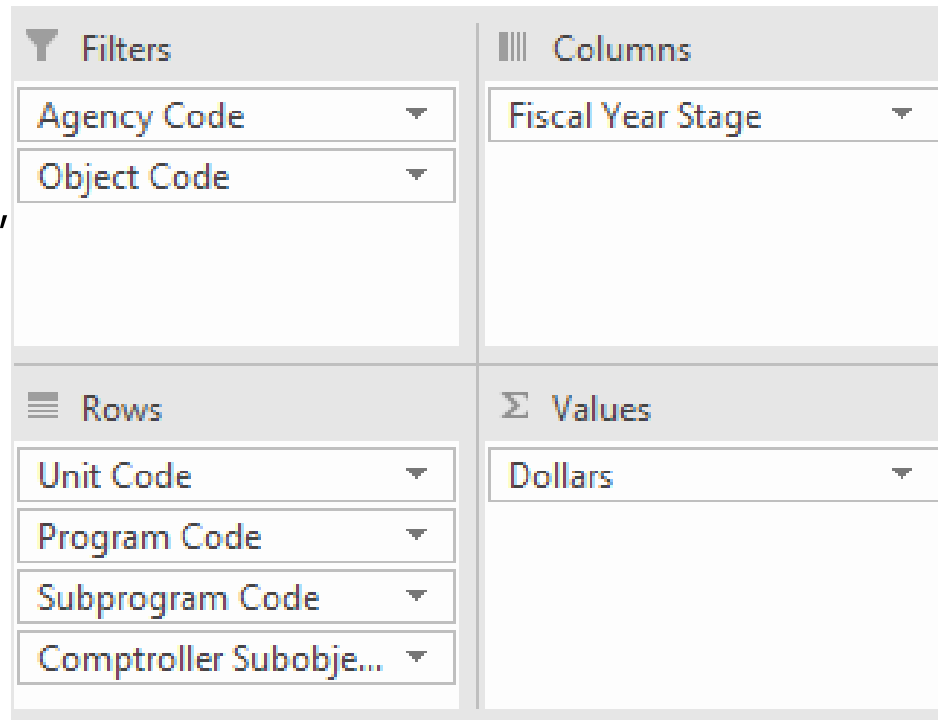
Parts of a Pivot Table

Filters: Agency Code, Object Code

Rows: Unit, Program, Sub-Program, Comptroller Subobject

Columns: Fiscal Year Stage

Values: Dollars



Filters	Columns
Agency Code	Fiscal Year Stage
Object Code	
Rows	Values
Unit Code	Dollars
Program Code	
Subprogram Code	
Comptroller Subobje...	

Parts of a Pivot Table

Agency Code		F10						
Object Code		08						
Dollars				Fiscal Year Stage				
Unit Code	Program Code	Subprogram Code	Comptroller Subsubject Code	FY 2021 Agency Actuals	FY 2022 Agency Working	FY 2023 Agency Request		
A01	01	B101	0839	\$204,700	\$212,172	\$212,172		
A01	01	B101	0874	\$24,835	\$26,444	\$26,444		
A01	02	B102	0802	\$50,000	\$65,000	\$65,000		
A01	02	B102	0808	\$57,000	\$57,000	\$57,000		
A01	02	B102	0809	\$1,000	\$1,000	\$1,000		
A01	02	B102	0831	\$377,585	\$72,428	\$72,428		
A01	02	B102	0839	\$43,364				
A01	02	B102	0861	\$2,100	\$2,100	\$2,100		
A01	02	B102	0875	\$116,741	\$19,359	\$19,359		
A01	02	B102	0876	\$156,748				
A01	02	B102	0882	\$50,460	\$1,887	\$1,887		
A01	02	B102	0894	\$22,020	\$18,661	\$18,661		
A01	02	B102	0899	\$38,965	\$20,000	\$20,000		
A01	03	B103	0801	\$1,000	\$1,000	\$1,000		
A01	03	B103	0804	\$40,000	\$40,000	\$40,000		
A01	03	B103	0808	\$100,000	\$100,000	\$100,000		
A01	03	B103	0809	\$10,000	\$10,000	\$10,000		
A01	03	B103	0817	\$250,000	\$250,000	\$250,000		
A01	03	B103	0829	\$605,000	\$605,000	\$605,000		
A01	03	B103	0831	\$131,134	\$106,387	\$106,387		
A01	03	B103	0839	\$103,541	\$112,769	\$112,769		
A01	03	B103	0862	\$525,000	\$3,704,580	\$3,704,580		
A01	03	B103	0864	\$15,000	\$15,000	\$15,000		
A01	03	B103	0872	\$12,149	\$12,149	\$12,149		
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Pivot Table Layout

- By using "Design" elements, users can create a format for their pivot table that looks more like budget tables they are used to working with.
- Begin by selecting the "Design" tab at the top of the Excel screen under "PivotTable Tools" and select "Show in Tabular Form" and "Repeat All Item Labels" under the Report Layout drop down menu.
 - This will design the layout of the data such that the data is repeated for each line and each "Row Label" receives its own discrete column.

The screenshot displays the Microsoft Excel interface for a PivotTable. The title bar indicates the file is 'ExpenditureFinancials.xlsx - Excel'. The ribbon is set to 'PivotTable Tools', with the 'Design' tab selected and circled in red. The 'Report Layout' dropdown menu is open, showing options: 'Show in Compact Form', 'Show in Outline Form', 'Show in Tabular Form' (circled in red), 'Repeat All Item Labels' (circled in red), and 'Do Not Repeat Item Labels'. The PivotTable in the background has the following structure:

	2019 Working	Sum of FY 2020 Current	Count of FY 2020 Adjustment
Object	0	207737	7
Row Labels	0	207737	7

Pivot Table Layout

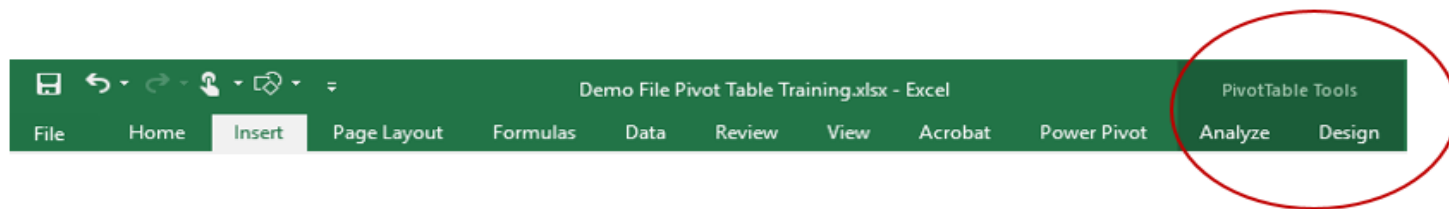
2. Under the Subtotals drop down menu, users can select "Do Not Show Subtotals" to eliminate individual subtotals running off of each chart of accounts selection in the "Rows" layout box.
 - By using these two quick design changes, users can transform the data to read in a line item fashion.
 - Notes that if users want to subtotal a specific type of data, they can right click that row or column in the table itself, and click "Subtotal _____."

The screenshot displays the Microsoft Excel interface with the PivotTable Tools Design tab active. The Subtotals dropdown menu is open, and the 'Do Not Show Subtotals' option is highlighted with a red oval. The background shows a PivotTable with columns for Program, Comptroller Subsubject, and Sum of FY 2018 Actuals.

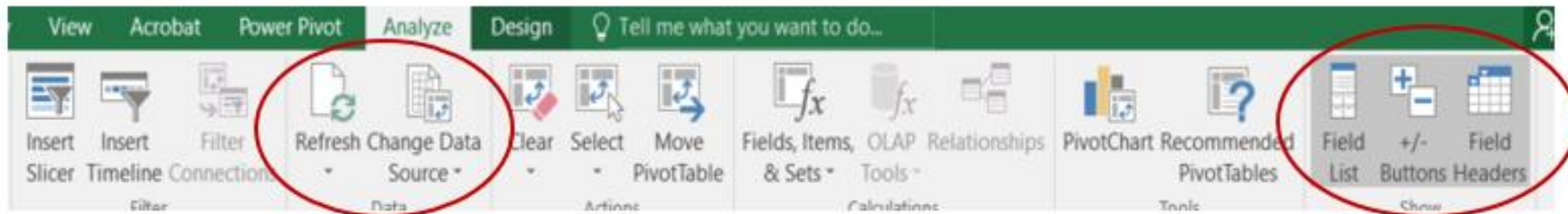
	Program	Comptroller Subsubject	Sum of FY 2018 Actuals	Sum of FY 2019 Working	Sum of F
4	A01	01	1111	0902	0

PivotTable Tools – Analyze Tab

- The cursor must be clicked **into** the Pivot Table for the “PivotTable Tools” ribbon to appear at the top.

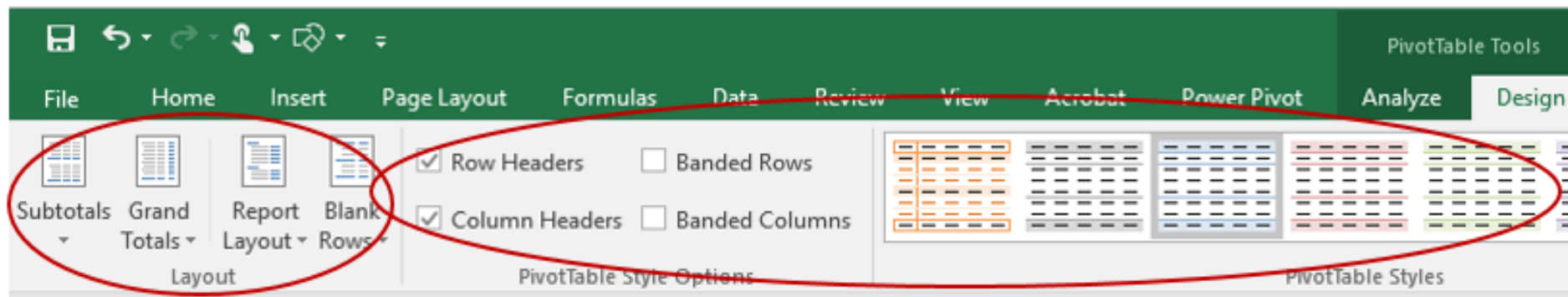


- **Analyze Tab** – provides options to analyze data sets.
 - **Refresh:** If you alter the source of the Pivot Table, use “Refresh” to update the Pivot Table data. The Refresh feature can also be found under the “Data” tab.
 - **Field List:** Use to view the PivotTable Fields list if it has disappeared from your screen. The cursor must again be clicked on the table.



PivotTable Tools – Design Tab

- **Design Tab** – changes how you want the table to display.
 - **Subtotals**: changes whether subtotals are included.
 - **Grand Totals**: changes whether grand totals are included.
 - **Report Layout**: various layout forms – “tabular” being the most useful for budget data evaluation.
 - **Blank Rows**: insert or remove blank rows.
 - **Style**: color, banding, etc... options



Using Excel Formulas with Pivot Tables

- Users can create formulas to the right or below a pivot table to summarize or calculate off of the data in a pivot table.
- However, users should not click into a pivot table cell when developing a formula. Since pivot tables are presenting data as opposed to being that source data, if users click "=" then into a cell in a pivot table, something like the following long reference will result.

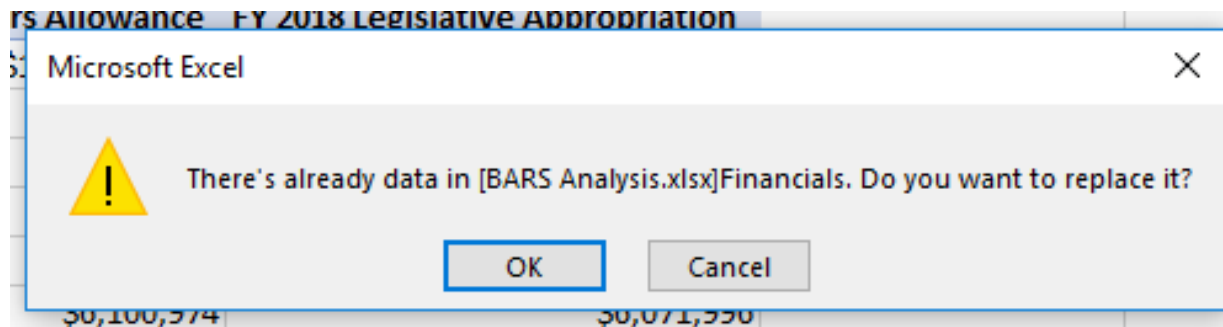
Balance	FY 2018 Legislative Appropriation		
31,790	\$8,710,964,049	GETPIVOTDATA("[Measures].[Dollars]",\$A\$5,"[Fiscal Year	
09,951	\$447,453,055	Stage].[Fiscal Year Stage]", "[Fiscal Year Stage].[Fiscal Year Stage].&[FY	
13,614	\$158,478,614	2018 Legislative Appropriation]", "[Object and Subobject].[Subobject	
15,134	\$109,340,134	Drill Down]", "[Object and Subobject].[Subobject Drill Down].[Object	
09,057	\$338,659,057	Code and Name].&[01: Salaries, Wages and Fringe Benefits]")	
15 910	\$217 257 843		

- Instead, users will need to hard code (type) in the cell references. For example, type "=H4+G4" instead of clicking into H4 and G4. This formula then can be dragged and populated down through a column or across a row.



Using Excel Formulas with Pivot Tables

- Since formulas referencing data in a pivot table have to be hard coded, they do not update if the pivot table changes. If a user adds more rows or columns, the formulas will not follow the initial data.
- In fact, if the formula is placed in a column directly next to a pivot table and then more columns are added then the following warning will show and if OK is clicked then the formulas will be deleted.



- Therefore, using formulas in conjunction with a pivot table can be a powerful tool, but if the pivot table is ever changed then users will need to be very careful to check and make sure the formulas still reference the data that they want it to.

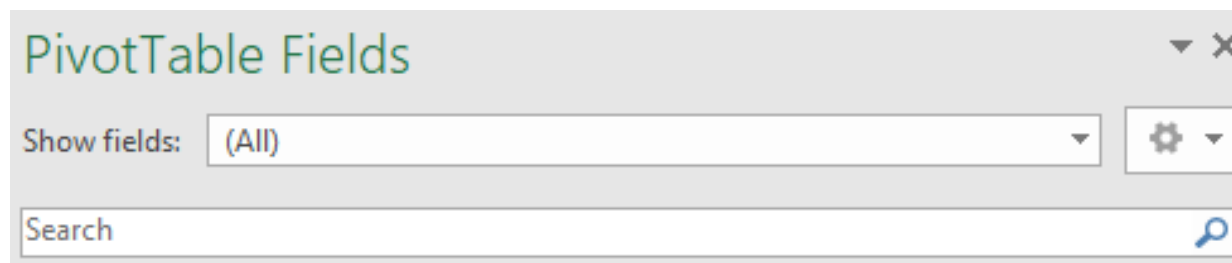


USING AD-HOC REPORTS



Common Fields Used in Ad Hoc

- Ad Hoc is extremely configurable and has a multitude of field options to use when building summary tables. This is a quick overview of common fields users will interact with to help par down the available options to something more accessible, but if users want more information feel free to ask your OBA analyst or consult the Data Dictionary for ideas.
- Since the list of options in PivotTable Fields for Ad Hoc is very long, users will generally want to use the **Search** function available in pivot tables to find the fields they want to use in an Ad Hoc report. Start typing in the field name, and it should show up as an option.



Common Fields - Filters

- Filters enable the user to par down the data they are seeing in an Ad Hoc report.
- **Adjustment Status.** The most common filter is Adjustment Status, since using this filter enables users to include or exclude adjustments based on where they stand in the approval process.
 - For example, if an agency only wants to see a list of adjustments that are ready for OBA submission, users would filter to Unit Approved since that status is what the Budget Request Submission (BRS) module in BARS pulls in and submits.
 - If an agency wants to see the total value of their submission that is ready for the BRS, they would filter to Released (which is where all of the cumulative data adding to the agency's Target resides) and Unit Approved.
 - Users must be very careful when selecting filtered statuses, as is it is easy to accidentally include items sitting at other statuses (i.e. Agency Void, etc.) That are not intended for analysis/submission.

Drag fields between areas below:

⌵ FILTERS

Adjustment Status ▼



Common Fields - Filters

- **Fiscal Year Stage.** This is the combined name of a Fiscal Year and the Stage name representing the data attached to it. If users only want to analyze data for a single year and stage (say the FY 2023 Agency Request) filtering is the best option.
- **Chart of Accounts.** If users only want to view data for one portion of their agency, it is feasible to filter by Unit Code, Program Code, Subprogram Code, Object Code, Comptroller Subobject Code, Agency Subobject Code, **Fund Type Code**, etc.



Common Fields - Rows

- The Rows area of the pivot table is where users typically start when building the outline of a report. When you drag a field into the Rows area of the pivot table, all the unique values in that field will be displayed in the first column of the pivot. If you add more Rows, then Ad Hoc will add columns for each in the order you drag them. The pivot table removes all the duplicates in the field (column of source data) and only displays the unique values.
- **Higher Level Chart of Accounts (COA).** The Agency Code, Unit Code, Program Code, and Subprogram Code are the most commonly used Row fields, and the more that are selected among this list the deeper dive into the detail a user will see. Except for Revenue data, which lacks Subprogram Codes, these four levels of Chart of Account data are universal across all BARS value fields whether it be expenditure information, contract data, etc.



Common Fields - Rows

- Beyond higher level COA, the type of data that a user wants to view drives what fields make sense to select for Rows.
- **Expenditure Data.** If a user wants to see their expenditure values, then lower COA levels including Object Code, Comptroller Subobject Code, Agency Subobject Code, and Fund Type Code are useful.
- **Revenue (Fund) Data.** To view this information, users will find Fund Type Code, Fund Type Name, Fund Source Code, and Fund Source Name helpful.
- **Position Data.** Common row fields for this information include PIN Number, Class Code, Class Title, Grade, and Retirement Plan.
- **Contract Data.** Contract Name, Vendor, and Contract Description are particularly helpful, but other fields found in that SD Tab (Expected Completion Date, Start Date, etc.) are also available.



Common Fields - Rows

- **Contractuals Data.** Combined with COA values, users will generally use Contractual Class and Contractual Job Purpose as row fields.
- **Real Estate Data.** Useful row fields include Building Name (most helpful) and Building Location. Other available fields include Date of Occupation, Includes Customization, Includes Utility Cost, Lease Termination, and Renew Lease.
- **Adjustment Data.** Instead of reviewing aggregated data, sometimes users might want to view the impact individual adjustments are having on their budget, or track adjustments as they progress through the cycle. Row fields useful for such review include Adjustment Working Title, Adjustment ID (the five digit code from the Worktray), and Adjustment Type.



Key Concept - Drill Downs

- Certain Chart of Account (COA) fields that are useful in Rows can either be populated by selecting each level of the COA individual as a field (i.e. dragging in Unit, Program, Subprogram, etc. separately) **or** by utilizing a Drill Down field.
- The two field options are Agency Drill Down and Subobject Drill Down.
- The Agency Drill Down field starts with Agency Code and Name, and users can click the “+” button to drill down to specific Units, Programs, and Subprograms.
- The Subobject Drill Down starts at the Object Code and Name level, and drills down to Comptroller Subobject Code then Agency Subobject Code.

Object Code and Name
⊕ 01: Salaries, Wages and Fringe Benefits
⊕ 02: Technical and Special Fees
⊕ 03: Communications
⊕ 04: Travel

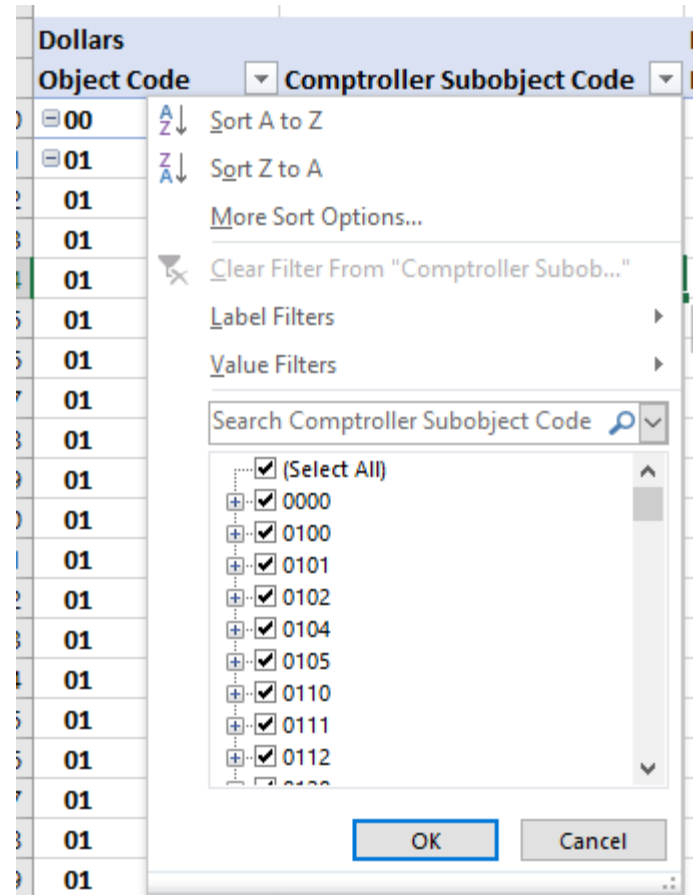
Common Fields - Columns

- If users do not choose a Column field, it will default to Values with one column.
- **Fiscal Year Stage.** Users most often use columns in Ad Hoc to track how values change through the budget cycle or to compare them between fiscal years.
 - For example, if the budget being developed is for FY 2023, and the user wants a "3-year" view of data, they could select the FY 2023 Agency Request (what the agency is submitting in the current budget year), the FY 2022 Agency Working (the current approved working appropriation), and the FY 2021 Agency Actuals.
 - Or if a user wants to see how a specific line item was revised first by DBM for the target then by the agency itself for the request, they could select FY 2023 Baseline Adjusted, FY 2023 Target, and FY 2023 Agency Request.
- **Fund Type Code** or **Fund Type Name.** For a data view that is familiar to many users, fund types can be added to columns instead of rows.



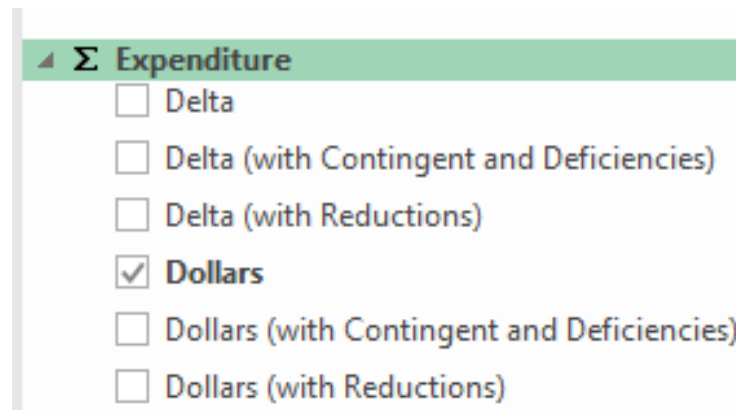
Filtering Using Rows or Columns

- In pivot tables, users can also filter the data they are viewing based on the selected Rows and Columns presented in the table.
- Simply click the small downward arrow button next to each Row or Column name, and users can select single or multiple options for filtering the data.



Common Fields - Values

- The Values area displays the data (values) that users want to summarize in their Ad Hoc report. When a user drags a field into the Values area, the pivot table will automatically sum the data in that field.
- Fields in the list with the “ Σ ” (sigma/sum) symbol can be used as Values in Ad Hoc (and Values only).



Key Value Concept - Deltas

- There are two main ways to view Values in Ad Hoc: as whole values or as deltas.
- If a user chooses a whole value metric (Dollars, Fund Dollars, Position FTE, etc.) then the data populated will be the total amount for each cell presented.
 - For example, if a user is comparing their agency's total Special Fund budget between the Baseline Stage (\$1 million), Target Stage (\$1.1 million) and Agency Request Stage (\$900,000), then those whole numbers would populate in the columns.
- However, there are also delta metrics (Delta, Fund Delta, Position Delta FTE, etc.) which only show the adjustment amount—not whole values—by stage.
 - In the example above, the Baseline Stage would show \$1 million, the Target Stage would show \$100,000, and the Agency Request Stage would show -\$200,000.



Common Fields - Values

- What Value a user selects depends on the type of data view they are looking to see.
- **Expenditure Data.** If a user wants to see their expenditure values, they would choose one of the following:
 - Delta – This shows expenditure adjustment values, excluding Contingent Adjustments (BRFA items used by OBA), Deficiencies (for the Current Year), or Reduction Options.
 - Delta (with Contingent and Deficiencies) – Delta plus those adjustment types.
 - Delta (with Reductions) – Delta plus that reduction type.
 - **Dollars – Whole values with the same adjustment type exclusions as above.**
 - *******Dollars is the most common and useful Value in ad hoc – this is an agency’s main budget data from the Expenditure grid.**
 - Dollars (with Contingent and Deficiencies) – Whole values plus those types.
 - Dollars (with Reductions) – Whole values plus that type.



Common Fields - Values

- **Revenue (Fund) Data.** If a user wants to see their revenue (fund) values, they would choose one of the following:
 - Fund Delta – This shows revenue adjustment values, excluding Contingent Adjustments (BRFA items used by OBA), Deficiencies (for the Current Year), or Reduction Options.
 - Fund Delta (with Contingent and Deficiencies) – Delta plus those adjustment types.
 - Fund Delta (with Reductions) – Delta plus that reduction type.
 - Fund Dollars – Whole values with the same adjustment type exclusions as above.
 - Fund Dollars (with Contingent and Deficiencies) – Whole values plus those types.
 - Fund Dollars (with Reductions) – Whole values plus that type.



Common Fields - Values

- **Position Data.** Useful values for this information include:
 - Position Delta FTE – FTE adjustment counts.
 - Position FTE – FTE whole counts.
 - Position Total Salaries – Salaries for the selected COA, available down to the PIN level.
 - _____ Fund Salary (there is one for each of the various fund types)
- **Contract Data.** Contract Dollars should be used.



Common Fields - Values

- **Contractuals Data.** The following values are available:
 - Contractual Positions Delta Dollars – Contractual salary adjustments (maps to Comptroller Subobject 0220).
 - Contractual Positions Delta FTE – Contractual FTE adjustment values.
 - Contractual Positions Dollars – Contractual salary whole values.
 - Contractual Positions FTE – Contractual FTE whole values.
- **Real Estate Data.** The most useful value is Real Estate Dollars.



Key Questions When Setting Up An Ad Hoc

- **What type of data am I looking for?** This determines what Values you select.
- **What information do I want to include/exclude?** This guides the Filters that are chosen.
- **At what level do I want to review the data?** This determines what Rows are selected.
- **What am I comparing?** This guides Column selection.



EXAMPLES

The presenter will show several example Ad Hoc, highlighting concepts from the previous slides.



Do's and Don'ts of Ad Hoc

- DON'T
 - Do not place a field in columns that has a lot of individual values. For example, if Comptroller Subobject Code is dragged to the column then hundreds of columns will be generated and the ad hoc will slow down or fail to load.
 - Do not try to use two different drill downs ("Agency Drill Down" and "Object Drill Down") in the same ad hoc. Drill downs use a lot of Excel processing power, and with two in the same table the result will likely be a failure to load or Excel freezing.
 - Make sure that the Value you have selected has all of the characteristics of your other selections. For instance, if Fund Dollars is the Value and Subprogram is on the Row, that will create issues since Revenue information is not designated at the Subprogram level.



Do's and Don'ts of Ad Hoc

- General Rule – if an Ad Hoc is taking more than 30 seconds to update, it is likely because the options chosen don't go well together. Press "Esc" on your keyboard to cancel.
- DO
 - Always select Values and Filters first. Then Rows and Columns This will help ad hoc run faster as it is not looking for as much data.
 - In general, there should be no more than around 20 columns of data for an Ad Hoc to function properly.
 - Delve in! Get creative! Ad hoc is a very powerful analytical, tracking, and review tool for budgeting in Maryland.
 - Ask questions! At OBA we use Ad Hocs for most of our data analysis so we are very familiar and more than happy to help agencies to unlock the potential of this great tool.



Accessing Ad Hoc

- From the BARS Home Page
 - Hover over Ad Hoc Reporting, choose a template

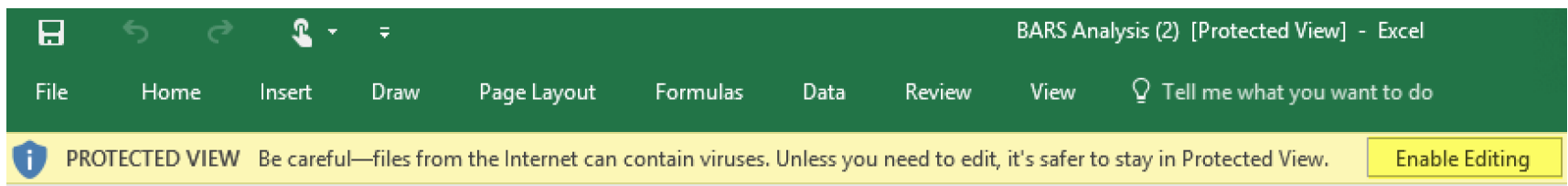
The screenshot displays the BARS (Budget Analysis and Reporting System) interface. The top navigation bar includes links for Worktray, Operating Budget, Administration, Agency Administration, Request Access, and Reports. A secondary navigation bar contains Ad Hoc Reporting, Support, and Logout. The Ad Hoc Reporting menu is open, listing various templates. The main content area shows a search for work items with a 'No Work Items found' message. The user's name, Nathan Bow, and the environment, PROD, are visible in the top right corner.

- When a prompt asking pops up, select **Save** in a location of your choice.

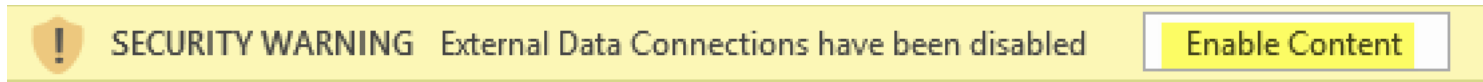


Accessing Ad Hoc

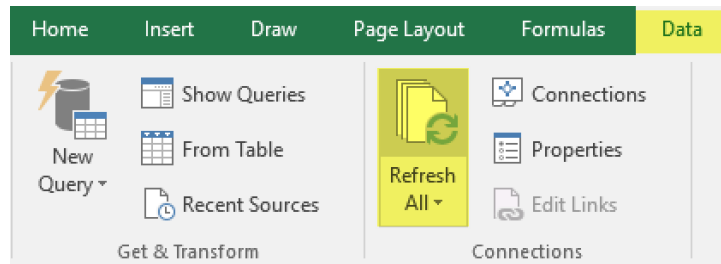
- Select **Enable Editing** to connect to the BARS database.



- Select **Enable Content**.

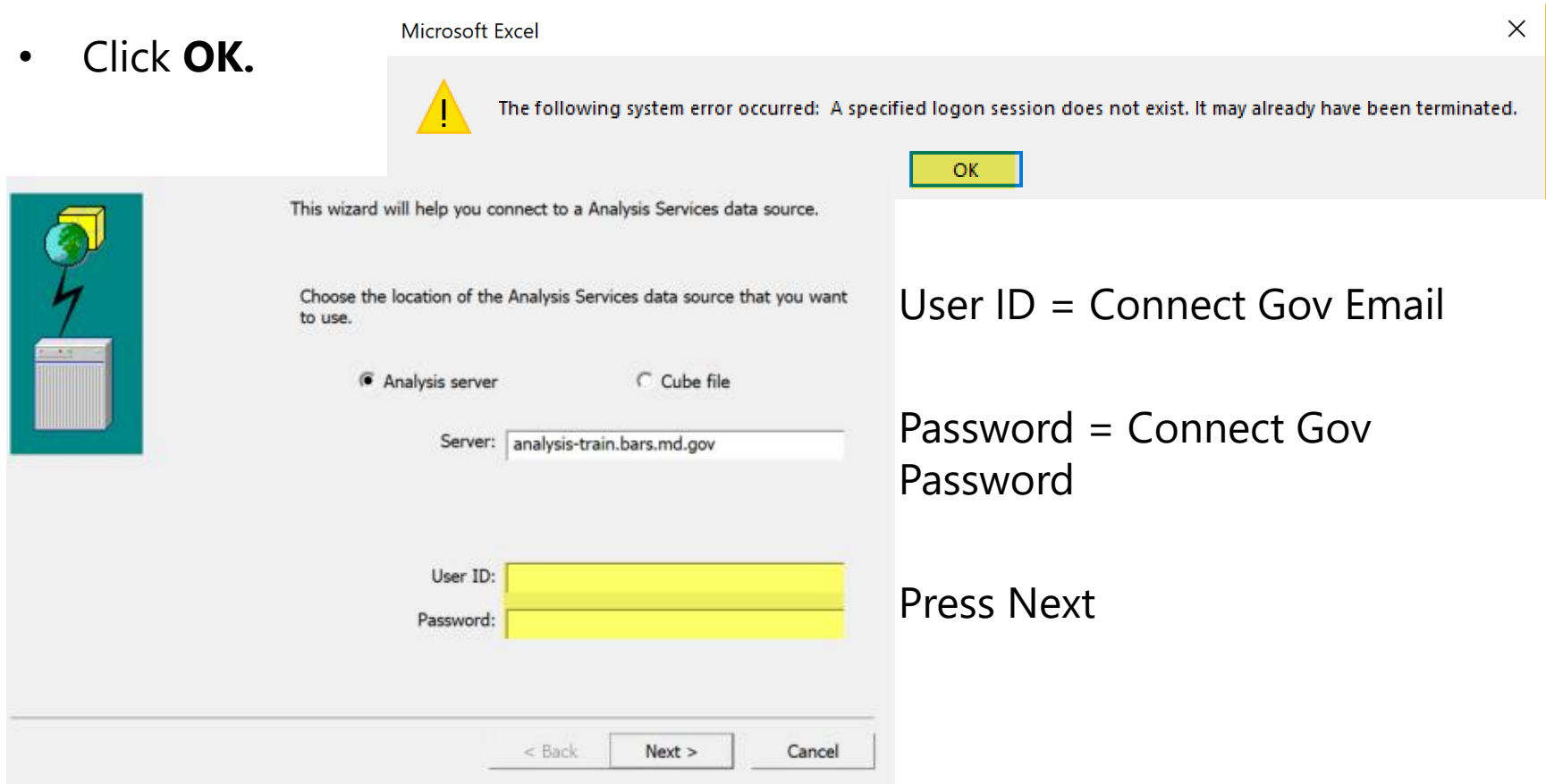


- Click on **Data**.
- Select **Refresh All** (you can do this whenever you want to refresh the information in a pre-existing ad hoc with the most recent data from BARS).



Accessing Ad Hoc

- Click **OK**.



The screenshot shows a Microsoft Excel window with a system error message and a wizard for connecting to an Analysis Services data source. The error message reads: "The following system error occurred: A specified logon session does not exist. It may already have been terminated." Below the error message is an "OK" button. The wizard is titled "This wizard will help you connect to a Analysis Services data source." and asks the user to "Choose the location of the Analysis Services data source that you want to use." The wizard has two radio buttons: "Analysis server" (selected) and "Cube file". The "Server:" field contains "analysis-train.bars.md.gov". The "User ID:" and "Password:" fields are highlighted in yellow. At the bottom of the wizard are buttons for "< Back", "Next >", and "Cancel".

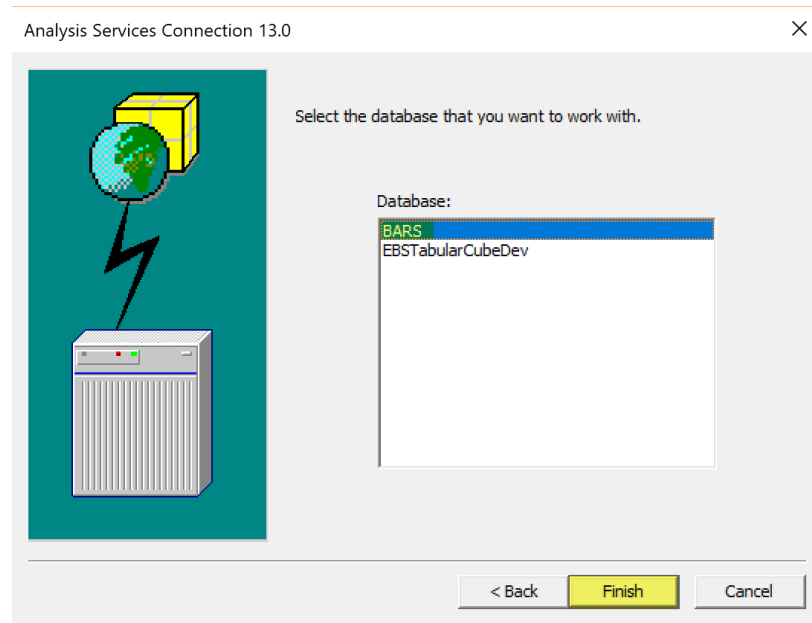
User ID = Connect Gov Email

Password = Connect Gov
Password

Press Next

Accessing Ad Hoc

- The Database defaults to BARS.
- Select **Finish**.



- The first time you open an ad hoc, you will need to log in once per ad hoc sheet in the file.
- You are now connected to the BARS Server and have the refreshed latest numbers! Data entered into BARS will be available in Ad Hoc upon Refreshing after about five minutes.



DISCUSSION AND QUESTIONS

Reminder: This training was recorded and will be available in the calendar invite link, and the PowerPoint presentation is attached to the calendar invite.

