



A Fiduciary's Guide to Passive Fund Benchmark Selection

B. Todd Stewart, CFA
Bob Noll, CFA
SageView Advisory Group

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Introduction

Passive investment strategies are an important and a growing component of defined contribution plans. In 2016, passive strategies took in over \$500 billion in new assets,¹ while active strategies experienced net outflows. According to the Investment Company Institute (ICI), 2016 net flows to actively managed mutual funds were -\$396 billion, while net flows to passive mutual funds were +\$197 billion.² The total percentage of assets allocated to passive strategies has been rising significantly and is projected by some experts to reach 50% in the U.S. within the next seven years.³ Thus, plan fiduciaries should ensure that their processes for evaluating passive index managers and assessing prudence are robust and that the rationale for selection is well documented, just as it is when making active manager decisions. Unfortunately, even experienced plan fiduciaries can focus their due diligence efforts exclusively on active manager analysis and neglect to document their rationale for selecting one passive solution over other available choices. In fact, there are significant differences that should be considered when evaluating passive fund managers, including fees, securities lending practices, and fair value pricing policies, to name a few.

However, before sponsors begin to compare the nuanced differences among passive products, they should consider the actual index against which these products are being managed. In our experience, the process of index (aka benchmark) selection is frequently neglected by plan fiduciaries, even though differences in the way various indices are constructed and maintained can and do lead to meaningful differences in both risks and returns.

This paper is intended to help plan fiduciaries in their efforts to build suitable passive investment lineups for their participants. We will initially seek to accomplish this by calling attention to differences that exist among equity indices that are commonly tracked by passive investment strategies. We will supplement

this at a later date with another paper that is aimed at identifying the factors that distinguish managers of passive funds from one another.

Index Uses and Functions

To determine how well a passive fund will suit the needs of a plan, we should first consider the intended function for the index being followed. Most practitioners use indices for two reasons.

1. The first is to evaluate active manager performance. By benchmarking an active manager against an index, investors can determine if they are being compensated for the increased management fees with superior relative performance.
2. The second purpose of an index, and the more relevant purpose for passive fund selection, is to serve as a building block for portfolio and asset allocation construction. For the purposes of this paper, our focus will be on the latter.

Indices as Building Blocks

To obtain relief from certain fiduciary responsibilities in a participant-directed retirement plan, ERISA Section 404(c) requires that the plan menu offer in a plan menu at least three investments with materially different risk and return characteristics. This requirement is intended to provide participants with the necessary building blocks to construct a well-diversified investment portfolio that is suited to their individual needs. In the context of choosing plan investments, therefore, sponsors should consider how each fund (and the benchmark it tracks) will function as a component of a larger portfolio, in addition to its merit as a standalone investment. This is particularly relevant as it pertains to the selection of passive funds in a plan investment menu. In the equity asset class(es), indices that serve as good building blocks for investment portfolios are generally those that exhibit the following characteristics:

¹ Morningstar (2017). *Morningstar Direct Asset Flows Commentary: United States*. Retrieved from <https://corporate.morningstar.com/US/documents/AssetFlows/AssetFlowsJan2017.pdf>.

² ICI Investment Company Institute (2017). *2017 Investment Company FactBook*. Retrieved from https://www.ici.org/pdf/2017_factbook.pdf.

³ Moody's Global Credit Research (2017). Announcement: Moody's: Passive investing to overtake active in just four to seven years in US; global traction to pick up. Retrieved from https://www.moody.com/research/Moodys-Passive-investing-to-overtake-active-in-just-four-to-PR_361541.



- A. Provide broad exposure to specifically identified markets;
- B. Are comprised of investable and liquid securities; and
- C. Effectively complement the other indices targeted for use in the same plan.

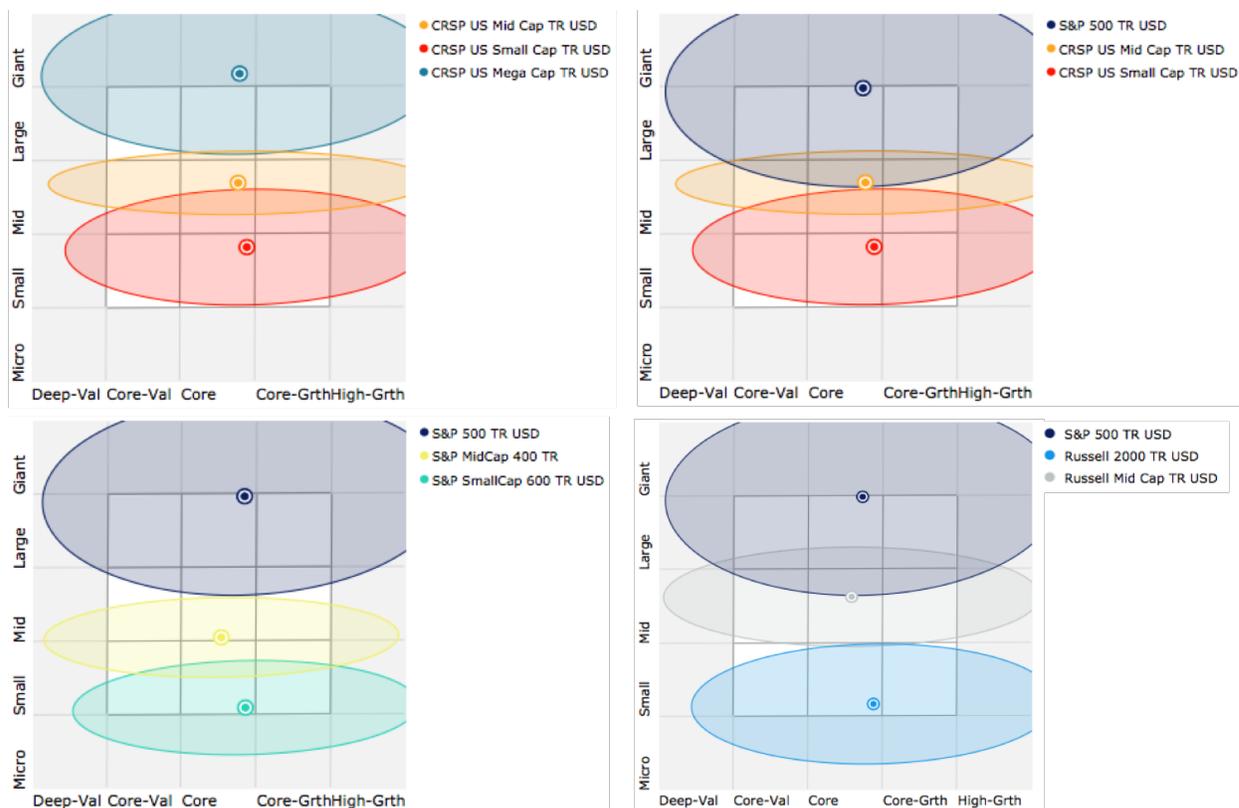
Typically, indices offered by a single provider are designed to meet all these objectives, with the caveat being that some providers offer more extensive market coverage than others. Where security-level overlap or coverage gaps frequently become more problematic is when two or more indices are selected from different providers, particularly if the indices were not designed to complement one another. Combining indices with differing methodologies could undermine the asset allocation efforts of the individual investor.

As an example, consider two indices - the Standard & Poor's 500 Index and the Russell Mid Cap Index. The S&P 500 Index includes 500 large U.S. companies

whose stocks are listed on the NYSE or NASDAQ and is widely seen as a proxy for the entire U.S. stock market. The Russell Mid Cap Index includes the 800 smallest companies in the Russell 1000 Index, which itself comprises the largest 1,000 publicly traded stocks by market cap. Pairing an S&P 500 Index fund with a Russell Mid Cap Index fund could lead to higher exposure to stocks of certain large and mid-sized companies than the investor intended.

Conversely, it is common to see investment menus designed that effectively exclude a market segment that would otherwise enhance an investor's asset allocation. This can happen when two domestic equity indices are paired with one another, but care is not taken to ensure that one index picks up where the other leaves off. An example would be pairing the S&P 500 Index with the Russell 2000 Index (a large cap index and a small cap index). This would result in sizeable portions of the mid cap equity marketplace being unrepresented in the plan. The concepts of market coverage and security overlap among frequently paired indices are visually depicted in the charts below.

Illustration 1.1: Holding-based style maps for selected index combinations



Source: Morningstar



Mismatched market exposure among retirement plan investment options is also common in the international equity asset class. For example, pairing the MSCI Emerging Markets Index with the FTSE Developed Index could lead to unintended overexposure to South Korea, which is represented in both indices. Similarly, pairing the FTSE Emerging Markets Index with the MSCI EAFE Index would entirely eliminate exposure to South Korean and Canadian stocks.

While maintaining broad market coverage and eliminating overlap are generally appropriate objectives for index selection, there may be good reasons to compromise. For instance, comprehensive market coverage is theoretically ideal, but it can necessitate the purchase of illiquid securities, driving up trading costs. This is particularly true for micro-capitalization and certain emerging markets stocks. Thus, we suggest that broader market coverage is generally desirable for portfolio construction purposes, provided that the cost of obtaining broader coverage is reasonable. Similarly, allowing limited security overlap between indices could result in lower turnover (and thus, transaction fees) than would be experienced with more rigid overlap rules.

Consequently, fiduciaries should consider both breadth of market coverage and overlap when designing a passive fund lineup. Of course, factors other than capitalizations and overlap are also relevant to passive fund selection. These factors include methodological and implementation-level differences among index providers plus a host of fund-specific considerations (such as expenses, tracking error, fund size, securities lending policies, etc.). We will explore the first two categories below, and will address fund-specific characteristics in a later paper.

Index Methodologies

It is a common misconception that all equity indices are built using similar rules. In fact, each equity index provider takes a distinct approach to building its indices. Methodological differences can be grouped into the following categories:

- Construction
- Reconstitution and rebalancing
- Inclusion requirements
- Weighting
- Style criteria

Plan sponsors and consultants should understand these methodological differences to ensure they are making informed decisions concerning index providers. Let us explore each of these areas in more depth.

Construction

All major equity index providers start with their own versions of a total stock market index, which is an index that encapsulates most of the securities available in the marketplace they cover. Each total stock market index is then subdivided into more specific indices that focus on smaller cross-sections of the investment universe. In building the subcomponent indices, providers generally distinguish their approaches in three ways.

First, providers can choose to include a fixed number of securities in their indices (S&P, Dow Jones, Russell, and MSCI) or to allow the number of securities to float based on specific market capitalization targets (CRSP and FTSE). Having a fixed number of securities is simpler to understand, but will result in fluctuating levels of equity marketplace coverage over time due to issuance changes.

Secondly, index providers segment market capitalization ranges in very different ways. A large cap stock for one provider may be a mid cap stock for another. We can easily see these differences by contrasting S&P and Russell. Under the S&P methodology, the large cap space is represented by the S&P 500 Index, which includes 500 large U.S. stocks and covers approximately 80% of the U.S. stock market capitalization. The S&P MidCap 400 Index includes the next 400 stocks that meet S&P's inclusion criteria and covers around 8% of the total market capitalization. The S&P SmallCap 600 Index includes the next 600 stocks and covers around 4% of the U.S. market cap. Meanwhile, under Russell's methodology, large cap stocks are represented by the Russell Top 200 Index, which includes the largest 200 names by market cap and covers around 63% of the domestic stock market cap. The MidCap Index and the Russell 2000 Index (which signifies small cap stocks) include 800 stocks and 2,000 stocks, respectively, and account for 27% and 8% of the domestic market cap, respectively. As discussed in the prior section, these market segmentation differences are very meaningful and have the potential to impact index returns significantly.

Thirdly, index provider construction methodologies vary based on how securities are selected for



inclusion. S&P indices are built at the discretion of a committee of market professionals that is charged with ensuring the indices are representative of the U.S. stock market. Other index providers publish an objective and absolute set of rules that govern which securities are included in their indices. S&P's methodology outlines criteria that are used in selecting and weighting index components, such as sector representation in relation to the market, size, liquidity, minimum float, and profitability. However, no firm rules are established, and decisions are made at the Committee's discretion.

Critics allege that S&P's discretion over the construction of its indices effectively makes the firm an active manager. Because of the opaque nature of S&P's process, and since the decision to include stocks in an S&P index can trigger unexpected stock price increases, S&P indices may in some ways be more difficult for active managers to replicate and outperform than rules-based indices.

S&P defends its selection process by asserting that rules-based indices only work when markets play by the rules. When markets are behaving irrationally, the committee will seek to understand the market dynamics and make changes that are in keeping with its broader mandate, including changing its own rules if necessary. During the 2008-2009 financial crisis, for example, the US Treasury invested in insurer AIG to the point that it owned 90% of AIG's outstanding stock. S&P's internal inclusion criteria at that time only permitted the index to hold companies whose float was 50% or greater. Since AIG's float had fallen to just 10% at that point, S&P would have been forced to remove the stock had it not been for the committee's interjection, which resulted in a change to the index guidelines.

Rules-based indices, on the other hand, are widely considered easier to beat than subjectively built indices. This is because savvy investors are frequently able to predict changes to the index prior to the reconstitution dates, thus benefiting from the any price increase that occurs when the securities are ultimately included. In some cases, the magnitude of pre-reconstitution trading can be so high that market prices for certain securities become distorted.

Reconstitution and Rebalancing

Index reconstitution is the process of periodically revising the composition of an index. Most providers reconstitute their indices on a periodic basis, such as annually (Russell and Dow Jones), semi-annually

(MSCI and FTSE) or quarterly (CRSP). S&P does not reconstitute its indices according to a calendar schedule, but rather on an as-needed basis as a result of the firm's monthly committee meetings. If a change is made in an S&P index, it will occur quarterly, on the third Friday after quarter end.

Index reconstitution practices can lead to discrepancies between the actual number of companies in an index at any point in time versus the stated target. This is typically caused when companies in the index experience mergers/acquisitions or are taken private. For instance, the S&P 500 Index was comprised of 505 stocks as of June 30, 2017.

Studies have shown that stock trading volumes experience huge increases around index reconstitution dates. The annual Russell reconstitution in June is one of the biggest trading days each year. Furthermore, new additions to an index tend to experience price increases on the reconstitution date, and removals experience downward pricing pressure. This is especially true for indices that are tracked by significant pools of assets, such as the S&P 500 Index and the Russell 1000 Index. The net result is an index that is adding securities at a higher price than would otherwise be experienced, and removing securities at a lower price than would otherwise be experienced. Incidentally, this phenomenon could serve as a headwind to both index and passive fund performance going forward by offering active managers more arbitrage opportunities.

The ideal frequency for an index to be reconstituted is not entirely clear. Firms with annual reconstitution similar to Russell claim that their approaches strike a balance between accurately representing the marketplace and maintaining reasonable and low levels of turnover, which may help to minimize passive fund trading costs. Critics might argue that infrequent reconstitution practices encourage front-running and may lead to a greater market impact than quarterly or semi-annual approaches. Front-running is a particular challenge for indices comprised of less liquid securities with a predictably scheduled reconstitution date and that are regularly used as active manager benchmarks. According to Morningstar, the Russell 2000 Index, which tracks US small cap stocks, underperformed other similar small cap benchmarks by 1.5% per year between June 2001 and January 2015, primarily due to front-running.



Weighting

The process of determining the weight to assign to each index constituent involves multiple considerations. The first and most impactful decision point relates to whether the index is market capitalization-weighted or structured in some other way. Most passive investment assets are benchmarked to market cap-weighted indices. A stock's market capitalization is equal to the product of its outstanding stock share count and its current stock price. Market cap-weighted indices allocate to each stock based on its proportional market cap representation in the index.

A more nuanced weighting methodology difference is the treatment of float. Float is the portion of a company's outstanding shares that is available for public trading, as opposed to being restricted stock or stock that is closely held by insiders, majority shareholders, employees, and certain other shareholders. Many people view float as a better indicator of a company's true market value, because it reduces the market capitalization of the company so that it represents what is publicly available for investment. Float-adjusted indices tend to be less top heavy than straight market cap-weighted indices. They also are more relevant to fund managers because they are more investable than straight market cap-weighted indices. Most market-cap indices have adopted practices to adjust for float, but providers sometimes differ with regards to how much float is required before a stock is included in the index.

Inclusion Requirements

Before an index provider can build an index and determine how to allocate to the various index constituents, it must outline a set of rules or thresholds that securities must satisfy to be considered for inclusion in the index. Inclusion rules generally define the investment universe and set minimum requirements for factors like market capitalization and liquidity. Inclusion rules vary among providers, and can occasionally lead to significant differences among otherwise similar indices.

A prominent example of the impact that inclusion rules can have on index composition is in the construction of the MSCI and FTSE international indices. Both providers have processes in place for assessing global equity markets and classifying countries according to their market accessibility levels, geopolitical stability, GDP, market size, and regulatory quality, among other factors. MSCI

classifies countries into four categories: developed, emerging, frontier, or standalone. FTSE also has four country categories, and labels them developed, advanced emerging, secondary emerging, and frontier.

In 2009, FTSE reclassified South Korea from advanced emerging to developed in recognition of its high per capita GDP and other key milestones. MSCI did not follow suit. The impact of these decisions is meaningful. South Korea comprises nearly 16% of the MSCI Emerging Markets Index as of June 30, 2017, while the FTSE Emerging Markets All Cap China A Inclusion Index has no exposure. Meanwhile, FTSE's Global All Cap ex US Index (a developed market index) has 3.7% exposure to South Korea as of June 30, 2017, compared to zero in the MSCI EAFE Index.

Another meaningful difference between MSCI and FTSE relates to the allocation to Chinese stocks. Since 2016, FTSE has expanded Chinese stock exposure in versions of their international indices that include emerging markets. This is being done through the inclusion of so-called "A-shares" listed in domestic Chinese exchanges that have been until recently inaccessible to non-Chinese investors. This change is ultimately expected to bring Chinese stock exposure in the FTSE Emerging Markets All Cap China Inclusion Index to 45% (up from 29% today) as foreign access to China's A-share marketplace expands. In the years leading up to 2017, MSCI had repeatedly declined to include China A-shares in its indices. In June 2017, however, MSCI announced they would be making a cautious entrance into the China A-share market by allocating less than 1% of the MSCI Emerging Market Index to A-shares beginning in May 2018. Further allocation increases may follow over time, but these will be subject to further review by MSCI.

Style Criteria

Market capitalization indices can be further refined into style indices based on certain value and growth criteria, ultimately resulting in sets of indices that resemble a classic, nine-category Morningstar style box. While style indices are perhaps less relevant for our purposes here, given that most retirement plans use passive funds that track a core market-capitalization index, sponsors should nevertheless be aware that distinctions exist among index providers in this area. Many active managers benchmark themselves to style indices, and the index is likely to be a key driver of performance even in the portfolio of an actively managed fund. Not only do firms use different criteria to determine whether stocks should



be classified as growth or value, but they also differ in the extent to which their style categories are mutually exclusive.

Take, for instance, the S&P and Russell approaches. For S&P, the objective is to construct style indices that split the market capitalization of the core index in roughly equal parts, while attempting to avoid too much security overlap. Initially, growth and value scores are calculated for each stock by taking an average standardized value of a stock's growth criteria (three-year change in earnings per share over price per share, three-year sales per share growth rate, and 12-month momentum) and value criteria (book value to price ratio, earnings to price ratio, and sales to price ratio), respectively. The universe of stocks is ranked, with the top 33% of securities with the highest value and growth scores categorized as such. The middle 34% of scores are deemed to exhibit both growth and value characteristics and are proportionately distributed to both indices based on the way in which they skew toward growth and value. This means that S&P style indices experience some security overlap, limited to 34% of the names in the core index. S&P also offers a set of 100% mutually exclusive style indices called the Pure Style Indices that were launched in 2005.

Russell does not define the proportion of value, blend, and growth stocks in advance like S&P. Their stock universe is measured by a set of growth and value metrics, and they then assign composite value scores to each security. The composite score is an average of each company's standardized value score (measured by its book-to-price ratio) and growth score (measured by the two-year growth forecast by Institutional Brokers Estimate System or IBES, and five-year sales per share growth). This score determines whether a company is considered growth, value, or a blend of the two. Stocks with a composite score in the middle are considered both growth and value and are split proportionately between the value and growth indices, according to market cap and their composite score to each style. Stocks are fully represented in the combination of the value and growth indices, meaning that a stock that has a 60% weight in the value index will necessarily have a 40% weight in the growth index.

The implications of the S&P and Russell style methodologies are generally subtle, but larger differences can develop under certain market conditions. Over time, index providers have adopted methodological changes that have resulted in more

style criteria similarity across providers. Recent consolidation among Index providers (S&P and Dow Jones merged in 2012, and FTSE and Russell merged in 2015) has also contributed to this trend. However, the S&P indices continue to have a persistent tilt toward growth stocks relative to most other providers. This skew toward growth results from splitting the overall market capitalization of the core index into equal parts.

Other Considerations

The most suitable indices are generally those that are investable in practice, transparent with regards to construction, and built independently.⁴ The importance of maintaining index independence cannot be overstated. Investment managers who create their own benchmarks have an inherent incentive to build easy-to-beat (or easy-to-replicate, in the case of passive funds) indices. Creating one's own benchmark is called self-indexing, and is garnering significant interest among fund managers who are facing lower management revenue and relatively high index licensing fees. Whether a self-indexing trend takes hold among passive funds is yet to be seen, but it should be noted that full-fledged self-indexing is not necessary to compromise an index's independence. In 2015, FTSE Russell CEO Mark Makepeace made the following observation:

"If we do a rule change, we have to consult with the institutions. The power is with them. We only make changes with their support. They do have the ability to choose between us and MSCI."⁴

This statement is true of every index provider in the industry, and it highlights the uncomfortable fact that index providers are running businesses, with asset managers as their primary clients. In most cases, index providers' advisory boards are comprised primarily of asset manager clients. While there is no escaping the reality that asset managers hold sway over changes to the indices they track, there are ways to gauge the extent to which an index provider may be influenced by outside parties. Firms with a diverse client base, like S&P and Russell, are less susceptible to undue influence from a single asset management firm, while firms with fewer clients may feel more pressure to institute methodological changes at the request of an asset manager. Firms with multiple

⁴ Maginn, John, Tuttle, Donald, and Pinto, Jerald (2007). *Managing Investment Portfolios: A Dynamic Process* (CFA Institute Investment Series).



asset management clients may still lack complete independence, but any index changes are sure to be vetted by many different industry practitioners prior to implementation.

Conclusion

Selecting funds to populate the passive sleeve of a retirement plan is no simple task. Passive fund complexity is often underestimated by sponsors and consultants alike. Not only must multiple decisions be made concerning passive fund management and product-level differences, but the indices themselves should also be selected based on many different criteria. No single index approach is clearly better than another; most methodological differences have potential benefits and drawbacks, and one approach might appeal to one sponsor but not another. That said, there are at least a few general rules that can help guide plan sponsors as they make their fund selection decisions:

1. An index (or collection of indices) that provides reasonably comprehensive

exposure to the investable marketplace is desirable.

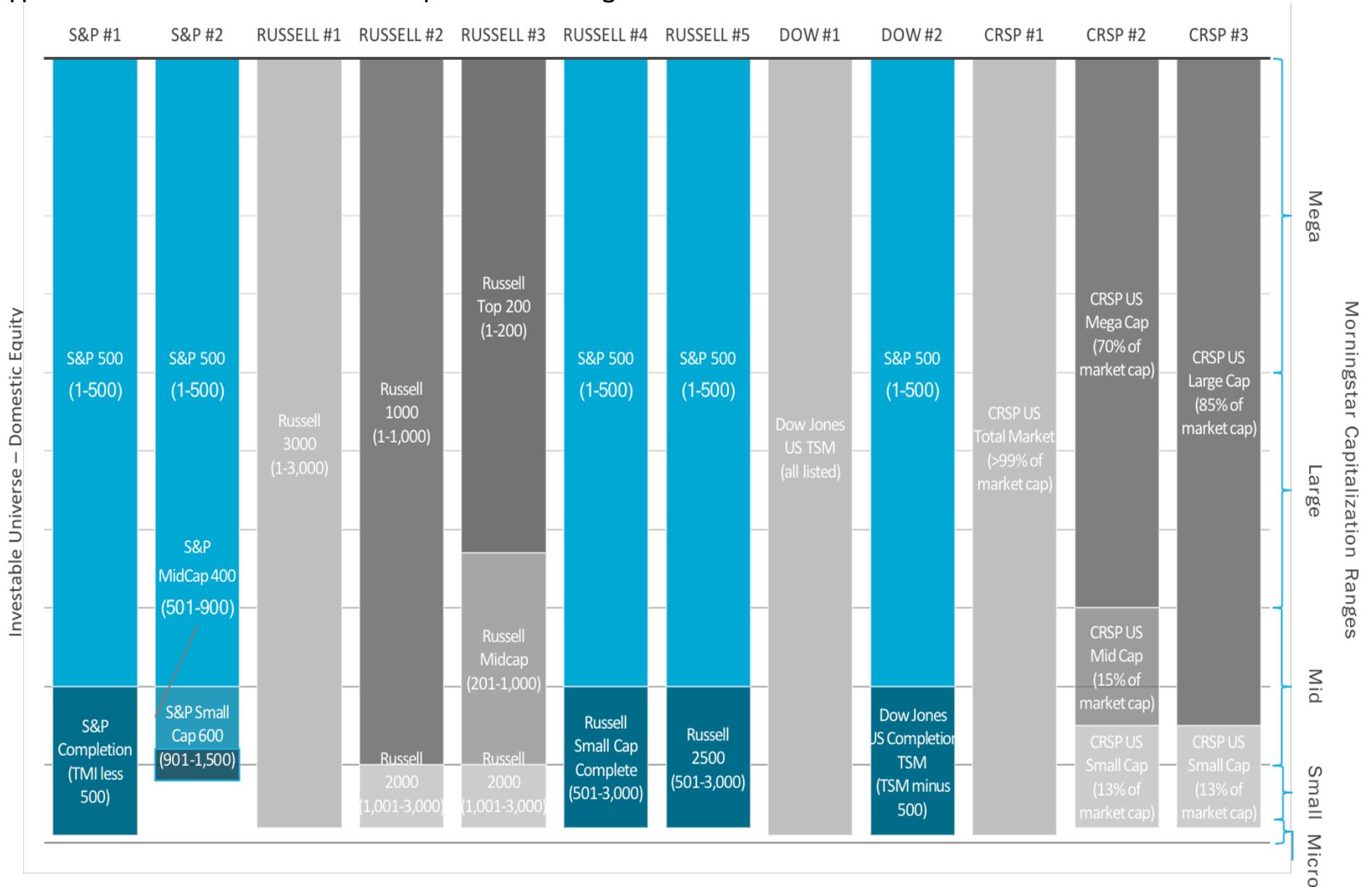
2. When combining multiple indices, security overlap should be minimized, to the extent practical.
3. Index reconstitution policies are important, particularly for indexes representing less liquid markets. Front-running is a potentially problematic issue for certain index categories. Sponsors may want to avoid indexes that have a history of returns that have been materially depressed by front-running.
4. The implications of index inclusion rules, especially those pertaining to foreign equity indices, need to be understood prior to making an index selection decision.
5. Consideration should be given to the level of independence between the index provider and fund manager.

As with most fiduciary matters, it is a good idea for plan sponsors to establish a process for index fund selection, to follow the process consistently, and to document the diligence and rationale behind all decisions.

SageView Advisory Group, LLC. Address: 1920 Main Street, Suite 800, Irvine, CA 92614. Telephone: (800) 814-8742.

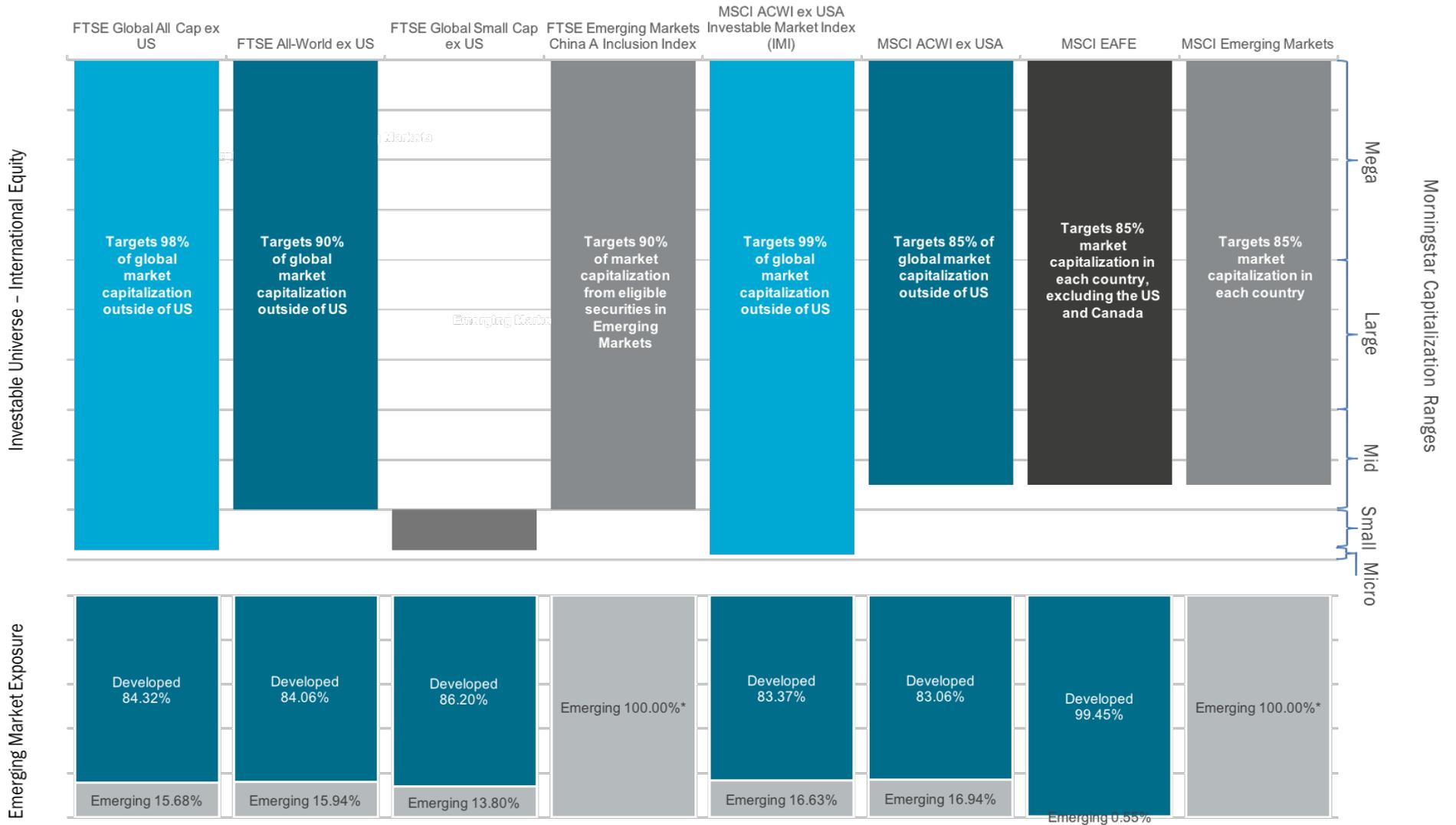
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Appendix I: Domestic Stock Index Market Capitalization Coverage



The index data uses estimates based on our knowledge of benchmark composition. Market fluctuations and index provider reconstitution and rebalancing practices might cause index data to diverge from our estimates.

Appendix II: Foreign Stock Index Market Capitalization Coverage



* Emerging market exposure data obtained through Morningstar, except in the cases of the FTSE Emerging Markets China A Inclusion Index and the MSCI Emerging Markets Index, where the index providers' own definitions are used. According to Morningstar, both emerging markets indices have meaningful exposure to developed markets. This is because Morningstar classifies Greece, Indonesia, and Taiwan as developed countries, while FTSE and MSCI classify them as emerging.

The index data uses estimates based on our knowledge of benchmark composition. Market fluctuations and index provider reconstitution and rebalancing practices might cause index data to diverge from our estimates.

Appendix III: Domestic Stock Index Methodology Comparison

	CRSP	S&P	Dow Jones	Russell
Construction Methodology	Rules-based	Based on criteria established by the S&P committee	Rules-based	Rules-based
Weighting Methodology	Full-market capitalization adjusted for free float before inclusion in index	Float adjusted market capitalization	Full-market capitalization (float adjusted also available)	Full-market capitalization adjusted for free float after inclusion in index
Rebalancing	Quarterly	TMI – quarterly All others – as needed	Quarterly	Annually
Market Cap Overlap	Some Overlap Exists	No Overlap	No Overlap	Some Overlap Exists
Sector Classifications	FTSE Industry Classification Benchmark (ICB)	Global Industry Classification Standard (GICS)	Global Industry Classification Standard (GICS)	ICB, GICS, and Russell
Growth Criteria	<ul style="list-style-type: none"> - Future long-term growth in EPS - Future short-term growth in EPS - Historical growth in EPS (3-Yr) - Historical growth in sales per share (3-Yr) - Current investment-to-assets ratio - Return on assets 	<ul style="list-style-type: none"> - 5-year EPS growth rate - 5-year sales per share growth rate - 5-year internal growth rate 	<ul style="list-style-type: none"> - Forward price/earnings ratio - Projected earnings growth - Price/book ratio - Dividend yield - Trailing revenue growth - Trailing earnings growth 	<ul style="list-style-type: none"> - Price/book ratio - Average estimate of long-term EPS growth forecast - 5-year Sales per share growth
Value Criteria	<ul style="list-style-type: none"> - Book to price - Forward earnings to price - Historic earnings to price - Dividend-to-price ratio - Sales-to-price ratio 	<ul style="list-style-type: none"> - Book value/price ratio - Cash flow/price ratio - Sales/price ratio - Dividend yield 	<ul style="list-style-type: none"> - Forward price/earnings ratio - Projected earnings growth - Price/book ratio - Dividend yield - Trailing revenue growth - Trailing earnings growth 	<ul style="list-style-type: none"> - Price/book ratio - Average estimate of long-term EPS growth forecast - 5-year Sales per share growth
Index Committee Structure	The Index Oversight Committee is composed of CRSP employees and is responsible for the governance and oversight function. The Index Oversight Committee reviews and approves material changes to the index methodology, as well as, all stages of the index determination process.	All members of the committee are full time S&P employees. There are no committee members from outside firms. However, there is an Advisory Panel that consists of market professionals from outside firms that periodically hold forums or discussion panels to offer their views and/or thoughts on the current market environment and other topics, as seen fit by the committee	Most committees are comprised of full-time professional members of S&P Dow Jones Indices' staff, with the exception of some co-branded indices, which may include committee members from external companies or exchanges	There are approximately 233 committee members (market practitioners and independent individuals) who are appointed onto the various FTSE Russell advisory committees. The 233 committee members are all independent of FTSE Russell. The FTSE Russell Policy Advisory Board consists of 11 underlying sub-committees

Appendix IV: International Stock Index Methodology Comparison

	FTSE	MSCI
Construction Methodology	Rules-based	Rules-based
Weighting Methodology	Market-cap weighted, adjusted for free float	Market-cap weighted, adjusted for free float
Rebalancing	Periodic reviews. Annual country reviews on a region-by-region basis	Quarterly and semiannual reviews.
Market Capitalization	Large-Cap: > 72% Mid-Cap: Between 72% and 92% Small-Cap: < 92%	Large-Cap: Top 70% +/- 5% Standard Index: Top 85% +/- 5% Mid-Cap: Standard index minus large-cap index Small-Cap: 99% + 1% or -0.5% standard index
Economic Classification (Developed or Emerging Markets)	<ul style="list-style-type: none"> - Wealth (GNI per capita) - Total stock market capitalization - Breadth and depth of market - Restrictions on foreign investment - Free flow of foreign exchange - Reliable and transparent price discovery - Efficient market infrastructure - Oversight by independent regulator 	<ul style="list-style-type: none"> - Sustainability of economic development - Number of companies market cap and liquidity requirements - Openness to foreign ownership - Ease of inflows/outflows - Efficiency of operational framework - Stability of the institutional framework
Growth Criteria	<ul style="list-style-type: none"> - 3-year historic EPS growth rate - 3-year historic sales growth rate - 2-year forward EPS growth rate - 2-year forward sales growth rate 	<ul style="list-style-type: none"> - Long-term forward EPS growth rate - Short-term forward EPS growth rate - Current internal growth - Long-term historical EPS growth trend - Long-term historical sales per share growth trend
Value Criteria	<ul style="list-style-type: none"> - Price-to-book value per share - Price-to-sales per share - Dividend yield - Price-to-cash flow per share 	<ul style="list-style-type: none"> - Book value per share to price - 12month forward earnings per share price - Dividend yield - Price-to-cash flow per share
Index Committee Structure	<p>There are approximately 233 committee members (market practitioners and independent individuals) who are appointed onto the various FTSE Russell advisory committees. The 233 committee members are all independent of FTSE Russell. The FTSE Russell Policy Advisory Board consists of 11 underlying sub-committees.</p>	<p>MSCI uses three main committees to provide overall oversight and governance for the production of the equity indexes and the equity index methodology and its application. These are: the Risk and Regulatory Committee ("RRC"), the Equity Index Committee ("EIC"), the Index Policy Committee ("IPC"). The committees are staffed solely by MSCI employees.</p>