

SOLACTIVE COUNTRY CLASSIFICATION FRAMEWORK

Version 1.2

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1. OVERVIEW

This guideline outlines the Solactive framework used to classify markets according to common economic, financial and institutional characteristics and to assess the respective levels of market development. Based on the framework presented below, countries can be classified as Developed, Emerging or Frontier.

Solactive will consider the factors in the table below as criteria in their annual market development review:

		<u>Developed</u>	<u>Emerging</u>	<u>Frontier</u>
Economic development	GNI per capita	Countries must fall into the top third of the World Bank country universe	Countries must fall into the top 90% of the World Bank country universe	Countries not falling into the top 90% of the World Bank country universe
	Human Development Index (HDI)	Minimum HDI score of 0.70 out of a total of 1, i.e., High Human Development	Minimum HDI score of 0.55 out of a total of 1, i.e., Medium Human Development	HDI score below 0.55 out of a total of 1, i.e., below Medium Human Development
Market size & liquidity	Market capitalisation	Countries must fall into the top 55% of the FactSet universe of stocks screened by domestic market capitalisation	Countries must fall into the top 70% of the FactSet universe of stocks screened by domestic market capitalisation	Countries not falling into the top 70% of the FactSet universe of stocks screened by domestic market capitalisation
	Average daily volume (ADV)	Countries must have minimum 6-month ADV of USD 56.9 mn of the FactSet universe of stocks	Countries must have minimum 6-month ADV of USD 22.8 mn of the FactSet universe of stocks	Countries with a 6-month ADV below USD 22.8 mn of the FactSet universe of stocks
Capital market structure	Short selling	Must be allowed in the country		
	Capital repatriation	No capital repatriation or surrender requirements on capital transactions		
	Stable economic environment	Main currency of debt issuance, credit rating		

All countries that do not fall into Developed or Emerging markets according to the above framework, may be considered for classification as Frontier. Countries can only be classified under one category of market development i.e. a country classified as Developed cannot be Emerging or Frontier.

Solactive reviews its Market Classification on an annual basis in September. Countries that used to meet the binding criteria but that do not so at the time of the most recent annual review are considered for reclassification. Following a consultation period, and unless otherwise stated in the specific Index Guidelines, the new Market Classification will become effective as of Selection Days in April of the following year. Intra-annual extraordinary committee meetings will be held to respond to extraordinary events leading to a potential reclassification in between review periods.



2. CRITERIA OF COUNTRY CLASSIFICATION

2.1 ECONOMIC DEVELOPMENT

GNI per capita is the standard measure used by the World Bank to classify countries according to their income levels. Solactive builds on data provided by the World Bank to measure relative levels of economic development to classify markets. According to the above framework, as of September 2022, countries with a GNI per capita of minimum USD 9,730 can be considered for classification as Developed, and a GNI per capita of USD 1,014 as Emerging.

Data source: World Bank www.worldbank.org

The Human Development Index (HDI) is a composite measure of life expectancy, level of education, and economic development published annually by the United Nations Development Programme. The UN classifies 189 countries according to their HDI in Very High Human Development (1 – 0.800), High Human Development (0.700 – 0.799), Medium Human Development (0.550 – 0.699), Low Human Development (\leq 0.549).

Data source: United Nations Human Development Reports hdr.undp.org

2.2 MARKETS SIZE & LIQUIDITY

Size and liquidity of markets are typically associated with ease of trade and market efficiency. The degree of country development tends to be associated with larger and more liquid capital markets. For this reason, Solactive calculates the market capitalization of the domestic stock exchanges by taking into account companies' primary listing. This is done in two steps. First, we determine to which country a company belongs by screening their primary listing. Second, we calculate the combined market capitalization of all companies that are part of a country. In addition, countries' liquidity is measured by 6-month Average Daily Volume (ADV). According to the above framework, as of September 2022, countries with a minimum market capitalization of USD 37.8 bn can be considered for classification as Developed, and of USD 9.8 bn for classification as Emerging.

Data source: FactSet www.factset.com

2.3 CAPITAL MARKET STRUCTURE

In the context of Developed markets, factors such as short selling and ease of capital movements are assessed in order to understand the sophistication of capital markets.



Short selling, or the possibility of selling a security that is not currently owned by the seller, is relevant for risk management practices and speculation. Short selling is associated with market efficiency and gives an indication of the level of development and flexibility of the stock market.

To check for ease of transactions in the global financial economy, the presence of capital repatriation and surrender requirements is investigated. These relate to the obligation of residents to repatriate proceeds of international capital transactions. Countries with less restrictions tend to be more integrated in the global financial economy.

Data source: International Monetary Fund, Annual Report on Exchange Arrangements and Exchange Restrictions – IMF www.imf.org

Additionally, the main currency of debt issues, whether domestic or hard currency, is taken into account, as well as the overall issuance activity. The ability to raise debt capital denominated in domestic currency is an indicator of economic stability of a country. Also, the credit rating of each country is taken into consideration in order to gain more insight into the specific economic environment.

2.4 EXTRAORDINARY MARKET CONDITIONS

In certain situations, the classification criteria pursuant to section 2.1 to 2.3 do not reflect the complete economic environment of a country (e.g. openness to foreign investors, market infrastructure, etc.) and would lead to an insufficient determination of a country's classification (extraordinary market environment).

In case of an extraordinary market environment additional criteria must be considered when classifying a country. As this is a discretionary decision, a committee composed of staff from Solactive AG (the "Committee") is responsible for making reasonable decisions regarding the classification of a country in case an extraordinary market environment occurs. Such decision will be made in accordance with the "Solactive Guideline Relating to the Exercise of Expert Judgement or Discretion", which is available on Solactive's website www.solactive.com.



3. COUNTRY CLASSIFICATION

3.1 CURRENT CLASSIFICATION

List of Developed Countries

Australia
Austria
Belgium
Canada
Denmark
Finland
France
Germany
Hong Kong
Ireland
Israel
Italy
Japan
Netherlands
New Zealand
Norway
Poland
Portugal
Singapore
Spain
Sweden
Switzerland
United Kingdom
United States

List of Emerging Countries

Brazil
Chile
China
Colombia
Czech Republic
Egypt
Greece
Hungary
India
Indonesia
Kuwait
Malaysia
Mexico
Philippines
Qatar
Saudi Arabia
South Africa
South Korea
Taiwan
Thailand
Turkey
United Arab Emirates



3.2 HISTORICAL RECLASSIFICATIONS

2022

Russia was excluded from Emerging Markets.

Peru was reclassified from Emerging Markets to Frontier Markets.

Pakistan was reclassified from Emerging Markets to Frontier Markets.

2021

Argentina was reclassified from Emerging Markets to Frontier Markets.

2020

There were no changes.

2019

Poland was reclassified from Emerging Markets to Developed Markets.

2018

Kuwait was reclassified from Frontier Markets to Emerging Markets.

Saudi Arabia was reclassified from Frontier Markets to Emerging Markets.

United Arab Emirates was reclassified from Frontier Markets to Emerging Markets.

Vietnam was reclassified from Emerging Markets to Frontier Markets.



4. DISCLAIMER

In classifying countries according to common economic, financial and institutional characteristics, Solactive uses a variety of data sources as set out above. Solactive does not claim or imply that any of said data sources endorse the use of these data. Solactive does not offer any express or implicit guarantee or assurance either with regard to the classification of countries nor the accuracy of the method described herein. To the extent possible, Solactive waives any liability for reliance upon the country classification system and its results.

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