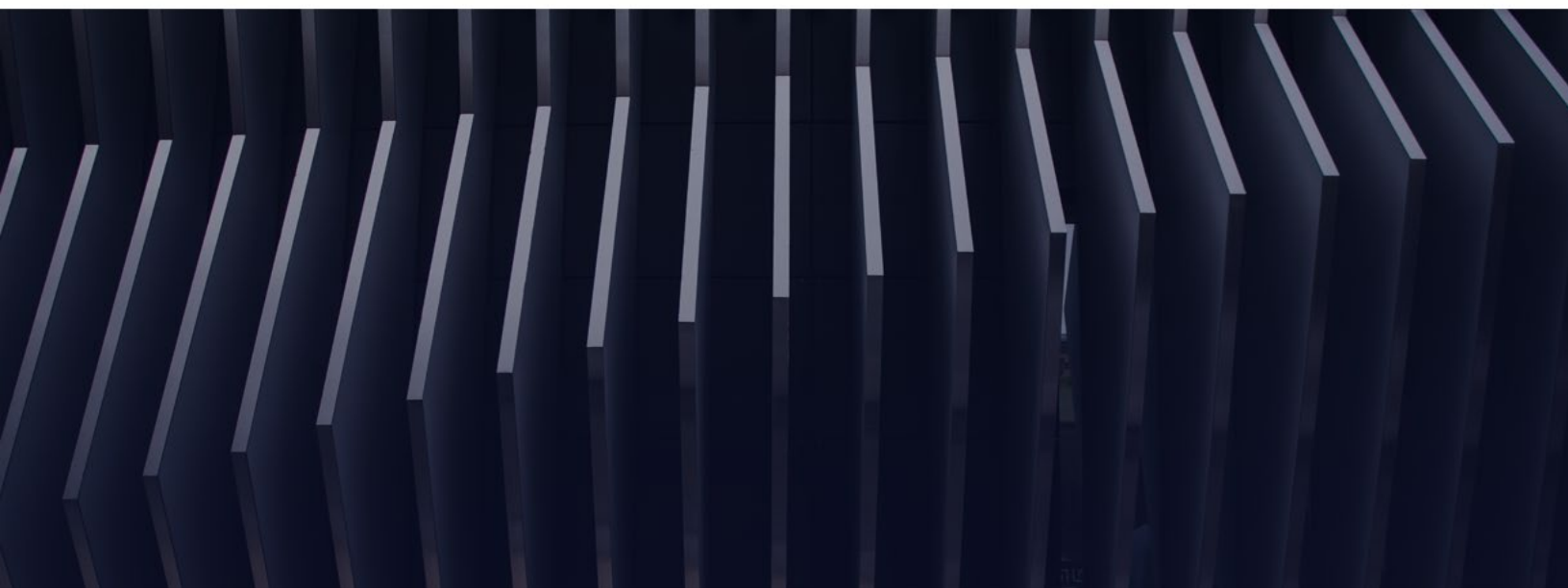


Wilshire Indexes

FT Wilshire GLIO Listed Real Assets Index Series Methodology

August 2025



Contents

Introduction	2
1 Listed Real Assets	2
1.1 Defining Real Assets	2
1.2 Eligible Universe	2
1.2.1 Energy.....	2
1.2.2 Infrastructure.....	3
1.2.3 Natural Resources.....	3
1.2.4 Real Estate.....	4
2 Available Listed Infrastructure Indexes	5
3 Index Construction	6
3.1 Constituents and Free Float Market Capitalization Weights	6
3.2 Natural Language Processing (NLP)	6
3.3 Liquidity.....	6
3.4 EBITDA.....	6
3.5 Constituent Selection	6
3.5.1 EBITDA and Liquidity Buffer	6
3.5.2 Energy.....	6
3.5.3 Infrastructure.....	7
3.5.4 Natural Resources.....	7
3.5.5 Real Estate.....	7
3.6 Segment Indexes	8
3.7 Segment Weighting	8
4 Index Maintenance.....	9
4.1 Index Reconstitution	9
4.2 Intra-reconstitution Additions	9
4.3 Intra-reconstitution Deletions	9
5 Corporate Events.....	9
5.1 Corporate Action Treatment.....	9
5.2 Suspension of Dealing	9
5.3 Takeovers, Mergers and Spinoffs	9
Index Methodology Approval	9
Legal Notices	10

Introduction

The FT Wilshire GLIO Listed Real Assets Index Series is designed to measure the value of listed equities which provide exposure to listed real assets across the globe.

Price, total and return indexes are calculated for all member indexes. The reinvestment of all dividend payments is reflected in the total return indexes at the close on the ex-dividend date but is not reflected in the price indexes. Only special dividends from non-operating income affect the price indexes.

Indexes are calculated in USD and variants converted to other currencies (using WM/Reuters 4pm London time exchange rates) are provided in index product files.

This document describes the procedures used to construct and maintain the FT Wilshire GLIO Listed Real Assets Index Series. It is reviewed at least annually but more frequent updates may be made in the light of market events or as a result of feedback obtained via consultation. It should be read in conjunction with the [Equity Index Calculation and Corporate Action Guide](#) which describes the calculation algorithm, the index treatment of corporate actions and events, and the procedures to be followed for suspended or delisted securities, and at times of market disruption. [The Equity Index Calculation and Corporate Events Guide](#) applies to all standard FT Wilshire equity indexes and to other indexes calculated or administered by Wilshire Indexes where this is explicitly stated in the methodology documentation for those indexes.

1 Listed Real Assets

1.1 Defining Real Assets

The following definition of real assets is used within the context of the FT Wilshire GLIO Listed Infrastructure Index Series.

Real Assets are assets which have an inherent value due to their tangible, physical characteristics and attributes. Many such assets can act as a store of value and are fundamental to a functioning economy.

Broadly, such real assets can be separated into four segments: Energy, Infrastructure, Natural Resources and Real Estate. Each of which is dealt with separately in the following sections.

Using the [Wilshire Indexes Global Assets Taxonomy System](#) (GATS), real assets companies within the [FT Wilshire Global Index](#) are identified as described in Section 1.2:

1.2 Eligible Universe

1.2.1 Energy

The Energy Segment provides exposure to companies involved in the extraction, production and transport of raw materials from which energy (electrical, thermal, nuclear) is obtained.

There are seven eligible GATS classifications in the Energy Segment, which are classified into three Real Assets Sectors. These are summarized in the following table:

Real Assets Sector	Description	GATS Level 4	GATS Code
Oil & Gas	Comprises companies which extract, produce and transport oil and natural gas	Oil and Gas Pipelines and Storage	10102030
		Pipeline REITs	60106510
		Oil and Gas Crude Producers	10102015
		Offshore Drilling and Other Services	10102010
		Oil and Gas Integrated Producers	10102025
Coal	Comprised of companies which mine coal	Coal Extraction	10101510
Nuclear	Comprised of companies which mine uranium	Uranium Mining	10152515

1.2.2 Infrastructure

Listed infrastructure companies tend to own long-duration assets that provide essential services to society, such as utilities (energy and water), renewable energy, communications and transportation. The Infrastructure Segment is made up four sectors: Transportation, Communications, Utilities and Renewables.

Real Assets Sector	Description	GATS Level 4	GATS Code
Transportation	Includes companies which own and/or operate airports, toll roads, marine ports and railways	Airport Services	25201010
		Railways	25201520
		Rail Transportation and Services	25151515
		Marine Ports and Services	25201015
		Transport Services	25201520
		Engineering and Contracting Services	20151025
Communications	Owners of communication towers, radio masts, long-distance cables (land, sea); own and operate commercial or military satellites	Tower REITs	60106530
		Telecom Services	55101520
		Aerospace	20101010
		Radio and TV Broadcasters	55201025
		Data Transmission Line REITs	60106010
Utilities and Renewables	Utilities: Companies that generate and distribute electricity, own electric networks and grids; distribute gas; manage water/waste-water networks Renewables: Renewable resources such as wind, tide, hydro, solar for power generation	Water Utilities	15252010
		Fossil Fuel Electricity Production	10152020
		Electric Grid and Power Distribution	10152015
		Diversified Electricity Production	10152010
		Nuclear Electricity Production	10152030
		Electricity transmission REITs	60106515
		Renewable/Sustainable Energy REITs	60106520
		Gas Distribution	10152025

The infrastructure sectors above are identical to the equivalently named infrastructure sectors of the FT Wilshire GLIO Global Listed Infrastructure Index Series. Further information on the FT Wilshire GLIO Global Listed Infrastructure indexes can be found in the [FT Wilshire GLIO Listed Infrastructure Index Series Methodology](#).

1.2.3 Natural Resources

The Natural Resources Segment comprises companies which are engaged in the extraction of raw chemical and mineral materials from the earth and its wider environment (e.g. air, land, sea), the usage of the environment (e.g. farmland) or the production of natural resources (e.g. timberland). The Natural Resources Segment is made up of four sectors with companies in the following table of GATS classifications eligible for inclusion.

Real Assets Sector	Description	GATS Level 4	GATS Code
Chemicals	Companies that extract raw chemicals and gasses from the earth and its atmosphere	Commodity Chemicals	15101020
		Industrial Gases	15101030
Metals	Companies who extract ore and raw metal through mining and related activities	General Mining	15201025
		Diversified Mining	15201020
		Aluminum	15201010

		Iron and Steel	15201035
		Nonferrous Metals	15201045
		Copper	15201050
Precious Materials	Companies which extract precious metals through mining and related activities	Silver, Platinum and Precious Metals	15201055
		Gold Mining	15201030
Forestry & Land	Companies which own and/or manage forests, timberland and farmlands	Forestry	15152010
		Timber REITs	60107010
		Farmland REITs	60107015

1.2.4 Real Estate

The Real Estate Segment provides exposure to both REIT¹ and non-REIT real estate and securities in the segment are selected from the constituents in the FT Wilshire Global Real Estate Index. Further information on the FT Wilshire Global Real Estate Index can be found in the [FT Wilshire Global Real Estate Index Series Methodology](#).

Securities in the Real Estate Segment are assigned to one of the following four sectors defined using GATS.

Real Assets Sector	Description	GATS Level 4	GATS Code
Traditional Property REITs	Comprised of REITs engaged in property ownership and leasing in the most mainstream residential, commercial, and industrial fields.	Apartment REITs	60101025
		Malls/Outlet REITs	60101510
		Shopping Centre REITs	60101515
		Free Standing REITs	60101520
		Office REITs	60102010
		Core Industrial REITs	60102510
		Hotel REITs	60103010
		Diversified REITs	60104510
Expanded Property REITs	Comprised of REITs engaged in property ownership and leasing in less traditional fields such as non-apartment residential REITs, self-storage, and medicine	Single Family Home REITs	60101010
		Manufactured Housing REITs	60101015
		Student Accommodation REITs	60101020
		Care Facilities REITs	60104015
		Outpatient Medical REITs	60104020
		Self-Storage REITs	60105510
Specialized REITs	Comprised of REITs engaged in property ownership and leasing in specialized fields including datacenters, laboratories, and specialized industrial uses.	Specialty Industrial REITs	60102515
		Scientific Lab REITs	60104010
		Entertainment Facilities REITs	60105010
		Gaming and Casino REITs	60105015
		Datacentre REITs	60106015
		Diversified Digital and Information Services REITs	60106025
Non-REIT Real Estate	Comprised real estate companies engaged in property ownership and leasing that are not REITs	Real Estate Holding and Development	60151010
		Diversified Real Estate Services	60152010
		Holdings and Development	
		Real Estate Operating Companies	60152510

¹ REIT – Real Estate Investment Trust

2 Available Listed Infrastructure Indexes

Table 2.1 sets out the various indexes in the series and the parameters that specify them:

Table 2.1: Available Indexes

Index Name	Underlying Index	Minimum EBITDA Ratio	Liquidity Threshold	Minimum Weight	Weighting Scheme	Reconstitution Schedule
FT Wilshire GLIO Global Listed Real Assets Index	FT Wilshire Global Index	0.66	Bottom Decile	0.01%	Risk Weighted	March, September
FT Wilshire GLIO Developed Listed Real Assets Index	FT Wilshire Global Index	0.66	Bottom Decile	0.01%	Risk Weighted	March, September
FT Wilshire GLIO Emerging Listed Real Assets Index	FT Wilshire Global Index	0.66	Bottom Decile	0.01%	Risk Weighted	March, September
FT Wilshire GLIO Global Listed Real Assets Market Cap Weighted Index	FT Wilshire Global Index	0.66	Bottom Decile	0.01%	Free float market capitalisation	March, September
FT Wilshire GLIO Developed Listed Real Assets Market Cap Weighted Index	FT Wilshire Global Index	0.66	Bottom Decile	0.01%	Free float market capitalisation	March, September
FT Wilshire GLIO Emerging Listed Real Assets Market Cap Weighted Index	FT Wilshire Global Index	0.66	Bottom Decile	0.01%	Free float market capitalisation	March, September

3 Index Construction

In addition to the following construction criteria, further eligibility criteria, such as liquidity, size, and nationality will be based upon the eligibility criteria contained within the methodology for the underlying index, namely, the FT Wilshire Global Equity Market Series methodology.

3.1 Constituents and Free Float Market Capitalization Weights

Constituents and their free floats and shares outstanding are taken from post close updates on the third Friday of the reconstitution month. Price is defined as the closing price at the cut-off date, adjusted for corporate actions which will go ex between the cut-off date and the post close updated data on the third Friday of the reconstitution month.

A constituent's free float market capitalization is then defined as the product of its free float, shares outstanding and adjusted cut-off date price. A constituent's free float market capitalization weight is then defined by its free float market capitalization divided by the total free float market capitalization of the entire set of constituents.

3.2 Natural Language Processing (NLP)

An NLP model is used to determine the relevant companies with the stated GATS classifications of the Energy, Infrastructure, Natural Resources and Non-REIT Real Estate segments (Section 1.2).

The NLP model harnesses a library of key phrases and words which are specific to the different Real Assets segments described. Additionally, the model is applied to company revenue lines to estimate EBITDA, Asset Values and Sales Revenue which is related to Energy, Infrastructure, Natural Resources and Non-REIT Real Estate.

The output of the NLP is used to screen each company in an accept/reject process whereby companies which contain key words and/or phrases in their descriptions are eligible for inclusion.

3.3 Liquidity

Liquidity is based on the 1-year average daily traded volume (ADTV), which is calculated over the previous year up to and including the last business day of the month preceding the reconstitution month.

3.4 EBITDA

The selection of constituents of the FT Wilshire GLIO Real Assets Index Series utilizes EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization).

All companies, except REITs in the Real Estate segment, must have an EBITDA ratio greater than or equal to 0.66 that derives from cash flows related to the segment for which the company is a member (Section 1.2).

If a company does not have a definable EBITDA, the ratio of company asset values relevant to the segment are considered and subject to the same 0.66 threshold.

If neither company asset values or EBITDA values are unavailable, the ratio of sales revenue is used, and the 0.66 threshold is applied.

3.5 Constituent Selection

3.5.1 EBITDA and Liquidity Buffer

To prevent signal whip-sawing and unnecessary turnover a 10% buffer is applied to EBITDA (Section 3.4) and liquidity (Section 3.3) of existing constituent companies in each segment. Existing companies are retained in the segment unless their EBITDA ratio has fallen below 90% of the 0.66 EBITDA threshold.

3.5.2 Energy

The Energy Segment is comprised of eligible companies that are members of the underlying GATS subsectors outlined in Section 1.2.1. Energy Segment constituents in the FT Wilshire GLIO Global Listed Real Assets Index are selected as follows:

- a) Energy companies which pass the NLP (Section 1.2.1) are eligible for inclusion and initially selected.

- b) The EBITDA (Section 3.4) screen is applied subject to the buffer rule (Section 3.5.1)
- c) Companies in the least liquid decile of the Energy Segment companies are removed subject to the buffer rule (Section 3.5.1).
- d) The remaining companies are weighted by their free float market capitalization

3.5.3 Infrastructure

The Infrastructure Segment is comprised of eligible companies that are members of the underlying GATS subsectors outlined in Section 1.2.2. Infrastructure Segment constituents in the FT Wilshire GLIO Global Listed Real Assets Index are selected as follows:

- a) Infrastructure companies which pass the NLP (Section 1.2.2) and EBITDA (Section 3.4) screens are eligible for inclusion and initially selected.
- b) The EBITDA (Section 3.4) screen is applied subject to the buffer rule (Section 3.5.1)
- c) Companies in the least liquid decile of the Energy Segment companies are removed subject to the buffer rule (Section 3.5.1).
- d) The remaining companies are weighted by their free float market capitalization

3.5.4 Natural Resources

The Natural Resources Segment is comprised of eligible companies that are members of the underlying GATS subsectors outlined in Section 1.2.2. Natural Resources Segment constituents in the FT Wilshire GLIO Global Listed Real Assets Index are selected as follows:

- a) Natural Resource companies which pass the NLP (Section 1.2.3) and EBITDA (Section 3.4) screens are eligible for inclusion and initially selected.
- b) The EBITDA (Section 3.4) screen is applied subject to the buffer rule (Section 3.5.1)
- c) Companies in the least liquid decile of the Energy Segment companies are removed subject to the buffer rule (Section 3.5.1).
- d) The remaining companies are weighted by their free float market capitalization

3.5.5 Real Estate

The Real Estate Segment is comprised of eligible companies that are members of the underlying GATS subsectors outlined in Section 1.2.4. Real Estate Segment constituents in the FT Wilshire GLIO Global Listed Real Assets Index are selected as follows:

- a) All REITs in the Real Estate segment are eligible for inclusion and initially selected.
- b) Non-REIT real estate companies which pass the NLP (Section 1.2.4) are eligible for inclusion and initially selected.
- c) EBITDA (Section 3.4) screen is applied to non-REIT real estate companies subject to the buffer rule (Section 3.5.1).
- d) Companies in the least liquid decile of the combined list of Real Estate Segment companies (a) and (b) are removed subject to the buffer rule (Section 3.5.1).
- e) The remaining companies are weighted by their free float market capitalization.

3.6 Segment Indexes

Each of the four segments constitutes a separate index which are used to determine the overall segment weights within a FT Wilshire GLIO Real Assets index. The segment indexes used to determine the risk weights are:

Real Assets Index/Segment Index	Energy	Infrastructure	Natural Resources	Real Estate
FT Wilshire GLIO Global Listed Real Assets Index	FT Wilshire GLIO Global Listed Real Assets Energy Index	FT Wilshire GLIO Global Listed Real Assets Infrastructure Index	FT Wilshire GLIO Global Listed Real Assets Natural Resources Index	FT Wilshire GLIO Global Listed Real Assets Real Estate Index
FT Wilshire GLIO Developed Listed Real Assets Index	FT Wilshire GLIO Developed Listed Real Assets Energy Index	FT Wilshire GLIO Developed Listed Real Assets Infrastructure Index	FT Wilshire GLIO Developed Listed Real Assets Natural Resources Index	FT Wilshire Developed Listed Real Assets Real Estate Index
FT Wilshire GLIO Emerging Listed Real Assets Index	FT Wilshire GLIO Emerging Listed Real Assets Energy Index	FT Wilshire GLIO Emerging Listed Real Assets Infrastructure Index	FT Wilshire GLIO Real Assets Emerging Listed Real Assets Natural Resources Index	FT Wilshire Emerging Listed Real Assets Real Estate Index

3.7 Segment Weighting

Following the selection of companies in each Real Assets segment, real assets segments are either weighted by their free float market capitalization or risk weighted (see Table 2.1).

For risk weighted indexes, the segments are risk weighted using the inverse 1 year volatility of the segment index:

$$w_s = \frac{\frac{1}{\sigma_s}}{\sum \frac{1}{\sigma_s}}$$

where w_s is the risk weight of segment s and $\sum w_s = 1$. The volatility of segment s , σ_s is calculated as the standard deviation of the segment price returns, $r_{s,t}$, over the previous year up to and including the last business day of the month preceding the reconstitution month:

$$\sigma_s = \sqrt{\frac{1}{n-1} \sum (r_{s,t} - \bar{r}_{s,t})^2}$$

where n is the number of days in the previous year and $\bar{r}_{s,t}$ the mean return over the period.

Following the risk weighting of each segment, constituents with weights less than 1 basis point are removed and the constituent weights are normalized to sum to one.

4 Index Maintenance

4.1 Index Reconstitution

The FT Wilshire GLIO Listed Real Assets Index Series is reconstituted semi-annually in March and September. The data cutoff date is Wednesday before the first Friday of the reconstitution month. Constituent and free-float changes are updated after the close of trading on the third Friday of the reconstitution month.

4.2 Intra-reconstitution Additions

Additions to the underlying benchmark will be eligible for inclusion at the next index reconstitution of the FT Wilshire GLIO Listed Real Assets Index in March or September.

4.3 Intra-reconstitution Deletions

A constituent will be removed from an FT Wilshire GLIO Listed Real Assets index if it is removed from the corresponding underlying benchmark. The deletion will be concurrent with that from the underlying benchmark and its weight will be distributed pro-rata amongst the remaining constituents of the real Assets segment from which it was deleted.

5 Corporate Events

5.1 Corporate Action Treatment

Corporate action treatment for the FT Wilshire GLIO Listed Real Assets Index Series can be found in the [Wilshire Indexes Equity Index Calculation and Corporate Action Guide](#). The risk weighted indexes (see Table 2.1) in the Index Series will follow the non-market capitalization sections of the guide.

5.2 Suspension of Dealing

Suspension of Dealing rules can be found in [Wilshire Indexes Equity Index Calculation and Corporate Action Guide](#).

5.3 Takeovers, Mergers and Spinoffs

The treatment of takeovers, mergers and spinoffs can be found in the [Wilshire Indexes Equity Index Calculation and Corporate Action Guide](#).

Index Methodology Approval

This Index Methodology was approved by the Index Management Committee on 14 August 2025.

Legal Notices

GLIO is the trademark of the Global Listed Infrastructure Organisation and is used under license. For more information please visit glio.org.

1. Intellectual Property

The material herein is © 2024 Wilshire OpCo UK Limited or its affiliates. All rights reserved.

No material published by Wilshire OpCo UK Limited and its affiliates ("Wilshire Indexes") should be construed as granting any license or right to use any copyright, trademark, service mark or other intellectual property right for any purpose whatsoever without the written permission of the lawful owner and an appropriate license.

Wilshire and Wilshire 5000 are registered service marks owned by Wilshire Advisors LLC and are used under license. "FT" is the trade mark of the Financial Times Limited and is used under licence.

"Information" means any data, text, or other material published or made available by Wilshire Indexes whether owned by Wilshire Indexes or a third-party. This includes presentations, factsheets, product files, methodology documents, benchmark statements, policies or other documents relating to the operation, calculation or administration of Wilshire Indexes benchmarks, whether supplied physically or published electronically, for example on Wilshire Indexes websites or the websites or materials of Wilshire Indexes clients that relate to Wilshire Indexes.

All Information is provided for information purposes only and is made available "as is" without warranty or other commitment of any kind.

Use or distribution of Information requires a license from Wilshire Indexes.

No part of the Information contained herein may be copied, stored in a retrieval system, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from Wilshire Indexes.

None of the Information may be used to create derivative works or to verify or correct other data or Information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other Wilshire Indexes data, Information, products or services.

2. Disclaimers

Wilshire Indexes entities and their respective directors, officers, employees, partners and licensors make no claim, prediction, warranty, representation or other commitment whatsoever, expressly or impliedly, as to the accuracy, timeliness, completeness, merchantability of any Information available or of results to be obtained from the use of the Information or the fitness or suitability of the Information for any particular purpose to which it might be put.

Any representation of historical data is provided for informational purposes only and is not a reliable indicator of future performance. The Information may contain back-tested data. Back-tested performance is not actual performance but is hypothetical. There may be differences between back-tested performance results and actual results subsequently achieved by any investment strategy.

To the fullest extent permitted by applicable law, Wilshire Indexes entities and their respective directors, officers, employees, partners, and licensors accept no responsibility or liability for:

- a) any loss or damage in whole or in part caused by, resulting from, or relating to any error (negligent or otherwise) or other circumstance involved in procuring, collecting, calculating, analyzing, editing, transcribing, transmitting, communicating, or delivering the Information or from use of the Information; and
- b) any direct, indirect, special, consequential, or incidental damages whatsoever, even if Wilshire Indexes (or the relevant person) is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, the Information.

Wilshire Indexes entities and their respective directors, officers, employees, partners, and licensors do not provide investment advice and nothing in the Information or any links thereto, including statistical data and industry reports, should be taken as constituting financial or investment advice or a financial promotion.

Wilshire Indexes entities and their respective directors, officers, employees, partners, and licensors are not responsible for and make no representation regarding the appropriateness or suitability of using, or investing in any financial instrument or entering into any contract linked to, Wilshire Indexes benchmarks or other Information provided by Wilshire Indexes and any decision to engage in such use or to invest in any such instrument or enter into any such contract should not be made in reliance on Wilshire Indexes benchmarks or other Information provided or published by Wilshire Indexes. All Information is impersonal and not tailored to the needs of any person, entity, or group of persons.

To the fullest extent permitted by applicable law, Wilshire Indexes entities and their respective directors, officers, employees, partners and licensors will not be liable in contract or tort (including negligence), for breach of statutory duty, misrepresentation or otherwise, in respect of any inaccuracies, errors, omissions, delays, failures, cessations or changes (material or otherwise) in Wilshire Indexes benchmarks or other Information.

Wilshire Indexes is the trading name of Wilshire OpCo UK Limited, a company registered in England and Wales under registered number 12991656, with its registered office at C/O Tmf Group, 13th Floor, One Angel Court, London EC2R 7HJ, United Kingdom. Wilshire OpCo UK Limited is authorized and regulated by the Financial Conduct Authority as a benchmark administrator, with reference number 985021.

Contact Us

wilshireindexes.com/contact

About Wilshire Indexes

Wilshire Indexes provides institutional investors, asset managers and retail intermediaries with a global benchmark platform that offers global coverage of the markets through the leading FT Wilshire Index Series.

To learn more about FT Wilshire Indexes, visit wilshireindexes.com