Table of Contents

About SAP Business Warehouse (BW) at Duke ....................................................... 3
Logging Into SAP BW ...................................................................................................... 4
The BEx Analyzer v7.0 Toolbar ..................................................................................... 7
BW Terms and Definitions .......................................................................................... 8
Using an Existing Query – Fund Trial Balance (FTB) .............................................. 9
   Locate and Select the Fund Trial Balance Query using InfoAreas .......................... 9
   Use the Find Function to Locate a Query ............................................................... 12
   Enter or Chose Selection Criteria for the Fund Trial Balance Query ................. 14
   Check the Selection Values Entered Before Executing the Query ...................... 20
   Save a Variant of the Selection Values to Use Later and Save Steps .................. 21
   Use or Get a Saved Variant of the Selection Values ............................................... 22
   Execute the Query and Review the Results .......................................................... 23

Saving a Single Formatted Query to a Workbook ..................................................... 26
   Saving the Formatted Query Results to a Workbook in BW for Future Use .......... 26
   Tips for Saving the Formatted Query as an Excel Workbook (Local Network) ....... 29

Opening a Workbook in BW to Access the Saved Query at a Later Date .......... 30
   Change the Variable Values .................................................................................... 33
   Refresh a Workbook Containing One Single Embedded Query ............................ 34

Basic Context Menu (Right Click) Functions for Queries and Workbooks .................. 35
   Overview of Basic Functions ................................................................................... 35
   Undo an Action or Go Back One Navigation Step to Prior Results ......................... 36
   Eliminate the Technical Description of the Duke Cost Object ......................... 37
   Expand the Hierarchy to See All Levels and Duke Cost Objects ....................... 39
   Deactivate a Hierarchy to Display a Straight List of Duke Cost Objects ............ 41
   Sort the Results Numerically by the Cost Object if a Hierarchy is De-Activated ... 43
   Filter and Drill Down – Example: Filter on One Cost Object and Drill Down By
     Commitment Item (G/L Acct.) ............................................................................... 45
   Add Drill Down According To - Example: Add Drill Down According To Commitment Item (G/L Account) ........................................................................... 47
   Swap the View of the Results – Example: Swap Duke Cost Object With
     Commitment Item (G/L Account) ........................................................................... 49
   Query Properties: Suppress Rows or Columns that Contain a Zero Amount ....... 53
   Query Properties: Add a Total (Results) Row if Not Displayed ......................... 56
   Query Properties: Move the Placement of the Grand Total Row ......................... 58
   Query Properties: Display or Hide Columns .......................................................... 61
   Query Properties: Suppress Repeated Key Values or Display Repeated Key Values ............................................................ 64
# Table of Contents (cont.)

Filter Button Functions Including Drag and Drop..............................................65
  Overview of Filter Button Functions .................................................................. 65
  Filter by BFR Code/Org. Unit from a Higher Level of Hierarchy via the Filter Button .... 68
  Display Balances by Period Across the Report via the Filter Button......................... 71
  Using Drag and Drop to Perform the Swap Function via the Filter Button ................... 75
  Using Drag and Drop to Add a Drill Down via the Filter Button ................................ 77
  Disable the Drag and Drop Function of the Filter Button if Preferred ....................... 81

Design Mode Toolbar: Setting Options for Queries and Workbooks.................82
  Overview and Tips for Using the Design Mode Toolbar (Top Row).......................... 82
  Deselect Autofit to Prevent Column Sizes from Adjusting to the Default Width ........... 84
  Workbook Settings: General Options ................................................................. 86
  Workbook Settings for Variables Values ............................................................. 88

Advanced Functions for Queries and Workbooks.............................................90
  Multiple Selection and Importing of Variable Values to a Selection Screen
  for a Query .............................................................................................................. 90
  Refresh a Workbook Containing Multiple Embedded Queries ............................... 90
  Copy a Query to a Worksheet using the Copy Sheet Function (Replaces
  Copy Query in Older Versions) ............................................................................... 102

List of Commonly Used Queries .........................................................................104
About SAP Business Warehouse (BW) at Duke

In addition to the financial reporting functions available in the SAP enterprise system, the SAP Business Warehouse (BW) product is available as a tool for more advanced reporting options at Duke. BW is a data warehouse and contains tables of data that can be used for ad hoc reporting, either to view and use existing standard queries or to build queries. Financial and procurement data are loaded into BW tables from the real-time SAP enterprise system on a nightly basis (SAP enterprise system is an On-line Transaction Processing software – OLTP). So while the data in BW is not updated real-time, there is only a one-day lag (SAP BW is an On-line Analytical Processing software – OLAP).

The BW tool uses an Excel Add-in tool, known as Business Explorer (BEx) Analyzer to view the results of the query and manipulate the report. This allows data to be analyzed in various ways that are not available in SA. BEx Analyzer (v7.0) is the current version that is recommended for use in SAP BW. Earlier versions are no longer supported and will not work with newer software updates for SAP and Microsoft Office.

SAP BW also allows departments to view all their cost objects (Cost Centers, Profit Centers, and WBS Elements/Projects) in one report. Most reports for the University and School of Medicine (Company Code 0010) in the SAP enterprise system allow for reporting on only one kind of cost object at the time.
Logging Into SAP BW

**To log into BW:**

1. Use the **Authentic Login** icon to enter your **Net ID** and **password** and obtain your green security ticket, just as you would to log into SAP.

2. Once you have a green ticket, double click on the **SAP logon** icon.

**In the resulting SAP Logon window:**

3. Double click on the option listed as **BWP**.

   *Note: MAC users should log into SAP per the usual steps, then select and open BWP on the Open: SAPGUI screen.*
On the **SAP Easy Access - User menu**... screen in BW, to open the BEx (Excel add-in):

4. Enter the transaction code **RRMX** in the Command field (this transaction works with SAP Logon 7.40 – see BW transition document if using an earlier version of the SAP Logon).

   *Note: To avoid any issues with BW, ensure that all other open Excel files are closed.*

5. Click on the **Enter** button to open an Excel session.

6. In the Excel session, to display the Business Explorer (BEx) toolbar at the top, click on the **Add-Ins** option on the toolbar.
7. Review the icons on the BEx Analyzer toolbar now displayed (see next section for descriptions) and use the toolbar to open queries and workbooks, save workbooks, and perform other Business Explorer (BEx) functions as outlined in the rest of this Guide.

   Note: Most BW users will not use the top row of the toolbar.
The BEx Analyzer v7.0 Toolbar

The Business Explorer (BEx) Analyzer v7.0 toolbar contains buttons that perform functions which help you analyze the data. A brief description of the most commonly used buttons is shown below and the functions will be discussed in the Guide as the steps for opening and saving workbooks or using existing queries are outlined.

Note: Most BW users will not use the top row of the toolbar.
BW Terms and Definitions

Key Terms
The following table outlines some key terms relating to SAP BW:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>InfoCube</td>
<td>A table which collects and stores characteristics (attributes) and key figures (dollars, hours, workdays, etc.) in BW – Example of InfoCube for financials = G/L Account Balances</td>
</tr>
<tr>
<td>ODS</td>
<td>Operational Data Storage – a table that contains transaction data stored at the document level.</td>
</tr>
<tr>
<td>InfoProvider</td>
<td>InfoCubes (balances) or ODS (transactions)</td>
</tr>
<tr>
<td>Query</td>
<td>An evaluation of data per the selection of attributes and key figures from InfoProviders that can be analyzed in an Excel worksheet – users can define and customize queries based on how they want to view and navigate data (e.g. Fund Trial Balance).</td>
</tr>
<tr>
<td>Workbook</td>
<td>Collection of Excel spreadsheets with embedded queries composed of one or more related worksheets.</td>
</tr>
<tr>
<td>InfoArea</td>
<td>Comprised of folders of InfoProviders that contain existing queries and workbooks.</td>
</tr>
</tbody>
</table>

More on InfoProviders
InfoProviders are folders that contain the existing queries, such as the Fund Trial Balance. These InfoProviders are identified in BW by symbols, which are displayed in the folder and used to expand the folders and open the queries. Below is legend of these symbols and what they represent in BW.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![Image] | Identifies an InfoArea (folders) of InfoProviders that contain existing queries or workbooks – think of the double diamonds as just “folders”.
| ![Image] | Identifies this InfoProvider as an InfoCube For financial analysis, cubes contain balances |
| ![Image] | Identifies this InfoProvider as an Operational Data Store (ODS) For financial analysis, ODS contain transactions |
| ![Image] | Identifies this InfoProvider as a Multi-cube = combination of two or more InfoCubes and/or ODS. For financial analysis, cubes contain a combination, such as balances and transactions |
| ![Image] | Identifies a Query within an InfoProvider (folder). |
Using an Existing Query – Fund Trial Balance (FTB)

Locate and Select the Fund Trial Balance Query using InfoAreas

1. Click on the **Open** button on the **BEx toolbar**.
2. Click on the **Open Query**… option from the drop-down list.

Note: The **History** button is the default selection and lists the last queries opened on the right side of the screen.

3. Click on the **InfoAreas** button to display the folders containing the InfoProviders with lists of InfoAreas (folders) on the right side of the screen (see screen next page).
Using an Existing Query – FTB (cont.)

4. Double click on the **Financials Management & Controlling** InfoArea folder to open and search in this folder (this folder contains other folders of financial based queries).

5. Double-click on the **Duke Custom Financial Objects** InfoArea to open that folder.

6. Double-click on the **Commitments/actuals and budget in Funds Management (Duke)** InfoCube to open that folder.

*Note:* As a reminder, the term **Infocube** = balances.
Using an Existing Query – FTB (cont.)

7. Click once on the **Name** column heading to sort the queries listed in alphabetic order if not already listed that way.

8. Scroll down to locate the queries beginning with Fund and double-click to open the **Fund Trial Balance (No Commitments) with Hierarchy** query folder.

9. Scroll down and double-click to open the **Fund Trial Balance (No Commitments) with Hierarchy** query and resulting selection screen (see steps for selection criteria).
Using an Existing Query – FTB (cont.)

Use the Find Function to Locate a Query

1. Click once on the **Find** button (left side of screen).

2. Enter the name or part of the name of the query you are trying to find in the white field under **Search Method**.

3. Click the **Find** button (this button is grayed out until you enter something in the white field).
4. In the resulting list under the **Name** column below, double-click on the query desired to open the query’s selection screen (or click once to highlight and use the **Open** button).
   - In this example, the query chosen is the Fund Trial Balance (No Commitments) with Hierarchy.
Using an Existing Query – FTB (cont.)

Enter or Chose Selection Criteria for the Fund Trial Balance Query

1. Enter the fiscal year (e.g. 2015) in the Fiscal Year field.
2. Ensure the values of # to 16 OR 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).
4. Use the next steps to select the desired level of BFR Code / Org. Unit for the Duke Cost Object 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 (default is SOM top level BFR Code node of OU6860000000 – change this to your BFR Code).
6. To find the BFR Code value, click on the button for the Duke Cost Object Hierarchy Node field and follow the next steps to find a value (SOM default should be changed).
Using an Existing Query – FTB (cont.)

Note: For some drop-down windows, like for Cost Object, a More>> button may be displayed in the lower right corner. To use this button as an aid for selecting multiple values, refer to the Multiple Selection and Importing of Variable Values to a Selection Screen for a Query section of this guide under Advanced Functions.

7. In the Show field, choose one of the following:
   - History (default) = to view a list of any BFR Code / Org. Units you’ve used in the recent past
   - Single Values = to view a list of all BFR Codes / Org. Units in the Duke Hierarchy.

8. If Single Values is chosen in the previous step, use the Expand buttons to open the “trees” within the Entire Hierarchy (on the left) for the Duke organization and locate the desired level of BFR Code/ Org. Unit (see next steps).
   - Only one BFR Code/Org. Unit may be selected (multiple selections are not provided on this particular query).
Using an Existing Query – FTB (cont.)

9. To open/expand the *Entire Hierarchy* and begin to locate the BFR Code / Org Unit, click on the **Expand** button beside the *(OUDUKE) DUKE* tree.

10. Use the drop-down side (right side) of the **Display Key/Text icon** on the toolbar to change value to desired display (**Key / Text** is recommended).

11. Click on the **Expand** button beside of *(OU10) Duke University* to open that node (Duke University includes the School of Medicine and Provost areas, as well as the DCRI).
12. 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, School of Nursing, or Centers, follow the path: Chancellor, Health Affairs → Chancellor, Health Affairs (again) → School of Medicine → choose appropriate area (Basic Sciences, Clinical Sciences, Centers, etc.).

- To find schools or departments within the Provost area, follow the path: Provost → Provost (again) → choose appropriate area from here.
13. Decide what level of BFR Code/ Org. Unit node to use in the query per the guidelines below:

- All BFR Code/Org. Unit levels are indicated with the symbol.
- The recommended selection is a **mid or lower level node (BFR Code/Org. Unit)** for your organizational hierarchy.
- Only one BFR Code/Org Unit may be selected here, although you may choose higher level BFR Code here and then filter to select multiple lower level BFR Codes once in the query results (see Other Navigational Tools for Queries).
- The symbol displays beside the **7 digit cost object** once you’ve reached the bottom BFR Code / Org. Unit level, and **may not be the best choice for this type of query**. In other words, the report is better for the BFR Code/Org. Unit levels versus single 7 digit cost objects.
14. To select the desired BFR Code/Org. Unit, click once on the BFR/Org. Unit to select and highlight the value.

15. Click on the **OK** button at the bottom of the window to return to the selection window and populate the field with the selection.
Using an Existing Query – FTB (cont.)

Check the Selection Values Entered Before Executing the Query

1. To verify the values are correct, especially if the BFR Code/Org. Unit Hierarchy Node was manually entered, click the Check button.

2. Review any edits needed and the description associated with the Duke Cost Object Hierarchy Node to ensure you’ve entered the correct values.
Save a Variant of the Selection Values to Use Later and Save Steps

Note: The Save Variant function allows the selection values entered in each field 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. To save a variant of the selection, click on the Save as New Variant button.

3. On the Create new Variant window, enter a name in the Description field (alpha numeric with no spaces; use underscore _ for space as needed).

4. Click in the checkbox to check and select as follows:
   - Save as User Variant – check if only you will be able to use the variant – do not check if you wish for others in your area to be able to use the variant.
   - Use as Default Variant – **DO NOT SELECT THIS OPTION.**

5. Click on the Save button to save the named variant and return to the selection screen.
Using an Existing Query – FTB (cont.)

Use or Get a Saved Variant of the Selection Values

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

1. To use the variant, click on the \textbf{Drop-down} in the Available Variants field and select the desired variant from the list.

2. To update or change a variant:
   - Select the variant to populate the fields
   - Change any field values as needed
   - Click the \textbf{Save Variant} button.

   - Click \textbf{OK} to overwrite the existing variant or click Cancel as needed.
Using an Existing Query – FTB (cont.)

Execute the Query and Review the Results

1. In the *Select Values for Variables* window, verify all values are entered or use the Available Variants to populate fields.

2. When ready to run the query, click the **OK** button.
In the *Fund Trial Balance* query results:

3. Review the query results (Fund Trial Balance in this example) for the **BFR Code/Org. Unit node that was selected and note the following:**

- This query uses the Duke Cost Object table (*CODUKEORG*) which combines 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 **Twistee** buttons and some may already be expanded to display the Duke Cost Object level.
Using an Existing Query – FTB (cont.)

- **Do not use** the Twistee buttons to open the hierarchy levels individually as this is time consuming - the hierarchy can be easily expanded or removed, and other formatting can be adjusted (see *Basic Functions for Queries and Workbooks* section of this Guide for more details).

- The format for the lowest level Duke Cost Objects in Column A is displayed as the “technical name”, is not useful, and can be removed (see *Basic Navigation Tools for Queries*). 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 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.

**Note:** Other options for analyzing data are also available, such as the ability to **drill-down by the items listed in columns**, such as Commitment item (term for Cost Element or G/L Account), Fiscal Period, Fund Group, Fund Categories, etc. See the *Basic Functions for Queries and Workbooks* section of this Guide for more details.
Saving a Single Formatted Query to a Workbook

Saving the Formatted Query Results to a Workbook in BW for Future Use

1. Review the following about saving a formatted query into an SAP BW Workbook for future use:
   
   • **Most users of SAP BW are NOT allowed to save formatting changes directly to a query.** The query is used as a starting point to format the results to a desired layout and save that formatted version of the query as a workbook that can be easily refreshed when needed.
   
   • Before saving a query as a workbook, filter and format the query as needed per the steps covered in the **Basic Functions for Queries and Workbooks** section of this Guide.
   
   • Most users will save one formatted query into one BW Workbook. However, multiple formatted queries may be saved into one BW workbook using the Excel worksheets at the bottom of the file. Saving multiple queries into a workbook is useful for more complex analysis as needed.
   
   • Workbooks can be saved to the SAP BW server, as well as to your local computer as an Excel file. **Some functions don’t work until a workbook is saved to the SAP BW server.**
   
   • The steps in this guide refer to saving the workbook on the SAP BW server and some tips for saving as an Excel file are also included in this section of the Guide.
2. Click on the **Save** button on the **BEx Analyzer** toolbar (under Add-Ins on Excel tab at top).

3. Choose one of the two SAP BW server options in the drop-down list as outlined below and detailed in the next steps:

   - **Save Workbook** – use this function the first time you save a query as a workbook **AND** use when you need to **save over / update an existing named workbook** without creating a new workbook. If this is the first time the query has been saved as a workbook, this function displays the **Save Workbook** screen (see next steps). After the initial save, this function will just continue to save over the existing named workbook.

   - **Save Workbook As...** – use this option the first time you save a query as a workbook **OR** when you need to save the workbook as a different named workbook (so you don’t overwrite the current named workbook, similar to saving Excel files). This function always displays the **Save Workbook screen** for a new workbook name (description).
Saving a Query to a Workbook (cont.)

On the **Save Workbook** window, if prompted:

4. Ensure the **Favorites** button is selected (left side of the screen – note that the **Roles** option cannot be used).

5. Enter a description of the query in the **Description** field.

6. Click on the **Save** button.

*Note:* Multiple queries may be formatted and saved to a single workbook using the Excel worksheets at the bottom of the Excel workbook. Some tips for steps related to refreshing multiple queries in a workbook are included in the next section of this Guide if needed.
Saving a Query to a Workbook (cont.)

Tips for Saving the Formatted Query as an Excel Workbook (Local Network)

Note: The queries may also be saved as an Excel file as well. This might be beneficial if you’d like to save a particular view such as monthly. The Excel files can be easily organized on your local network drive.

1. To save the file in Excel, use the File option in the Excel tabs/menu bar (versus the Save button in the BEx Analyzer toolbar) – the steps may vary depending on the version of Microsoft Office or Excel being used to save the file.

2. In the resulting window, select Save As option (this option is ALWAYS recommended as the Save option alone does not default the Excel extension like.xls, .xlsx, etc.).

3. Enter the file directory path, type of file, and name of file in the resulting window as desired (not shown in example above).
Opening a Workbook in BW to Access the Saved Query at a Later Date

Note: To avoid any issues with SAP BW, ensure that all other open Excel files are closed.

1. Log into BW and use the transaction code **RRMX** to launch Excel and click on the **Add-Ins** option to display the BEx Analyzer toolbar (not shown – see Logging Into SAP BW chapter of this guide).

2. Click on the **Open** button on the **BEx Analyzer toolbar**.

3. Click on **Open Workbook…** from the drop-down list.
On the resulting *Open Workbook* window:

4. **Click on the Favorites button** (left side of the screen).
   
   *Note:* As an alternative, you may also open the History or the Roles folder, or use the Find button to locate the workbook using similar steps as outlined earlier in this guide for finding queries. The Roles folder contains workbooks of saved queries used primarily by central finance areas within Duke. The Roles folder contains a folder for the School of Medicine for Tiered reports.

5. **Double click on a workbook** (i.e., the named workbook, like Financial Services FTB file in this example) **OR** click once to select and highlight the workbook and click on the Open button.
6. **IMPORTANT:** Once the workbook is open, the formatted query or queries embedded in the workbook must be refreshed before any other functions like those on the Context Menu / right mouse click may be performed (functions won’t be available) – the refresh can be done as follows:

- If the workbook contains a single query and needs to be refreshed to the last selected criteria, use the steps for Refresh a Workbook Containing One Single Query.

  **Note:** If the workbook contains multiple queries, use the steps in the Advanced Functions chapter of this guide for Refresh a Workbook Containing Multiple Queries (this option includes steps for refreshing one query at a time as well as refreshing all queries at once).

- Recommended: Always use the Change Variable Values button to refresh a query, as well as to change the selection criteria for a query. Refer to the steps for Change the Variable Values in the next pages. The other option of using the Refresh button or menu may not always prompt you to update your selection criteria (i.e., change the variable values for the query). If you are not prompted to update the variables for the selection criteria when you use the Refresh options, then you will have to use the Change Variable Values button to refresh the query and be prompted to change the variable values.
Opening a Workbook (cont.)

Change the Variable Values

*Note:* Use this method to update the selection criteria for the embedded query and refresh the workbook, for example to change the period selected to a current closed period.

1. Click on the **Change Variable Values** button on the toolbar.

2. In the **Select Values for Variables** window, select from the list of Available Variants in the dropdown list or update the selection fields as needed.

3. When ready to run the query, click the **OK** button.

   • **DO NOT CANCEL** the window for Change Variable Values once displayed if the action is not needed – use the **OK** button. You must click **OK** to re-process the query and display the results even if you don’t change variables.

   • **Cancelling the window deletes all the results displayed,** so if you do cancel out of the window, then don’t save the workbook results.

   • **Note that the context (right mouse click) menu is NOT available if the Change Variable Values was cancelled and the workbook was refreshed.**
Opening a Workbook (cont.)

Refresh a Workbook Containing One Single Embedded Query

*Note:* There are two ways to access the Refresh function – the Context Menu or the Refresh button. See steps below for each.

1. To refresh the query using the Context Menu, **right mouse click into an active BEx cell** (any cell within the query results) to display a list of options - click on the **Refresh** option.

2. To refresh the query using the toolbar, **click once into an active BEx cell** and click the **Refresh** button on the toolbar to display a list of options - click on the **Refresh** option.
1. After an embedded query is refreshed for a workbook, the **Context Menu** may be accessed via the **right mouse click** within an active cell or a column heading of the results.

2. The **options listed on the Context Menu may vary** based on whether you right mouse click on a value or a column heading, and may vary by the type of embedded query as applicable.

3. If you right mouse click in a native Excel cell (outside of the embedded query results), the Context Menu will display only the Excel functions versus the Business Analyzer functions.

4. Refer to the individual sections in this guide for examples of how to use the Context Menu functions – note that the functions can be used in any order needed.

5. **Right click** on any column header or on a cell with an actual value to display and use the Context Menu.
Undo an Action or Go Back One Navigation Step to Prior Results

1. **Right click** on any column header or on a cell with an actual value to display and use the Context Menu.

2. Click on **Back One Navigation Step** to return to the previous view (**Back to Start** will reset query to original view).
Basic Functions (cont.)

Eliminate the Technical Description of the Duke Cost Object

On some queries, the technical description contains the longer different format for the cost object, such as KSDUKE0001573070. The steps below are to change the display of the Duke Cost Object column from the technical “key” (number) description to the name (text) description.

1. **Right click** once on any column header or on a cell with an actual value to display and use the Context Menu.
2. Click on **Properties**... to choose that option.
3. On the General tab, in the field under **Display**, click on the drop-down button to display a list of options.

4. Select **Text** from the list.

5. Verify the option **Text** is now displayed in the field and click the **OK** button.

6. Review the results and note the Duke Cost Object column now contains the name of the Cost Object with the 7 digit number still displayed in the Cost Object column.
Basic Functions (cont.)

Expand the Hierarchy to See All Levels and Duke Cost Objects

Note: Some queries contain organizational (BFR) levels of the Duke Hierarchy. These steps expand the hierarchy without having to click on Twistee icons to manually open each level.

This example is done from the Duke Cost Object view (original view) of the query.

1. Right click once on an actual value (not the column header) for the Duke Cost Object to display and use the Context Menu.

2. Select the options from the resulting pop-up window per this path: Expand to Level → Level # (# = choose the highest level listed at bottom of last list in order to expand fully).
3. Review the results that now show the entire depth of the hierarchy (all Twistee buttons now open).
Basic Functions (cont.)

Deactivate a Hierarchy to Display a Straight List of Duke Cost Objects

Note: This example is done from the Duke Cost Object view (original view) of the query. If a hierarchy is displayed in query results, the hierarchy may be deactivated to completely remove the hierarchy (BFR/Org. Unit levels) and display the results by Duke Cost Objects. Once removed the function can be used again later to add back the hierarchy (turn on and off like a light switch).

4. Right click once on any column header or on a cell with an actual value to display and use the Context Menu.

5. Click on Properties... to display the Properties for Characteristic Duke CostObject window.
Basic Functions (cont.)

In the resulting *Properties for Characteristic Duke CostObject* window:

6. Click on the **Hierarchy** tab for settings related to the hierarchy.

7. Click in the box beside **Activate Hierarchy to uncheck** the box which deactivates the hierarchy (the box is checked by default on some queries).

8. Review the results that now show the hierarchy deactivated (i.e., removed) which shows the entire depth of the hierarchy and is listed by Duke Cost Object (in this query example).

*Note:* *Sort for this view defaults to by Cost Centers, Profit Centers, and WBS Elements/Projects, so to sort numerically by Duke Cost Object, see the next step.*
Basic Functions (cont.)

Sort the Results Numerically by the Cost Object if a Hierarchy is De-Activated

Note: This example is done from the Duke Cost Object view (original view) of the query AFTER the hierarchy is removed. The sorting of the view is still set to the hierarchy (BFR roll-up). These steps sort the view by the Cost Object (7 digit fund) in numerical order.

9. To sort the Duke Cost Objects numerically from lowest to highest number (ascending) or highest to lowest (descending):
   - Right click once on the first column header or on a cell with an actual value (not the column header) for the Duke Cost Object to display and use the Context Menu.
   - Click on Properties.
10. In the resulting *Properties for Characteristic Duke CostObject* box, ensure the General tab is selected.

11. Under the **Sort By** section:
   - Ensure the value of **Key** is in the first field or choose that value if not.
   - Use the drop-down option in the middle field and choose **Cost Object** for the sort (or the desired value for other queries).
   - Choose either **Ascending** or **Descending** in the last field based on your preference.

12. Click **OK** to complete the change in the sort of the view.

13. Review the results that now show the entire depth of the hierarchy listed by Duke Cost Object and sorted numerically in a straight line in either ascending or descending order.

*Note:* Remember to use the **Save** button to save this view as the existing workbook or as a new workbook for future use. **Right Click** on any column header or on a cell with an actual value and select **Back One Navigation Step** to return to the previous view.
Basic Functions (cont.)

Filter and Drill Down – Example: Filter on One Cost Object and Drill Down By Commitment Item (G/L Acct.)

Note: This example is done from the Duke Cost Object view shown as a straight list with no hierarchy, but may be done in any view. Use the Filter and Drill Down By function to filter for the chosen cell and drill-down to the details for the value chosen (like Commitment item / G/L Account). The drill-down options vary by query and which cell is chosen. The Filter button may also be used to perform many filter functions – see the Filter Button section of this guide.

1. Right click on a cell under the Duke Cost Object column that contains the text for a single Duke Cost Object to display and use the Context Menu (menu varies by which cell is chosen).

2. Select the options from the resulting pop-up windows per this path: Filter and Drill Down By → Commitment Item.

Note: Choose from one of the many other Filter and Drill Down By values, like Fund Group, if preferred. If you don’t see a desired option, ensure you clicked in the right active cell.
3. Review the results and note the following:
   - The balances are displayed for the filtered Duke Cost Object with the drilldown by Commitment Item for more detail.

4. To see a reference to the filtered Duke Cost Object, click on the Filter button at the top of the results.

5. The Filter section now shown to the left will display the name or number of the filtered Duke Cost Object (expand column width for that cell to see entire name as needed).

   **Note:** Remember to use the   ![Save](save.png) Save button to save this view as an existing or new workbook for future use. **Right Click** on any column header or on a cell with an actual value and select **Back One Navigation Step** to return to the previous view.
Basic Functions (cont.)

Add Drill Down According To - Example: Add Drill Down According To Commitment Item (G/L Account)

Note: This example is done from the Duke Cost Object view shown as a straight list with no hierarchy, but may be done in any view. Use the Add Drilldown According To function to add the drill-down to ALL Cost Objects for the value chosen (like Commitment item / G/L Account). In other words, you are adding more “drill down” details for the value chosen to the existing results.

1. **Right click** once on any column header or on a cell with an actual value to display and use the Context Menu.

2. Select the options from the resulting pop-up windows per this path: Add Drilldown According to → Commitment item.

**Note:** Choose from other Add Drilldown According to other values, like Fund Group, if preferred.
3. Review the results and note the following:
   - The balances are displayed for ALL Duke Cost Objects with the added drilldown by Commitment Item (G/L Account).

   Note: Remember to use the Save button to save this view as an existing or new workbook for future use. Right Click on any column header or on a cell with an actual value and select Back One Navigation Step to return to previous view.
Basic Functions (cont.)

Swap the View of the Results – Example: Swap Duke Cost Object With Commitment Item (G/L Account)

Note: This example is done from the Duke Cost Object view shown as a straight list with no hierarchy, but may be done in any view, such as the original view for this query. Use the Swap function to change the query results from one type of view to another, for example from a Cost Object view to a Commitment Item (G/L Account) view.

1. Right click once on any column header or on a cell with an actual value to display and use the Context Menu.
2. Select the options from the resulting pop-up windows per this path: Swap Duke CostObject With → Commitment item.
3. Review the results and note the following:

- The **entire view of the report has now changed from a Cost Object (7 digit number) view to a Commitment Item (G/L Account) view** for the entire BFR Code/Org. Unit hierarchy chosen for the original query.

- The first column is **Commitment Items** and the query results are listed by 6 digit G/L Account versus the 7 digit Cost Object.

- The **balances are displayed for Commitment Items (G/L Accounts) listed.**
Basic Functions (cont.)

4. **OPTIONAL**: In this example, once the results are swapped from Duke Cost Object to Commitment Item, use the **right click Context menu** to **Filter and Drill Down By** for a selected Commitment Item / G/L Account and view all the Duke Cost Objects that had expenses for that selected Commitment Item / G/L Account balance – see summarized steps below:

   - **Right click** once on the Commitment item in question (this example 647000) to display a drop-down list.
   - Select the options from the resulting pop-up windows per this path: **Filter and Drill Down By → Duke CostObject**.

5. **SCROLL TO THE TOP** of the new drill-down view, as the view will be positioned wherever the cursor was previously.
   - The amounts for the Commitment Item chosen are listed by Duke Cost Object.
Basic Functions (cont.)

6. To see a reference to the filtered Commitment Item, click on the Filter button at the top of the results.

- The **number and description of the Commitment Item** (G/L Account) chosen for the drill-down is displayed in the Filter section (expand column width for that cell to see entire name as needed).

**Note:** Remember to use the Save button to save this view as an existing or new workbook for future use. **Right Click** on any column header or on a cell with an actual value and select **Back One Navigation Step** to return to the previous view.
Basic Functions (cont.)

Query Properties: Suppress Rows or Columns that Contain a Zero Amount

Note: The original results of some queries will allow rows or columns that contain zero amounts to display. Use the Zero Suppression function to suppress those rows or columns as desired.

1. Right click once on any column header or on a cell with an actual value to display a drop-down list.

2. Click on Query Properties... to display the Local Query Properties window.

3. Click on the tab Zero Suppression to display a list of options.
4. In the **Zero Suppression** drop-down list, click on **Active (All Values = 0)** which will activate a hidden **Apply To** field with drop-down list directly below.

5. Use the **Apply To** drop-down list now displayed to choose an option as desired:
   - Leave the default value of **Rows and Columns** selected to suppress zero amounts in both columns and rows.
   - Choose either of the other two options to suppress zero amounts for just **Rows** or **Columns** as desired.

6. Once the Zero Suppression options are chosen, click the **OK** button to apply the changes.
7. Review the results showing that the rows and/or columns containing any zero amounts have now been suppressed or hidden from view

- In this example: 1567971 had a 0.00 amount indicated with the $ sign, and is now no longer displayed as a row in the query results.

Note: Remember to use the Save button to save this view as an existing or new workbook for future use.
Basic Functions (cont.)

Query Properties: Add a Total (Results) Row if Not Displayed

Note: The display of totals in a query depends on the query chosen. In addition, as you add a drill down to a query, the totals / results row or columns may no longer be displayed. For example, by adding the drill down across periods to the Fund Trial Balance query, the total balance column and grand total row at the bottom are removed. The totals are “suppressed”. Use the Properties for Characteristic feature to never suppress the results row, which will display the totals / results row, if applicable.

1. Right click once on the column heading for the characteristic to display a drop-down list (in this example where the Posting Period is listed in a column heading).

2. Click on Properties… to display the Properties for Characteristic Posting period window.
3. In the **Results Rows** drop-down list, click on **Always Display**.

4. Click the **OK** button.

5. Review the results and note the following:
   - The **Overall Result** row has been added to total the posting period columns across the query results for each Duke Cost Object row.
   - There may also be a total added for each column at the bottom of the report to total each posting period down the report for all Duke Cost Objects.
   - The **position of the results (Total) rows can be changed** (see next section of the Guide).

**Note:** Remember to use the **Save** button to save this view as an existing or new workbook for future use.
Query Properties: Move the Placement of the Grand Total Row

Note: The original placement of the Total results row depends on the query chosen. Use the Presentation Options function to move the position of the Total results column/row. This function can be used on any view of a query.

In the example below, the Total row for all columns is displayed at the bottom of the query results.

1. Right click once on any column header or on a cell with an actual value to display a drop-down list.
2. Click on Query Properties... to display the Local Query Properties window.
Basic Functions (cont.)

3. Select the **Presentation Options** tab from the resulting pop-up window.

4. In the **Position of Result in Rows** field, use the drop down list to choose one of the two desired options as outlined below:
   - Choose **Left** to move the total column (which totals rows across the results) to the far left of the results (last column).
   - Choose **Right** to move the total column (which totals rows across the results) to the right of the results (adds a column at the beginning of the actual dollars or columns being summed for the total).

   **Note:** The function phrase “Position of Results in Rows” means that the Total for columns down the report will display at the top or bottom of the query results.
5. In the **Position of Results in Columns** field, use the drop-down list, to choose one of the two desired options as outlined below:
   - Choose Top to move the totals of all the columns to the Top of the results.
   - Choose Bottom to move the totals of all the columns to the bottom of the results (assuming totals are currently at the top).

   **Note:** The function phrase “Position of Results in Columns” means that the Total for columns down the report will display at the top or bottom of the query results.

6. Click the **OK** button.

7. Review the results and note the following:
   - **For totals originally displayed in a column to the far right** (totaling across the results like this example where there was a total for the posting period drilldown across the results), then the **total will now appear on the far left** (the first column before the Posting Period drilldown columns).
   
   - **For totals originally displayed at the bottom** of the results (totaling down the results like this example where the Posting Period column totals were at the bottom), then the **total will now appear at the top of the results**.

   **Note:** Remember to use the **Save** button to save this view as an existing or new workbook for future use.
Basic Functions (cont.)

Query Properties: Display or Hide Columns

Note: Columns and / or rows within columns may be displayed or hidden. The columns of data (like Budget, Actual YTD, Projections etc.) displayed are known as “Key Figures”.

This function will vary depending on the query chosen and the key figures shown in the original view or revised view of the query. The example used in this section is a budget related query with lots of columns of dollar amounts. The Fund Trial Balance query is not a good example as it really just displays one column of Actual Amount balances.

1. As shown in previous examples for Query Properties functions:
   - **Right click** once on any column header or on a cell with an actual value to display a drop-down list.
   - Click on **Query Properties…** to display the Local Query Properties window.

2. In the resulting Local Query Properties, remain on the Navigational State (default tab), which includes the fields shown in the three sections titled Columns, Rows and Free Characteristics.
3. To display or hide key figures available in the BEx query being used, under the Columns section, right click on **Key Figures**.

4. Click **Select Filter Value**…

5. Review the resulting **Select Values for Displayed Key Figures** box which contains two sections - a list of Displayed Key Figures (those available) and Chosen Selections (those columns chosen to display as columns in the results).
Basic Functions (cont.)

6. Click on a Key Figure value to highlight and then click on the appropriate arrow to display or hide the Key Figures (columns) in the workbook based on desired view – see buttons below:

- **Move to Selection** = adds the highlighted column value to the Chosen Selections, which will display the column in the results.

- **Remove from Selection** = removes the highlighted column selected from the Chosen Selections, which will hide the column in the results.

7. Click **OK** to apply the changes.
Query Properties: Suppress Repeated Key Values or Display Repeated Key Values

Note: Depending on the query being used and view of that query, there may be rows of repeated values in the query or repeated values may already be suppressed. This function in Query Properties allows you to suppress the display of those repeated values OR to display the repeated values in a query where those values are already suppressed.

1. As shown in previous examples for Query Properties functions:
   - **Right click** once on any column header or on a cell with an actual value to display a drop-down list.
   - Click on **Query Properties…** to display the Local Query Properties window.

2. In the resulting Local Query Properties, click on the **Display Options** tab.

3. Click in the check box beside **Suppress Repeated Key Values** to select that option which suppresses any repeated values (uncheck to not suppress and display those repeated values).

4. Click **OK** to apply the changes.
Filter Button Functions Including Drag and Drop

Overview of Filter Button Functions

1. Before using the Filter button, the query embedded in the workbook **MUST be refreshed first** in order to use the functionality (see Opening a Workbook in this guide for more on refreshing workbooks with single and multiple embedded queries).

2. Click on the Filter button located above the query results to display a list of all available characteristics in the left margin of the results.

   *Note:* Older BEx 3.5 workbooks upgraded / saved in BEx 7.0 will still have the characteristics for filtering listed at the top in the first section of the results versus using a Filter button.

3. Review the following points about the functions available when using the Filter button:
   - The characteristics in the left margin may be used to filter and drill-down OR add a drill down using the right click (Context Menu) on the characteristic.
   - In addition, you may simply double click on the characteristic to easily add the drill down for that characteristic (filter is not available via double clicking).

   Bullet Points Continued Next Page
Filter Button and Drag and Drop (cont.)

- The characteristics in the left margin may also be used to click and drag the characteristic into the body of the results to add a drilldown, as another option.

- In addition, you may click and drag the column heading to change the drill-down from “down” the report to “across the report or perform “swap with” functions as well.

- Some of these same filter and drill down options are also available via the right click (Context Menu) within the query results as outlined in previous chapters of this guide - choose the method you prefer to achieve the desired results.

4. To filter or add a drill down using the characteristics on the left, right mouse click on the characteristic and select the filter or drill down options from the resulting Context Menu – see the next examples in this guide.

Note: For older BEx 3.5 workbooks upgraded / saved to BEx 7.0, right mouse click right on a characteristic listed at the top to use the Context Menu.
5. Also, as an alternative to other methods, use the characteristics listed to “drag and drop” the characteristic into the query results in order to filter, swap with, or add / remove a drill-down and note the following:

- The above example shows that you can click on the characteristic Commitment Item and drag that value over to the column heading of Duke Cost Object, drop the value on top, and perform the swap function to swap the entire view from one by Duke Cost Object to one by Commitment Item.

- There are some drawbacks and nuances when using drag and drop functions, especially in more complex queries/workbooks where scrolling is needed, so use at your own discretion.

6. Refer to the next topics in this section of the guide for specific examples of both using the right click (Context Menu) on a characteristic and for dragging and dropping characteristics into the results.
Filter by BFR Code/Org. Unit from a Higher Level of Hierarchy via the Filter Button

**Note:** This example is done from the Duke Cost Object view shown as a straight list with no hierarchy, but may also be done if the hierarchy is active. Use the **Filter** function to select **multiple** lower level BFR Code / Org. Units as desired.

1. **Right click** once on **Link to Fund Center** in the Filter section to display a drop-down list.

2. Select the option **Select Filter Value**... from the resulting pop-up window.
3. Click the **More>>** button to expand the pop-up window to view the Chosen Selections section.

4. Select the value or values as follows:
   - **Double Click directly on a value** to select.
   - Use the **Ctrl** key and click other codes to select **multiple** codes as desired.
   - Use the **Shift** key and click the **beginning and ending of a range** to select a range of codes.
5. Once values are selected, click on the Add button to display the selected values under the Chosen Selection section (right).

6. Click the OK button to complete the selection process and apply the filter to the query result.

7. Review the filtered query results and note that the BFR Codes / Org. Units selected for the Link to Fund Center filter are displayed in the Filter section to the left of the results.

Note: To undo this action, right click once on the column header, on any cell with an actual value, or on the characteristic in the left pane. Select Back One Navigation Step. Another option is to right click in the Filter section on the Link to Fund Center text or on the filter values and select Remove Filter.
Filter Button and Drag and Drop (cont.)

Display Balances by Period Across the Report via the Filter Button

Note: This example is done from the Duke Cost Object view shown as a straight list with no hierarchy. Use the **Drilldown According to** function by **Columns** to add the drill-down using the Filter section to the right of results to provide additional detail, such as to display balances with the drill-down across the posting periods.

1. Click on the **Filter** button to display the Filter pane on the left.

2. **Right click** once on **Posting period** in the **Filter Section** to display a drop-down list.
3. Select the option from the resulting pop-up window per this path: Add Drilldown According to Posting period in Columns (or Drilldown According to Posting Period in Rows if preferred).

4. Review the results and note the following:
   - The Actual Amounts for each Duke Cost Object are now drilled down to show the balances for each Period across the next columns with the period listed in each column heading (or if “down” was chosen, the balances by period are in the rows).
   - There are no totals displayed as default on this view, but totals may be added back per the next summarized steps.

**Note:** Remember to use the Save button to save this view as an existing or new workbook for future use.

**Note:** To undo this action, right click once on the column header, on any cell with an actual value, or on the characteristic in the left pane. Select Back One Navigation Step. Another option is to right click in the Filter section on the Link to Fund Center text or on the filter values and select Remove Filter.
5. **OPTIONAL:** To add back the total (results) rows if not displayed:

- **Right click** once on the column heading for the characteristic (i.e., Posting Period like #, 1, etc.) to display a drop-down list.

- Click on **Properties**… to display the Properties for Characteristic Posting period window.

6. In the **Results Rows** drop-down list, click on **Always Display**.
7. Click the **OK** button.
8. Review the results and note the following:

- The **Overall Result** row has been added to total the posting period columns across the query results for each Duke Cost Object row.

- There may also be a total added for each column at the bottom of the report to total each posting period down the report for all Duke Cost Objects.

- The **position of the results (Total) rows can be changed** (see previous chapter of the guide).

*Note:* Remember to use the **Save** button to save this view as an existing or new workbook for future use.
Using Drag and Drop to Perform the Swap Function via the Filter Button

Note: This example is done from the Duke Cost Object view of the Fund Trial Balance. If preferred, the Swap function may also be performed using the right click (Context Menu) within the query results versus using the Filter button and resulting left pane.

1. To swap the results displayed from a Duke Cost Object view (first column) to a Commitment Item (G/L Account) view per this example:
   - Click on the Commitment Item in the left pane and hold down the mouse click.
   - Drag the Commitment Item characteristic on top of / into the first column header (Duke Cost Object in this example) or on top of a value within the column.
   - Once the mouse cursor is over top of the desired location, let go of the mouse to “drop” the item being dragged onto the header / value desired (in this example dropping on the column header of Duke Cost Object).
2. Review the results showing the entire view of the query results is now swapped (in this example from a view by Duke Cost Object to a view by Commitment Item for the selected criteria).

   **Note:** Remember to use the **Save** button to save this view as an existing or new workbook for future use.

   **Note:** To undo this action, **right click** once on the column header, on any cell with an actual value, or in the left Filter pane. Select **Back One Navigation Step.** Another option is to **drag and drop** the Duke Cost Object characteristic under the Filter section back on top of the Commitment Item column heading.
Using Drag and Drop to Add a Drill Down via the Filter Button

1. To add drill-down to the results, like the drill down by Period for an Actual Amount column (using Fund Trial Balance as the basis for this example):

   - Click on the Period characteristic in the left pane and hold down the mouse click.
   - Drag the Period characteristic on top of a value in the Actual Amount (a **black small arrow** icon will appear in the body of the results to indicate if drill-down will be “down rows” or “across columns” – the black arrow is not displayed in example above).
   - Once the mouse cursor is over top of the desired location, let go of the mouse to “drop” the item being dragged onto the header / value desired (in this example dropping on the column header of Duke Cost Object).
2. Review the results and note the following:
   
   • The Actual Amounts for each Duke Cost Object are **now drilled down to show the balances for each Period across the next columns** with the period listed in each column heading (or if “down” was chosen, the balances by period are in the rows).
   
   • There are no totals displayed as default on this view, but totals may be added back per the next summarized steps.

   **Note:** Remember to use the **Save** button to save this view as an existing or new workbook for future use.

   **Note:** To undo this action, **right click** once on the column header, on any cell with an actual value, or in the left Filter pane. Select **Back One Navigation Step**. Another option is to use the **drag and drop** to remove the drill down by Periods from the results.
3. **OPTIONAL**: To add back the total (results) rows if not displayed:
   - **Right click** once on the column heading for the characteristic (i.e., Posting Period like #, 1, etc.) to display a drop-down list.
   - **Click on Properties…** to display the Properties for Characteristic Posting period window.

4. In the **Results Rows** drop-down list, click on **Always Display**.
5. Click the **OK** button.
6. Review the results and note the following:

- The **Overall Result** row has been added to total the posting period columns across the query results for each Duke Cost Object row.

- There may also be a total added for each column at the bottom of the report to total each posting period down the report for all Duke Cost Objects.

- The position of the results (Total) rows can be changed (see previous chapter of the guide).

**Note:** Remember to use the ![Save](image) button to save this view as an existing or new workbook for future use.
Filter Button and Drag and Drop (cont.)

Disable the Drag and Drop Function of the Filter Button if Preferred

Note: Given that there are nuances/drawbacks with dragging and dropping characteristics into complex workbooks AND the filter, swap with, and drill-down options are also available using the right click Context Menu, if you do not wish to use the new Drag and Drop function you may disable the function.

1. Click on the **BEx Design Toolbox: Workbook Settings** icon (last icon top toolbar)
2. Click in the check box to uncheck the option for **Allow Drag and Drop**.
3. Click **OK** to close.
4. Click on the **BEx Design Toolbox: Exit Design Mode** (first button top toolbar) to return to the results screen (for more on Design Mode, see next chapter of this guide).
Design Mode Toolbar: Setting Options for Queries and Workbooks

Overview and Tips for Using the Design Mode Toolbar (Top Row)

1. **Recommended:** Before using ANY Design Mode buttons (top row of toolbar) be sure to **refresh the embedded query results** once a workbook is opened (for multiple queries embedded in a workbook, **refresh at least one single query**).
   - If the workbook has not been refreshed, the act of using the **Design Mode buttons will automatically refresh all the embedded queries in a workbook to the last saved values** - for complex workbooks with multiple queries the refresh may be lengthy.

2. To apply formatting changes for queries and workbooks, use the **BEx Design Toolbox: Design Mode** (first button top toolbar) function and **other related “Design Mode” buttons on the top toolbar** – this top bar will not be used much by most users.

3. Specifically, to edit workbook settings, use the **BEx Design Toolbox: Workbook Settings** button (last button top toolbar) – see specific examples in this section of the guide.
4. Once you’ve clicked on a Design Mode button, **review the screen and recognize that you are in Design Mode**

   - After clicking the **BEx Design Toolbox: Design Mode** button or other buttons on the top tool bar, the **entire view of the query results changes (data is gone)** and more options are available, including a different Context Menu when using the right mouse click.
   - Review the screen and recognize that you are in Design Mode.

5. **To exit the Design Mode view and return to the workbook view (see the results)**, simply click on the **BEx Design Toolbox: Exit Design Mode** button again.
Design Mode (cont.)

Deselect Autofit to Prevent Column Sizes from Adjusting to the Default Width

Note: When navigating and performing analysis, any column sizes that were manually adjusted will change back to the default width for that column. Use the steps below to deselect the Autofit option and prevent the automatic sizing of columns back to default column widths.

1. Click on the Design Mode button on the BEx toolbar to enter Design Mode (screen changes to a different look).

2. Right Click within the body of the Table object (not the header) to select the table and then right click for a list of options.

3. Click on Properties... to display the Properties of Analysis Grid window.
4. Uncheck the check box for **AutoFit** (click to uncheck box).

5. Click on the **OK** button.

6. Click on the **Design Mode** button on the **BEx toolbar** to exit Design Mode and return to the workbook / query results.

   **Note:** Once the query reappears after Exiting Design Mode, the columns will stay at the width that was last set (by the click and drag feature).
Design Mode (cont.)

Workbook Settings: General Options

1. To edit general setting options for Workbooks, click on the BEx Design Toolbox: Workbook Settings button (top row).

2. In the resulting Workbook Settings window, ensure the General tab is selected (the default tab).
Design Mode (cont.)

3. Under the General tab, click in the checkboxes to select (check) or deselect (uncheck) the boxes as desired – some options you may wish to use are highlighted below:

- **Allow Refresh Function for Individual Queries** – beneficial for workbooks with multiple embedded queries to allow individual queries to be refreshed.

- **Allow Drag and Drop** – deselect if you do not wish to use this new function (see Filter Button Functions Including Drag and Drop for more on the functionality).

4. Click **OK** when done.

5. Remember to click the **BEx Design Toolbox: Design Mode** to exit the Design Mode view.
Design Mode (cont.)

Workbook Settings for Variables Values

1. To edit settings for Variables Values (used to select values for a query / workbook), click on the BEx Design Toolbox: Workbook Settings button (top row).

2. Click on the Variables tab.
3. Under the Variables tab, choose the options desired per guidelines:

   - **Process Variables on Refresh** - disable the option if you want to display and select variable values independently in the Change Variables Values box for each individual query (if left checked, the variables will refresh for all embedded queries back to the last results / selection).

   - **Display Common Variables Only Once** - disable the option if you want to specify variable values independently in the Change Variables Values box for each query.

4. Click OK when done.

5. Remember to click the BEx Design Toolbox: Design Mode to exit the Design Mode view.
Advanced Functions for Queries and Workbooks

Multiple Selection and Importing of Variable Values to a Selection Screen for a Query

When selecting variables to refresh or update some queries, you may need to select multiple values or import values into the selection fields.

1. If a field allows for multiple selections, for example Cost Object (Fund Code), use the Select from List (drop-down) button to the right of the field as you would for any field to select a value.

2. In the resulting Select Values for…, click on the More >> button (displays only if the field allows for multiple selections).
3. To choose multiple values for the selection:

- Click on a value to select and highlight that value under either the list of values on the left.

- Click on the **Move to Selection** button and verify the selected item now displays on the right under Chosen Selections (example, Cost Object / Fund Code)..

- If needed, use the **Remove from Selection** button to remove any values that display under Chosen Selections.

- Click **OK** when all values are selected.
4. To import values from a spreadsheet, etc., right click in the white area under Chosen Selections and use one of these options:
   - Click on **Upload Selections** option and upload from a spreadsheet.
   - OR if values were copied into the clipboard, click on **Paste** (which will be highlighted and available if there is data in the clipboard).

5. Click **OK** to exit the window and complete the selection of multiple values.
Refresh a Workbook Containing Multiple Embedded Queries

1. Review the points below regarding the settings needed and other nuances of refreshing workbooks with multiple embedded queries:

   - As a reminder, a query within a workbook must be refreshed in order to access the Context Menu options (Swap with, Drill-down, etc.) via the right mouse click function. This applies to workbooks with multiple embedded queries as well.

   - As a reminder, if you right mouse click in a native Excel cell (outside of the embedded query results), the Context Menu will display only the Excel functions versus the Business Analyzer functions, so be sure to right click within the results.

   - If a workbook is opened and embedded queries have NOT been refreshed, the right mouse click will only display the Refresh options which will vary based on your Global and Workbook settings.

   - To ensure you have the flexibility to refresh each individual query embedded in a workbook, you must set preferences in via the Global Settings button and then Workbook settings (in that order). For new workbooks, this option is DISABLED by default, so you must enable this setting for new workbooks containing multiple queries, if desired.
Advanced Functions (cont.)

2. **BEFORE USING GLOBAL SETTINGS** in the next step, ensure the “plug is connected” in the icon for the Connect button per above examples, as follows:

   - If the icon shows the plug is NOT connected, simply click on the button.

   ![Example: NOT Connected]

   ![Example: Connected]

   - At the SAP Logon prompt, click on BWP (BW Production) and click **OK**.

   ![SAP Logon at BWP]

   - In the SAP Logon a BWP prompt, enter Logon credentials if not already defaulting and click **OK**.

   - Ensure the “plug” is connected in the icon (see connected example in diagram at top of page).
3. After the Connect button shows as connected, click the **Global Settings** button on the **lower level of the BEx toolbar** (Do NOT use the similar looking Workbook Settings button on the BEx toolbar top row).

   **Note:** The buttons for Global Settings (bottom toolbar) and Workbook Settings (top toolbar) have the same icon. *If you click the incorrect Workbook Settings button for this step, then performance problems may be encountered since the Workbook Settings button requires a refresh of **ALL** queries in the workbook.*

4. In the Global Settings box, click in the check box to enable the **Allow Refresh on Individual Queries for all Running Workbooks** option.

5. Click the **OK** button.
6. Select the worksheet you would like to refresh (bottom tabs in Excel – not shown above) and click into a BEx active cell (shaded cell in body of query/workbook results).

7. Click the **Refresh** button on the toolbar or use the context menu (right click) and select option **Refresh This Query** to process the active query.
   - If prompted, specify / update values in the **Select Values for Variables** window (not shown in this example).

8. After the query has refreshed, click the **Workbook Settings** button (this button places you in the Design Mode).
9. In the Workbook Settings box, under the **General** tab, verify the option **Allow Refresh Function for Individual Queries** is enabled (click to check if not enabled; note that for new BEx 7.0 workbooks, this setting is disabled by default).
10. Click on the **Variables** tab and use the guideline below:

   - **Display Common Variables Only Once** – if this is enabled (checked) then all variable selections for ALL embedded queries are displayed on one screen.
   - **Disable** the option if you want to display and select variable values independently in the Change Variables Values box for each individual query.

11. Click **OK** to close the window – the workbook will automatically be placed in **Design Mode** (screen looks different and no results are displayed).

12. Click the **BEx Design Toolbox: Exit Design Mode** button to exit Design Mode.

13. Click on the **Save** button to save the Workbook.
14. Based on the preferences set for the workbook in the previous steps, review the various Refresh options below that may be available based on the preferences set for the workbook with multiple embedded queries – the options available also vary by whether you use the right click (Context Menu) and Refresh button:

- **Refresh** – be careful when selecting this option. FOR WORKBOOKS WITH MULTIPLE EMBEDDED QUERIES this option **ALWAYS refreshes all embedded active queries** within the workbook at once, whether used via the toolbar button or Context Menu (right mouse click). This option continues to appear until all active queries have been refreshed.

- **Refresh This Query** – when available based on your settings, refreshes just the embedded query in a worksheet selected within a workbook.

- **Full Refresh of Active Queries** – works like Refresh to refresh all active embedded queries within the workbook at once.

15. To refresh only the query displayed in a workbook with multiple queries, click into an active cell within that worksheet (use bottom tabs to select worksheet).
16. Once clicked into an active cell, choose one of these options to refresh the query embedded in the selected worksheet:

- Use the Refresh button on the toolbar OR right click in any active cell to view the list of Refresh options
- OR use the Change Variable Values button (see note below and refer to the Change the Variable Values section of this guide located under Opening a Workbook…).

Note: When using the Refresh option, you may or may not be prompted to enter selection variables depending on your workbook settings. Using the Change Variable Values button will refresh and prompt you to update the selection values and is recommended.

17. If you chose to use the Refresh options, click ‘Refresh This Query’ to refresh the active query displayed.

- **WARNING:** If you use the Refresh button to refresh an embedded query, be sure to have clicked into an active BEx cell within the results to ensure that all Refresh options are available.

18. Review the following points that pertain to the active selected query AFTER that query is refreshed (no example shown):

- Clicking on the Refresh toolbar button with a cell selected within the refreshed query results now only displays the option ‘Full Refresh of Active Queries’.
- The option ‘Refresh This Query’ is no longer available for that selected query.
- Right clicking on an active cell will display the Context Menu options.
Advanced Functions (cont.)

19. Review the following about selecting another worksheet with an embedded query that HAS NOT been refreshed (no example shown):

- Selecting another sheet or query which has not been refreshed in the workbook will only include ‘Refresh This Query’ via the context menu option (right click).

- The Refresh toolbar button will display both ‘Full Refresh of Active Queries’ and ‘Refresh This Query’.

Note: Even after you have refreshed an individual query in the workbook with multiple embedded queries, the Refresh option will display at the top of the Context Menu (right mouse click) along with other options like Filter, Swap with…, etc. for that individual query / worksheet. This may be confusing as it appears you need to Refresh again, but if that option is chosen, all embedded queries will be refreshed, not just the individual query within the workbook.
Copy a Query to a Worksheet using the Copy Sheet Function (Replaces Copy Query in Older Versions)

Note: The Copy Sheet function allows you to copy an embedded query from one Excel worksheet (tab at bottom) into another worksheet and refresh the variable values. This function replaces the old Copy Query option (Context Menu) in prior BEx versions.

1. To copy a query from one Excel worksheet into another worksheet (bottom tabs), select the tab containing the query.

2. On the selected worksheet with the query, click on the Tools button (lower toolbar).

3. Click on Copy Sheet function to copy a query to another worksheet in Excel (bottom tabs) as needed.
4. In the **Select Values for Variables** window if prompted, update any variable value selections as needed.

5. Click **OK**.

   **Note:** If you do not change any variables as you copy the query to a new worksheet, you may get a blank results screen that prompts you to change variable values for the selection. Use the **Change Variable Values** button to update / refresh the results (see the Change Variable Values topic in the Opening Workbooks… section of this guide for more on that function.

6. When you save the workbook as an Excel file versus on the BW server using the BEx toolbar, you may encounter the above warning message when using Copy Sheet - click on the **Save changes and discard signature** button to save the workbook.
## List of Commonly Used Queries

The table below contains the most commonly used queries that have been created in SAP BW for your use and a brief description of each query.

For any SOM queries, please contact your SOMMC representative for any additional training materials that may be available.

<table>
<thead>
<tr>
<th>Query Name</th>
<th>InfoProvider (Cube or ODS)</th>
<th>Input Fields</th>
<th>Available Characteristics</th>
<th>Description</th>
</tr>
</thead>
</table>
| Fund Trial Balance (No Commitments) with Hierarchy | Financial Management & Controlling Duke Custom Financial Objects Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period Range  
• Commitment Item Range  
• Duke Cost Object Hierarchy Node (BFR) | • Duke Cost Object, hierarchy  
• Link to Fund Center (BFR)  
• Commitment item  
• Posting period  
• Fund Tier  
• Fund Category  
• Fund Group  
• Fund Class  
• Fund Programmatic Class  
• Board Reporting | Mimics Fund Trial Balance found in R/3. Provides actual balances depending on commitment item range - to get fund balances run commitment item range 290000 to 999999. Provides a straight list of cost objects for the range selected (no Org. Unit hierarchy levels). |
| Fund Trial Balance (No Commitments)            | Financial Management & Controlling Duke Custom Financial Objects Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period Range  
• Commitment Item Range  
• Fund Range and List | • Organizational Unit (BFR)  
• Commitment item  
• Posting period  
• Fund Tier  
• Fund Group  
• Fund Class  
• Fund Programmatic Class  
• Key Figures  
• Fund  
• Board Reporting | Mimics Fund Trial Balance found in R/3. Provides actual balances depending on commitment item range - to get fund balances run commitment item range 290000 to 999999. Provides a straight list of cost objects for the range selected (no Org. Unit hierarchy levels). |
| ZF107, Beginning Balance with Hierarchy        | Financial Management & Controlling Duke Custom Financial Objects Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period  
• Organizational Unit (BFR) | • Fund  
• Fund Category  
• Fund Class  
• Fund Group  
• Fund Programmatic Class  
• Commitment item  
• Organizational Unit (BFR)  
• Key Figures  
• Posting Period  
• Board Reporting | Mimics ZF107 found in R/3. Provides actual beginning and ending balances as well as FYTD revenues and expenses. |

**TABLE CONTINUED ON NEXT PAGES**
### List of Commonly Used Queries (cont.)

<table>
<thead>
<tr>
<th>Query Name</th>
<th>InfoProvider (Cube or ODS)</th>
<th>Input Fields</th>
<th>Available Characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support Summary Award Statement</td>
<td>Financial Management &amp; Controlling</td>
<td>• Duke Cost Object hierarchy • Cost Object (fund code) • Responsible person • Calendar Month/Year</td>
<td>• Cost Object • PI • Project Definition • Account Description (cost element hierarchy)</td>
<td>Used in Faculty Access application by support staff. Provides Project’s Inception to Date plan versus actual expenditures as well as current month and fiscal year to date actuals for selected cost objects. Cost elements (object codes) presented using Sponsored Projects Award versus Expenditure (SPAWEXP) hierarchy.</td>
</tr>
<tr>
<td></td>
<td>Duke Custom Financial Objects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project Systems – Controlling/Dates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supt Transaction Stmt</td>
<td>Financial Management &amp; Controlling</td>
<td>• Duke Cost Object hierarchy • Cost Object (fund code) • Responsible person • Calendar Month/Year</td>
<td>• Cost Object • PI • Account • Doc. Date • Fiscal Month • FY • Line Item Text • Offset Acct Desc</td>
<td>Used in Faculty Access application by support staff. Provides list of transactions for selected period of time for selected cost objects. Can also select by PI. Selection by hierarchy (BFR) available but not recommended. Drilldown to documents not provided.</td>
</tr>
<tr>
<td></td>
<td>Duke Custom Financial Objects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MultiProvider – FI and CO only Transactions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOM Basic Operations</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt; Commitments/actual and budget in Funds Management (Duke) (FMCFIFM)</td>
<td>• Fiscal Year • Posting Period • Org Unit</td>
<td>• Fund Programmatic Class • Fund Category • Commitment item • Organizational Unit (BFR)</td>
<td>The report allows users to monitor actual SOM income and expenses, by broad categories. The categories (columns) of the report correspond to specific Fund Programmatic Classes, and consist of Clinical Services, Total Education, Total Research, Administration and Other, and a Grand Total.</td>
</tr>
<tr>
<td>Sum of All Tiers</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt; Commitments/actual and budget in Funds Management (Duke) (FMCFIFM)</td>
<td>• Fiscal Year • Posting Period • Org Unit</td>
<td>• Fund Category • Commitment item • Organizational Unit (BFR)</td>
<td>The report allows users to monitor actual SOM income and expenses, by broad categories. The categories (columns) of the report correspond to specific Fund Categories, and consist of Basic Operations (Tier 1), Chief Controllable Reserves (Tier 2), Chair Controllable Reserves (Tier 3), Subtotal, Faculty Discretionary, Start-Up and Other Internally Restricted (Tier 4), Externally Restricted (Tier 5), Endowment, Plan &amp; Load Funds (Tier 6), and Grand Total.</td>
</tr>
</tbody>
</table>
### List of Commonly Used Queries (cont.)

<table>
<thead>
<tr>
<th>Query Name</th>
<th>InfoProvider (Cube or ODS)</th>
<th>Input Fields</th>
<th>Available Characteristics</th>
<th>Description</th>
</tr>
</thead>
</table>
| SOM Current Yr Actual V Prior Year Actual | Financial Management & Controlling>Duke Custom Financial Objects>Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period  
• Fund Group  
• Fund  
• Organizational Unit (BFR) | • Fund Category  
• Commitment item  
• Organizational Unit (BFR) | No Description Available |
| SOM Budget V Actual YTD | Financial Management & Controlling>Duke Custom Financial Objects>Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period  
• Organizational Unit (BFR) | • Fund Category  
• Commitment item  
• Organizational Unit (BFR) | No Description Available |
| Departmental Administrator Report | NA | • Organizational Unit (BFR) | • NA | This is a report of Departmental Administrators by BFR. |
| SOM Budget Vs Actual | Financial Management & Controlling>Duke Custom Financial Objects>Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period  
• Fund Group  
• Fund  
• Organizational Unit (BFR) | • Fiscal Year  
• Fund  
• Fund Category  
• Board Reporting  
• Fund Programmatic Class  
• Fund Tier  
• Fund Group  
• Duke Cost Object hierarchy  
• Fund Class  
• Posting period  
• Organizational Unit (BFR)  
• Commitment item | This report shows the Board of Trustees version of the cost elements in the rows. Departments should be familiar with this view to analyze variances. |
| YE11A Year to Date Budget vs Year to Date Actuals | Financial Management & Controlling>Duke Custom Financial Objects>Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period,  
• Fund Group  
• Organizational Unit (BFR) | • Fiscal Year  
• Organizational Unit (BFR)  
• Duke Cost Object hierarchy  
• Fund  
• Fund Category  
• Board Reporting  
• Fund Programmatic Class  
• Fund Tier  
• Fund Group  
• Fund Class  
• Posting period  
• Commitment item | The report allows users to monitor year to year actual activity in comparison to year to date original budget. Data is presented in the Board format, sponsored activity is not included. |
### List of Commonly Used Queries (cont.)

<table>
<thead>
<tr>
<th>Query Name</th>
<th>InfoProvider (Cube or ODS)</th>
<th>Input Fields</th>
<th>Available Characteristics</th>
<th>Description</th>
</tr>
</thead>
</table>
| ZF107, All Funds One Line Summary | Financial Management & Controlling>Custom Financial Objects>Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period | • Posting period  
• Fund  
• Fund Category  
• Fund Class  
• Fund Group  
• Commitment item  
• Board Reporting  
• Fund Endowment Estab.  
• Person responsible  
• Fund Endowment Expen Responsible Person  
• Person responsible  
2  
• Duke Cost Object hierarchy | Shows Beginning balance, YTD Revenue and Expense, Ending balance and the Annual Plan. If there is an overdraft in the ending balance, then the field will be highlighted in red. |
| ZF107, All Funds - One Line Summary with Hierarchy | Financial Management & Controlling>Duke Custom Financial Objects>Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period  
• Organizational Unit (BFR) | • Posting period  
• Fund Category  
• Fund Programmatic Class  
• Board Reporting  
• Commitment item  
• Organizational Unit  
• Fund  
• Fund Group  
• Fund Class | This report displays actual balance by BFR and by fund. Columns include beginning balance, year to date actual revenues, year to date actual expenses, ending balance and revised annual plan. Selection is by organizational unit. |
| Fund Attribute                  | Cross Application Components>(0FUND)                                                      | • Funds Center  
• Fund Range & List | • Fund Unit  
• Fund Other Sponsored  
• Fund Programmatic Class  
• Fund Class  
• Fund Category  
• Funds Center  
• Fund  
Person responsible  
• Fund Valid-to,Board Reporting | This report provides a list of attributes assigned to funds - primary sort by fund category. |
| SOM G&A BS/C/I                  | Financial Management & Controlling>Duke Custom Financial Objects>Commitments/actual and budget in Funds Management (Duke) (FMCFIFM) | • Fiscal Year  
• Posting Period  
• Duke Cost Object | • Fund Class  
• Commitment item  
• Fund Group  
• Fund Category  
• Fund Programmatic Class  
• Duke Cost Object | Provides an estimate calculation of the G&A expense that will post on the fund. |
### List of Commonly Used Queries (cont.)

<table>
<thead>
<tr>
<th>Query Name</th>
<th>InfoProvider (Cube or ODS)</th>
<th>Input Fields</th>
<th>Available Characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZF109, Sponsored Programs Award One Line Summary</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt;Project System - Controlling/Dates(0 PS_C05)</td>
<td>Duke Cost Object, Hierarchy Node (BFR), Cost Object (Fund Code), Responsible Person, Calendar Month/Year</td>
<td>Duke Cost Object, Cost Object (Fund Code), P.I., Project Start Date, Project Finish Date, Parent, SPS Proposal ID</td>
<td>ZF109, Sponsored Programs Award One Line Summary. This uses the Calendar Month/Year as opposed to Fiscal Period/Year.</td>
</tr>
<tr>
<td>ZF109, Sponsored Programs Non-Award One Line Summary</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt;Project System - Controlling/Dates(0 PS_C05)</td>
<td>Duke Cost Object, Hierarchy Node (BFR), Cost Object (Fund Code), Responsible Person, Calendar Month/Year</td>
<td>Duke Cost Object, Cost Object (Fund Code), P.I., Project Start Date, Project Finish Date</td>
<td>ZF109, Sponsored Programs Non-Award One Line Summary. This uses Calendar Month/Year as opposed to Fiscal Period/Year.</td>
</tr>
<tr>
<td>Fund Balance (No Commitments) with Hierarchy</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt;Commitments/actual and budget in Funds Management (Duke) (FMCFIFM)</td>
<td>Fiscal Year, Posting Period, Commitment Item, Duke Cost Object</td>
<td>Commitment item, Posting period, Board Reporting, Fund Category, Link to Fund Center, Fund Tier, Fund Group, Fund Class, Fund Programmatic Class, Fund, Duke Cost Object</td>
<td>This report displays actual balance by BFR and by fund, beginning balances are posted to period 0. Selection is by cost object hierarchy.</td>
</tr>
<tr>
<td>Fund Balance (No Commitments)</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt;Commitments/actual and budget in Funds Management (Duke) (FMCFIFM)</td>
<td>Fiscal Year, Posting Period, Commitment Item, Fund</td>
<td>Organizational Unit, Fund Tier, Posting period, Fund Group, Fund Class, Fund Programmatic Class, Board Reporting, Commitment item, Fund</td>
<td>This report displays actual balance by fund, beginning balances are posted to period 0. Selection is by fund or range of funds.</td>
</tr>
<tr>
<td>Query Name</td>
<td>InfoProvider (Cube or ODS)</td>
<td>Input Fields</td>
<td>Available Characteristics</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------</td>
<td>--------------</td>
<td>--------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>ZF127, Plan/Actual One Line Summary with Hierarchy</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt;Commitments/actual and budget in Funds Management (Duke) (FMCFIFM)</td>
<td>• Fiscal Year • Posting Period • Organizational Unit (BFR)</td>
<td>• Organizational Unit • Fund Center • Fund Class • Fund Category • Commitment item • Fund Group • Fund</td>
<td>This report displays budget to actual by BFR and by fund. Columns include annual budget, current period plan, current period actual, current period variance, year to date plan, year to date actual and year to date variance. Selection is by organizational unit.</td>
</tr>
<tr>
<td>MC Programmatic Reports, Tiers 1-6 and Drilldowns</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt;Commitments/actual and budget in Funds Management (Duke) (FMCFIFM)</td>
<td>• Fiscal Year • Posting Period • Organizational Unit (BFR) • Fund Category</td>
<td>Fund • Fund Group • Fund Category • Duke Cost Object • Commitment item</td>
<td>The report allows users to monitor actual SOM income and expenses, by broad categories. The categories (columns) of the report correspond to specific Programmatic Codes. This report can be filtered many different ways and allows users to perform analysis on the Sum of All Tiers and Basic Operations data.</td>
</tr>
<tr>
<td>MC Programmatic Reports, Fiscal Period Trend</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt;Commitments/actual and budget in Funds Management (Duke) (FMCFIFM)</td>
<td>• Fiscal Year • Posting Period • Fund Category</td>
<td>Fund Group • Fund Category • Fund Programmatic Class • Duke Cost Object • Commitment item</td>
<td>A trend report on actuals by period.</td>
</tr>
<tr>
<td>ZF107, All Funds - One Line Summary (no Hierarchy)</td>
<td>Financial Management &amp; Controlling&gt;Duke Custom Financial Objects&gt;Commitments/actual and budget in Funds Management (Duke) (FMCFIFM)</td>
<td>• Fiscal Year • Posting Period • Organizational Unit (BFR)</td>
<td>Posting period • Fund Category • Fund Programmatic Class • Board Reporting • Commitment Item • Fund • Organizational Unit (BFR) • Fund Group • Fund Class</td>
<td>This report displays actual balance by fund only (no BFR display). Columns include beginning balance, year to date actual revenues, year to date actual expenses, ending balance and revised annual plan. Selection is by organizational unit.</td>
</tr>
</tbody>
</table>
### List of Commonly Used Queries (cont.)

<table>
<thead>
<tr>
<th>Query Name</th>
<th>InfoProvider (Cube or ODS)</th>
<th>Input Fields</th>
<th>Available Characteristics</th>
<th>Description</th>
</tr>
</thead>
</table>
| Endowment Report  | Financial Management & Controlling>Duke Endowment Investment Accounting>EIA Investment Multiprovider(EIAM NVST) | • Fiscal Year  
• Posting Period  
• EIA Investment ID  
• EIA Division  
• Fund Category  
• Fund Class  
• Cost Object  
• EIA Customer Familiar  
• Number of Remaining Quarters  
• Market Valuation Date  
• Company Code  
• Cost Object | • Pool Value Per Unit  
• Distrib Rate (Spend)  
• Supplemental Rate  
• Recipient Code  
• EIA Investment ID  
• EIA Fiscal Period  
• EIA Subledger FY  
• EIA Management Center  
• EIA Process Type  
• EIA Customer Entity  
• Cost Object  
• Organizational Unit  
• Valuation Date | Long Term Pool Participant Balances and Projected Distributions |
| Book Value Rollforward | Financial Management & Controlling>Duke Endowment Investment Accounting>EIA Investment Multiprovider(EIAM NVST) | • Fiscal Year  
• Posting Period  
• EIA Investment ID  
• EIA Division  
• Fund Category  
• Fund Class  
• Cost Object  
• EIA Customer Familiar  
• Market Valuation Date  
• Company Code  
• Cost Object | • Pool  
• Fiscal Year  
• UMV  
• EIA Management Center  
• EIA Fiscal Period  
• Cost Object  
• Organizational Unit  
• Valuation Date | Long Term Pool Participant Activity |