What Makes a Good Benchmark?

A portfolio benchmarking strategy has two equally important components. First, an investor selects a market benchmark based on a quantitative evaluation of the specific objectives and risk tolerance of the program. The benchmark reflects that risk/return profile. Second, portfolio return is compared, over time, to the return on the market benchmark.

Academic discussion and market experience have, over time, helped investors develop appropriate, helpful benchmarks, which share certain characteristics.

Historically, public investors have employed various “yield” measures as their benchmarks. While yield benchmarks are helpful in developing budget forecasts of the interest earnings from the portfolio; however, there are several drawbacks to yield benchmarks. A yield benchmark is a “snapshot in time” and is dependent upon the date chosen for measurement.

By contrast, total return benchmarks measure the performance of a portfolio for an entire period, up to and including the measurement date. A total return benchmark measures the change in value of an index over a defined time period, rather than just the interest yield on the portfolio on a specific date. A second major problem with yield benchmarks is that there is no precise definition of “yield.” Does the benchmark measure book yield or current yield? What about yield to call or yield to maturity? There are many different types of yield, and yield measurement is often imprecise as to which is being used. Therefore, it can be difficult to get an “apples to apples” comparison when using yield benchmarks.

Total return benchmarks provide more complete information as to a portfolio’s performance. Because they measure market gains and losses, as well as interest income, total return benchmarks provide a true measure of the change in value over a given period of time. Total return is also unambiguous; while there are multiple definitions of yield, there is only one definition of total return. Therefore, using total return measurement guarantees an “apples to apples” comparison.

Good benchmarks satisfy certain generally agreed upon criteria. The exact composition of the benchmark should be specified in advance; users should know what securities make up the benchmark and how it is constructed. The benchmark should be representative of the securities in which the portfolio can invest. The benchmark should contain securities that can actually be bought and sold in the marketplace. Historical performance and information on the benchmark index should be available for analysis. Finally, the benchmark should represent a level of risk that is similar to that which the portfolio wishes to take.

The goal of a portfolio benchmarking strategy is to find a benchmark that accurately represents the manner in which the portfolio is likely to be invested. If this occurs, then portfolio performance can be measured against that of the benchmark, and a truly accurate portrait of portfolio performance can be ascertained. Even more importantly, it will be possible for the managers of the portfolio to examine the portfolio’s performance and see any reasons for either above or below average returns. Changes than can be made, and the risk-adjusted performance of the portfolio can be improved over time.
The chart below lists several of the benchmarks that public agencies use, as well as the characteristics of benchmarks that are used by professional money managers. The chart then shows how well the various benchmarks meet the criteria for a good benchmark.

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Transparent</th>
<th>Investable</th>
<th>Appropriate risk profile</th>
<th>Historical Data Available</th>
<th>Known in Advance</th>
<th>Representative of Investable Universe</th>
<th>Performance Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Return Benchmarks</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>TRR</td>
</tr>
<tr>
<td>LAIF</td>
<td>N</td>
<td>Y/?</td>
<td>?</td>
<td>incomplete</td>
<td>N</td>
<td>N</td>
<td>Yield</td>
</tr>
<tr>
<td>Sample County Pool</td>
<td>N</td>
<td>Y</td>
<td>?</td>
<td>incomplete</td>
<td>N</td>
<td>N</td>
<td>Yield</td>
</tr>
<tr>
<td>Constant maturity 2 year treasury</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Yield/TRR</td>
</tr>
<tr>
<td>3 month treasury bill</td>
<td>Y</td>
<td>Y</td>
<td>?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Yield/TRR</td>
</tr>
</tbody>
</table>

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Martin Cassell is the Chief Executive Officer and Chief Investment Officer at Chandler Asset Management and is a principal of the firm. Mr. Cassell is responsible for defining, planning, and directing company programs. He heads implementation of the firm’s investment strategies and portfolio risk management. He designed the proprietary quantitative models that drive the firm’s investment process, establishing duration, structure, and asset allocation throughout client portfolios.

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**RISKS AND OTHER IMPORTANT CONSIDERATIONS**

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Fixed income investments are subject to interest, credit, and market risk. Interest rate risk: the value of fixed income investments will decline as interest rates rise. Credit risk: the possibility that the borrower may not be able to repay interest and principal. Low rated bonds generally have to pay higher interest rates to attract investors willing to take on greater risk. Market risk: the bond market in general could decline due to economic conditions, especially during periods of rising interest rates.