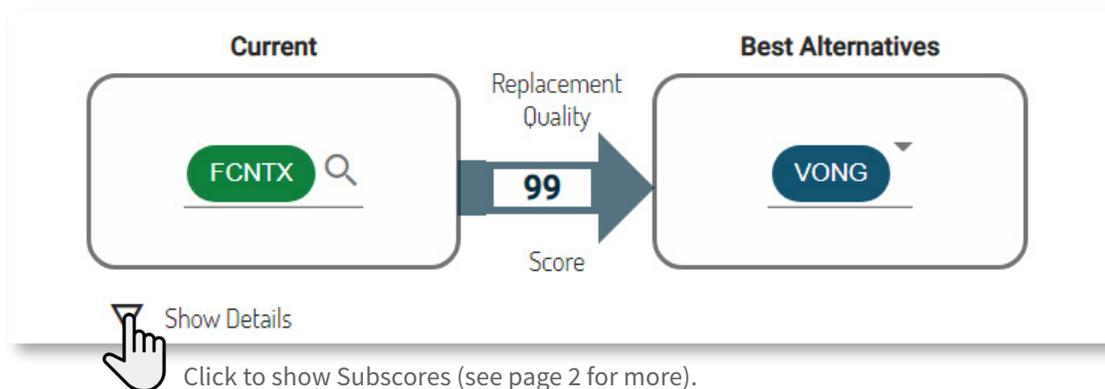


Portformer | Replacement Quality Score

Introduction

The power of the Portformer Replacement Quality Score lies in its ability to quickly and clearly summarize thorough quantitative comparisons between ETFs, Mutual Funds, and portfolios.

This metric results from comparing millions of strategies* through machine learning, then ranking the best according to fees, returns, drawdowns, and more. The Replacement Quality Score represents a breakthrough in investment research that saves financial advisors time and helps grow their AUM.



What It Means

Portformer Replacement Quality Score is a quantitative expression of how much our Best Alternative fund or portfolio improves on our chosen fund or portfolio. It ranges from 1 to 100.

A score of 99 indicates Portformer has found a near-perfect Best Alternative with lower fees, higher returns, lower drawdowns, and less use of capital than the original strategy.

Scores from 85 to 99 are good to excellent, suggesting significant benefits in several measures.

A score of 70 or below indicates the Best Alternative strategy is either not similar to the original strategy or underperforms in key ways.

How It's Calculated

Methodologically, Replacement Quality Score is the average of four Subscores:

- ▶ **Consistent:** how stable the relationship between the strategies is over time;
- ▶ **Complete:** the similarity of the return types between them;
- ▶ **Concise:** the simplicity of the Best Alternative strategy; and
- ▶ **Confidence:** the expected relative outperformance of the Best Alternative.

*Strategy: an individual fund or portfolio of funds

Portformer | Subscores

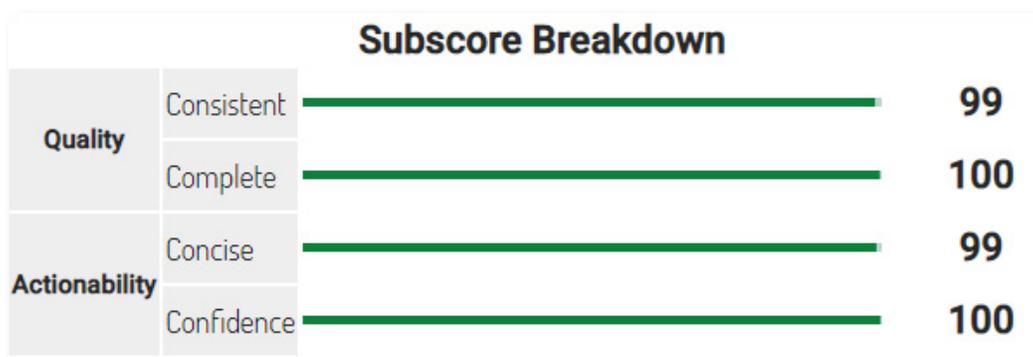
Consistent

This metric tracks **the stability of the relationship between the two strategies** by identifying similar systematic investment strategies. It relates to weights and portfolio turnover—similar strategies demonstrate stable weights and low turnover over time.

This measure also allows us to separate funds that are easily replicated from those with no true market substitutes.

Complete

A comparison of **how alike the original strategy and Best Alternative were in the past and prediction of how alike they will be in the future**. First, we perform a monthly calculation of the forecasting accuracy (R^2) between the two based on their history. Then we predict how similarly the strategies will perform over the next month. Based on the accuracy of the prediction, the algorithm trains itself to predict the next month's return. Lastly, we adjust for outlier months by penalizing the model for overfit.



Concise

How simple is the Best Alternative to implement? Although Portformer sometimes selects a group of funds as the Best Alternative, our methodology prefers simple solutions. So while advisors seek low Herfindahl-Hirschman Index (HHI) values for their overall portfolios, we look for high HHI values for our very specific fund replacement suggestions.

Confidence

Confidence represents **the expected relative outperformance of the Best Alternative**—how much we predict that strategy will outperform the other. By comparing the performance of the strategies and the model's constant coefficient monthly over five years, we arrive at a conservative measure with strong support from the data.