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Indexing the world

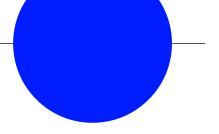
Building a better benchmark — the FTSE Global Equity Index Series (FTSE GEIS)

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Introduction

In this paper, we show how the FTSE Global Equity Index Series (FTSE GEIS), the leading global equity benchmark, embeds the principles of a good benchmark. The paper includes:

- A brief history of FTSE GEIS, from its origins as the FT-Actuaries World Index in 1987 to its role today as an internationally recognised series of global benchmarks
- An illustration of the broad coverage and modular design of FTSE GEIS
- An explanation of how FTSE Equity Country Classification process has evolved, including an introduction to its unique four-tiered approach to classifying markets
- A step-by-step overview of the FTSE GEIS review process, including the region-relative approach to universe construction and size segmentation
- An introduction to the FTSE Russell index governance process
- An example of how global equity markets have changed over time and how FTSE GEIS has evolved to reflect this change

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Executive summary

Financial market indices are nearly a century old and their role has evolved over time. Initially, indices were used as an information tool, primarily as a means of gauging business conditions and market sentiment. In the last few decades, indices have assumed a central role in the investment business, both as a means of benchmarking investors' performance and as the basis for index-based fund management.

Today, FTSE GEIS provides a robust global equity benchmark framework with coverage of the entire opportunity set, including large, mid, small, and micro cap companies across both developed and emerging markets.

In their role as benchmarks, the leading indices now play a vital role in the global capital markets. But despite the variety of index choices now available to professional and retail investors, there are some design standards that any market-leading benchmark should follow. In particular, we believe that three important principles help define a good benchmark: **objectivity, modularity and reliability**.

The history of FTSE GEIS

The predecessor to FTSE GEIS, the FT-Actuaries World Index, was conceived in 1986 by four founding partners: the Financial Times, the Institute and Faculty of Actuaries, Goldman Sachs and broker Wood Mackenzie. While each partner viewed the world of international investing through its own lens, all four firms recognised the need for a new breed of global equity index.

The drawbacks of existing benchmarks for investors with an increasingly global outlook were clear. At the time of the new index's introduction in 1987, Eric Short, a Financial Times journalist and Fellow of the Institute of Actuaries, said: "Local stock market indices are not sufficient in themselves to provide the fund manager and adviser with all the tools needed to assist in their international investment, especially if certain stocks on the market are not freely available to overseas investors."¹

The FT-Actuaries World Index, which at the outset covered roughly 70% of the market capitalisation of the 23 countries included in the index at the outset,² was the founders' solution to this problem.

In the succeeding decades, the index has undergone some significant changes, which have had the effect of broadening and deepening its coverage. Other changes have reflected the continuing evolution of the global equity markets and the classification of markets for index inclusion now follows a more clearly defined process than in 1987.

Some of the more notable changes include:

- In 1995, the London Stock Exchange and the Financial Times formed a joint venture (FTSE) which took over the calculation of the index in 1997 and bought out the other partners in 1999.³
- At a time of increasing investor interest in emerging equity markets, in 2000, the Barings Emerging Market Index was incorporated into the index, adding 20 countries and extending its target market coverage from 70% to 90% of the underlying markets' capitalisation. At the same time, the new, broader global equity index was renamed as the FTSE All-World Index.
- In 2003, the series was renamed as the FTSE Global Equity Index Series (GEIS) and extended to include small cap stocks. At the same time, the process for reviewing index constituents was reorganised along regional lines, with index reviews taking place in seven regions: Asia Pacific ex Japan, Developed Europe, Emerging Europe, Japan, Latin America, Middle East & Africa and North America.
- In 2014, the London Stock Exchange Group acquired the Frank Russell Company, including the wellknown Russell US Indexes, creating the FTSE Russell brand. FTSE Russell products, including FTSE GEIS, are used extensively by institutional and retail investors around the world.
- In 2018, FTSE Russell enhanced FTSE GEIS by introducing global micro cap stocks from both developed and emerging markets. In 2019, FTSE Russell began reviewing China separately from the Asia Pacific ex Japan region, creating an eighth region. This decision reflected the size of China's equity market and the impact it would have on other companies captured within the region during the semi-annual review process.

¹ Assessing World Stock Markets: The Design, Calculation and Production of the Financial Times–Actuaries World Indices", Eric Short, FIA, presentation to the Faculty of Actuaries Students' Society, November 1987.

² This was achieved by setting a target of at least 70% coverage of the aggregate value of all listed equities in each local market, and at least 10% (and up to 30%) by number of the available companies in each market.

³ Wood Mackenzie sold its share to Standard and Poor's in 1995.

FTSE GEIS today

Today, FTSE GEIS consists of a number of modular global equity indices (see Figure 1), available to benchmark the performance of different global equity markets, combinations of markets, or their capitalisation segments.

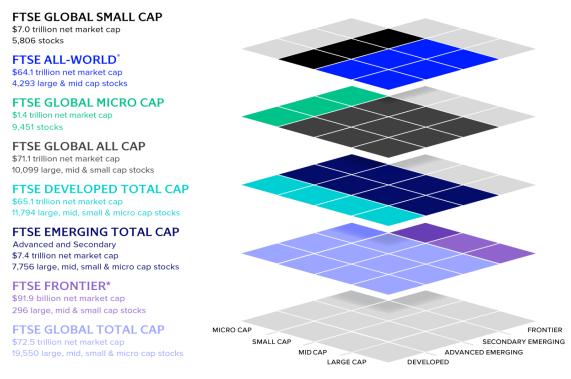
As of September 2023, the **FTSE Global All Cap Index** (of large, mid and small cap stocks) included 10,099 stocks (worth \$71.1 trillion net market capitalisation), across 49 developed and emerging markets. The FTSE Global All Cap index includes the largest 98% of stocks by full market capitalisation, measured within each FTSE GEIS region.

At the same date, the FTSE Global Micro Cap Index included 9,451 stocks with \$1.4 trillion net market capitalisation. The FTSE Global Micro Cap index extends the target market capitalisation coverage of FTSE GEIS to 99%, measured within each region.

For investors looking for a complete global view of the equity market opportunity set, the **FTSE Global Total Cap Index** aggregates the FTSE Global All Cap Index and the FTSE Global Micro Cap Index to cover large, mid, small and micro cap stocks across both developed and emerging markets.

FTSE GEIS is divisible into other modular components as well, including the well-known FTSE All-World Index, which includes large and mid-cap stocks from all covered markets, the FTSE Global Small Cap Index, and the FTSE Global Small/Micro Cap Index. A wide range of sub-indices are available to segment the global market further into industries, regions, and individual countries.

Figure 1: FTSE GEIS coverage and modularity



Source: FTSE Russell, data as of September 18, 2023 market open. For more information, please see the <u>FTSE Global Equity</u> Index Series Ground Rules.

* The FTSE Frontier Index Series is maintained separately from FTSE GEIS.

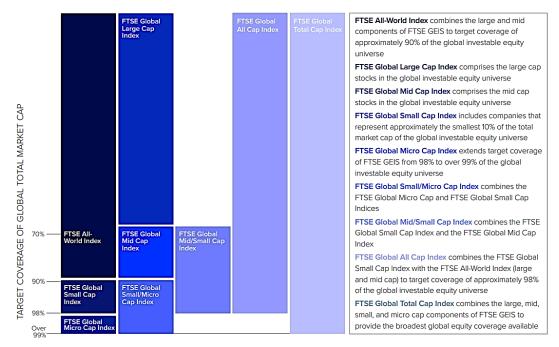
Figure 2: A universal taxonomy

By defining markets and securities on the basis of quantifiable, measurable attributes, FTSE GEIS delivers an unbiased representation of global equity markets and a reliable way for investors to track and measure market opportunities.

FTSE GEIS Data-driven classification at a granular level.							
MARKET STAT	ARKET STATUS SIZE STYLE			SECTOR (ICB®)			
Developed	Advanced Emerging	Large	Mid	Growth	Value	Industries	
Secondary Emerging	Frontier	Small	Micro	Defensive	Dynamic	Supersectors	Subsectors

Source: FTSE Russell. For more information, please see the FTSE Global Equity Index Series Product Highlights.





Source: FTSE Russell. For more information, please see the FTSE Global Equity Index Series Product Highlights.

Figure 4: FTSE GEIS headline indices

Index	FTSE Global Total Cap	FTSE Global All Cap	FTSE All-World	FTSE Global Small Cap	FTSE Global Small/Micro Cap	FTSE Global Micro Cap
Included cap segments	Large, Mid, Small, Micro	Large, Mid and Small	Large and Mid	Small	Small and Micro	Micro
% of FTSE Global Total Cap Index	100%	98%	88%	10%	12%	2%
Net Mcap (USDt)	72.5	71.1	64.1	7.0	8.4	1.4
Number of markets	49	49	49	49	49	49
Developed	25	25	25	25	25	25
Emerging	24	24	24	24	24	24
Advanced Emerging	10	10	10	10	10	10
Secondary Emerging	14	14	14	14	14	14
Number of constituents	<mark>19,5</mark> 50	10,099	4,293	5,806	15,257	9,451
Developed	11,794	5,745	2,116	3,629	9,678	6,049
Emerging	7,756	4,354	2,177	2,177	5,579	3,402
Advanced Emerging	2,934	1 ,169	505	664	2,429	1,765
Secondary Emerging	4,822	3,185	1,672	1,513	3,150	1,637

Source: FTSE Russell, data as of September 18, 2023 market open, indicative index review effective September 18, 2023. For more information, please see the <u>FTSE Global Equity Index Series Product Highlights</u>.

The evolution of the FTSE Equity Country Classification process

The designers of the FT-Actuaries World index faced an important and challenging question: which markets should they include?

According to Eric Short, writing in 1987, the decision was made to include only those countries with "an established stock market with viable, reliable stock prices and company data." But even with these rather vague conditions, some countries initially fell short. Finland, for example, was not included in the FT-Actuaries World Index until a year after its launch because of doubts about the reliability of the country's published company data.

When the distinction between developed and emerging markets was introduced in 2000 (with the launch of the FTSE All-World Index), the eligibility guidelines were still somewhat arbitrary. They tended to focus first on the relative wealth of a country, with an added layer of subjective judgment around its equity market's quality. FTSE set out to improve this process by conducting extensive consultations with over 100 institutional investors to propose a more efficient, transparent method of classifying countries. During the consultation process, FTSE tested the notion of a more structured, objective framework for determining a country's development status. The proposed process considered additional criteria and was designed to encourage less developed countries to adopt global best practices in the pursuit of promotion to the next (higher) classification level.

As it exists today, the FTSE Equity Country Classification process still largely reflects the outcome of those market-wide consultations, although the governance framework follows a more formal process than two decades ago. The Country Classification process is now supported by the FTSE Equity Country Classification Advisory Committee and the FTSE Russell Policy Advisory Board, with the final approval of any changes provided by the FTSE Russell Index Governance Board. The guiding principles for this formal market classification process, along with the FTSE Quality of Markets Matrix against which markets are objectively judged and compared, are published on the FTSE Russell website. To further improve transparency, FTSE Russell also publishes a Watch List of countries likely to be reclassified, enabling index users to monitor possible upcoming changes.⁴

Two levels of emerging markets

An attribute exclusive to the FTSE Equity Country Classification process is its unique four-tiered country classification structure, which classifies countries as Developed, Advanced Emerging, Secondary Emerging and Frontier (see figure 2). By providing two layers of classification at the emerging markets level, users are able to identify which emerging markets are closer to achieving developed market status. While some FTSE GEIS users may choose to simply view the emerging markets universe as one combined opportunity set, having the added option of dissecting where these markets fall along the advanced emerging/secondary emerging market spectrum allows for added flexibility in the development of portfolio strategies. For example, investors may choose to weight their emerging markets portfolio based on risk by focusing on countries with higher or lower country risk profiles.

⁴ For more information about the FTSE Equity Country Classification process please visit: <u>Equity Country Classification</u>.

FTSE Frontier

Countries classified as frontier markets are included in the FTSE Frontier Index Series,⁵ which is separate from FTSE GEIS (shown in Figure 5). Frontier markets are those that are still developing, and they tend to attract investors looking to benefit from diversification opportunities and growth potential. There is a tendency to associate frontier markets with low-income countries, but according to the World Bank, 10 of the 29 countries included in the FTSE Frontier Index Series are actually considered to be high-income economies (defined for the 2022 fiscal year as having a per capita Gross National Income (GNI) of \$13,846 or more) and another 7 are considered upper-middle income economies.⁶

FTSE's Equity Country Classification process is largely independent of GNI or economy size, and instead focuses on a country's political and market environment. Criteria considered include the depth and breadth of financial markets, legal and regulatory infrastructure, and the general ease with which foreign investors can do business.

Figure 5: FTSE Russell's unique 4-tiered equity country classification structure	

FTSE equity country classification						
DEVELOPED	ADVANCED EMERGING	SECONDARY EMERGING	FRONTIER			
Australia	Brazil	Chile	Bahrain			
Austria	Czech Republic	China	Bangladesh			
Belgium / Luxembourg	Greece	Colombia	Botswana			
Canada	Hungary	Egypt	Bulgaria			
Denmark	Malaysia	Iceland	Côte d'Ivoire			
Finland	Mexico	India	Croatia			
France	South Africa	Indonesia	Cyprus			
Germany	Taiwan	Kuwait	Estonia			
Hong Kong	Thailand	Pakistan	Ghana			
Ireland	Turkey	Philippines	Jordan			
Israel		Qatar	Kazakhstan			
Italy		Romania	Kenya			
Japan		Saudi Arabia	Latvia			
Netherlands		UAE	Lithuania			
New Zealand			Malta			
Norway			Mauritius			
Poland			Mongolia			
Portugal			Morocco			
Singapore			North Macedonia			
South Korea			Oman			
Spain			Palestine			
Sweden			Peru			
Switzerland			Serbia			
UK			Slovak Republic			
USA			Slovenia			
			Sri Lanka			
			Tanzania			
			Tunisia			
			Vietnam			

Source: FTSE Russell, as of 30 September 2023. For more information please see Equity Country Classification.

⁵ For more information about the FTSE Frontier Index Series, please see FTSE Frontier Index Series.

⁶ https://datahelpdesk.worldbank.org/knowledgebase/articles/906519

The FTSE GEIS region-relative approach

Another unique design principle of FTSE GEIS is its region-relative approach to defining the global investment universe and segmenting stocks into market capitalisation bands. Our regular consultations with FTSE Russell index users indicate that this approach most closely reflects established practices across global portfolios. By employing a regional approach to global index design, the indices included in the FTSE GEIS family align with the most common global investment management process.

Reviewing each region independently, rather than on a global scale, also reduces the influence some of the world's largest markets could have on the index's representation of smaller countries. By capturing each of the eight regional universes separately, countries are grouped and reviewed with their peer markets, resulting in a comprehensive, balanced approach to universe capture and size segmentation.

The five steps below, also shown in Figure 6, summarise the semi-annual process for reviewing the FTSE GEIS indices and capturing the global investable universe.

Step 1: Countries are classified as Developed, Advanced Emerging, Secondary Emerging or Frontier.

Step 2: Companies are assigned to a single country based on an assessment of a number of factors including country of incorporation, country of domicile for tax purposes, and location of headquarters.⁷

Step 3: Companies are grouped according to their country assignment into eight regional universes. Within each universe, companies are ranked in descending order by their total market capitalisation and then allocated to large, mid, small or micro cap based on a combination of their regional rank, size and current index membership. Buffer zones are applied to ensure existing constituents are only moved between market capitalisation tiers (e.g., from small to mid cap) when material shifts in size occur, a common practice among index providers that helps to mitigate unnecessary turnover.

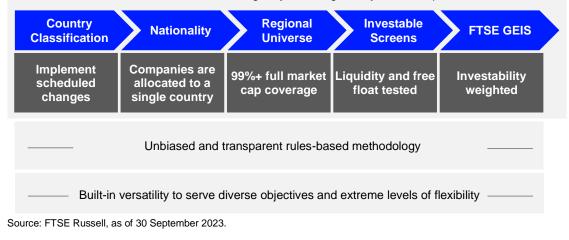
Step 4: Investability screens are applied to eliminate stocks considered unavailable to institutional investors.

Step 5: Index weights are determined based on market capitalisation, adjusted for available float and foreign ownership limits.

Figure 6: The FTSE GEIS review process

FTSE Global Equity Index Series

Stocks from 49 markets are screened for eligibility and weighted by market capitalisation

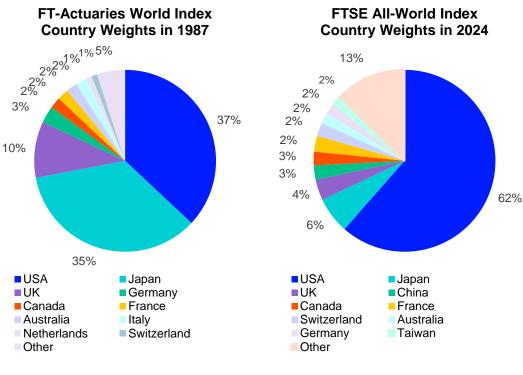


⁷ For a complete list of factors assessed in determining nationality, please review the FTSE Global Equity Index Series Ground Rules.

A changing global equity market

Global equity markets have grown and changed dramatically over the last thirty years. Because FTSE Russell is committed to providing accurate coverage of the global opportunity set via FTSE GEIS, users can rely on the indices to accurately capture this evolution. In Figure 7, we compare the weights of the countries included in the FT-Actuaries World Index at its inception in 1987 to the country weights of FTSE All-World Index as of January 2024. In 1987, Japan represented roughly 35% of the FT-Actuaries World Index while the US represented 37%. Over thirty years later, Japan's representation has dipped to 6%, while the weight of the US has grown to 62%. The dramatic increase in the relative importance of the US equity market is especially notable, given that the number of countries included in the index has increased substantially over the same period (from 23 in 1987 to 49 in 2024).

Figure 7: Country weights comparison



Source: FTSE Russell, FT-Actuaries World Index Country Weights, September 30, 1987.

Source: FTSE Russell, FTSE All-World Index Country Weights, 31 January 2024.

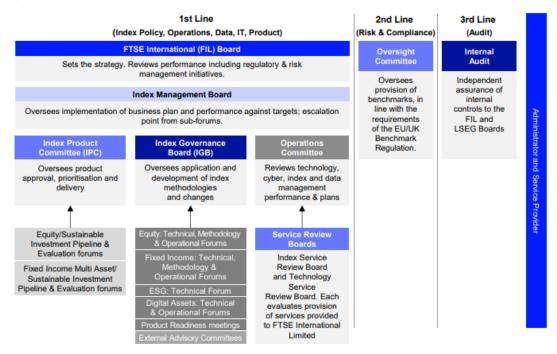
FTSE GEIS governance

Transparency, reliability and accuracy are key attributes of FTSE GEIS. From its launch over thirty years ago, the FT-Actuaries World Index was supervised by a diverse group of investment managers and industry professionals. The first Policy Group, responsible for ensuring that the indices remained independent, broad, accurate and objective, included representatives of the founding firms as well as members from external international investment and advisory firms.

Today, like all FTSE Russell indices, FTSE GEIS is governed by a well-defined framework that draws from strong internal expertise, with support from external independent committees of leading market participants (see Figure 8).⁸ The external committees are made up of investment market professionals from around the world including pension plan trustees, investment managers, consultants, and other market participants that make use of FTSE Russell indices. Members serve in a personal capacity and are chosen for their ability to provide strategic input.

This formal process proactively evaluates all of the construction and maintenance rules applied to the indices, from equity country classification to corporate action reflection, to ensure they are responding and adapting to the evolving markets. Approval of index construction and methodology changes to FTSE Russell equity indices is provided by the FTSE Russell Index Governance Board.

Figure 8: FTSE Russell's Index Governance Groups



Source: FTSE Russell, as of February 2024.

⁸ For additional details on the index governance process and committees please visit Governance and policy.

Conclusion

Since 1987, use of the indices that now form part of FTSE GEIS has expanded enormously. Today, FTSE Russell indices are used by institutional and retail investors around the world. Leading asset owners, asset managers, ETF providers and investment banks have chosen the indices to benchmark their investment performance and to create investment funds, ETFs, structured products and index-based derivatives. As at end-December 2022, approximately \$15.9 trillion was benchmarked to our indices, \$1.9 trillion of which tracks our global equity benchmarks, including FTSE GEIS.⁹

FTSE Russell is committed to maintaining strong relationships with market participants, regulators and exchanges globally. As the global investment landscape has evolved over time, so has FTSE GEIS thanks to our global perspective and dedicated index governance process. Today, FTSE GEIS provides investors of all types with accurate, comprehensive coverage of global equity markets using an approach to index construction that is objective, modular, transparent and reliable.

⁹ Data as of December 31, 2022 as reported on April 1, 2023 by eVestment for active institutional funds, Morningstar for active retail mutual funds, insurance products, and ETFs, and passive assets directly collected by FTSE Russell. AUM includes blended benchmarks and excludes futures and options. AUM data does not include active and passive assets not reported to a 3rd party source or FTSE Russell. For funds where AUM was not reported as of December 31, 2022, the previous period AUM was used as an estimate. No assurances are given by FTSE Russell as to the accuracy of the data.

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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.

CONTACT US

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