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Royce&Associates

Tableau Performance Visualizer

User Guide

Introduction:

The Royce Performance Visualizer is a powerful and easy to use tool that allows you to make insights about fund performance that you could never have made just looking at raw numerical data. The dashboard can be found at http://ranybi01:8000/#/site/Research/views/PerformanceVisualizer/PerformanceVisualizer and contains many curated default views that we believe are the most helpful to Royce. These default views allow inexperienced users to be able to quickly make important insights from the most commonly used performance scenarios.

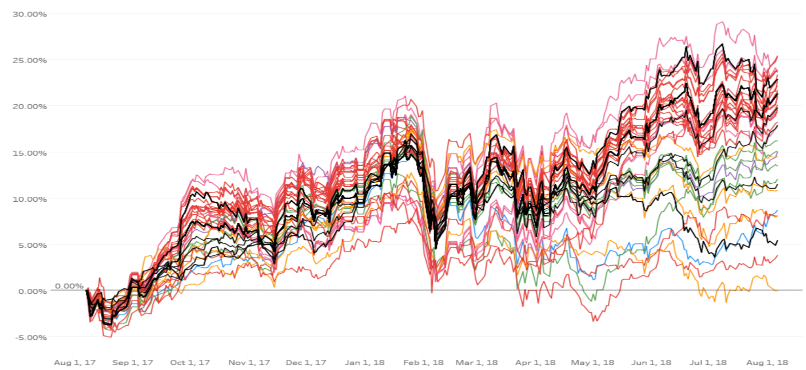
Reading the default dashboard:

The dashboard contains two main displays to help make a quick assessment about your fund's performance.

On the left-hand side of the screen is a treemap of all of the funds. The treemap acts as a visual representation of the weekly flash report, grouping funds by the same categories and coloring them by their relative return versus their respective indexes during the default 1 year rolling time period. Green colored funds outperformed their index, while red funds underperformed their index during this time period. The intensity of the color shows the degree of out/underperformance.

Clicking on one of the funds in the treemap will highlight the same fund on all of the other parts of the dashboard, allowing you to quickly see all of the important info about the fund. (You can also drag a box around several funds, ctrl/shift click funds, or click on one of the category names to select a group of funds all at once to compare many similar funds at once). To deselect the funds, click on the white space near the treemap (or whichever area of the dashboard you selected from initially)

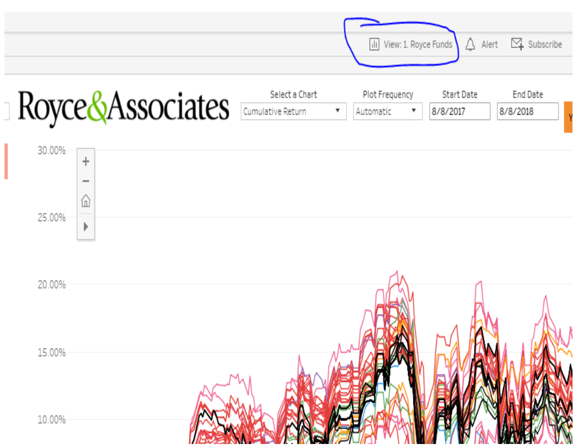
The main visual on the right side of the screen contains a line graph showing the 1 year trailing returns of all of the Royce funds (the colored lines) and their indexes (the black lines). The lines are colored as follows: pink is micro-cap, red is small-cap, purple is mid-cap, blue is large-cap, orange is international, green is low risk. This graph allows you to not only to see the cumulative return of a fund over a period of time relative to its index and the rest of the firm, but also make unique insights about things like the correlation of funds over time.

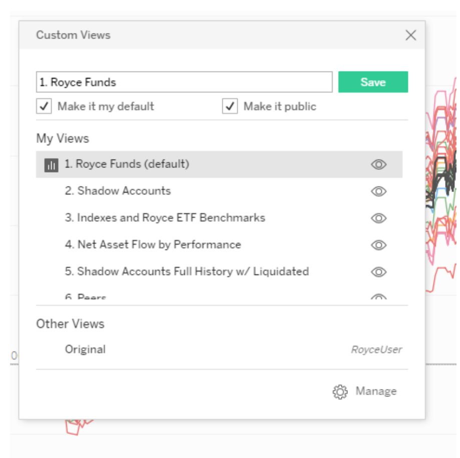


Whenever you click on a fund in the treemap or on the line graph the fund and its index will both be highlighted and labeled (if there is enough space to do so) so you can always see when a fund was outperforming or underperforming its benchmark and by how much.

Dashboard Navigation:

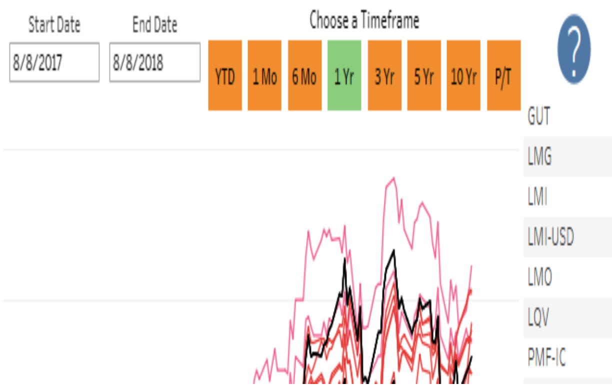
While the Performance dashboard provides you the ability to customize the view in many different ways by changing the sizing, grouping, and coloring of the treemap, the type of chart being displayed, the start and end dates, and many more options found on the settings page, we have set up a number of additional views in order to save time from having to change these settings manually. To access these alternate views, click on the views button above the dashboard and select one of the views from the pop-up menu.





The first three views show the 1 year performance of Royce funds, Shadows, and Indexes. The other views have much more specific use cases, so we will not be explaining them in-depth in this guide.

Another way of quickly getting a custom view on the dashboard is by editing the dates. You can either type in a start and end date into their respective boxes or click on one of the buttons under **Choose a Timeframe** to have the dates autofill to whatever the box says (you may have to enable pop-ups in your browser the first time you use these buttons).



<u>NOTE</u>: The timeframe buttons will open up the dashboard with the changed dates on a new tab. All views on this new tab will have the same timeframe as the one you selected, even views that are longer than 1 year by default.

Additional Information:

If you require any additional assistance with the Performance dashboard, please consult the help icon at the top right corner of the dashboard or contact jnecakov@roycefunds.com for additional questions.