RAFI
Developed by Research Affiliates

Index Methodology & Standard Treatment | REVISED: 10.31.2018

RAFI® Bonds US High Yield 1-10 Index

A Research Affiliates Fundamental Index® Strategy as designed by Ryan ALM, Inc. Index Division

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1. INTRODUCTION

The RAFI Bonds US High Yield 1-10 Index utilizes the principles developed by Research Affiliates, LLC for the creation of securities indices based on measures of company size. These principles are laid out in the paper "Fundamental Indexation" by Arnott, Hsu, and Moore (*Financial Analysts Journal,* 2005). The RAFI Bonds US High Yield 1–10 Index uses fundamental factors of company size, including book value of assets, gross sales, gross dividends, and cash flow, to create RAFI weights rather than market weights for each issuer.

The RAFI Bonds US High Yield 1–10 Index enables investors and fund sponsors to obtain exposure to the U.S. high yield bond market through a thoughtful and transparent construction approach whose salient features are described here.

2. RAFI WEIGHTS

The RAFI Bonds US High Yield 1–10 Index begins with the aggregation of historical accounting data for all U. S.-based publicly traded corporations. Note that this process inherently results in a portfolio that will not invest in debt issued by privately held entities.

Four factors are utilized. For three of them—gross sales, gross dividends, and cash flow—five-year averages are calculated for each company. If a firm does not have a complete five-year history for sales, cash flow or dividends, the remaining available data is used to calculate an average. The current book value of assets is the fourth variable.

Each corporation receives factor-specific RAFI weights equal to the ratio of its sales (or cash flow, dividends, book value of assets) to the aggregate sales (or cash flow, dividends, book value of assets) across all companies in the sample. If a company does not pay any dividends, its score is computed as an equally weighted average of the remaining three metrics. Companies with negative scores are removed from consideration.

Note that the amount or type of debt issued by the corporations is not factored into the RAFI weight calculations. Therefore, the resulting Index will include many companies that do not issue any debt of any kind; these companies will be filtered out when the index is constructed.

3. INDEX METHODOLOGY

3.1 Composition

The RAFI Bonds US High Yield 1–10 Index is comprised of U.S. dollar-denominated bonds which are SEC-registered securities or SEC Rule 144A securities with Registration Rights (issued after 7/31/2013) and whose issuers are public companies listed on a major U.S. stock exchange. Only investible, non-convertible, non-exchangeable, non-zero, fixed coupon high-yield corporate bonds qualify for inclusion in the index. No foreign agencies, governments, or supra-nationals are allowed.

Non-U.S. issuers are not eligible for the RAFI Bonds US Corporate Index Series. We define a “U.S. issuer” as any company domiciled in the United States.

3.1.1 Bonds Trading Flat of Accrued

Bonds trading flat of accrued are not eligible for the index. If a bond trades flat of accrued during the month, it is removed from the index at month-end.

3.1.2 Liquidity

Each issue must have a minimum par value amount of $350 million outstanding. Bonds that have a par value reduced below $350 million during the month are removed from the index at month-end.

3.1.3 Rating

As independently determined by ALM Research Solutions, LLC, each issue must be rated Ba1/BB+ or lower by either Moody’s or S&P, but not below B3/B- by either Moody's or S&P. Bonds which fall outside this range due to intra-month upgrades or downgrades are removed from the index at month-end.

3.1.4 Call Protection

All issues must have a minimum of two-year call protection when entering the index. Poison puts and make-whole provisions are allowed. On entering the index the minimum tenor is six years for the 5-10 year maturity cell and two years for the 1-5 year maturity cell. An issue will be removed from the index at the last month end before maturity.

3.1.5 Maturity Cells

The RAFI Bonds US Investment Grade 1-10 Index is divided into two distinct maturity cells: 1–5 years and 5–10 years. Where an existing investment in any maturity cell has been held for a period of 12 months or longer, the largest qualifying issue per maturity cell per issuer is selected; otherwise the existing holding is retained, subject to the requirements related to bonds trading flat of accrued, liquidity, rating, and call protection. If there is more than one issue with the same amount outstanding, then the most recent issue is selected. As a result, this Index will have up to two bonds per issuer selected.

3.1.6 RAFI Weights

Eligible issues that possess a positive company RAFI score will constitute the RAFI Bonds US Investment Grade 1-10 Index. The issues are weighted by a function that is proportional to the company’s RAFI score. Where a company possesses more than one issue, each issue will be equally weighted.

3.2 Reconstitution and Rebalancing

Index portfolios are reconstituted at month-end for index rules and rebalanced annually on March 31 for new RAFI scores. New issues may enter at month-end due to index rules. Issues may also leave at month-end due to index rules. No issue shorter than two years to maturity can enter the index. Non-U.S. issuers are not eligible for the RAFI Bonds US Corporate Index Series. We define a “U.S. issuer” as any company domiciled in the United States.

3.2.1 Tender Offers and Calls

Issues that are tendered in their entirety will be removed immediately. Subject to confirmation, a partial call or tender offer that is announced during the month will be treated as a transaction at month-end.

3.2.2 Issue Introduced into Currently Populated Maturity Cell

If a qualifying issue in either maturity cell is more than 20% larger than the held issue in that same cell, the larger issue will replace the held issue at month-end provided that the issue being removed has been in the index for a minimum of a 12 month holding period. The new issue will receive the same weight as the issue it replaced.

3.2.3 Removal of One of Two Issues and Introduction of Second Issue

If a company begins a month with one issue in the index, and a new qualifying issue is introduced into the other maturity cell during the month, then the company's total portfolio weight will be divided equally between the two issues at the end of the month of issue, keeping the company's overall weight constant. Similarly, if a company begins a month with an issue in each of the maturity cells, and one of the two is removed at month-end, then the weight of the remaining issue increases at month-end, keeping the company's overall weight constant.

3.2.4 Intra-Year Additions

Companies that are assigned RAFI portfolio weights but do not have qualifying issues at rebalancing, and that subsequently issue qualifying bonds before the next rebalancing, are added at the end of the month of issue at their previous rebalancing weight. The weights of all existing issues across the index are reduced pro-rata in conjunction with any intra-year additions.

3.2.5 Issue Moving Between Maturity Cells

If an issue moves between maturity cells (as its tenor decreases) during a month, resulting in two issues within a cell, the longer call-protected tenor is retained at month-end, unless the alternative issue is more than 20% larger, subject to the requirements related to bonds trading flat of accrued, liquidity, rating, and call protection.

3.3 Index Calculations

3.3.1 Pricing

All new issues enter the index at the midpoint between the closing bid and offer prices. All existing issues are also priced at the midpoint between the closing bid and offer. All deleted issues leave the index at the closing bid price.

3.3.2 Accrued Interest

The following day count conversions are based on SIA standards for each index:

- Actual days of accrued interest / 360
- ISMA / 30/360

3.3.3 Daily Total Return

All calculations are based on SIA standards for each index:

[(End Price + End Accrued + Coupon Payment) / (Begin Price + Begin Accrued) – 1] *100

3.3.4 Index Levels

The index level starts at 100 and rises or falls as daily total returns become available. The daily total returns, which include the price return and the income return, are reinvested and compounded back into each index on a geometric or multiplicative basis:

Begin Index Level x (1 + Daily Return / 100) = End Index Level

For example, consider a hypothetical index that has a price return of 1% (0.01) on the first day of the month and 0.5% (0.005) on the second day. It also has an income return of 2 basis points (0.0002) each day. Then the index level at the end of the second day is 101.55, calculated as follows:

Beginning Index Level x [1 + (Price Return + Income Return)] = End Index Level

Day 1 100 x [1 + (0.0100 + 0.0002)] = 101.02

Day 2 101.02 x [1 + (0.0050 + 0.0002)] = 101.55

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