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Exploring alternatives to market cap fixed income indices

The recent example of Greece has shown that there can be difficulties with traditional fixed income indices, where benchmarks are weighted to reflect the size of eligible issuance. Evidently this gives the largest exposures to the largest issuers, regardless of whether credit quality is improving or deteriorating. Here we explore the alternatives to conventional market cap fixed income indices.

Bond indices can be categorized based on their broad characteristics, such as whether they are composed of government bonds, corporate bonds, high-yield bonds or mortgage-backed securities. They can also be classified based on their credit rating or year of maturity. However, when it comes to allocating how bonds are weighted within any of these indices, the most common method is to weigh by market capitalisation. Therefore, a fixed income index assigns the most weight to the largest fixed income issuer. However, there is an evident issue with this approach, namely that it gives the largest exposures to countries or companies that have the most debt, which a relative return fund will have little choice but to allocate to, even in the case of deteriorating credit quality.

A good example of this problem is Argentina, where its bonds accounted for about 20% of major emerging market bond indices in 2001 – it defaulted a year later. A similar situation affected high yield indices when Ford and General Motors were downgraded to junk

in 2005. Concerns were also raised about Japan in Global indices in the 1990s given the size of its debt-to-GDP ratios, and more recently Greece in European indices, where it constituted around 5% of these indices.

So, what alternatives are there to the market cap approach? These fall into three broad categories: **Constrained Indices**, **Valuation-Weighted Indices** and **Risk-Adjusted Indices**.

Constrained Indices

This type of constrained index is the market's most common solution when faced with market cap problems in the past. These indices seek to limit some or all issuer weights in some way. For example, emerging market debt index providers have developed indices where any individual country is limited to a maximum of 10% of the index. High yield indices with issuers limited to a maximum of 2% have also been developed. However, an evident criticism of them is that they are arbitrary in the choice of limit¹.

There are also indices that completely exclude certain issuers and maturities, for example the BoA Merrill Lynch Global Government Bond Excluding Japan index or the BoA Merrill Lynch EMU Direct Governments Excluding Ireland index. However, using indices that exclude certain issuers is by default a retrospective solution. In other words, seeking to exclude an issuer on the grounds of creditworthiness would mean that a problem has already occurred. Thus this would not help to prevent issues arising in the future.

Valuation-Weighted Indices

These indices have been developed to try to deal with the problems of market cap indices without the arbitrariness of constrained indices. In 2009, Barclays Capital introduced a new family of benchmark bond indices which used gross domestic product (GDP) to weigh country blocs within an index. Using official GDP data, index weights for 10 country blocs (three Americas, four

¹ Equal weighted indices are a special case of constrained indices with each issuer having equal weight. The downside of these indices is that they can give small, illiquid issuers a relatively high weighting.

Europe, Middle East & Africa, and three Asia) are calculated as a percentage of GDP rather than weighting each bond by its market value. Barclays Capital then uses market cap weightings of issuers within each region.

Other fundamentals that have been used to weight country indices include population and energy consumption. We would suggest that using government revenues or working age population would also be valid methods of weighting government bond indices. Corporate bond indices could use financial measures such as sales, profits or assets but this risks some companies with low and illiquid bond issuance being given relatively high weightings.

Risk-Adjusted Indices

These indices have also been proposed using methods such as minimum variance or maximum diversified, or more recent complex methods. All of these however share the same problem of how to properly calculate expected (rather than historical) returns and risks. Assets which have historically been stable can suddenly become volatile as demonstrated in the recent financial crisis e.g. covered bonds. Risk adjusting may be one way to build portfolios, but it is not a good way to build benchmarks as there are too many relatively arbitrary decisions on how to quantify risk measurement. Major index providers

don't use these methods for this reason, while organisations like EDHEC or TOBAM seem to have rather opaque methods or algorithms.

A Practical Solution

For investors who are concerned about the down sides of traditional market cap fixed income indices, we believe that the easiest and most practical solution from the above choices is the constrained index. Using the example of Greece, a constrained index would have limited Greece and other lower rated issuers to a 2% ceiling, helping to minimize issues when it eventually dropped out of the investment grade world.

A secondary, but less practical solution (though more theoretically satisfying) would be to use some sort of valuation-weighted index. Using GDP as a measure is the most realistic method and rebalancing can be done on a quarterly basis. Using data such as population, government revenues or working age population could only be rebalanced annually.

Alternatively, investors may want to consider an absolute return approach to investing in fixed income markets. This removes the obligation to invest in certain areas of the markets, allowing the manager to allocate purely to those issuers who offer the best risk/reward profiles.

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