UIT Composite Returns and Extended Performance

Morningstar Methodology Paper
Effective September 2014

©2014 Morningstar, Inc. All rights reserved. The information in this document is the property of Morningstar, Inc. Reproduction or transcription by any means, in whole or in part, without the prior written consent of Morningstar, Inc., is prohibited.
Calculation

A unit investment trust, or UIT, purchases a fixed portfolio of securities that are held for a predetermined period of time, typically one to five years. Often, subsequent series of a UIT that follow the same strategy are offered at regular intervals, such as quarterly or annually. Morningstar’s UIT composite return combines the returns of each series within a strategy to measure how the strategy has performed over different time periods. This allows investors to get a longer-term picture of how a UIT strategy has performed.

Unlike other composites, Morningstar links the UIT strategy composite to the returns of a specific UIT Series to generate extended performance. For individual UIT Series, extended performance includes the loads associated with the subject series.

Investors should be aware that the strategies used to group UIT series together are defined by the investment provider or sponsor. Morningstar does not evaluate the appropriateness of the groupings. UIT strategy construction methodologies are sometimes based upon asset characteristics that are highly sensitive to market movements. In certain investing environments these strategies may contain series with divergent performance. In these cases the individual UIT series may deviate substantially from the average, the composite.
**UIT Composite**

The composite return for any given day is the equally weighted average return of all series that existed on that day, not including transactional sales charges. Each series may contain multiple classes represented by separate CUSIPs, but the performance of all classes is identical after applying the assumption of reinvested distributions. The total return for each series is calculated following the Morningstar Total Return Index Methodology. To determine the daily composite return, the returns for all of the series are added together and divided by the number of series available.

\[
\text{Daily composite return} = \frac{\text{Return}_{\text{Series 1}} + \ldots + \text{Return}_{\text{Series N}}}{N}
\]

Longer-term composite returns are equal to the product of all daily composite returns during the longer-term time period.

\[
\text{Long-term composite return} = \left[(\text{Daily return}_{\text{first day}} + 1) \times \ldots \times (\text{Daily return}_{\text{last day}} + 1)\right] - 1
\]
Extended Performance

Once the composite has been calculated, Morningstar appends the composite for all months prior to inception month and calculates an extended performance total return index. To calculate load-adjusted returns, transactional sales charges associated with the subject UIT are deducted from the extended performance at the frequency with which a hypothetical investor would have made an initial purchase and rolled over the investment.

UIT sales charges typically include an initial sales charge, a creation fee, and a deferred sales charge or charges. First-time investors in a UIT Series pay all of these sales charges, but it is industry standard practice for the initial sales charge to be waived for investment in subsequent series. These data points are taken directly from the prospectus of the subject series.

Load-adjusted UIT extended performance can be calculated through the following formulas.

\[
EPL = \left( \frac{1 - F}{TRI_0} \right) \times \left( 1 - D \frac{TRI_1}{TRI_0} \right) \times \left( 1 - D \frac{TRI_2}{TRI_1} \right) \times \ldots \times \left( 1 - D \frac{TRI_I}{TRI_{I-1}} \right) - 1
\]

- \( EP_L \) = Cumulative load-adjusted extended performance
- \( TRI_i \) = Total return index value at time \( i \)
- \( F \) = Maximum sales charge for the UIT Series
- \( D \) = Deferred sales charges applicable for rollover purchases
- \( \theta \) = Term of UIT series from inception to liquidation
- \( \nu \) = Number of series purchased during the performance period
- \( t \) = Extended performance time period
Calculation

This formula can be simplified to:

\[
EP_L = \left( \frac{TRI_t}{TRI_0} \right) \ast (1 - F) \ast (1 - D)^{v-1} - 1
\]

To calculate the number of series that would be included in the extended performance estimate, the period of the extended performance is divided by the term of the UIT Series. This value is rounded to the smallest integer greater than the calculated value.

\[
v = \left\lfloor \frac{t}{\theta} \right\rfloor
\]
Load-Adjusted Return

For some calculations and charts, it is necessary to have periodic performance match growth charts. This is achieved through a performance adjustment factor. Morningstar calculates a daily adjustment factor for loads, \( a \), as follows:

\[
a = \left( \frac{1 + \frac{EP_t^L}{TRI_t}}{1 + \frac{TRI_t}{TRI_0}} \right)^{\frac{1}{T}}
\]

Where

\( T \) = Number of days since strategy inception

Then, Morningstar adjusts the daily total returns with this factor:

\[
LR_t = a(1 + TR_t) - 1
\]

Where

\( LR_t \) = Load-adjusted return for day \( t \)

\( TR \) = Total return for day \( t \)

The daily total returns are then converted into a load-adjusted total return index, and can be used in the same manner as the Morningstar Total Return Index.

It is important to note that the cumulative load-adjusted performance changes based upon the number of series included in the extended performance estimate. Morningstar recalculates the daily adjustment factor monthly based upon the number of series (and rollover purchases) which hypothetically would have occurred from the strategy inception until the most recent month-end. Therefore load-adjusted daily returns, and all calculations based upon these estimates, will be restated monthly due to the changes to: 1) the time period where loads are amortized in the daily return index; and 2) the number of series, \( v \), in the performance period.