SELECTING SIZE & STYLE BENCHMARKS

Overview & Description

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INTRODUCTION

The IndexUniverse ETF Analytics process evaluates ETFs based on how well they track "the market" for their segment. To measure this abstraction called "the market," we employ what we determine to be the best-in-class benchmark family, chosen with the goal of broad, representative and accurate coverage. To select these benchmarks, we made a careful study of all the available choices, to understand what securities go into an index, and how indexers make classifications and distinctions.

In evaluating size and style indexes, we look at how each index provider defines a security's geography (region and country), size (large-, mid- or small-cap) and style (growth or value) classifications.

IndexUniverse researched the methodology and construction of the six largest and most widely recognized index families:

- MSCI Global Investable Market Indices (MSCI)
- FTSE Global Equity Indices (FTSE)
- Dow Jones Global Indexes (DJGI)
- Standard & Poor's Global Equity Index Series (SPGI)
- Russell Global Indexes (RGI)
- Thomson Reuters Country & Region Indices (TRCRI)

Our goal was to determine which index family most strongly adhered to the following principles:

- **Coverage:** Does the index family cover the widest range of securities and countries possible?
- **Selection:** Does the index family use a rules-based, transparent security selection methodology?
- **Roll-Up:** Does the index family maintain consistency across country, region and global indexes?
- **Size:** Does the indexer define large-, mid- and small-cap size buckets in a way that makes sense? Does it use buffers to avoid frequent turnover?
- **Style:** Does the indexer use a mutually exclusive, multifactor methodology to classify securities as growth or value?
- **Index Governance:** Does a designated committee regularly review and maintain indexes?

We chose the MSCI Global Investable Market Indices as the most neutral and representative for our ETF Analytics size and style benchmark series.

COVERAGE

Coverage is our most important criterion for choosing a global size-and-style benchmark family. We looked for the index provider with the broadest coverage, based on the number of countries and securities that it includes in its benchmark family.

INDEX NAME	SECURITIES	COUNTRIES
MSCI All Country World & Frontier Markets Investable Market Index	9,000	70
FTSE Global Equity Index Series All Cap Index	7,400	47
Dow Jones Global Index	7,000	47
S&P Global Broad Market Index	10,000	46
Russell Global Index	10,000	50
Thomson Reuters Global Index	N/A	51

MSCI, S&P and Russell are the top three contenders for coverage. MSCI covers approximately the top 99 percent of the global free-float-adjusted market capitalization. As of August 2012, its minimum float-adjusted market-cap requirement was $130 million. The S&P Global BMI casts a slightly wider net: It covers all publicly listed companies with float-adjusted market values of $100 million or more that have annual trading volumes of at least $50 million. The last indexer, Russell, sets its market-cap minimums with a company's total, rather than float-adjusted market cap. Historically, the market cap of the smallest firm has been about $160 million. Russell excludes companies with less than 5 percent of their shares available to the public and assigns weights based on float-adjusted market cap, but is ultimately more inclusive than indexers that select based on the float-adjusted number.

MSCI and Thomson Reuters are the only index providers that include frontier markets in their global indexes. Russell and S&P offer frontier market indexes, but exclude them from their global indexes. Dow Jones and FTSE exclude frontier markets altogether. About 25 percent of the world's population lives in frontier markets, so the decision of whether to include them in global indexes is significant despite the relatively small percentage of the global market cap attributable to the frontier markets.

SELECTION

We also looked at how each indexer selected its holdings. We started with the index families that select and weight stocks based on their market capitalizations, since a market-capitalization-weighted index most neutrally captures the market. At a minimum, index providers should screen for investability based on size, liquidity and availability and/or access to foreign investors. All of the indexes that we considered balance these factors against representativeness to come up with similarly broad and investable indexes.

We prefer index families with transparent, replicable, rules-based methodologies, and five of the six index families under consideration meet that ideal. S&P is the only index provider that is not entirely rules based: Its selection committee can break the rules at will.

ROLL-UP

Best practices dictate that an index family's country indexes compile directly into its regional indexes, with no additions, omissions or reweightings. The regional indexes should roll up into the index family's global indexes. A large-cap value stock in Poland should also be a large-cap value stock in Europe and a large-cap value stock globally. Small-cap emerging market securities should be included in global indexes and not cut because of size or liquidity constraints that differ from those for the local markets.

None of the index families perfectly meets our specifications, but S&P, Thomson Reuters, MSCI and Dow Jones come the closest.

MSCI begins by identifying all eligible equities worldwide and then assigns each to a country. Each company is assigned exclusively to one country, resulting in country indexes that do not overlap. MSCI builds each country index from the ground up, with the exception of developed European countries: MSCI first builds a developed Europe index and then derives individual country indexes from that MSCI Europe index. MSCI's indexes roll up next well, with the parts adding up to the whole.

S&P creates country indexes that include all equities that meet its size and liquidity screens and then parses them into regional and global indexes. It creates its size indexes based on the market-cap breakdowns in each country. For example, its global large-cap index is composed of the top 70 percent of free-floated market cap of each country, subject to size minimums.

Thomson Reuters defines its equity universe by first selecting the top 97.68 percent of each country's market capitalization and then rolling its country indexes up into its regional and global indexes. Thomson Reuters allows companies to be included in multiple country indexes, however, which is not ideal.

Dow Jones first selects eligible countries and then identifies securities within them. Like MSCI, Dow Jones assigns each company to one country to avoid redundancy in the country indexes. Dow Jones selects the top 95 percent of each country's market capitalization, with one exception: Dow Jones selects all European and emerging market securities at the regional level. As a result, some of its single-country European indexes are less comprehensive than they otherwise would be.

The remaining index providers all construct their indexes in ways that make sense, but nonetheless fall short of meeting our ideals.

FTSE selects securities first at the regional level and then rolls its regional indexes into its global index. FTSE selects its country index constituents under a separate process; U.K. companies in the global index may or may not also appear in the FTSE U.K. Index.

Russell starts out with all of the securities that meet its minimum size requirement, and then assigns them to countries that then roll into regions and the global index. It then sets its size bucket cutoffs based on the global market-cap distribution: Russell assigns any companies in the top 85 percent of the global market cap to its large-cap indexes, and companies in the bottom 10 percent to its small-cap indexes (companies in the 85th to 90th percentile stay in their original size box). Russell's system makes sense, but it ultimately excludes countries with smaller companies from Russell's large-cap indexes.

SIZE

An indexer's method of classifying securities as large-, mid- and small-caps is also important, since size baskets often coincide with particular attributes. For example, small-cap stocks generally have more market risk and pay lower dividends than large-cap stocks, but may have greater growth potential.

Size classification systems rank firms by their market capitalizations (share price times shares outstanding, adjusted for free-float and liquidity) and classify the largest as large-cap, the smallest as small-cap and the ones in the middle as midcaps. Each of the six index families that we examined sets its size bucket thresholds based on a percentage of the market's total market cap.

We believe that buffers are necessary to maintain index consistency and prevent excessive turnover. Buffers should be wide enough to prevent a stock from vacillating between two buckets, but narrow enough to allow for logical transitions.

All of the index families, with the exception of Thomson Reuters, have distinct percentile rankings and buffers:

INDEX FAMILY	SIZE	PERCENTILE RANGE	BUFFER
MSCI	Large-Cap	Up to 70%	5%
	Midcap	70% – 85%	+/– 5%
	Small-Cap	85% – 99%	+/– 1%
FTSE	Large-Cap	Up to 68%	4%
	Midcap	68% – 86%	6%
	Small-Cap	86% – 98%	2%
Dow Jones	Large-Cap	Up to 70%	5%
	Midcap	70% – 90%	+/– 2%
	Small-Cap	90% – 95%	–5%
S & P	Large-Cap	Up to 70%	+/- 3%
	Midcap	70% – 85%	+/– 3%
	Small-Cap	85% – 100%	+/– 3%
Russell	Large-Cap	Up to 87.5%	+ 2.5%
	Midcap	N/A	
	Small-Cap	87.5% +	–2.5%
Thomson Reuters	Large-Cap		
	Midcap	None Available	
	Small-Cap		

Most index providers follow logical and consistent size rules, with a few exceptions. Russell has no midcap index series. Thomson Reuters does not currently provide global size indexes.

STYLE

The next-most-important factor is whether the index provider offers style-based indexes and, if so, how it defines growth and value. We prefer index families that distinctly classify each stock as either growth or value—not both. We also prefer index providers that rely upon multiple style metrics, since an approach with more factors offers greater explanatory power. Price-to-book was one of the original factors used in seminal studies by Fama and French, but subsequent researchers added additional factors to compensate for perceived accounting distortions associated with simpler models. Index providers have generally followed suit.

For growth, we sought forward-looking metrics such as forward earnings per share estimates and forward sales growth estimates. For value metrics, we prefer balance sheet measures like book value, sales, and cash flow ratios. We also have an academic preference for style purity, wherein stocks that don't exhibit strong growth or value qualities land in a third "core" bucket, but none of the index families we examined offered a comprehensive suite of pure style indexes.

Thomson Reuters and Dow Jones do not currently offer global style indexes. The remaining four index providers' growth and value metrics are summarized below:

STYLE FACTORS	MSCI	FTSE	S & P	RUSSELL
GROWTH FACTORS				
Current internal growth rate	X		X	
Projected EPS growth rates (LT or ST)	X	X		X
Historical EPS growth trend	X	X	X	
Historical sales/share growth trend (LT)	X	X	X	X
Projected sales growth		X		
Payout ratio		X		
VALUE FACTORS				
Price/book	X	X	X	X
Price/sales		X	X	
Price/FCFE		X	X	
Dividend yield	X	X	X	
Price/earnings (forward)	X			

None of the global index families meets our ideal of style exclusiveness and purity, but the MSCI and FTSE use a reasonable array of factors. S&P uses only one forward-looking growth factor.

INDEX GOVERNANCE: REVIEW & MAINTENANCE

Index providers should have a regular transparent and rules-based process for reviewing and maintaining their indexes. Index review committees should evaluate country classifications and index constituents, and be able to make changes as necessary in response to extraordinary events (such as delistings, bankruptcies and mergers). They should disseminate changes to the public in a timely fashion.

All index families have committees that oversee the indexes on a periodic basis. FTSE's regional committees meet annually. Dow Jones reviews its global indexes every quarter, as well as following extraordinary events. S&P evaluates countries annually as part of index reconstitutions. During the annual reconstitution, size and style classifications and additions and deletions are discussed. Share rebalances happen quarterly. TRBC rebalances indexes on a semiannual or quarterly basis. TRBC uses committees to ensure necessary liquidity, cap assignments and changes to country and regional indexes.

Overall, however, we prefer MSCI's index review methodology. MSCI reviews its indexes every quarter. Every February and August, MSCI assesses new securities for eligibility, re-evaluates size buffers, and reviews changes to the foreign inclusion factors. Every May and November, MSCI updates its equity universe, recalculates minimum size ranges, re-evaluates size and style buffer zones and updates foreign inclusion factors.

CONCLUSION

While several of the index families described above could be reasonable size and style benchmarks, we have chosen MSCI's family of indexes as the most suitable benchmarks. MSCI has passing marks in each of the necessary criteria

INDEX FAMILY	COVERAGE	SELECTION	ROLL-UP	SIZE	STYLE	INDEX GOVERNANCE
MSCI	+	+	+	+	+	+
FTSE	✓	+	–	+	+	+
Dow Jones	✓	+	✓	+	–	+
Standard & Poor's	✓	–	+	+	✓	+
Russell	✓	+	–	✓	✓	+
Thomson Reuters	–	+	✓	–	–	+

and exemplifies the transparent and replicable index methodology that we require.

(+) Issuer met most of our criteria
(ü) Issuer met some of our criteria
(–) Issuer did not meet our criteria or information was not available

IndexUniverse will continue to evaluate the various index families, including potential new index families, as index providers modify their methodologies in the continuously evolving global market.