# Getting Started Guide – Tips & FAQ's Silvon Stratum Power BI Connector



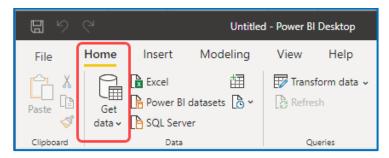
This document shares best practices to consider when creating Stratum. Viewer reports (also known as views) that you plan to use with Microsoft Power BI. Data from Stratum reports is loaded into Power BI to be used as datasets for building Power BI reports and dashboards. Silvon Stratum Power BI Connector facilitates securely bringing your Stratum data into Power BI.

- Get Started Connect To Stratum Views To Use As Power BI Datasets
- Best Practices For Stratum Views Used As Datasets In Power BI
- Other Topics & FAQ's

## Get Started – Connect To Stratum Views To Use As Power BI Datasets

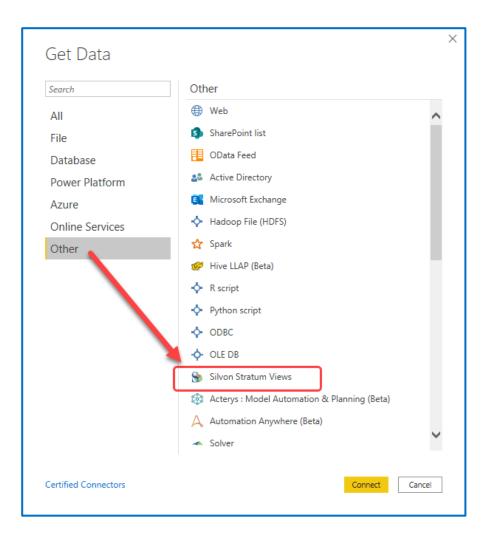
To use Stratum data in Power BI, choose a Stratum view that will be the dataset for visuals built in Power BI. That's accomplished through the following, simple "Get Data" steps in Power BI.

1. Click "Get data" from the application's Home ribbon.



2. Click "Other" in the Get Data window, and then click the Silvon Stratum Views entry in the list that displays (see next image for an example of this window).

**Note:** If you do not see a Silvon Stratum Views entry in the Get Data window, you may have skipped a step when installing Stratum Power BI Connector. The step pertains to adjusting a Security setting in the Microsoft Power BI Desktop Application so that it recognizes the Stratum Power BI Connector. See <a href="Appendix A">Appendix A</a> in the installation guide.



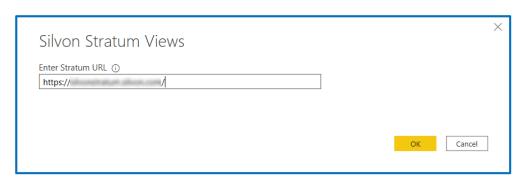
- 3. Click the Connect button in the Get Data window.
- 4. A prompt will display to confirm you want to connect to a third-party service. Click the Continue button.

**Note:** To stop seeing this prompt in the future, click the "Don't warn me again for this connector" checkbox before you click the Continue button.



5. In the Silvon Stratum Views window that displays, specify your Stratum URL and then click OK. This is the URL for the Stratum. Viewer implementation whose reports you want to use in Power BI. Include the full path including the https://server-xyz:55001/.

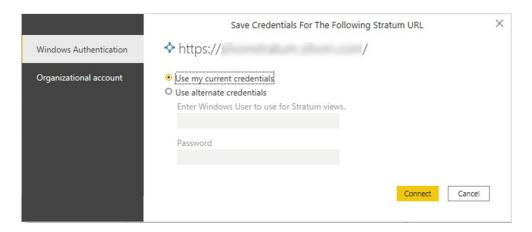
**Note:** Make sure you enter your Stratum URL exactly. For example, if you include extra spaces at the end of the URL or exclude the forward slash at the end, the URL will be considered invalid.



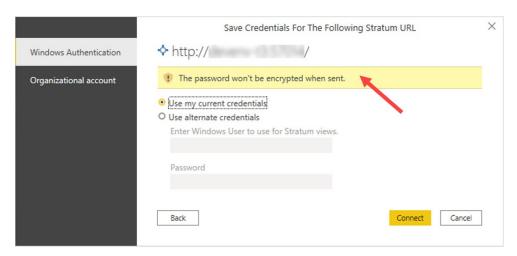
6. A credentials window displays. This window won't be displayed again for future connections made to the service once the credentials have been cached after their initial use. On the Windows Authentication tab, select to use either your current credentials or alternate Windows credentials. If you have a hosted Stratum Cloud implementation that uses Microsoft Azure Identity, you must use the Organizational account tab that shows in the credentials window to provide credentials. On that tab you will click "Sign in" and you will be prompted to enter one of the Microsoft Azure User ID\* and Passwords from the set that Silvon generated for you – enter the credentials.

\*Note: The format to use when entering the Silvon-provided User ID is [CompanyIDPBIx]@SilvonCloud.com.

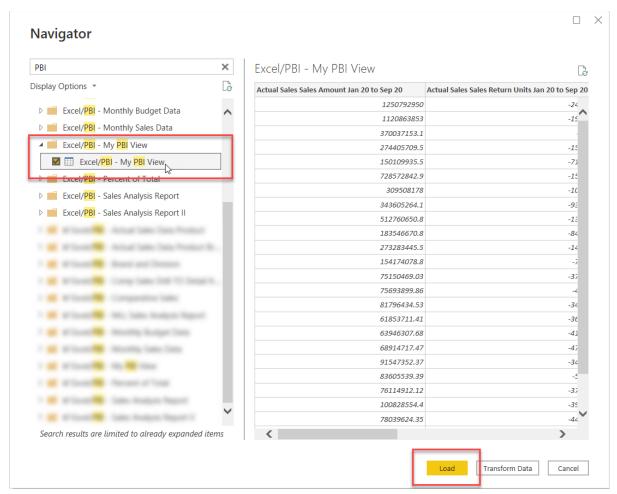
Click the Connect button in the credentials window to continue.



If the URL specified doesn't represent a secured https site, the credentials window will include a message about its password not being encrypted. You can click Connect to proceed.



- 7. Once connected, a Navigator window displays the Stratum views available to use with Power BI. Search for and pick a view. To select a view from the list:
  - a. Click the view name to expand its folder, then select the checkbox for the view name that displays under the expanded folder.
  - b. Click the Load button to load the view's data into Power BI. Data will show in a Fields pane. You are ready to build Power BI visuals with the data.



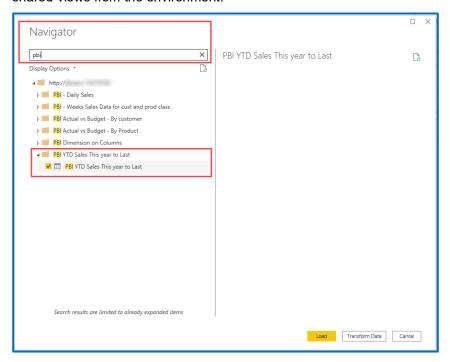
## Best Practices For Stratum Views Used As Datasets In Power BI

# **Name Views Strategically**

Name views so they are easy to search for when choosing from available views in the Power BI Desktop. Also name them in a way that indicates they were set up to be used exclusively with Power BI and that indicates to users that care should be taken when changing them in Viewer after their initial setup. For example, start each view name with the text "PBI". See also Don't Delete Views Used For Power BI Datasets.

When you are using the Power BI Desktop Navigator window to get data from a view, you can search by text in the view name. Navigator shows one folder for each available view from the Viewer environment you connected to, and you need to expand the folder to select the desired view then load its data.

- For users who are View and Security Administrators in Viewer, Navigator shows all views from the environment.
- For users who are Casual and Advanced Users, Navigator shows their personal views plus all global and shared views from the environment.



# **Create Captions For All View Items Strategically**

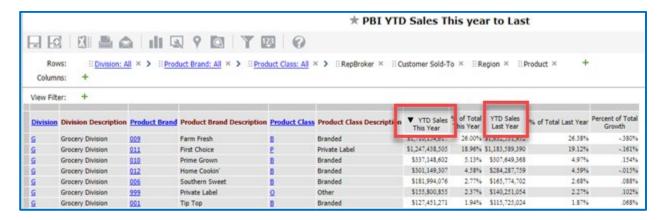
Power BI uses the captions from a Stratum view to identify each column of data in the view. When Power BI detects a change in a caption *after* you initially connected to a view to get its data, you will have to manually adjust things in Power BI reports for them to recognize new captions/columns related to the caption changes in Viewer.

To avoid having to change your Power BI reports due to caption changes on the Viewer side, be strategic when setting up captions and be aware of things that influence how captions resolve in views. Favor static captions over dynamic captions, make sure each caption in the view is unique, avoid using levels on columns (which impacts caption rendering), and avoid editing captions once the view has been used with Power BI.

#### 1. Favor Static Captions Over Dynamic

Static captions use static text and avoid using variables that would update frequently over time as underlying view elements change.

For example, avoid using measure item captions that use time variables because time variables update as time passes. Define your measure item captions like the following where generic static text of This Year and Last Year are used to give time period info.



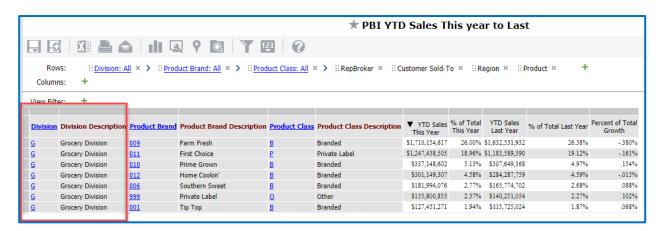
The above setup is preferred over the following when a view is used with Power BI. The marked captions below use time variables of "[From Period Short Desc] [From Year YY] to [To Period Short Desc] [To Year YY]" in the caption expression, and those variables will cause the caption to change each period.



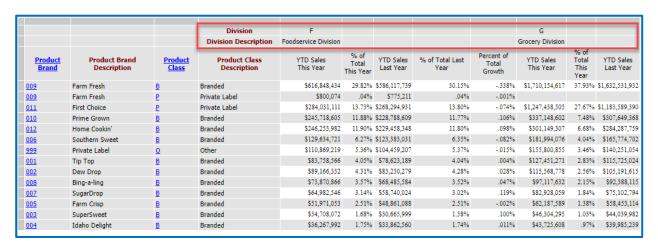
#### 2. Don't Use Levels On Columns Due To Impact On Captions

When levels are on columns, the level value becomes part of the column name used by Power BI to identify columns. If level values get added or removed based on the data in the view, the associated captions would change in the view and you'd have to adjust your Power BI reports. See also the <a href="Consider Using Levels Only On Rows">Consider Using Levels Only On Rows</a> section of this document.

For example, define your view like the one in the next image where levels only exist on rows.



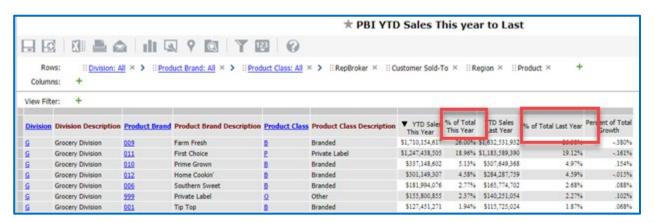
Rather than defining the view like this, which has a level on columns.



#### 3. Assign Unique Captions To Each Item

Use unique captions for all items and avoid scenarios that would cause duplicates to occur when captions resolve in the view. View captions become the field names in the Power BI dataset. Having duplicate names will make the resulting dataset difficult to understand.

For example, define your captions like this:



Rather than this where two columns have the same name:



#### 4. Avoid Captions That Resolve To An Empty String

Power BI will assign a meaningless column name to any caption that resolves to an empty string. For example, a generic name such as Column 1, Column 2, and so on. These names would make your resulting dataset difficult to understand.

#### Streamline Views To Focus On Their Raw Data

Stratum views are the suppliers of data for building reports and dashboards in Power BI. When creating datasets from views, only the raw data is captured. Power BI isn't concerned with user-friendly report formatting or other special features applied in Viewer like conditional formats or charts. Any sorts and formatting needed for Power BI reports and dashboards can be set up in Power BI once you've loaded up the raw data from your Stratum views. Knowing that, keep the following tips in mind when setting up views to be used with the Power BI Connector.

#### 1. Do Not Use Sorts In Views

Use Excel to sort your data. Having a sort in the view can add to the data refresh times. There is typically no value in sorting the raw data.

#### 2. Exclude Extras Like Charts, Conditional Format, Hyperlinks

Charts, conditional formatting, hyperlinks, pop-up labels, and Viewer formatting are excluded from datasets in Power BI. Skip using those types of items in views you plan to use with Power BI since the view's only purpose is to supply data to Power BI. If your Stratum view does have conditional formats, pop-up text, or images defined for any measure items, you may see extra, meaningless data columns in your Power BI dataset.

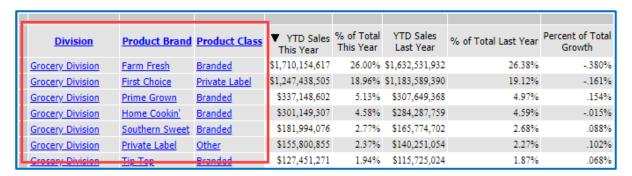
#### 3. Leave Display Text Property For Levels Set To "Value"

The Display Text property for a level is ignored and the value is always used for Power BI datasets. When building a view for use with Power BI, consider leaving Display Text set to the default of "Value". You can still include any attribute relationships as additional columns in the view.

For example, set up the view like this:



Rather than setting it up like this:



#### 4. Considerations When Using All Others In Views

Filtering related features can be set up in Power BI itself when data is used there for reports and dashboards, so All Others aren't necessary in the source view. If you really need All Others in your dataset, then exclude attribute relationships from the view. All Others will be ignored and excluded from a dataset when the source view has All Others AND attribute relationships on its rows.

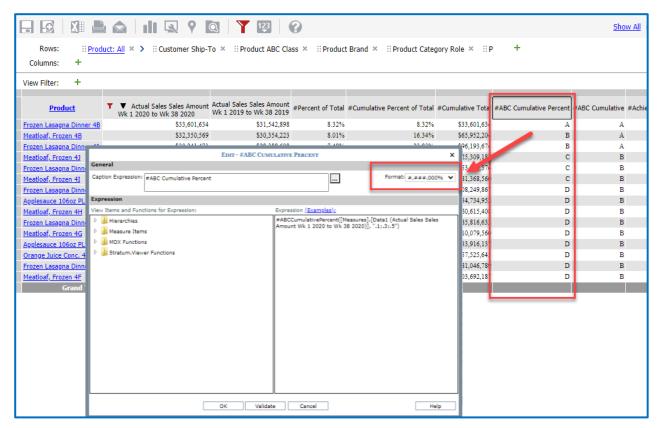
#### 5. Considerations When Using Totals In Views

Totals can be calculated in Power BI itself when data is used there for reports and dashboards, so totals aren't necessary in the source view. If you really need totals in your dataset, then exclude attribute relationships from the view. Totals will be ignored and excluded from a dataset when the source view has totals AND attribute relationships on its rows.

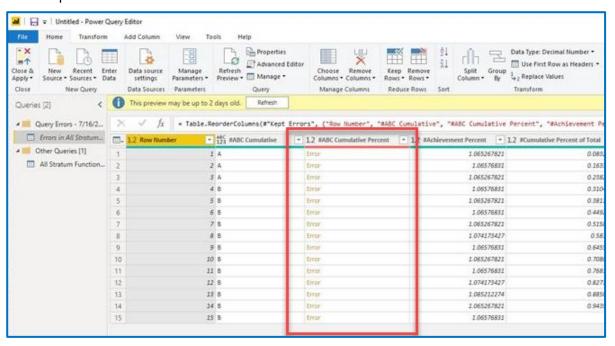
#### **Choose Formats Appropriate To The Measure Item Data**

When setting up measure items in Stratum views, you can assign them a format such as a percent or currency format. Make sure you choose a format that is appropriate to values returned for the measure item. If the format isn't appropriate given the measure item outcome, errors can result in the data when it's loaded into Power BI.

For example, this view has an #ABC Cumulative Percent calculation that returns a text value of A, B, C, and so on. The assigned format is a percentage, which isn't appropriate. A format of None would have been more appropriate.



This mismatch between the results (text) and the format (percentage) can cause an error when retrieving data from this view into Power BI. The measure item format is defined for a numeric, but the data returned for the measure item is alphanumeric. This causes an error for that data column in Power BI.



#### Always Have The Grid Displayed In The View

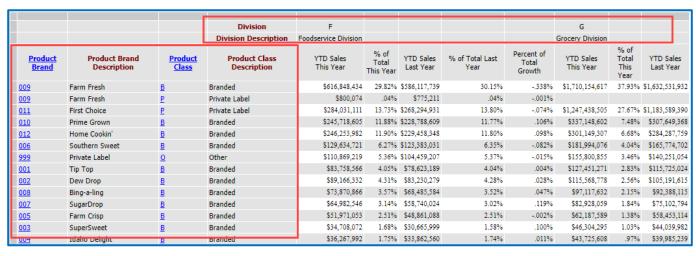
Stratum views can be set up such that their grid is hidden, for example, in cases where there is a chart and you only want to display the chart. Avoid using views like that where the grid is hidden from display. Charts also aren't recommended for views you plan to use with Power BI. The raw data from the grid is the focus when Power BI datasets are created using Stratum views. Keep the grid visible for the sake of easy viewing by users.

# **Consider Using Levels Only On Rows**

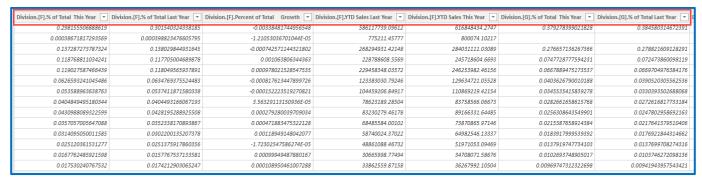
A Stratum view with levels on only one axis is more ideal when used with Power BI. The resulting dataset will be less visually complicated and more straightforward to work with in Power BI. A view with levels on both rows and columns is still valid to use as a Power BI dataset, but having levels on both axes can result in more visually complicated results.

Note: See also Don't Use Levels On Columns Due To Impact On Captions.

For example, here's a Stratum view with levels on both rows and columns to show you how that type of setup is treated in Power BI.



Here are the results in Power BI, with the column's level information merged into the measure item captions. That tells you which measure item values belong to each level member on columns.



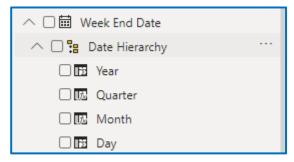
# Other Topics & FAQ's

#### **Don't Delete Views Used For Power BI Datasets**

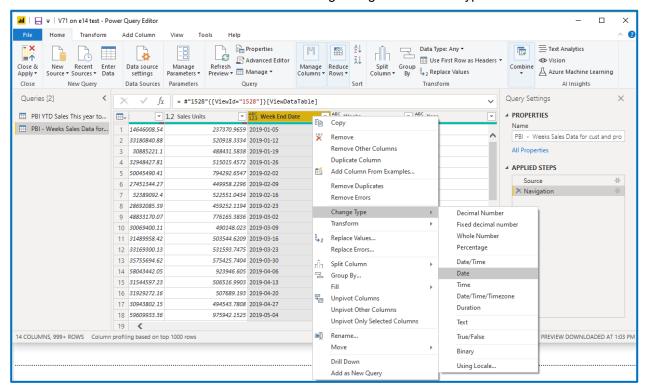
Avoid removing any view associated with reports in Power BI. Removing the view from Stratum will break your Power BI datasets and associated Power BI reports and dashboards.

## How Do I Add a Date Hierarchy To A Power BI Dataset?

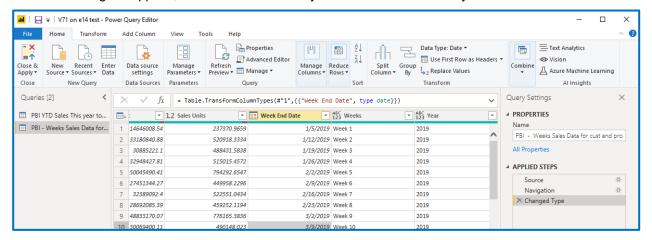
An example of a Date Hierarchy is below. It originates from an End Date attribute from the "Weeks" time hierarchy in the Stratum view used to create the Power BI dataset. To set up a time hierarchy in a Power BI dataset, include a Start Date or End Date attribute from a Stratum time hierarchy in your view. Once you get data from the view into Power BI, change the type for the attribute's column to "Date" and the result will be a time hierarchy.



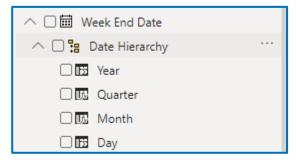
Here is the "Week End Date" column in Power BI being changed to a "Date" type.



After that change is applied, Power BI automatically creates a Date Hierarchy associated with that field.



Here is the Date Hierarchy.



# What Happened To All Others Data From My Original View?

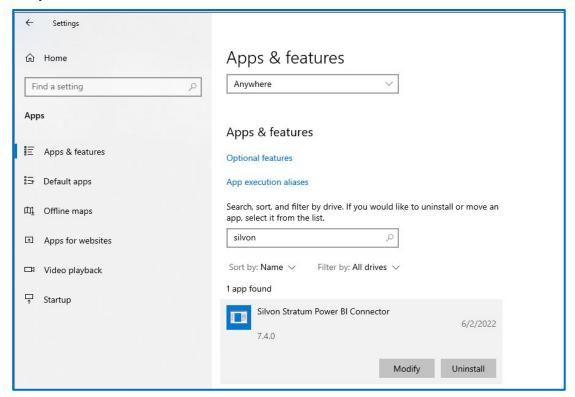
If your Stratum view had All Others AND attribute relationships on its rows, the All Others will be ignored and excluded when the Power BI dataset is created. Silvon recommends excluding All Others from views you plan to use with Power BI. Filtering related features can be set up in Power BI itself when data is used there for reports and dashboards, so All Others aren't necessary in the source view.

# What Happened To Totals From My Original View?

If your Stratum view had totals AND attribute relationships on its rows, the totals will be ignored and excluded when the Power BI dataset is created. Silvon recommends excluding totals from views you plan to use with Power BI. Totals can be calculated in Power BI itself when data is used there for reports and dashboards, so totals aren't necessary in the source view.

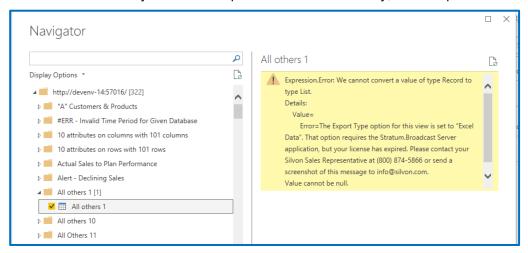
# What Version Of Silvon Stratum Power BI Connector Am I Using?

You can find the version number in the Apps section of Windows settings. Open the Settings window then choose Apps. Browse to the Silvon Stratum Power BI Connector application in the Apps & features section. Click its name, and you will see the version number below its name.



# Why Am I Seeing An "Expression. Error" Message About Needing Broadcast Server?

To use Silvon Stratum Power BI Connector with Power BI, your Stratum. Viewer implementation must have a valid license for the Stratum. Broadcast Server application. Also, a valid registration key for the license must be specified in Stratum. Viewer's Application Settings. An error message about the requirement will show in the Navigator window of Power BI if you have an expired license or invalid key, for example.



### Why Are Repeating Values Included In A Power BI Dataset & Reports?

Repeating values are used for every dimension in a dataset even if repeating values are disabled in the original Stratum view. Repeating values aid you in understanding and working with the data in the Power BI framework.

# Why Are Some Calculated Measure Items Missing From A Power BI Dataset?

This happens when the source Stratum view has both attribute relationships AND distinct calculated measure items on rows in the view. In those cases, the distinct calculated measure items will not be loaded into the Power BI dataset that was created from the view.

# Where Can I Find The Viewer Implementation URL And View ID Used For A Datasource?

Those details can be looked up in the Power BI Desktop application. Access the Power Query Editor for your PBIX file. Under Applied Steps, click Source to see the Viewer Implementation URL. Under Applied Steps, click Navigation to see the View ID.

