Index Methodology and Standard Treatment for:

RAFI® US Investment Grade Corporate Bond Index Series

RAFI® US High Yield Corporate Bond Index Series

A Research Affiliates Fundamental Index® Series
As designed by Ryan ALM, Inc. Index Division

June 2010

Table of Contents

1. Introduction

The RAFI® Corporate Bond Index Series utilizes the principles developed by Research Affiliates, LLC for the creation of securities indexes based on measure of company size. These principles are laid out in the paper "Fundamental Indexation" by Arnott, Hsu, and Moore (*Financial Analysts Journal,* 2005). The RAFI Corporate Bond Index Series uses fundamental measures of company size to create RAFI weights for each issuer and includes book value of assets, gross sales, gross dividends and cash flow, rather than market weights.

This paper sets out the methodology for the management of the RAFI Corporate Bond Index Series explained herein, which is calculated by Ryan ALM, Inc.

The following indexes are calculated:

RAFI US Investment Grade Corporate Bond Indexes:
- RAFI US Investment Grade Corporate Short Bond Index
- RAFI US Investment Grade Corporate Bond Index
- RAFI US Investment Grade Corporate Extended Bond Index

RAFI US High Yield Corporate Bond Indexes:
- RAFI US High Yield Corporate Bond Index
- RAFI US High Yield Corporate Short Bond Index

The primary purpose of an index is to measure the growth rate of a market area. The aim of this guide is to describe how the indexes are calculated. The RAFI Corporate Bond Index Series is designed for investors and fund sponsors to obtain exposure to the US corporate bond market through a thoughtful and transparent construction approach described herein.

2. RAFI Weights

The RAFI Bond Indexes begin with the aggregation of historical accounting data for all United States-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, including book value of assets, gross sales, gross dividends and cash flow are utilized. Five-year averages are calculated for each company for gross sales, gross dividends and cash flow. 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. Current book value is the fourth variable.

A composite RAFI weight is calculated for each company. Composite RAFI weights are comprised of individual RAFI weights calculated for each company for each individual accounting variable. Each corporation thereby receives a composite RAFI weight equal to the ratio of its sales (or cash flow, dividends, book value) to the aggregate sales (or cash flow, dividends, book value) across all companies in the sample. If a company does not pay any dividends, the composite calculation does not give it a zero weight on that metric but rather computes its weight as an equally weighted average of the remaining three metrics. Companies that receive a negative composite weight are removed.

The RAFI weights are finally rescaled by taking the square root of each weight for each individual company. These weights are then normalized to sum to 1.

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 portfolio weights are merged with the available high-yield bond universe (see Section 3.6) and the remaining portfolio weights will again be rescaled.

3. Index Rules and Methodology (RAFI US Corporate Bond Index Series)

3.1 Composition

Each index is comprised of US dollar denominated bonds registered for sale in the US whose issuers are public companies listed on a major US stock exchange. Only non-convertible, non-exchangeable, non-zero, fixed coupon investable corporate bonds with maturities greater than 1 year to maturity qualify. No foreign agencies, governments, or supra-nationals are allowed.

3.1.1 Tender Offers and Calls

Issues that are tendered in their entirety will be removed immediately. Any bond subject to a partial firm call or tender offer in the month announced will be reviewed as a transaction at month-end as and when confirmed.

3.2 Liquidity

Each issue must have a minimum amount outstanding.

3.2.1 Investment Grade Liquidity

Each issue must have a minimum amount outstanding of $500 million.

3.2.2 High Yield Liquidity

Each issue must have a minimum amount outstanding of $350 million.

3.3 Rating

Each issue's rating must correspond with the index series in which it is included.

3.3.1 Investment Grade Rating

Each issue must be rated (BBB/Baa and higher) by both Moody's and S&P (no split-rated bonds below BBB/Baa).

3.3.2 High Yield Rating

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.

3.4 Call Protection

All issues in each index must have a minimum of one year call protection. Poison puts and make-whole provisions are allowed.

3.5 Pricing

All issues enter the index priced on the offer side. All bonds already in the index are priced on the bid side.

3.6 RAFI Adjusted Weights

Each of the RAFI High Yield indexes is weighted by the adjusted RAFI weights. Based on the index rules for liquidity, several issuers listed in the initial RAFI weights may not have bonds that qualify for entry into these indexes. As a result, the initial RAFI weights are adjusted for the population of bonds that enter the index. For example, if 30% of the initial RAFI weights were removed from the index portfolio due to issuers not qualifying under the index rules, then all issuers remaining in the index population will get an increase in weight by dividing previous weight by 1—weight removed = 0.70 (RAFI adjusted weights).

(RAFI initial weight) / (1 – % weights removed) = RAFI adjusted weights

3.7 Maturity Cells

Each index is divided into three distinct maturity cells (if index is long enough): 1–5 years, 5–10 years, and 10+ years. The largest issue per maturity cell per issuer is selected. If there is more than one issue with the same amount outstanding, then the most recent issue is selected. As a result, the 1–10 year RAFI index will have will have up to two bonds per issuer selected; the 1–30+ year index will have up to three bonds per issuer selected.

3.8 Rebalancing

Index portfolios are rebalanced at month-end for index rules and annually for RAFI weights on March 31st. 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 1 year to maturity can enter the indexes.

3.8.1 New issue introduced into currently populated maturity cell

If a constituent introduces a new issue in either maturity cell that is larger than an existing issue in that same cell, the new, larger issue will replace the existing one at month end. The new issue will receive the weight as the issue it replaced.

3.8.2 Removal of one of two issues and introduction of second issue

If a constituent begins a month with one issue in the index and it introduces a new qualifying issue in the other maturity cell during the month then the constituent's total portfolio weight will be divided equally between the two issues at month end keeping the constituent's overall weight constant. Similarly, if a constituent 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 doubles at month end keeping the constituent's overall weight constant.

3.8.3 Introduction or removal of maturity cell

Companies that are assigned RAFI portfolio weights but do not have qualifying issues at the beginning of the year that subsequently issue qualify bonds intra-year (at a month end other than March 31st) are added at the subsequent month end at their previous

year end adjusted RAFI portfolio weight. The weights of all existing issues across the index are reduced pro-rata in conjunction with any intra-year additions.

3.9 Index Calculations

3.9.1 Accrued Interest

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

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

3.9.2 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 excluded at the next rebalancing date.

3.9.3 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

3.9.4 Index Levels

All index levels start at 100 and are based on the daily total return behavior of each index. Total returns are based on price return + income return. Each index total return is calculated daily. The daily returns are reinvested and compounded back into each index on a multiplicative basis:

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

Example:
Beginning index level * [(Price return + Income return) + 1] = End Index Level
Note: Returns are in decimals so 2% = 0.02

Day 1 100 * [(0.0100 + 0.0002) + 1] = 101.02
Day 2 101.02 * [(0.0050 + 0.0002) + 1] = 101.55