Education

Indices and benchmarks made clear

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What is an index? And what is a benchmark? Are they the same?

The terms *index* and *benchmark* are often used interchangeably. However, they have slightly different meanings.

An index is a calculation that represents a hypothetical portfolio of securities designed to represent an asset class, market or market segment. A benchmark is a category of index that's used for reference purposes, for example in portfolio performance measurement or in setting the value of an investment contract or financial instrument.

In this guide we explore some of the uses of indices and benchmarks. The guide is designed to provide pension fund trustees with an introduction to the various purposes indices and benchmarks can serve. It also shares some of the important attributes one should consider when selecting an index or a benchmark.

Indices and benchmarks: legal definitions

In the EU, indices and benchmarks fall within the scope of the Benchmark Regulation, which took effect in 2018. After Brexit, the Regulation also became law in the UK (with effect from the end of 2020).

The EU/UK Benchmark Regulations give the following definitions of *benchmark* and *index* (see the diagram).

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Figure 1: Benchmark and index – legal definitions

Benchmark	Index
ANY INDEX… by reference to which the amount payable under a financial instrument or financial contract, or the value of a financial instrument is determined. **OR** used to measure the performance of an investment fund with the purpose of: – tracking the return of such index or – defining the asset allocation of a portfolio or – computing the performance fees	**ANY FIGURE…** published or made available to the public; **OR** that is regularly determined – entirely or partially, by the application of a formula or any other method of calculation, or by an assessment; and – on the basis of the value of one or more underlying assets or prices, including estimated prices, actual or estimated interest rates, quotes and committed quotes or other values or surveys

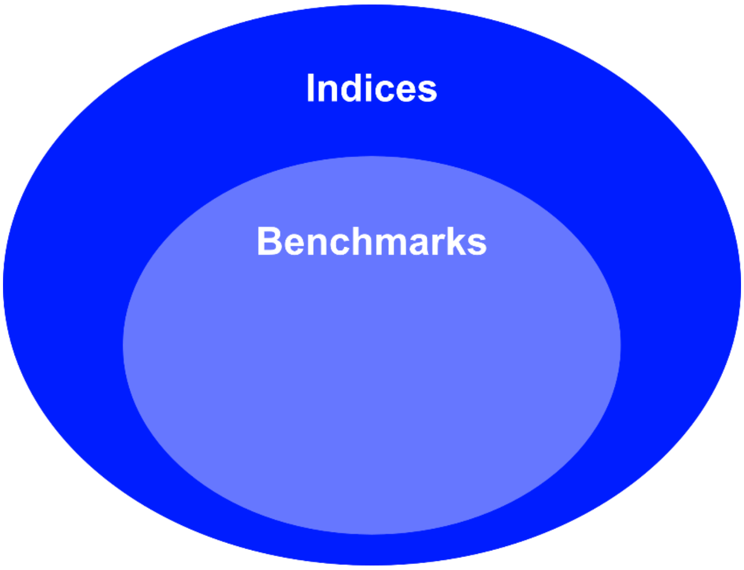
Source: FTSE Russell, August 2023.

It's worth noting from the definitions that a benchmark is a category of index. A benchmark is used to determine the value of a financial instrument or a payout on a financial contract. Or it is used to measure the performance of an investment fund, whether that's an actively managed fund (which seeks to outperform the benchmark) or an index-tracking fund (which aims to track the return of the benchmark).

EU/UK regulators define "index" broadly – it's any figure disseminated to the public that's calculated by a formula or assessment and based on some underlying assets, prices, quotes or surveys.

Similarly, the International Organisation of Securities Commissions' (IOSCO's) Principles for Financial Benchmarks, published in 2013, define benchmarks as a category of index. IOSCO says that benchmarks are "prices, estimates, rates, indices or values". Similarly to the EU/UK Benchmark Regulations, the IOSCO Principles also refer to how indices are made available, calculated and used in the definition of a benchmark.

Figure 2: A benchmark is a type of index



Source: FTSE Russell, August 2023.

Why indices and benchmarks matter

The use of indices and benchmarks in the professional investment business continues to grow.

Index-tracking ("passive") funds have grown hugely in popularity during the last two decades. According to the consultancy firm ETFGI, global assets in exchange-traded funds (ETFs, most of which track indices) have risen from $0.4 trillion in 2005 to $10.5 trillion in June 2023[1].

According to the Investment Company Institute (ICI), a trade body representing the US mutual funds industry, index fund assets have also taken a significantly larger share of overall US fund assets during the last decade.

At year-end 2022, index mutual funds and index ETFs together accounted for 46% of assets in long-term funds, up from 22% at year-end 2012[2].

Indices are widely used by large asset owners and asset managers in internally managed long-term index funds and as separate accounts for institutional clients.

And as benchmarks, indices are widely used in investment performance measurement among actively managed funds. Furthermore, indices and benchmarks underlie popular hedging instruments such as equity futures, options and swaps.

Why benchmark and index selection matters

Benchmarks and indices play a fundamental role in institutional investment portfolios. In a defined benefit (DB) pension plan, for example, they are used for far more than just reporting investment performance (see the table).

[1] ETFGI press release, 17 July 2023

[2] Source: 2023 Investment Company Factbook

Figure 3: How a DB pension plan may use benchmarks and indices

Step for DB pension fund	Example(s)	How the benchmark/index is used
Set investment objectives	Maximise pension fund surplus or adequately fund liabilities	At each step, benchmarks and indices provide information to help the pension plan, its trustees and consultants to set objectives and make asset allocation decisions. Indices also provide a framework for portfolio construction
Determine asset allocation	Set asset allocation targets for equity, fixed income, real estate, and other asset classes	
Identify strategic allocation to sub-asset categories	Divide listed equity allocation into domestic and international equity	
Define ranges (or buffers) around target allocations to allow for tactical investment decisions to be made as markets change	Set a 10% target allocation for international equities with buffers +/- 2%	
Communicate investment goals to investment manager(s)	The pension plan communicates its goals for the international equity allocation to an external investment manager	Benchmarks and indices help determine the universe of securities from which the manager will invest
Determine whether the plan objectives are being met and how (or why not)	Analyse the investment portfolio to attribute performance to asset allocation, stock selection or other sources of return	Benchmarks and indices help measure the performance of the investment portfolio relative to the asset allocation targets, as well as within asset classes

Source: FTSE Russell, August 2023.

Choosing the right benchmark

Benchmarks have a variety of uses and play an important role in every step of the investment process.

Investors use benchmarks to conduct risk analysis and to develop investment policies and strategies. Once these strategies are implemented, nearly all investors use benchmarks to evaluate the performance of their portfolios. Benchmarks also underlie trillions of dollars in passive investment products such as mutual funds or ETFs[3].

To serve these purposes effectively, we believe there are some universal design standards that every market-leading benchmark should follow: it should be **comprehensive**, **transparent** and **objective**, **regularly rebalanced** and **maintained**, and **modular** (benchmark users should be able to combine one benchmark with another without overlaps or gaps). Adhering to these standards is essential to a benchmark's ability to represent a market or market segment.

A benchmark of stocks and bonds is typically also capitalisation-weighted (the weight of each stock or bond in the index reflects its investable market capitalisation). This ensures that the benchmark represents the opportunity set facing the investor or benchmark user.

Those with fiduciary responsibility for an investment fund's assets, such as pension fund trustees, should consider the following desirable attributes of a benchmark when conducting due diligence.

[3] For example, around $20.1 trillion was benchmarked to FTSE Russell indices in June 2023. See FTSE Russell announces 2023 Russell US Indexes Reconstitution schedule | FTSE Russell

Figure 4: Desirable attributes of a benchmark

Attribute	Rationale
Comprehensive representation of the intended market or market segment	The benchmark should deliver an accurate and comprehensive representation of its intended market segment. If otherwise eligible securities were omitted for no good reason, the benchmark would not be doing its job. Complete market coverage also helps distinguish alpha (the investment manager's skill) from beta (the return from tracking the market segment). If coverage were inadequate, manager performance would not be measured accurately.
Transparent and **objective** construction methodology	A transparent, objective approach to benchmark construction ensures the accurate, unbiased representation of the market it is designed to measure. The benchmark's rules should allow any user to understand and potentially anticipate why and when changes are made to the index. By contrast, a subjective, committee-driven approach to benchmark construction can result in the unpredictable inclusion of newly available securities, impacting the benchmark's representativeness.
Regularly rebalanced and **maintained**	Regularly scheduled index reviews and clearly stated maintenance rules ensure the benchmark stays up to date and continues to represent its target market or market segment. These rules should specify how the benchmark is adjusted to reflect unscheduled corporate actions like mergers, spin-offs, special dividends and initial public offerings (IPOs).
Modular structure with no gaps or overlaps	Modular benchmarks can be used as portfolio building blocks, offering a precise picture of the market and its segments. Modular design enables the accurate implementation of asset allocation goals, such as target allocations to small-, mid- and large-capitalisation equities. A pension plan should be able to rely on its preferred benchmarks to differentiate between these market segments with no gaps or overlaps.

Source: FTSE Russell, August 2023.

FTSE Russell offers a wide range of indices and data solutions. For more information on our market-cap weighted indices and other products, please explore our website

Choosing an index for an investment vehicle

An index can be thought of as a recipe in a cookery book: it sets out the ingredients necessary to make a dish, together with the instructions to combine them. As an index provider, FTSE Russell produces hundreds of recipes that investors can replicate.

Investors should be able to follow a recipe step-by-step by reading the ground rules of an index, helping produce the desired dish. But the index is not the dish itself! It's just the guide to produce it.

So although investors and traders sometimes talk about "buying the index" in relation to a particular combination of stocks or bonds, this is a mental shortcut. As the index is a hypothetical basket of stocks, you can't buy it directly.

However, if you want an investment vehicle that tracks the return on an index, you have many options to choose from. Asset managers and banks use indices to create mutual funds, ETFs, separately managed accounts, swaps and structured products.

Pension funds and other large institutional investors often engage an asset manager to try and replicate an index, rather than asking the asset manager to outperform it. This is because asset manager skill is notoriously hard to identify and because passive funds are usually much cheaper than their active counterparts.

For example, an investor may feel that large-cap UK stocks are going to outperform small caps over the long term. Rather than asking an active manager to pick the best large caps, the investor may adopt a passive investment strategy that tracks an index designed to represent the entire large-cap segment of the UK market.

When evaluating an index to underlie a passive investment strategy, investors should consider whether the index's design makes it easy or difficult for the fund manager to replicate it, as well as whether the index is a comprehensive representation of its target market or market segment.

In figure 5, we set out a list of attributes to consider in this regard.

Figure 5. Choosing an index to underlie a passive investment strategy

Attribute	Rationale
Representative	Since the goal of the investment strategy is to target a particular market or market segment, the chosen index should be as representative of this market segment as possible. Does it have full coverage? And are there gaps or overlaps with adjacent indices?
Internal costs	Although most index-tracking investment strategies have very low turnover by comparison with active strategies, some turnover is inevitable (for example, when the index is rebalanced or when there are new entrants). This turnover incurs trading costs. Good index design balances the goal of being representative with the need to keep turnover costs low and manageable (for example, by screening index constituents for liquidity and maintaining "buffer zones" between adjacent capitalisation segments).
Objective and transparent	Because the investment strategy is replicating an index, it is important that the rules governing the index's design and its calculation are objective, logical and transparent. The asset manager should be able to understand and anticipate changes to the index. If not, replicating the index can be difficult and unintended tracking error may occur.
Investable	As the index is being chosen to underlie a passive investment strategy, it should limit its holdings to those readily available to the investor. For example, index weights should be calculated using float-adjusted market capitalisation (the index should only include those shares that are freely available for purchase by the average investor: i.e., not those held by employees or other investors who are restricted from selling their shares). If shares not available to public investors were included in the index, replicating the index could be difficult, and the demand for shares from investment funds replicating the index could cause unnatural stock price spikes.

FTSE Russell is one of the world's leading providers of indices for ETFs. Please refer to the FTSE Russell ETF Centre for a list of funds available

Non-capitalisation-weighted indices – smart beta, factor and sustainable

Benchmarks, whose goal is to represent whole markets or market segments, are typically weighted by the capitalisation of their constituents. Capitalisation-weighting is the methodology of many popular FTSE Russell benchmarks, such as the FTSE All-Share, the Russell 1000 and the FTSE Global All Cap equity indices and the FTSE World Government Bond index.

However, indices that don't weight their constituents by their capitalisation have become increasingly popular during the last decade. They embed a variety of investment exposures that can then be used to underlie passive strategies or financial products. For example:

> **Alternatively weighted ("smart beta"):** Alternatively weighted indices (sometimes called "smart beta" indices) depart from capitalisation weighting to capture a range of risk/return goals. For example, equal-weighted indices weight constituents equally, rather than by capitalisation; fundamental indices weight constituents by fundamental factors such as dividends, cash flow, sales and book value; and minimum volatility indices use an optimisation to select constituents in the combination that produces the lowest-possible past portfolio volatility.

Factor: Economists and financial market researchers have long maintained that stock performance can largely be explained by shared characteristics such as company size, value, share price momentum, quality, volatility and dividend yield.

Factor indices are designed to capture these characteristics within an index in a controlled and transparent way. Single factor and factor combination indices are now common tools for market participants. In evaluating factor indices, users should take a holistic approach and explore, for example, how well the index design suits their objectives, risk constraints, and beliefs as well as how well it compliments or interacts with the allocations across the rest of the portfolio.

Green and sustainable: FTSE Russell is one of the pioneers of green and sustainable indices. We launched the FTSE4Good index in 2001, at a time when environmental, social and governance-based (ESG) investment was still a niche topic and even shunned by many professionals.

We offer a range of green and sustainable indices, including climate indices (which aim to accelerate the push to a green economy, transition to a low-carbon economy or align with regulatory objectives) and ESG indices (which help investors align their portfolios with their individual values by de-selecting companies based on their conduct or products, or which increase exposure to companies with superior ESG scores, based on FTSE Russell's ESG framework).

For more on FTSE Russell's smart beta and factor indices, click here. To learn more about our sustainable investment indices, click here.

Getting benchmarks and indices right

When setting investment objectives for a pension plan, trustees face many important decisions: for example, deciding how to fund future benefits, stating investment beliefs, defining risk appetite and setting standards for responsible business practice and corporate governance.

The importance of the choice of benchmarks and indices for use in the pension plan's asset allocation, investment strategies and ongoing performance measurement should not be overlooked. By following the principles set out in this guide, trustees should feel confident they are equipped to make this choice.

For their part, index providers should demonstrate experience, a solid organisational and governance framework, and a commitment to provide the research and information tools that investors need to achieve their goals.

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Market participants look to us for our expertise in developing and managing global index solutions across asset classes. Asset owners, asset managers, ETF providers and investment banks choose FTSE Russell solutions to benchmark their investment performance and create investment funds, ETFs, structured products, and index-based derivatives. Our clients use our solutions for asset allocation, investment strategy analysis and risk management, and value us for our robust governance process and operational integrity.

For over 35 years we have been at the forefront of driving change for the investor, always innovating to shape the next generation of benchmarks and investment solutions that open up new opportunities for the global investment community.

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Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index inception date is back-tested performance.

Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. However, back-tested data may reflect the application of the index methodology with the benefit of hindsight, and the historic calculations of an index may change from month to month based on revisions to the underlying economic data used in the calculation of the index.

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