

Getting a Patent is not just an Academic Exercise

Patent Pending *15/047,680*

Borealis Global Advisory has recently completed the 3rd iteration of its patent application for a “Semi-active Equity Portfolio and a Device for Tactical Allocation Changes”. It sounds a bit like an academic paper and to some degree the patent application is. Our patent application describes a process where an index (or portfolio) can be created based on a factor or groups of factors and then weighted in a way that is different from a commonly used index such as the S&P 500, Dow Jones, NASDAQ and many others.

One aspect of many, though not all indexes, is that they are capitalization weighted, meaning larger companies (larger capitalization) have a bigger impact on the indexes value. In fact, the top 30 companies in the S&P 500 (500 large US companies) index represent about 36% of the total index value. Investment companies have recognized the nature of cap-weighted indexes and their potential drawbacks and therefore created equal weighted indexes, such as the S&P 500 equal weight index. Though many in the general public have not heard of this or understand the difference in this index, they do assist us in understanding something about what is happening within the market without having to look at every individual stock. In other words, grouping stocks into indexes in different ways can tell us something about the market overall.

There are many ways to weight indexes but they generally fall into these two camps: Capitalization weighted or equal weighted. But how an index is weighted is only one aspect of an index, the other is, what are you going to put into the index to weight it (constituents)? The S&P 500 index is composed of the largest 500 companies in the U.S., as you may or may not know, picking 500 companies is a bit arbitrary and the actual companies selected vary over time as they are acquired, get smaller or go out of business.

Picking companies by size isn't the only way to create an index. Another way to create an index is to gather all the “High Quality” companies from among the S&P 500 companies and call this the high quality index. This is an index (portfolio) that has been created based on companies with common characteristics such as return on equity, accruals ratio and financial leverage ratio. It too must be weighted in some way, by size or equal weighted or some other way.

What makes a characteristic recognized or useful in creating an index? The answer is, generally, academics looking over data for a long period identify characteristics (sometimes called factors) that seem to explain stock performance over that long period. This work was started largely in the 1960's and 1970's by famous academics such as William Sharpe, Eugene Fama and Kenneth French, and later works of many, many others up to today. There are many factors that may contribute to outperformance over time, however today there are between three and five factors that are generally considered unique: Size, Value (these first two are the oldest/most famous), but also momentum, quality and volatility. Now we could debate which “size” is appropriate or what defines value, momentum, quality or volatility, but I'll leave that for another day.

Of course, you would not be surprised to find debates about whether all factor categories are truly unique or overlap, certainly academics debate it and will continue to do so. I will not drag you through these arguments, nor other factors that have been proposed as possible candidates for more research. What I will say is we at Borealis Global Advisory believe that factors are, can and will be used to describe companies, as well as groupings of companies (indexes) and therefore over time can be used to identify superior company and stock performers. We will even take this one step further, we can group industries, sectors, countries together in ways that make intuitive and academic sense (similar logical company characteristics) and identify factors within these groupings that help identify the superior performers.

To do this, we use a statistical process and algorithm (a recipe or series of steps) to identify groups of companies by industry, sector, country or other logical groupings and the factors that drive their superior performance. How do we prevent arbitrarily picking groupings or factors that show good results, but in fact are not truly related to determining performance? In other words, how do we pick things that are not just “lucky” and work for a little while, but have no fundamental basis and don’t work over time? The short answer is again, academics and quantitative research. While statistics can be tortured, mined, and falsified according to many quips such as “There are lies, damn lies, and statistics” as quoted from Mark Twain, it is the best tool we have for identifying factors that lead to superior performance; and statistical measures about these factors themselves tell us how good they are and whether they are truly valuable or just lucky for a time.

Once we have identified the factors that will likely point to superior future performance within a grouping of stocks or investments (such as groups of countries – Tranches as we call them), we still need a way to weight our results within the portfolio. How Borealis Global Advisory does this is also different from existing indexes. Instead of capitalization weighted or even equal weighted, we use a dynamic weighting method which is based on the relative standardized scores of the factors for each country/company/sector within our universe of investments. We call this methodology double ZZ scoring and its basis is in Z-statistics.

At Borealis Global Advisory we use exchange traded funds (ETFs) as the primary investment vehicle for what we call “Dynamic Factor Weighted” portfolios. Certainly the same process can be used for stock selection. However, ETF’s give us a low cost, more diversified grouping of investments to employ in our portfolios. Most ETF tactical, rotational, index providers will follow either an equal weighted methodology or they will determine an allocation method based on their strategic view of the market, momentum indicators, revenue, cash-flow or other ad hoc rules.

The Bottom line is our patent describes an algorithm for identifying Factors to be used within an index, then has a unique method for weighting the individual securities or investments to form the index. Therefore our “Multi-Factor Weighted” portfolios are rules driven, easy to implement, low cost and backed by quantitative research.