



GLOBAL LISTED  
INFRASTRUCTURE  
ORGANISATION

# GLIO Global Listed Infrastructure Index 'GLIO Index'

## Construction & Maintenance Procedures

**July 2021**



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## 1 GLOSSARY

<i>Adjustment factor</i>	A multiplier to correct for changes in the share price not having return implications
<i>Base</i>	Initial value of the index
<i>Carve-out</i>	Situation in which a company disposes part of its portfolio to the public by creating a separate entity, which subsequently may be floated
<i>Compiler</i>	Responsible for the management and maintenance of the index
<i>Directors' holdings</i>	Shares held by the management and board of directors of the company
<i>EBITDA</i>	Earning before interest, tax, depreciation and amortization
<i>Ex-dividend date</i>	First trading date at which the holder of the shares is no longer entitled to receive the subsequent dividend
<i>Free float</i>	The number of shares outstanding considered to be available for trading on the stock market as a percentage of the total shares outstanding
<i>Gross dividends</i>	Dividends before deduction of withholding taxes
<i>Infrastructure Activities</i>	Income generating activities from the development and ownership of economic Infrastructure assets defined by TICCS
<i>Market capitalization</i>	Number of shares outstanding times the share price



<i>Nominee account</i>	A joint share account held by a financial institution aggregating various separate shareholdings
<i>Primary stock listing</i>	Quotation of the share with the highest number of shares traded measured over a period of one year. In case no trading history over the past year is available the compiler will assign a primary stock listing
<i>Spin-off</i>	Situation in which a company disposes part of its portfolio to the existing shareholders by creating a separate entity, which subsequently may be floated
<i>Suspension of trading</i>	A temporary deferral of regulated trading
<i>Trading volume</i>	Shares traded on the primary stock listing



## 2 INDEX COMPOSITION

- 2.1 This document contains the rules for the construction and maintenance of the GLIO Index.
- 2.2 The GLIO Index is a free float market capitalization weighted index based on shares of the major companies in the world focusing on infrastructure activities.
- 2.3 The GLIO Index is representative for the movements in the global listed infrastructure asset class.
- 2.4 The GLIO Index is not restricted by a fixed number of companies. The number of companies in the index will expand and contract depending on the number of companies that fully meet the eligibility criteria outlined in this document.
- 2.5 The general principles of the GLIO Index are to capture companies engaged in activities that are 'mission critical' to the day-to-day functioning of society and the global economy. The companies should exhibit the following headline characteristics:
  - a. High barriers to entry to preserve market position which include natural monopolies, high capital requirements or regulation.
  - b. Predictability of cashflows through the presence of regulation, robust long-term contractual agreements and dominant market position.
  - c. Other considerations will include inflation linkage in contractual agreements, asset obsolescence and payout predictability and stability.
- 2.6 Companies are included if at least 75% of EBITDA is derived from infrastructure activities (as outlined in Rule 2.9) . EBITDA is determined using figures from the latest available annual financial statements of the company. If EBITDA cannot be derived from these financial statements, infrastructure assets will serve as the criterion to determine inclusion.
  - a. Inclusion: under the normal course of business<sup>1</sup>, a company is included when it meets the minimum EBITDA criteria for two consecutive annual reports.
  - b. Exclusion: under the normal course of business, a company is excluded when it fails to meet the minimum EBITDA criteria for two consecutive annual reports.
- 2.7 Companies are included if the publication of audited annual reports on their website are all available in English. An annual report is defined as a current set of accounts consisting of a profit and loss statement, a balance sheet, a directors' review and full notes to the accounts.

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<sup>1</sup> Company restructurings and long-term strategic asset sales and purchases will be taken into account at the next periodic review.



2.8 The GLIO Index includes companies from the following infrastructure groups<sup>2</sup>:

<b>Group Description</b>
Energy Transportation & Storage, including pipelines, processing and storage (ETS)
Communications Infrastructure, including data transmission (COM)
Transport, including airports, seaports, rail, road and urban commuter networks (TRN)
Renewable Generation, including wind, solar, hydroelectric, plus other methods & storage (RNW)
Regulated Network Utilities including electric transmission & distribution, water and gas distribution (UTL)

- 2.9 Companies are eligible when the free float market capitalization weight, calculated as the share price times the shares outstanding times the free float, is over 0.02% of the GLIO Index for two consecutive reviews. The minimum free float must be at least 15%.
- 2.10 Free float is reduced to reflect (strategic) share holdings of more than 5% of the shares outstanding. Combinations of holdings below 5% never qualify, unless these smaller holdings belong to one fiscal entity. Directors' holdings never qualify as free float, even when these holdings fall below 5%. Nominee accounts are always considered to be part of free float market capitalization. In case shareholders have a lock-up on their shares, then these holdings will not be part of free float, even when these holdings fall below five percent.
- 2.11 Country weights are the sum of weighting of individual constituents in every country.
- 2.12 If a company derives over 75% of the EBITDA from one country, not being the country of its primary stock listing thereby not crossing continental borders, the company is placed in the index of the country in which the assets are located.
- 2.13 The stocks included in the GLIO Index are assigned a weighting derived from their free float market capitalization.
- 2.14 Only stock exchange quoted companies without restrictions on foreign ownership are eligible for inclusion in the GLIO Index.
- 2.15 In deviation from the regular inclusion criteria, the free float market capitalization weight of newly listed property companies (IPOs) must be at least 0.10% of the index in order to qualify for inclusion. If this is the case then the newly listed companies (IPOs) will be included in the GLIO Index at the closing price at the end of the first day of trading. If this is not the case then the newly listed companies (IPOs) need to build three (3) consecutive months of trading history and have a minimum trading average volume of greater than 50% of free float shares over the three (3) consecutive months of trading history. Since trading volume in case of newly listed property companies (IPOs) is unknown at the time of inclusion, this Rule 2.17 replaces Rule 5.1.2.

<sup>2</sup> These groups are designed to be compatible with EDHEC Infra - The Infrastructure Company Classification Standard (TICCS)<sup>TM</sup>



2.16 The methodology of the GLIO Index conforms to the UCITS investment directives set by the EU.



### 3 INDEX CALCULATION

- 3.1 The value of the GLIO Index is based on total return calculations. The components of total return are price return and dividend return.
- 3.2 The inception date of the GLIO Index is 31 December 1999 and the base is 100.00.
- 3.3 Share prices are closing prices established during normal, regulated trading on the stock exchange of primary stock listing.
- 3.4 Share prices used are most recent closing trade prices.
- 3.5 Regular changes in free float will be implemented once a month, after close of trading on the third Friday of each month.
- 3.6 Changes in free float caused by a corporate event will be implemented immediately, after close of trading on the day the effects on the company are known.
- 3.7 Regular free float changes will be reported at least one (1) week before occurrence. Changes in free float caused by a corporate event will be reported at least three (3) business days before occurrence.
- 3.8 The GLIO Index reflects gross dividend payments.
- 3.9 Dividends are included in the GLIO Index at the ex-dividend date.
- 3.10 Dividends paid out by a company are immediately reinvested in the index at the first index calculation.
- 3.11 Foreign exchange rates are WM/Reuters London close rates.
- 3.12 If for any reason the stock price or a foreign exchange rate is not known or deemed to be unreliable the compiler will, after proper inquiries have been made with the relevant pricing source, calculate the GLIO Index on the basis of the most recent price for that share or foreign exchange rate which is known.





#### **4 INDEX PUBLICATION**

- 4.1 The current value of the GLIO Index will be published once a day.
- 4.2 Index values calculated will be published on the next trading day.
- 4.3 The compiler of the GLIO Index reserves the right to delay publication of values of the index or to suspend or cease publication, if circumstances prevail which prevent the proper calculation of the index.
- 4.4 The compiler of GLIO Index reserves the right to recalculate values of the index whenever errors or distortions occur that are deemed to be significant. Users of the GLIO Index are notified whenever such a recalculation occurs.



## 5 INDEX PERIODIC ADJUSTMENT

### General Rules

- 5.1 The main periodic adjustment elements will establish that all eligible companies meet the following inclusion criteria as described in chapter 2:
  - 5.1.1 Minimum free float market capitalization weight is 0.02%
  - 5.1.2 Minimum average trading volume of greater than 25% of free float shares over the twelve (12) months.
  - 5.1.3 Minimum EBITDA from eligible infrastructure activities as described in Rule 1.9
- 5.2 The aim of the compiler of the GLIO Index when making a periodic adjustment is to ensure that the weighting and selection of the component countries and shares remains in accordance with the basic principles of the GLIO Index, as described in chapter 2.
- 5.3 Periodic adjustments to the selection of shares in the GLIO Index will occur semi-annually after trading hours on the third Friday of March and September.
- 5.4 Changes in the selection of stocks will be announced on the first trading date of March and September. The compiler will publish an index changes list. Any changes (inclusions, exclusions or adjustments) to the index changes list will be reported immediately.
- 5.5 Periodic adjustment to the selection of shares included in the GLIO Index may not change the historic value of the GLIO Index.
- 5.6 If a share has multiple stock exchange listings only the primary stock listing will be considered.
- 5.7 In cases, which are not explicitly defined in the rules for periodic adjustment, periodic adjustment will be carried out in spirit of the aims mentioned in chapter 2. All adjustments must meet the criteria mentioned in chapter 2.



## Company Structure Changes

- 5.8 In case of a merger or acquisition in which all of the companies involved are in the GLIO Index, the 'surviving' company will continue to be part of the GLIO Index. The weight of this company is dependent on the free float market capitalization of the surviving company. Free float and shares will be adjusted based on public information following the offer. The final return of the 'target' company will reflect the offer price.
- 5.9 In case of a merger or acquisition in which one of the companies involved is in the GPR GLIO Index and the other company does not meet the criteria as expressed in chapter 2, the 'surviving' company will have to comply with these criteria in order for the company to remain included in the GLIO Index. If the resulting company fails to meet these criteria, the company will be excluded. The final return of the 'target' company will reflect the offer price.
- 5.10 In case of a merger or acquisition, whereby the target company remains listed on the stock exchange with a free float percentage of at least 15%, this target company will continue to be part of the GLIO Index when the offer has been declared unconditional. This article will be superior to Rule 5.8 and Rule 5.9.
- 5.11 In case of a stock split, a stock dividend, a poison pill, a rights issue or a bonus issue the number of shares will be adjusted. Furthermore, an adjustment factor is implemented to ensure continuity of return calculations.
- 5.12 In the event of a rights issue, an adjustment factor is implemented to ensure continuity of return calculations. If the rights issue is fully underwritten, then the newly issued shares will be included in the GLIO Index at the closing price at the end of the ex-right date. If the rights issue is not fully underwritten, then the newly issued shares will be included in the index at the closing price at the end of the first day of trading. In case of doubt, the rights issue will be perceived as not fully underwritten.
- 5.13 In the occurrence of a spin-off of a company included in the GLIO Index, both the original and/or the newly created entities will be eligible for inclusion in the index provided that new entities meet the criteria of chapter 1.
- 5.14 After the occurrence of a carve-out of part of a company included in the GLIO Index, only the original company will remain part of the index. The carve-out will be treated as an initial public offering (IPO).
- 5.15 In case of a suspension of trading in a company, the price of the share will remain the price of the last trade in the companies' shares. In case the suspension eventually leads to a bankruptcy or the liquidation of the company, the loss of the investment will be taken on the filing date. Whenever the suspension continues for more than three (3) consecutive months, the share price will be set at zero, assuming a total loss of the investment.
- 5.16 The amount of shares outstanding will be changed to reflect seasoned offerings and share repurchases at the day of occurrence.



## 6 FINAL PROVISIONS OF THE INDEX

- 6.1 Global Property Research (GPR) acts as the compiler of the GLIO Index.
- 6.2 The rules of the GLIO Index are overseen by the GLIO Index Advisory Committee.<sup>3</sup> GLIO Global Infrastructure Advisory Committee advises the compiler exclusively on the rules governing the GLIO Index.
- 6.3 The GLIO Global Listed Infrastructure Advisory Committee has no responsibility whatsoever for the calculation, maintenance or dissemination of the GLIO Index.
- 6.4 The GLIO Index Advisory Committee does not advise or determine, in any way, individual company inclusions and exclusions.
- 6.5 The compiler of the GLIO Index is responsible for the daily administration of the index. The compiler of the GLIO Index is fully responsible for decisions regarding the interpretation of these rules.
- 6.6 In cases for which the rules make no provision, but which require immediate action, the compiler of the GLIO Index shall decide to the best of his ability and within the spirit of and in accordance with the aim of the rules.
- 6.7 These rules may be amended (upon the advice of the GLIO Index Advisory Committee), which may also lead to changes in constituents in the GLIO Index.
- 6.8 All changes and adjustments to the rules of the GLIO Index are subject to a period of at least three (3) months between the date of publication of a proposed amendment and the date on which changes and adjustments come into effect.
- 6.9 No responsibility is accepted for damages arising from an amendment to the rules of the GLIO Index.
- 6.10 The compiler of the GLIO Index shall make every effort to safeguard the accuracy of the composition, publication and adjustment of the GLIO Index in accordance with the applicable rules. However, the compiler of the GLIO Index accepts no responsibility whatsoever for any inaccuracy in the share prices, the calculation and publication of the index, the information used to make adjustments neither in the GLIO Index nor in the adjustments themselves.
- 6.11 There might be circumstances pursuant to which the compiler can decide to terminate the GLIO Index. Before deciding to terminate the Index, the compiler shall consult with the client(s) using the GLIO Index. If the compiler, after the consultation, decides to terminate the GLIO Index the compiler shall give the client(s) using the GLIO Index at least two (2) years prior notice before the GLIO Index is terminated. Whenever possible, the compiler shall suggest alternative indices to the client(s) using the GLIO Index.
- 6.12 The latest version of the rules are freely available at:
  - 6.12.1 [www.glio.org](http://www.glio.org)
  - 6.12.2 [www.globalpropertyresearch.com](http://www.globalpropertyresearch.com)

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<sup>3</sup> Members and Terms of Reference of the GLIO Global Listed Infrastructure Index Advisory Committee can be found here: [www.glio.org](http://www.glio.org) / [www.globalpropertyresearch.com](http://www.globalpropertyresearch.com)



## **7 VERSION HISTORY**



## 8 TECHNICAL APPENDIX

### 8.1 Calculating returns for individual companies

The returns for individual companies are calculated as follows:

$$r_{i,t} = \frac{P_{i,t} + D_{i,t} - P_{i,t-1}}{P_{i,t-1}}, \text{ where}$$

$r_{i,t}$	Return of company $i$ in period $t$
$t$	Calculation date
$P_{i,t}$	Price of company $i$ at time $t$
$D_{i,t}$	Dividend on company $i$ at time $t$
$P_{i,t-1}$	Price of company $i$ at time $t-1$
$t - 1$	Previous business day

### 8.2 Calculating weights of individual companies

The weight of companies in the index is derived as follows:

$$W_{i,t} = \frac{C_{i,t-1}}{\sum_{i=1}^{N_t} C_{i,t-1}}, \text{ where}$$

$W_{i,t}$	Weight of company $i$ at time $t$
$C_{i,t-1}$	Free float market capitalization of company $i$ at time $t-1$
$N_t$	Number of companies that meet the inclusion criteria at time $t$

### 8.3 Calculating Indices

The index value is calculated by making a sum of all contributions of all companies in the index, multiplied by the index value of the previous trading day. The contribution of a company is calculated by multiplying its return by its respective weight.

The weight of companies in the index is derived as follows:

$$I_t = I_{t-1} * \left(1 + \sum_{i=1}^{N_t} (W_{i,t} * r_{i,t})\right), \text{ where}$$

$I_t$	Index value at time $t$
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**9 LIST OF HEADLINE INDICES REGIONS, GROUPS & SECTORS**

<b>Region</b>	<b>Regional Indices</b>	<b>Developed Market Indices</b>	<b>Emerging Market Indices</b>
Global	Global, Global ex-regions, Global ex-countries	Global Developed	Global Emerging
Americas	Americas	North America  Canada, United States	Emerging Americas  Argentina, Brazil, Chile, Colombia, Mexico, Peru
Asia-Pacific	Asia-Pacific, Asia-Pacific ex-Australia, Asia	Developed Asia-Pacific, Developed Asia  Australia, Hong Kong, Japan, New Zealand, Singapore, South Korea	Emerging Asia  China, India, Indonesia, Malaysia, Pakistan, Philippines, Taiwan, Thailand
EMEA	EMEA, Europe, Europe ex-United Kingdom, Eurozone	Developed Europe, Developed Europe ex-United Kingdom  Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom	Emerging EMEA, Emerging Europe, Emerging MEA,  Czech Republic, Egypt, Greece, Hungary, Poland, Qatar, Russia, Saudi Arabia, South Africa, Turkey, United Arab Emirates



<b>Group Description</b>	<b>Sector/Asset Description</b>
Energy Transportation & Storage	Pipelines
	Processing & Storage
Communications Infrastructure	Telecom Towers
	Long-Distance Cables
	Communication Satellites
Transport	Airports
	Seaports
	Railroads
	Roads, motorway networks, tunnels & bridges
	Urban commuter networks
Renewables Generation	Wind & Solar
	Hydro-electric
Regulated Network Utilities	Electric
	Water
	Gas





## 10 LIST OF STOCK EXCHANGES + MARKET IDENTIFIER CODES

### Africa

Botswana	Botswana Stock Exchange	XBOT
Namibia	Namibian Stock Exchange	XNAM
South Africa	Johannesburg Stock Exchange	XJSE

### Americas

Argentina	Bolsa de Comercio de Buenos Aires	XBUE
Brazil	Bovespa (Sao Paulo SE)	BVMF
Canada	Toronto Stock Exchange	XTSE; XTSX
Chile	Santiago Stock Exchange	XSGO
Colombia	Bolsa De Valores De Colombia	XBOG
Mexico	Bolsa Mexicana de Valores	XMEX
United States	New York Stock Exchange	XASE; XGNS; XNAS; XNCM; XNMS; XNYS

### Asia

Hong Kong	Hong Kong Stock Exchange	XHKG
India	The Bombay Stock Exchange	XBOM
Indonesia	Indonesia Stock Exchange	XIDX
Japan	Tokyo Stock Exchange	XJAS; XTKS
Korea	Korea Exchange	XKOS; XKRX
Malaysia	Bursa Malaysia	XKLS
Pakistan	Pakistan Stock Exchange Limited	XKAR
Philippines	Philippine Stock Exchange	XPHS
Singapore	Singapore Exchange	XSES
Taiwan	Taiwan Stock Exchange	ROCO; XTAI
Thailand	The Stock Exchange Of Thailand	XBKF; XBKK
Vietnam	Ho Chi Minh Stock Exchange	XSTC

### Europe

Austria	Vienna Stock Exchange	XWBO
Belgium	Euronext Brussels	XBRU
Croatia	Zagreb Stock Exchange	XZAG
Denmark	Nasdaq Copenhagen A/S	XCSE
Finland	Nasdaq Helsinki	FNFI; XHEL
France	Euronext Paris	ALXP; XPAR
Germany	Deutsche Börse	XBER; XDUS; XETR; XFRA; XHAM; XMUN; XSTU
Greece	Athens Stock Exchange	XATH
Hungary	Budapest Stock Exchange	XBUD
Ireland	Euronext Dublin	XDUB
Israel	Tel Aviv Stock Exchange	XTAE
Italy	Italian Stock Exchange	XMIL
Malta	Malta Stock Exchange	XMAL



Netherlands	Euronext Amsterdam	XAMS
Norway	Oslo Stock Exchange	XOSL
Poland	Warsaw Stock Exchange	XWAR
Portugal	Euronext - Euronext Lisbon	XLIS
Romania	Spot Regulated Market - BVB	XBSE
Russian Federation	Moscow Exchange - All Markets	MISX
Slovenia	Ljubljana Stock Exchange (Official Market)	XLJU
Spain	Bolsas y Mercados Españoles	MABX; XMAD
Sweden	Nasdaq Stockholm	FNSE; SSME; XNGM; XSAT; XSTO
Switzerland	SIX Swiss Exchange	XSWX; XVTX
Turkey	Istanbul Stock Exchange	XIST
United Kingdom	London Stock Exchange	XLON

**Oceania**

Australia	Australian Stock Exchange	XASX
New Zealand	New Zealand Exchange	XNZE



## 11 EXPLANATION OF HOW ESG FACTORS ARE REFLECTED

Name of the benchmark administrator	Global Property Research B.V.
Type of benchmark or family of benchmarks	Equity
Name of the benchmark or family of benchmarks	GLIO Index
Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?	No



P.O. Box 75666  
1070 AR Amsterdam  
The Netherlands

Phone: +31 20 3488 451/452  
Fax: +31 20 3488 962

E-mail: [info@gpr.nl](mailto:info@gpr.nl)  
Website: [www.globalpropertyresearch.com](http://www.globalpropertyresearch.com)