

RAFI™ Global Equity Investable Universe: Methodology

Introduction

The RAFI Global Equity Investable Universe (GEIU) is the starting point for all index strategies available through RAFI Indices.

Data Source

The data source for the GEIU is derived from Bloomberg Back Office.

Eligible Exchanges and Equity Security Types

The eligible exchanges for developed and emerging markets are shown in Appendix A: Eligible Exchanges. Eligible securities consist of all common equity securities traded on primary eligible exchanges, and preferred shares in countries where preferred shares are economically equivalent to common, issued by companies that are assigned to countries classified by RAFI Indices as developed and emerging markets.

Table 1: Eligible Developed and Emerging Market Countries

DEVELOPED MARKETS*			EMERGING MARKETS*		
Americas	Europe	Asia	Latin America	EMEA	Asia
Canada	Austria	Australia	Brazil	Czech Rep	China
United States	Belgium	Hong Kong	Chile	Egypt	India
	Denmark	Japan	Colombia	Greece	Indonesia
	Finland	New Zealand	Mexico	Hungary	South Korea
	France	Singapore	Peru	Kuwait	Malaysia
	Germany			Poland	Philippines
	Ireland			Qatar	Taiwan
	Israel			Saudi Arabia	Thailand
	Italy			South Africa	
	Netherlands			Turkey	
	Norway			UAE	
	Portugal				
	Spain				
	Sweden				
	Switzerland				
	United Kingdom				

*As of March 2022, there are 23 developed market countries and 24 emerging market countries eligible for inclusion.

Country Assignment

RAFI assigns companies to countries and promulgates that assignment to securities. The country assignments are based on country of primary listing, domicile, and incorporation. If a company's primary listing is on a stock exchange in the same country as the company is domiciled and incorporated, then the company is assigned to that country. If the country of domicile is different from the country of incorporation and the primary listing is in the country of domicile, then the company is assigned to the country of primary listing and domicile. If the

country of primary listing is different from the country of domicile and the country of primary listing is in the country of incorporation, then the company is assigned to the country of primary listing and incorporation. If the country of domicile is the same as the country of incorporation, but is different from the country of primary listing, then the company is assigned to the country of domicile and incorporation. If the country of primary listing, domicile, and incorporation all differ, and for exceptions to these rules, country assignment is based on other factors including domicile of parent company, management location, source of sales, trading volume, and reporting currency.

Eligible Investible Equity Securities

Securities and companies are eligible to be included in the GEIU by meeting certain criteria defined below:

1. An initial investibility screen is applied to remove companies with zero volume, zero shares outstanding, and zero price.
2. Eligible companies must meet the required minimum market capitalization in order to be included in the universe. For the purpose of determining a company's market capitalization, all security lines for that company are aggregated. Minimum market capitalization rules are as follows:
 - a. Minimum Cumulative Weight – Within each country defined in Table 1, companies are sorted in descending order by unadjusted market capitalization. For each company, a free float-adjusted market capitalization weight is then calculated. Companies with cumulative free float-adjusted market capitalization weight greater than 99% are excluded from the starting universe.
 - b. Minimum Unadjusted Market Capitalization –A minimum unadjusted market capitalization range is defined by RAFI Indices for developed and emerging markets. The range will ensure the size of the smallest companies are comparable among countries in developed and emerging markets.
 - c. Minimum Adjusted Market Capitalization –Companies with adjusted market capitalization that is less than 50% of the unadjusted market capitalization of the smallest company within its country that passes the minimum unadjusted market capitalization threshold defined in Section 2.b are excluded from the universe.
3. Liquidity Threshold – To be eligible in the universe, a company must meet the liquidity screen as defined below:
 - $\text{Company Daily Volume} / \text{Adjusted Company Market Capitalization} \geq 0.05\%$

- Where company Daily Volume is the maximum of the 30-day and 90-day median daily traded value in USD and company daily volume must be greater than or equal to \$100,000 USD.

RAFI Weights for Each Company

Company weights are calculated using the Fundamental Index™ methodology. This process breaks the price-size link and instead weights companies by four fundamental measures of company size:

1. **Adjusted Sales** – Company Sales multiplied by company equity to assets ratio averaged over the past five years.
2. **Adjusted Cash Flow** – Company operating cash flow averaged over the past five years plus company R&D expenses averaged over the past five years.
3. **Dividends + Buybacks** – Dividends paid and share buybacks averaged over the past five years.
4. **Book Value + Intangibles** – Most recent company book value plus research capital, with research capital defined as the accumulation of R&D expenses over the past six years.

An aggregate fundamental weight is calculated for each company by averaging the normalized accounting measures for each of the four accounting measures. This is the fundamental weight of the company.

Region & Size Classification

Within each country listed in Table 1, eligible companies are sorted in descending order by unadjusted RAFI weights. Companies are classified as large, mid, small and micro depending on their rankings as outlined in Table 2. In order to reduce turnover from companies moving back and forth between size classifications each year, a banding approach is also applied to companies in order to move from one size classification to another. For example if a company became eligible for the GEIU in year t and ranked in the top 68% of cumulative fundamental weight within its assigned country, it would be classified as large company. If in year $t+1$ that company ranked in the top 68.5% by cumulative fundamental weight, it would continue to be classified as large company in year $t+1$. If in year $t+2$ it ranked in the top 69.5% by cumulative fundamental weight, it would then be reclassified as mid company in year $t+2$.

Table 2: Size Classification and Size Bands

Size Classification	Cumulative Fundamental Weight Rank	Size Band
Large Company	0% - 68%	+1% (69%)
Mid Company	68% - 86%	-/+ 1% (67% - 87%)
Small Company	86% - 98%	-1%/+0.5% (85% - 98.5%)
Micro	98% - 100%	-0.5% (97.5%)

Companies are then assigned to region/size buckets according to country and size classification. Table 3 outlines the region assignment for each country. The total global large/mid universe is the union of all companies classified as large and mid company in each of the seven regions. The global small universe is the union of all companies classified as small company in each of the seven regions.

Table 3: Region Classification

DEVELOPED MARKETS					EMERGING MARKETS	
United States	Japan	United Kingdom	Developed Europe, ex UK	Other Developed Markets	China	Emerging Markets ex-China
US	Japan	UK	Austria Belgium Denmark Finland France Germany Ireland Italy Netherlands Norway Portugal Spain Sweden Switzerland	Australia Canada Asia Pacific Israel Hong Kong New Zealand Singapore	China	Brazil India South Africa South Korea Taiwan Americas Chile Colombia Mexico Peru EMEA Czech Republic Egypt Greece Hungary Kuwait Poland Qatar Saudi Arabia Turkey UAE Asia Pacific Indonesia Malaysia Philippines Thailand

As of March 2022, there are 23 developed market countries and 24 emerging market countries eligible for inclusion.

RAFI Global Equity Investable Universe as of March, 2023

Table 4 outlines the number of companies within each region/size classification.

Table 4: Region/Size Classification

Region	Large Company	Mid Company	Small Company	Micro	Total
Developed Europe ex UK	144	188	427	349	1,108
Other Developed	138	176	355	299	968
Emerging Markets ex CN	359	530	1,277	854	3,020
Japan	146	225	457	259	1,087
United Kingdom	24	46	143	138	351
United States	176	306	811	766	2,059
China	101	204	529	398	1,232
Total	1,088	1,675	3,999	3,063	9,825

APPENDIX A: Eligible Exchanges

ISO Country Code	MIC	Exchange Name	Country	Developed/ Emerging
AU	XASX	Australian Securities Exchange	Australia	Developed
AT	XWBO	Wiener Borse	Austria	Developed
BE	XBRU	Euronext Brussels	Belgium	Developed
CA	XTSE	Toronto Stock Exchange	Canada	Developed
DK	XCSE	Copenhagen Stock Exchange	Denmark	Developed
FI	XHEL	Helsinki Stock Exchange	Finland	Developed
FR	XPAR	Euronext Paris/European Stock Exchange	France	Developed
DE	XETR	XETRA	Germany	Developed
HK	XHKG	Hong Kong Exchanges and Clearing	Hong Kong	Developed
HK	SHSC	Shanghai - Hong Kong Stock Connect	Hong Kong	Developed
HK	SZSC	Shenzhen - Hong Kong Stock Connect	Hong Kong	Developed
IE	XDUB	Irish Stock Exchange	Ireland	Developed
IL	XTAE	Tel-Aviv Stock Exchange	Israel	Developed
IT	MTAA	ELECTRONIC SHARE MARKET	Italy	Developed
JP	XJAS	Tokyo Stock Exchange JASDAQ	Japan	Developed
JP	XTKS	Tokyo Stock Exchange	Japan	Developed
JP	XOSE	OSAKA EXCHANGE	Japan	Developed
LU	XLUX	Luxembourg Stock Exchange	Luxembourg	Developed
NL	XAMS	Euronext Amsterdam	Netherlands	Developed
NZ	XNZE	NZX Limited/New Zealand Exchange	New Zealand	Developed
NO	XOSL	Oslo Stock Exchange/Oslo Bors	Norway	Developed
PT	XLIS	Euronext Lisbon	Portugal	Developed
SG	XSES	Singapore Exchange	Singapore	Developed
ES	XMAD	BOLSA DE MADRID	Spain	Developed
SE	XSTO	NASDAQ OMX /Stockholm Stock Exchange	Sweden	Developed
CH	XSWX	SIX Swiss Exchange	Switzerland	Developed
GB	XLON	London Stock Exchange	United Kingdom	Developed
US	XNYS	NYSE	United States	Developed
US	XASE	NYSE MKT LLC	United States	Developed
US	XNCM	NASDAQ CAPITAL MARKET	United States	Developed
US	XNGS	NASDAQ/NGS (GLOBAL SELECT MARKET)	United States	Developed
US	XNMS	NASDAQ/NMS (GLOBAL MARKET)	United States	Developed
BR	BVMF	BM&F BOVESPA	Brazil	Emerging
CL	XSGO	Bolsa de Comercio de Santiago	Chile	Emerging
CN	XSHE	Shenzhen Stock Exchange	China	Emerging
CN	XSHG	Shanghai Stock Exchange	China	Emerging
CN	XSEC	Shenzhen Stock Exchange - Hong Kong Connect	China	Emerging

CN	XSSC	Shanghai Stock Exchange - Hong Kong Connect	China	Emerging
CO	XBOG	Bolsa de Valores de Colombia	Colombia	Emerging
CZ	XPRA	PRAGUE STOCK EXCHANGE	Czech Republic	Emerging
EG	XCAI	Egyptian Exchange	Egypt	Emerging
GR	XATH	Athens Exchange SA - Cash Market	Greece	Emerging
HU	XBUD	Budapest Stock Exchange	Hungary	Emerging
IN	XNSE	National Stock Exchange of India	India	Emerging
IN	XBOM	BSE India Limited/Bombay Stock Exchange	India	Emerging
ID	XIDX	Indonesia Stock Exchange	Indonesia	Emerging
KW	XKUW	Kuwait Stock Exchange	Kuwait	Emerging
MY	XKLS	Bursa Malaysia	Malaysia	Emerging
MX	XMEX	Bolsa Mexicana de Valores	Mexico	Emerging
PE	XLIM	Bolsa de Valores de Lima	Peru	Emerging
PH	XPHS	Philippine Stock Exchange	Philippine	Emerging
PL	XWAR	Warsaw Stock Exchange	Poland	Emerging
QA	DSMD	Qatar Stock Exchange/Doha Securities Market	Qatar	Emerging
SA	XSAU	SAUDI STOCK EXCHANGE	Saudi Arabia	Emerging
ZA	XJSE	Johannesburg Stock Exchange (JSE)	South Africa	Emerging
KR	XKOS	Korea Exchange (KOSDAQ)	South Korea	Emerging
KR	XKRX	Korea Exchange (STOCK MARKET)	South Korea	Emerging
TW	XTAI	Taiwan Stock Exchange Corp	Taiwan	Emerging
TH	XBKK	Stock Exchange of Thailand	Thailand	Emerging
TR	XIST	Borsa Istanbul	Turkey	Emerging
AE	XDFM	Dubai Financial Market	UAE	Emerging
AE	XADS	Abu Dhabi Securities Exchange	UAE	Emerging
AE	DIFX	NASDAQ DUBAI	UAE	Emerging

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