Creating Workbooks in Excel from Existing Queries

Important Points Before Creating Workbooks

- Queries that have already been developed for your use, as well as Query Views and InfoProviders, can be used as data sources.
- Most will use existing queries as a data source and using query views and InfoProviders are beyond the scope of this guide.
- Data is displayed in the workbook in crosstabs.
- Multiple crosstabs in a workbook with data from different sources can be inserted.
- Data sources that are stored in different systems can be used in one workbook, for example there are queries from the budget system and those in BW from financial data, procurement, and Human Resources / Payroll.
- Data sources, such as queries, contain data for Dimensions or Members AND Measures.
  - Dimensions or Members are qualitative data provided in the crosstab in the rows of embedded queries and are informational and not used for mathematical purposes and do not total for a sum.
  - Measures are quantitative numerical values where mathematical functions do work, such as Amount columns or rows of dollars that can be totaled for a sum.
- Both Dimensions / Members and Measures can be added and removed easily with drag and drop for formatting and analysis.
- In this example, we will use the existing Fund Trial Balance Query to create the workbook, but any query can be used.
Locate and Select an Existing Query

1. Click on the **Analysis** tab to display that add-in toolbar.

2. Click in the desired cell where you would like to insert the query results.

3. Click on the **Insert Data Source** button on the add-in toolbar under the Analysis tab (or select queries already used and listed in the drop-down as needed).

4. Click on **Select Data Source for Analysis...** option.
Creating Workbooks from Queries (cont.)

5. In the Select Data Source window, select the connection to the server such as:

- **BWP (Business Warehouse)** for queries for financials, HR Payroll, Procurement, etc.

  **OR**

- **BPP (SAP Budget Planning)** to access budget specific queries for budget reports (C3, C5, C5B, YE2, YE10, YE11, M3, SI, P1 or P1.1).

  *Note:* The list of connections may be displayed as a List View as shown here or a Display as Tree View simply by changing the button selected to the right of the Show Connections field.

6. After the connection is chosen, click the **Next** button.
Creating Workbooks from Queries (cont.)

7. If you know the name or have an idea of the name of a query, select the Search tab.

   Note: If you do know which query you’d like to use, select the Area tab and open folders to see all the queries that you have security rights to use. Most financial queries are located in the Financial Management & Controlling folder under the Duke Custom Financial Management and the Commitments /actuals and budget in Funds Management (Duke) folders.

8. Ensure the All radio button is selected.

9. Enter the name or partial name of the query enclosed with and using wildcard * (asterisks) in the spaces between words in the search field at the top (for example, *Fund* Trial*Balance*).

10. Click Enter on the keyboard or the Search icon in the field to search.

11. In the displayed results, select the query desired as the data source and click OK (in this example, one of the Fund Trial Balance (No Commitments) with Hierarchy is selected).

   Note: Consult your management center (SOMMC, PAMC, CAMC) for recommended queries if needed.
Enter Prompts to Select Values for the Query

Note: The selection criteria and input fields will vary by each query. Fields outlined below are typical input fields and based on the Fund Trial Balance query example used in this guide. You may have different selection fields to enter based on the query chosen. Required fields are indicated with an asterisk (*).

1. On the Prompts selection screen for this Fund Trial Balance query, enter the fiscal year (e.g. 2020) in the Fiscal Year field.

2. Ensure the values of # to 16 OR # to the last closed period are displayed in the Posting Period Range From and To fields
   - # = balance forward needed for certain codes to determine a fund balance.

3. Ensure the values of 290000 to 999999 are displayed in the Commitment Item Range From and To fields
   - Commitment item = G/L Account in SAP BW; using the range of G/L Accounts 290000 to 999999 provides a fund trial balance versus a complete trial balance (29xxxxx G/L accounts are Fund Equity).
Creating Workbooks from Queries (cont.)

4. Use the next steps to select the desired level of BFR Code / Org. Unit for the CODUKEORG Hierarchy Node field.

5. If the BFR Code / Org. unit number is known, the 10-digit number may be keyed directly into the field using the value of OU at the beginning (example OU6860509510 – USE YOUR OWN 10-digit BFR Code).

6. To find the BFR Code value if the value is not known, click on the Show Value Help button for the Duke Cost Object Hierarchy Node field and follow the next steps to find a value (any defaulted BFR /Org. Units should be changed).

Note: This window may be sized for better viewing by clicking and dragging borders.

7. Use the drop-down to the right of Display to ensure the Key / Text option is defaulted to show the recommended display (key = BFR code / Org. Unit number and text = corresponding description of BFR Code / Organizational Unit name).

8. Ensure the Hierarchy option is displayed in the field on the right side of the screen.
Creating Workbooks from Queries (cont.)

9. To expand the entire hierarchy, click on the **Expand** buttons beside the **OUDUKE (DUKE)** tree and beside of **OU10 (Duke University)** to open those nodes (Duke University includes the School of Medicine and Provost areas, as well as the DCRI).

10. Continue to use the **Expand** buttons to open and locate the desired level of the organization hierarchy to be selected for the query (i.e., the department, division, or school) per below:

   • To find schools or departments within the School of Medicine follow the path: **Chancellor, Health Affairs (OUH)** → **Chancellor, Health Affairs (OU6800000000)** → **School of Medicine** (or School of Nursing or Medical Center Admin) → choose appropriate area (Basic Sciences, Clinical Sciences, Centers, etc.).

   • To find schools or departments within the Provost area, follow the path: **Provost (OUV)** → **Provost (again)** → choose appropriate area from here.

   • To find departments within the Central Administration Management Center, follow the path: **Exec Vice-President (OUE)** → **Executive Vice-President (again)** → choose appropriate area from here.
11. Decide what level of BFR Code/ Org. Unit node to select and use in the query per the guidelines below:

- The BFR Code/Org. Unit level node is indicated by the letters **OU** followed by the **10-digit BFR Code**.

- The recommended selection is a **mid or lower level node** (**BFR Code/Org. Unit**) for your organizational hierarchy.

- More than one BFR Code/ Org. Unit may be selected by adding a line to the selection box (covered in the next pages).

- Do NOT choose the bottom level nodes beginning with KS or PD as those represent the **7-digit cost object** (fund code) once you’ve reached the bottom BFR Code / Org. Unit level, and **may not be the best choice for most queries**. In other words, the report is better for the BFR Code/Org. Unit levels versus single 7-digit cost objects.
12. To select the desired BFR Code/Org. Unit, click once on the radio button beside the value.

   Note: Only one radio button can be selected on this screen; however, multiple lines may be added to select more than one BFR Code / Org. Unit back on the Prompts selection screen, as outlined in the next steps.

13. Click on the **OK** button at the bottom of the window to return to the **Prompts** selection screen and populate the field with the selection.
Creating Workbooks from Queries (cont.)

Add Lines to Select Multiple Values for Prompts Like BFR Codes / Org. Units (Based on Query Used)

1. Back on the Prompts selection screen, click on the Add Line button to the right of a field, if available.

2. In the resulting added line, repeat the steps outlined in the previous pages of this guide to either enter or find a value, such as another BFR Code / Org. Unit to add to the selection.

   Note: The Add Line button also allows you to choose Add Lines Using Filter by Member which provides checkboxes to select or deselect additional lines to be added, if preferred.
1. To check the selection values that have been entered are valid:
   
   - Once you’ve clicked into a field to enter values on the right side of the screen, then clicking into another field will activate the edit process for the field just entered.
   
   - Use the **green check marks** displayed on the left side as the indicator to verify values are valid and make edits as needed.

   **Note:**  *This is especially helpful when typing the 10-digit BFR Code/Org. Unit in the field versus selecting the value from the search results as outlined in the previous steps. If you select a value by searching and choosing from the results, then the check is automatically done as only valid values will display in the search results.*
Creating Workbooks from Queries (cont.)

Save a Variant of Prompts for Future Use to Populate Selection Values

**Note:** The Save Variant function allows the selection values entered in the fields for Prompts to be saved as a named variant. The variant can be used the next time to populate the fields and save keystrokes.

1. Ensure the desired values are entered in the selection fields.

2. If creating a new variant, simply enter a name for the new variant in the **Use Variant** field.

   **Note:** The field defaults with instructions on either selecting an existing variant or entering a name to create a variant.

3. To create the new variant, click on the **Save Variant** button.

   **Note:** A note will briefly display in the lower left corner of the spreadsheet confirming the named variant was saved. If saving over an existing variant, you will be prompted to click **Yes** to replace the existing variant or click **No** to not replace the existing variant.
Use a Variant for Prompts to Populate Selection Values and Save Keystrokes

Note: If a named variant was saved for the selection values, then each time the query is used again, the Use Variant field may be used to find / select the existing variant. The variant will populate the fields with the saved values and save keystrokes.

1. To use an existing variant, click on the **Drop-down** in the far right of the **Use Variant** field.

2. Select the **named variant** from the list.

3. Verify the selection values populated from the variant as expected.
Creating Workbooks from Queries (cont.)

Update and Overwrite a Variant for Prompts

1. Select the variant to populate the fields per the previous steps.
2. Change any field values as needed.
3. Click the **Save Variant** button.
4. Click **Yes** to overwrite or replace the existing variant or click **No** if needed.
Creating Workbooks from Queries (cont.)

Execute the Query

1. In the **Prompts for Fund Trial Balance (No Commitments) with Hierarchy** window or other Prompt windows for other queries, verify all values are entered or use the available Variants to populate fields.

2. When ready to run the query, click the **OK** button.
Review the Query Results

1. Review the query results inserted as follows:
   - Data displays in the **crosstab on the left side** of the screen.
   - Data **starts in the cell that was selected** earlier.
   - The data is **based on the data source used** and the BFR Code/Org. Unit node(s) and other selected prompts.

2. Note the following about the query used in this example:
   - This **Fund Trial Balance (No Commitments) with Hierarchy**, query uses the Duke Cost Object table (**CODUKŒORG**) to combine all four major cost objects in one place for reporting - Cost Centers, Profit Centers, Projects/WBS Elements, and Internal Orders.
   - The cost objects are displayed in one “**super hierarchy**”, which provides a consolidated view of the entire organization’s financial activity; **some queries do not have the hierarchy built into the query**.
   - The **hierarchy levels** are displayed with the ![Open](+) buttons and some may already be expanded to display the Duke Cost Object level.
   - **Do not use** the ![Open](+) buttons to open the hierarchy levels individually as this is time consuming and the hierarchy can easily be expanded or removed as covered later in this guide.
Creating Workbooks from Queries (cont.)

- In this query, the format for the lowest level Duke Cost Objects in Column A is displayed as the “technical name” and is not useful in analyzing the data. For example, a cost center such as 1573147 is listed as KSDUKE0001573147, and a Project/ WBS Element such as 7473100 is listed as nothing meaningful, like PD0001157. The technical name can be removed by using one of several methods covered later in this guide.

- The meaningful 7-digit value for Duke Cost Object is listed in the Cost Object column – in the example used above – the values of 1573147 or 7473100 (WBS Plant fund) are shown.

- See the Cost Object column for the meaningful 7-digit Cost Object (fund code) value.

3. **Choose one of many methods that best suits your preference** to analyze and format the workbook query results, as summarized below:

   *Note:* *There is more than one way to perform the same function using the methods summarized below. Choose the method that you prefer.*

- Use **buttons** on the top Analysis add-in toolbar like Undo, Filter, and Hierarchy to perform functions or the File > Analysis menu path to use other buttons like Open Workbook.

- Use the right side of the screen to display the Analysis “Design Panel” or “Property View” and do analysis and formatting of data (if not displayed, click the **Display** button on the top toolbar and select Display Design Panel or Show Property View).

- Use **context menu (right click)** functions for Analysis in the crosstab results to analyze and format data.

- Refer to the general instructions for how to use each of these methods, as well as sections later in the guide that outline specific functions to analyze and format data with detailed instructions for how to do those functions.