Invesco Indexing Investable Universe Methodology

June 2022

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Introduction

This document provides a detailed description of the processes associated with the construction and maintenance of the Invesco Indexing Investable (III) Universe. The III Universe is a global collection of securities available to Invesco Indexing to support index construction. The goal of Invesco Indexing in the compilation of the III Universe is to create the broadest set of liquid equity and fixed income securities to support the creation of a wide variety of index strategies which can act as practical performance benchmarks or as the basis of index-based portfolios. The III Universe is comprised of the III Equity Universe (IIIEU) and III Bond Universe (IIIBU). The IIIEU represents developed and emerging market securities across the market capitalization spectrum. Each security within the IIIEU is categorized along several dimensions including region, country, market status, size, sector, and industry. The IIIBU includes developed and emerging market fixed income securities across multiple bond sectors and currencies. All IIIBU securities are categorized along well-known market dimensions including coupon type, country assignment, market status, region, and credit rating. Creating a well-defined taxonomy for equity and fixed income securities leads to an index creation process that is highly modular, customizable, and flexible.

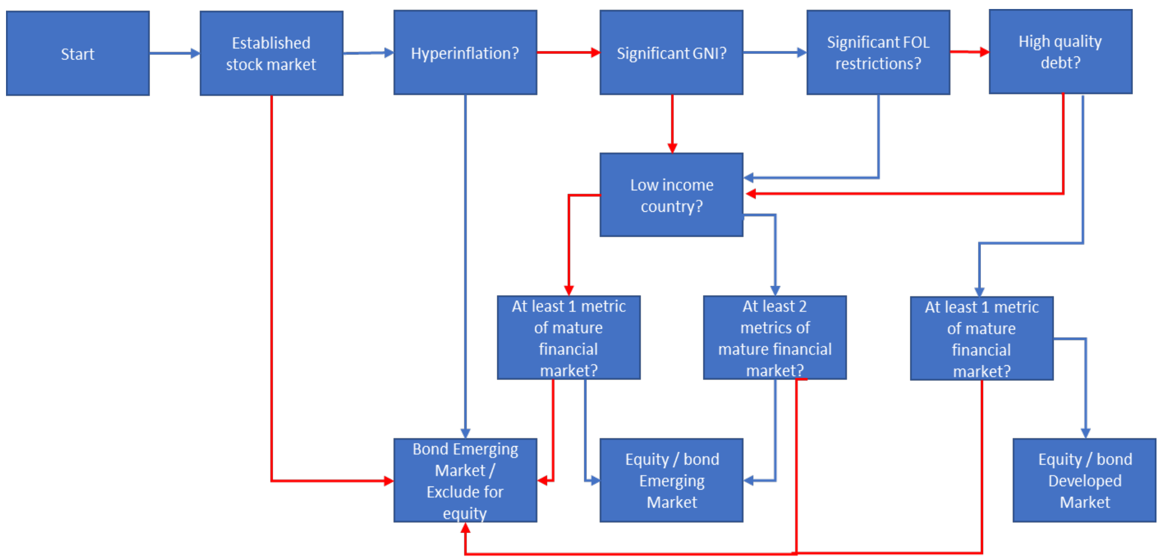
The remainder of the document is grouped into three sections. The first section details the qualifications for country selection to the III Universe and the market status assignment of those countries. The second section describes the process used to create and maintain the III Equity Universe. The third section describes the process used to create and maintain the III Bond Universe.

Country Review

Country Selection and Market Status Assignment

The country selection and market status assignment process occurs annually in December. During this process, all countries are assessed for potential coverage in the III Universe. They are classified as developed, emerging, or are not included in the universe. This country selection and market status assignment considers various factors, including inflation, national income, sovereign debt rating, openness to foreign investment, and the maturity of the public equity market.

The results of the country selection and market status assignment process are effective in June of the following year. As part of the monthly (ex-June) updates of the Invesco Indexing Investable Bond Universe (see General Approach on page 12), any newly eligible bond for which its country's market status was not available as of the most recent June will receive a market status assignment of emerging market. This assignment is effective as of the relevant monthly update. The figure below graphically depicts the logic of the country selection and market status assignment process.



GNI: Gross National Income
FOL: Foreign Ownership Limits (see Appendix 1: Free Float and Foreign Ownership Limits)

Country Review (continued)

The following table provides additional detail around the country selection process. In addition to the aggregate level requirements mentioned on the previous page, to be included in the equity universe, a country must contain at least three stocks that satisfy the security selection procedures outlined in the subsequent sections.

Requirement	Description	Developed	Tier 1 Emerging	Tier 2 Emerging
Inflation	No hyperinflation in the past 3 years	✓	✓	✓
Income	Not a World Bank low income country	✓	✓	-
	GNI at least 1.6 (1.4) times the World Bank high income threshold for new (current) constituents in each of last 3 years	✓	-	-
Openness of financial markets	No significant foreign ownership limits	✓	-	-
Sovereign debt quality	Sovereign debt credit rating is not below Baa3 (Baa2) for new (current) constituents in the past 3 years	✓	-	-
Maturity of public equity market	Country market cap within top 99.5% (99.9%) of world for new (current) constituents in 2 of past 3 years.	At least 1	At least 1	At least 2
	Country revenue within top 99.5% (99.9%) of world for new (current) constituents in 2 of past 3 years.			
	Country trade volume within top 99.5% (99.9%) of world for new (current) constituents in 2 of past 3 years.			

Invesco Indexing Investable Equity Universe Methodology

Introduction

The following sections provide a detailed description of the processes associated with the construction and maintenance of the Invesco Indexing Investable Equity Universe. The universe is a global collection of equity securities available to Invesco Indexing to support index construction. It contains both developed markets and emerging markets companies. The size of the companies ranges from small capitalization to large capitalization. Each security within the III Equity Universe is categorized along several dimensions including region, country, developed/emerging, size, sector, and industry. This taxonomy leads to an index creation process that is highly modular, customizable, and flexible. Indexes are created from the III Equity Universe by screening on one or more of the segmentations and applying a weighting scheme to that subset of securities to achieve particular investment objectives.

General Approach

The III Equity Universe is updated four times per year. There is a full reconstitution annually in June and three smaller rebalances in March, September, and December. While the reconstitution is intended to reset the overall global equity universe, the rebalances ensure the universe includes new listings that have met the criteria for inclusion while eliminating illiquid securities. March, June, September, and December are collectively referred to as "Rebalance Months."

During the reconstitution, the III Equity Universe is fully refreshed. Based on the results of the December country review (see Country Review on page 4), countries are selected into the universe and identified as emerging or developed. The universe will only contain securities from these qualifying countries. For each qualifying country, equity-like securities are considered for inclusion into the III Equity Universe. Liquidity thresholds are determined based on the characteristics of the global equity market, and equities are added to or removed from the universe based on their ability to satisfy these liquidity requirements. Finally, qualifying universe members are assigned to various segmentations based on characteristics including company size and geography.

During quarterly rebalances, Initial Public Offerings (IPOs) and spinoffs may be added to the III Equity Universe if they are sufficiently large and liquid, and current index constituents may be removed if they no longer meet liquidity requirements. To improve the stability of the universe and the indexes that are built from the universe, entry requirements at quarterly rebalances are more stringent and requirements for continued universe membership are less demanding relative to the annual reconstitution.

The table below summarizes the update process.

Update	Timing	Actions
Country selection	• Third Friday in December • Third Friday in June	• Country review • Country changes effective
Annual reconstitution	Third Friday in June	Equity universe and size classification updates
Quarterly rebalance	Third Friday in March, September & December	Security addition/removal and update

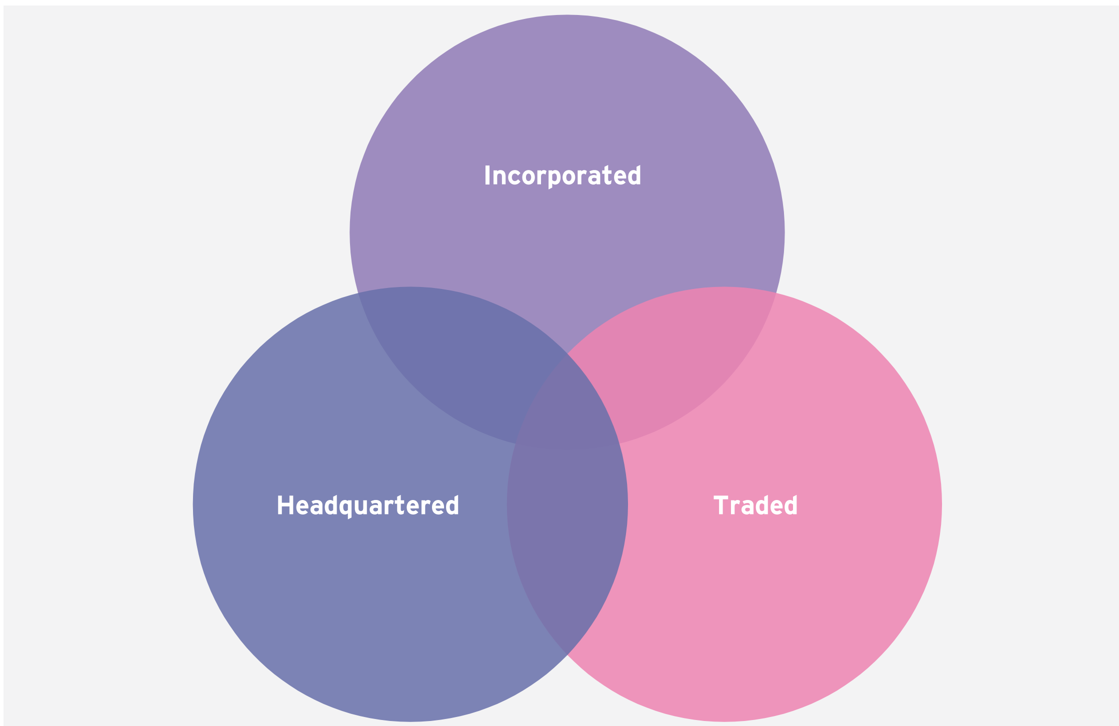
Region Classification

Once countries are selected, they are classified into one of four Invesco Indexing (II) Geographic Regions: Americas, Asia Pacific, Europe, and Middle East & Africa. Countries are further classified into one of seven II Economic Regions: Developed Americas, Emerging Americas, Developed Asia Pacific, Emerging Asia Pacific, Developed Europe, Emerging Europe, and Middle East & Africa. As of the document's publication date, the countries included in these regions are described in the table below.

Americas	Europe
Developed	Developed
Canada	Austria
United States	Belgium
Emerging	Denmark
Brazil	Finland
Chile	France
Colombia	Germany
Mexico	Ireland
Peru	Italy
Asia Pacific	Netherlands
Developed	Norway
Australia	Portugal
Hong Kong	Spain
Japan	Sweden
New Zealand	Switzerland
Singapore	United Kingdom
South Korea	Emerging
Emerging	Czech Republic
China	Greece
India	Hungary
Indonesia	Poland
Malaysia	Middle East & Africa
Philippines	Developed
Taiwan	Israel
Thailand	Emerging
Vietnam	Egypt
	Kuwait
	Qatar
	Saudi Arabia
	South Africa
	Turkey
	United Arab Emirates

Country Assignment

Only companies associated with Invesco Indexing countries are included in the III Equity Universe. Three criteria are considered when assigning a company to the II Country: the country in which the company is headquartered, the country in which the company is incorporated, and the country that is most relevant for the company's securities trading. If all of these are the same, then the company is assigned to that country. If the company is headquartered and trades in the same country, then this defines the country. Otherwise, if the company is incorporated and trades in the same country, then this defines the country. In cases for which neither the country of headquarters nor the country of incorporation aligns with trading, the company is first assigned to the headquarters country, provided it is in an emerging market country and that country is not a tax haven. Otherwise, the company is assigned to the country that is most relevant for the company's securities trading.[1]



Security Types

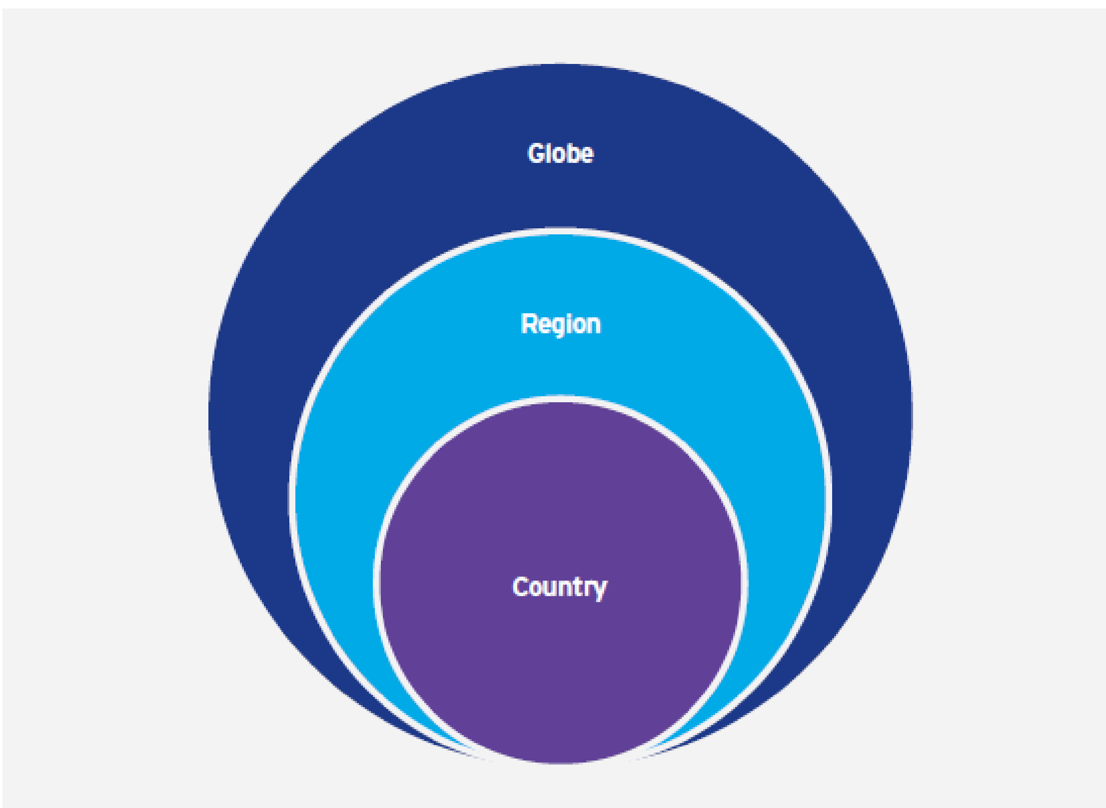
The III Equity Universe is designed to capture the investable segment of the global equity market. Publicly listed equity securities or securities that exhibit equity-like characteristics are eligible for inclusion. Limited partnerships, mutual funds, exchange-traded funds, warrants, rights, and investment trusts (other than REITS) are excluded.

[1] Special treatment exists for Chinese, Russian, and Israeli companies. Though these countries use different data, the application of that data remains systematic.

Primary Security

Each company in the III Equity Universe is represented by a single security selected from the eligible security types[2]. This single security is referred to as "the primary." When there is only one security issued by the company, this is assigned as the primary. When a company has multiple listings, the decision is less straightforward. Invesco Indexing's approach to selecting the primary is designed to give preference to more liquid and more local equities. To that end, only "liquid share classes" (as defined in the Liquidity section on page 9) are eligible as the primary. For the remainder of this section, we limit our discussion to these most liquid securities.

If there are multiple listings, but only one listing that trades in the company's II Country, then this listing is designated as the primary. If there are multiple listings in the company's II Country, the security with the most volume in the past year is designated as the primary. If there are no liquid listings in the company's II Country, then securities are evaluated at the Economic Region level. If there is only one security in the company's II Economic Region, then this is designated as the primary. If there are multiple listings, but only one trades in the II Economic Region, then this listing is designated as the primary. If there are multiple listings trading in the II Economic Region, the security with the most volume in the past year is designated as the primary. For emerging market securities, if there are no securities at the Economic Region level, the listing with the most volume in the past year across global developed and emerging markets is designated as the primary. For developed market securities, if there are no securities at the Economic Region level, the listing with the most volume in the past year across global developed markets is designated as the primary. If no such global developed market security exists, the company is not included in the III Equity Universe. Whenever reasonable, the process is designed to select common equity over alternatives, such as depository receipts. Therefore, when comparisons are made based on volume to determine the most liquid security, volume on depository receipts is discounted.



[2] Eligible securities must trade on an exchange covered by the III Equity Universe. For a full list of covered exchanges, please see Appendix 2: Stock Exchanges Covered by the III Equity Universe. Altered Trading Method (ATM) designated securities trading on the Taiwan and Taipei Stock Exchanges are ineligible for universe inclusion.

Investability

Only meaningfully sized companies are considered investable and are eligible for inclusion in the III Equity Universe. For developed markets and emerging markets separately, the size of the overall market is computed as the total company market capitalization of all primaries. These securities are then ranked in descending order of total company market capitalization, and the investable set of companies is defined by the top cumulative 96% of total market capitalization for developed markets and the top 98% for emerging markets. All new universe constituents must have company market capitalizations that exceed these thresholds. For current constituents, the requirements for continued inclusion in the universe are adjusted to reduce turnover in the universe and, ultimately, in the associated indexes. In the case of company- level market capitalization, the minimum size thresholds for developed and emerging markets are 99% and 99.5%, respectively.

Liquidity

In addition to the company-level investability requirement, several security-level liquidity criteria are considered when evaluating a stock's eligibility for the III Equity Universe. These include trade history, free float[3], security market capitalization, and volume.

- **Trade History**
  Only securities that have been trading for at least one month are eligible for universe inclusion. In addition, each stock must satisfy both long-term and short-term trade frequency requirements. Over the prior 50 trading days, new constituents must have traded on at least 40 days, and, over the previous 250 trading days, must have traded on at least 200 days. For current constituents, the short-term and long-term requirements are 35 days and 180 days, respectively. For new issues, these frequency requirements are prorated relative to the length of available history.

- **Free Float**
  The free float, or float, represents those shares of a security that are readily accessible in the marketplace. A more detailed definition is included in Appendix 1: Free Float and Foreign Ownership Limits. For new constituents, at least 20% of shares outstanding must be free float, and for current constituents the float must be at least 15%.

- **Size**
  The float-adjusted, security-level market capitalization is computed for each security as the product of shares outstanding, price, and the float factor. To be eligible for universe inclusion, the security's market capitalization must be at least 50% of the universe threshold for total company market capitalization of current constituents (see Investability above).

- **Volume**
  Securities are required to trade sufficient volume over the long and short term. As in trade history, 50 days is used for the short-term horizon, and 250 days is used as the long-term horizon. Daily liquidity turnover is defined as median daily volume scaled by free-float adjusted security market capitalization (see Appendix 1: Free Float and Foreign Ownership Limits). For new constituents, daily liquidity turnover is required to be at least 8bps in developed markets and 7bps in emerging markets for both short and long-term horizons. For current constituents, the daily liquidity turnover requirement is 5bps and 4bps in developed and emerging markets, respectively.

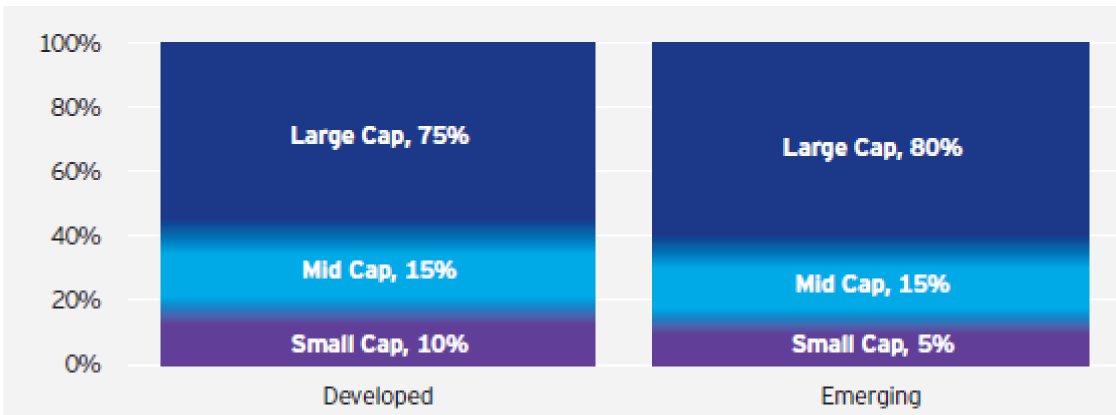
  We define "liquid share classes" as those with long-term and short-term daily liquidity turnover that satisfy this minimum level of 4bps, as well as the trade history requirements for current constituents.

[3] See Appendix 1: Free Float and Foreign Ownership Limits for more details.

Size Classification

Once a final list of securities has been determined based on the preceding selection process, securities are assigned to the appropriate size segment: small, medium, or large. The size classification process is a global one, which creates consistency in the definition of size across countries and economic regions. At the same time, the process differentiates between emerging and developed markets in recognition of the fact that the distribution of size in these two types of countries is meaningfully different. The size classification process is as follows.

Securities are separated into developed markets and emerging markets. Within each group, securities are ranked in descending order from the largest to the smallest based on company-level total market capitalization, and the cumulative market capitalization is computed. In developed (emerging) markets, all securities within the top 75% (80%) of cumulative market capitalization are classified as large cap, the next 15% are classified as midcap, and the remaining names are classified as small cap.



To reduce excess turnover in the universe and the indexes, securities that have previously been classified into a particular size segmentation are buffered up to 5%. For example, a developed market stock that had been previously classified as large cap but has since experienced a decline in price and is now only in the top 79% of cumulative market capitalization will continue to be classified as large cap, even though it would be classified as a midcap stock if it were a new entry into the universe. Alternatively, a developed market stock that had previously been classified as a midcap security and is currently within the top 72% of cumulative market capitalization is not considered sufficiently large to be classified as large cap even though it would be as a new universe entrant. The minimum company market capitalization thresholds are summarized below.

New Size Segment	Prior Size Segment: Unclassified	Large Cap	Mid Cap	Small Cap
Developed Markets				
Large Cap	75%	80%	70%	70%
Mid Cap	90%	95%	95%	85%
Small Cap	100%	100%	100%	100%
Emerging Markets				
Large Cap	80%	85%	75%	75%
Mid Cap	95%	99%	99%	90%
Small Cap	100%	100%	100%	100%

Size Classification (continued)

Additionally, security market capitalization must be at least half of the size threshold for total market capitalization to qualify for a given size segment. For example, for a developed market large capitalization stock, if the minimum company market capitalization at the top 80% is USD 10 billion, the security market capitalization needs to be at least USD 5 billion for the security to be a developed market large cap security. Otherwise, that security will be evaluated for the mid cap segment.

Quarterly Rebalance

During the quarterly rebalances, new issues including IPOs and spinoffs may be added to the universe based on the guidelines established at the annual reconstitution. These shares must satisfy all the previously discussed trade history conditions. Other liquidity requirements are approximately 50% higher for universe inclusion off of the annual cycle. The free float requirement is 30% and median daily liquidity turnover thresholds are 12bps and 10bps for developed and emerging markets, respectively. Size requirements are similarly restrictive for new entrants. Company market capitalization must be at least two times the annual mid-cap company size threshold, and float adjusted market capitalization for a security must exceed the annual company size threshold for the mid-cap segment.

At quarterly rebalances, current index members are not excluded based on either company or security market capitalization, but they must maintain a 10% free float and satisfy all the trade history requirements. In addition, they must have sufficient trading activity; however, the median daily liquidity turnover requirements are approximately half of the annual levels at 3bp and 2bp daily for developed and emerging markets, respectively.

Current index members are not assigned to new size segments at quarterly rebalances. New index members are assigned to size segments based on the market capitalization thresholds established at the most recent annual reconstitution, as described on page 10.

Invesco Indexing Investable Bond Universe Methodology

Introduction

The following sections provide a detailed description of the processes associated with the construction and maintenance of the Invesco Indexing Investable (III) Bond Universe. The universe is a global collection of fixed income securities available to Invesco Indexing to support index construction. As the global fixed income markets are broad, diverse, and complex, each security within the III Bond Universe is categorized along well-known market dimensions including bond sector, coupon type, par amount outstanding, bond country assignment, market status, region, and credit rating. Indexes may be created from the III Bond Universe by screening on one or more of these classifications, potentially incorporating additional security selection rules, and by applying a weighting scheme to the resulting subset of securities to achieve particular investment objectives. This taxonomy leads to an index creation process that is highly modular, customizable, and flexible.

The sections that follow describe these classification schemes. A discussion of bond sector classifications serves as the starting point. Next, the security-level characteristics required for eligibility within the III Bond Universe are detailed. From there, a discussion of bond country assignment and region follows. Lastly, the credit rating approach used to designate securities as investment grade or high yield is discussed.

General Approach

The Invesco Indexing Investable Bond Universe is updated monthly. The monthly updates ensure the universe includes new securities that meet the eligibility criteria while eliminating those that fall outside the universe requirements. These monthly updates are collectively referred to as "Rebalance Months". During the June rebalance, countries are selected into the universe and identified as emerging or developed based on the results of the December country review (see Country Review on page 4). During all other monthly rebalances, any newly eligible bond for which its country's market status was not available as of the most recent June will receive a market status assignment of emerging market.

During monthly rebalances, fixed income securities are added to the III Bond Universe if they meet all inclusion requirements (see Eligible Securities on page 15). Current universe constituents are removed if they no longer meet these requirements. The monthly rebalance also provides an update to existing III Bond Universe constituents, when applicable, including updates to characteristics such as amount outstanding or credit rating. The table below summarizes this process.

Update	Timing	Actions
Monthly rebalance	Each calendar month-end	• Country selection • Security addition/removal and update

Bond Sectors

Within the III Bond Universe, categorization occurs based on the type of fixed income security. Bonds with similar characteristics are grouped into categories and assigned a bond sector based on these underlying similarities. The Sovereign, Government-related, Corporate, Securitized and Municipal (Tax-Exempt) sectors are included in the III Bond Universe. The sector and sub-sector classification scheme used in the III Bond Universe is detailed below.

Sector	Sub-Sector			
Sovereign	Foreign Sovereign			
	Treasury			
Government-Related	Agency			
	Local Authority/Municipal (Taxable)			
	Supranational			
Corporate	Basic Materials	Energy	Industrials	Institutions, Associations & Organizations
	Consumer Cyclicals	Financials	Real Estate	Utilities
	Consumer Non-Cyclicals	Healthcare	Technology	
Securitized	Asset-Backed Securities (ABS)			
	Commercial Mortgage-Backed Securities (CMBS)			
	Covered Bonds			
	Mortgage-Backed Securities (MBS)			
Municipal (Tax-Exempt)	Double Barrel			
	General Obligation			
	Revenue			

Sovereign: The Sovereign sector is comprised of securities issued by a country's central government. Two sub-sectors within the Sovereign sector are:

- **Foreign Sovereign**: debt issued by an independent central government denominated in a non-local currency
- **Treasury**: debt issued by an independent central government denominated in the local currency

Government-Related: The Government-Related sector is comprised of issuers with sub-sovereign affiliations. Three sub-sectors within the Government-Related sector are:

- **Agency**: debt issued by entities associated with implementing policy on behalf of a country's central government
- **Local Authority/Municipal (Taxable)**: taxable debt issued by a local authority or political division
- **Supranational**: debt issued by international agencies

Corporate: The Corporate sector includes debt issued by corporations in secured and unsecured format. There are 11 sub-sectors within the Corporate sector representing different economic industries.

Bond Sectors (continued)

Securitized: The Securitized sector includes debt collateralized by underlying pools of assets with similar characteristics. There are four sub-sectors within the Securitized sector:

- **Asset-Backed Securities (ABS):** debt backed by pools of underlying assets such as credit card receivables, auto loans or student loans with similar characteristics used to pay both principal and interest
- **Commercial Mortgage-Backed Securities (CMBS):** securities backed by pools of commercial mortgage loans with similar characteristics used to pay both principal and interest
- **Covered Bonds:** debt secured by a ring-fenced pool of assets on an issuer's balance sheet
- **Mortgage-Backed Securities (MBS):** passthrough securities backed by pools of US Agency-backed residential mortgage loans with similar characteristics used to pay both principal and interest

Municipal (Tax-Exempt): The Municipal (Tax-Exempt) sector includes tax-exempt debt issued by local authorities or political divisions. There are three sub-sectors within the Municipal (Tax-Exempt) sector:

- **Double Barrel:** bonds backed by both the full faith, credit, and taxing power of the issuer and a pre-defined revenue source or project
- **General Obligation:** bonds backed by the credit of the issuer, not a defined revenue stream or project
- **Revenue:** bonds backed by specified revenue generating projects as a funding source

Eligible Securities

Securities eligible for the III Bond Universe must meet the following criteria. These criteria seek to ensure that the universe encompasses the full global bond opportunity set. Most requirements apply to all bond sectors. However, several criteria, such as those for asset-backed securities (ABS), mortgage-backed securities (MBS), commercial mortgage-backed securities (CMBS), and tax-exempt municipal securities, are particular to those bond types.

Coupon Type

For all bonds except ABS, MBS, CMBS, and tax-exempt municipals, all coupon types are allowed (including zero-coupon bonds). ABS, MBS, and CMBS coupons must be fixed rate or zero-coupon. Tax-exempt municipal security coupons must be fixed rate. Zero-coupon bonds are ineligible for tax-exempt municipal securities.

Placement Type

Private placements are excluded from the universe, except for 144A and Regulation S (Reg S) bonds. For tax-exempt municipal securities, 144A and Reg S bonds are not eligible.

Amount Outstanding

All securities except ABS, CMBS, and MBS are required to have a minimum par amount outstanding of USD 10 mil (or equivalent) to be eligible for inclusion in the universe. ABS and CMBS must have an original deal size greater than or equal to USD 300 mil, with 10% or more of the original deal size still outstanding. Individual senior tranches must have USD 50 mil or more outstanding, while USD 10 mil or more outstanding is required for mezzanine and subordinated tranches. Generic MBS coupons must have USD 5 bil or more outstanding. Each MBS cohort must have USD 300 mil or more outstanding.

Credit Ratings

For all bonds except ABS, CMBS, and tax-exempt municipals, there are no ratings restrictions. Within the securitized sector, ABS and CMBS bonds must be rated investment grade (as defined in the Credit Rating section on page 20) to be eligible for inclusion in the universe. Tax-exempt municipal securities' highest credit rating must be investment grade to be eligible for inclusion.

Maturity

Securities are required to have time remaining until maturity to be eligible for inclusion in the universe. ABS and CMBS must have a final maturity greater than or equal to one year and remaining time to last expected cash flow of greater than or equal to one month. MBS bonds must have a weighted average life (WAL) greater than or equal to one year. For tax-exempt municipal bonds, the security's maturity must be greater than the end of the current month.

Pricing Availability

All securities must have pricing available, otherwise they are excluded from the III Bond Universe.

Currency

There are no currency restrictions within the III Bond Universe, except for ABS, CMBS and MBS within the securitized sector and tax-exempt municipal securities, all of which must be denominated in US dollars.

Taxation

All eligible tax-exempt municipal securities must be exempt from US federal taxes and must not be subject to the Alternative Minimum Tax (AMT).

Eligible Securities (continued)

Exclusions
For ABS, interest-only (IO), principal-only (PO), re-securitized and Agency deals are excluded. For CMBS, IO, PO and re-securitized deals are excluded. For MBS, IO, balloon payment, mobile home, graduated payment, and quarter coupon fixed rate mortgages are excluded. For tax-exempt municipal security types, defaulted, 3a3 commercial paper, and securities from the housing or tobacco sectors are excluded.

MBS Specific Requirements
Only passthrough mortgage securities issued by the US Agencies Government National Mortgage Association (Ginnie Mae), Federal National Mortgage Association (Fannie Mae), and Federal Home Loan Mortgage Corporation (Freddie Mac) are eligible for inclusion.

Please see Appendix 3: III Bond Universe Eligibility Requirements on page 25 for a summary of the eligibility requirements.

Country Assignment

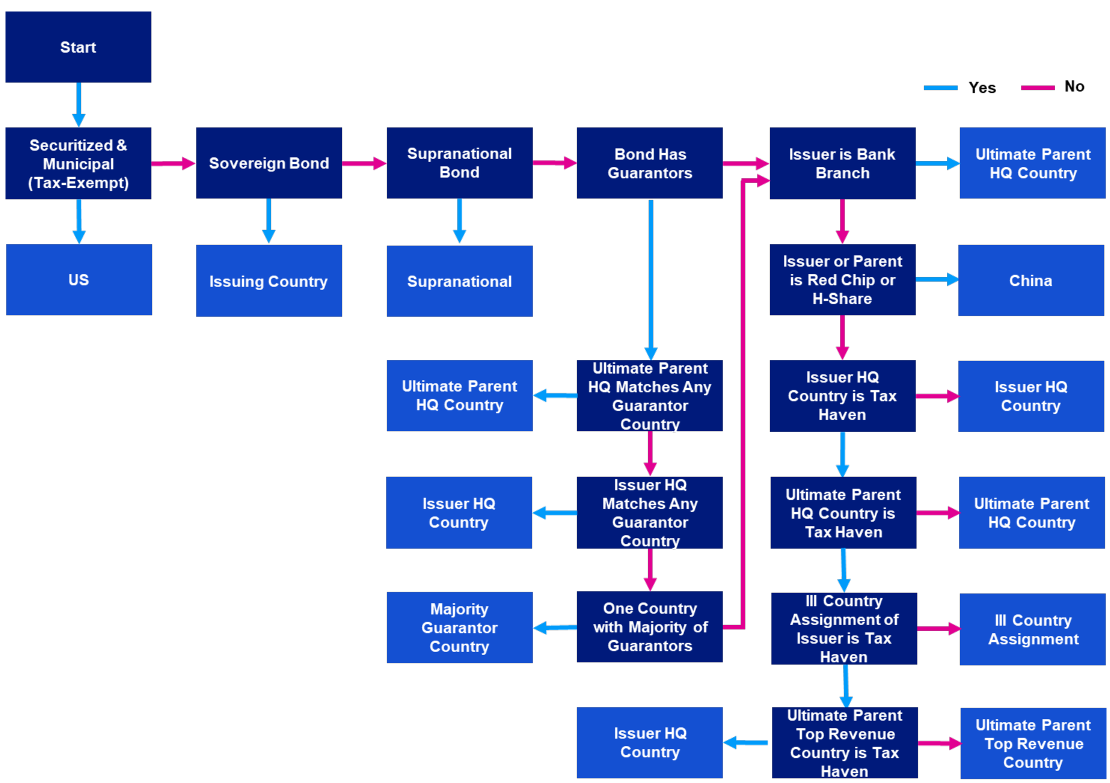
Once bonds eligible for the III Bond Universe have been selected, country designations are applied to these fixed income securities. Other than for tax-exempt municipal, sovereign, or supranational bonds, the primary considerations used to determine a bond's country assignment are the guarantor(s) of a bond (if the security has a guarantor), the issuer's country of headquarters (HQ), and the ultimate parent's country of headquarters.

First, securitized and tax-exempt municipal bonds are assigned to the United States. Sovereign bonds are assigned to the issuing country and supranational bonds are assigned as supranational.

For securities without a guarantor, if an issuer is a bank branch, the ultimate parent's HQ country is assigned. If an issuer or its parent is a Red Chip or H-Share company, China is assigned. If the issuer's HQ country is not a tax haven, that country is assigned. If the issuer's ultimate parent's HQ country is not a tax haven, that country is assigned. If the III Equity Universe Country assignment[4] of the issuer is not a tax haven, that country is assigned. If the country from which the ultimate parent earns the most revenue (ultimate parent top revenue country) is not a tax haven, that country is used. Otherwise, the issuer's HQ country is used.

For securities with a guarantor, those guarantors are first assigned to a country using the process described in the preceding paragraph. Those guarantors that otherwise would be assigned to tax havens are removed from the steps that follow[5]. First, if the ultimate parent's HQ matches any of the guarantors' assigned countries, the ultimate parent's HQ is used. If not, and the issuer's HQ country matches any of the guarantors' assigned countries, the issuer's HQ country is used. Otherwise, if there is simply one country where most of the guarantors are assigned, that country is used. If not, the security is treated as if it does not have a guarantor. The diagram that follows depicts the bond country assignment logic. For government-related bonds (excluding supranationals), country of domicile is used in place of headquarters.

Country Assignment Decision Tree



[4] See Country Assignment section of the III Equity Universe Methodology on page 7

[5] If a security's guarantors are all assigned to tax havens, the bond will be treated as if it has no guarantors

Region Classification

Once countries are classified, they are assigned into one of four Invesco Indexing (II) Geographic Regions: Americas, Asia Pacific, Europe, and Middle East & Africa. Countries are further classified into one of seven II Economic Regions: Developed Americas, Emerging Americas, Developed Asia Pacific, Emerging Asia Pacific, Developed Europe, Emerging Europe, and Middle East & Africa. As of the document's publication date, the countries included in these regions are described in the table below.

Americas	Asia Pacific
Developed	Emerging
Canada	Bangladesh
United States	Cambodia
Emerging	China
Argentina	India
Aruba	Indonesia
Bahamas	Kazakhstan
Barbados	Laos
Belize	Macau
Bermuda	Malaysia
Bolivia	Maldives
Brazil	Mongolia
British Virgin Islands	Pakistan
Cayman Islands	Papua New Guinea
Chile	Philippines
Colombia	Sri Lanka
Mexico	Taiwan
Peru	Tajikistan
Puerto Rico	Thailand
San Marino	Uzbekistan
Suriname	Vietnam
Trinidad and Tobago	Europe
Uruguay	Developed
Venezuela	Austria
Asia Pacific	Belgium
Developed	Denmark
Australia	Finland
Hong Kong	France
Japan	Germany
New Zealand	Ireland
Singapore	Italy
South Korea	Luxembourg
	Netherlands
	Norway
	Portugal
	Spain
	Sweden
	Switzerland
	United Kingdom

Region Classification (continued)

Europe	Middle East & Africa
Emerging	**Developed**
Aland Islands	Israel
Albania	**Emerging**
Andorra	Angola
Armenia	Bahrain
Azerbaijan	Benin
Bosnia and Herzegovina	Botswana
Bulgaria	Cameroon
Croatia	Congo (Rep. of)
Czech Republic	Cyprus
Estonia	Egypt
Faroe Islands	Ethiopia
Georgia	Gabon
Gibraltar	Ghana
Greece	Iraq
Hungary	Ivory Coast
Iceland	Jordan
Latvia	Kenya
Liechtenstein	Kuwait
Lithuania	Lebanon
Macedonia	Liberia
Malta	Mauritius
Moldova	Morocco
Monaco	Namibia
Montenegro	Nigeria
Poland	Oman
Romania	Qatar
Serbia	Rwanda
Slovakia	Saudi Arabia
Slovenia	Senegal
Ukraine	Seychelles
	South Africa
	Tanzania
	Togo
	Tunisia
	Turkey
	Uganda
	United Arab Emirates
	Zambia

Credit Rating

Three major rating agencies' credit ratings are used within the III Bond Universe: Moody's Corporation (Moody's), Standard & Poor's (S&P), and Fitch Ratings (Fitch). A security's credit rating is an average of the available ratings from these three agencies.

Individual rating agency letter ratings are assigned a numerical value based on the conversion table below, and a simple average is calculated. The simple average uses only those ratings that are available (one or two ratings in cases where less than three are available). This unrounded numerical average is then used to determine a security's credit rating based on the classification ranges below. For example, a bond with an unrounded average numerical rating of 672 would receive a letter rating of BBB. At the same time, a bond with an unrounded average rating of 676 would be BBB+.

Investment grade bonds are defined as any bond with an average unrounded numerical credit rating greater than 655. High yield bonds are defined as any bond with an average unrounded numerical credit rating less than or equal to 655 and greater than 545. Bonds rated 545 or below are considered in default.

All bonds in the III Bond Universe use the average bond level rating as described above. However, in the case of local currency sovereign bonds (Treasuries), the average long-term local currency sovereign debt (issuer-level) rating is used, and if unavailable, the average bond rating. In the case of foreign currency sovereign bonds (Foreign Sovereign), the average long-term foreign currency sovereign debt (issuer-level) rating is used, and if unavailable, the average bond rating.

Credit Rating Conversion Table

	S&P	MOODY'S	FITCH	VALUE	GROUP	UNROUNDED AVG. RATING CLASSIFICATON RANGE
INVESTMENT GRADE	AAA	Aaa	AAA	750	AAA	AAA > 745
	AA+	Aa1	AA+	740	AA	735 < AA+ ≤ 745
	AA	Aa2	AA	730		725 < AA ≤ 735
	AA-	Aa3	AA-	720		715 < AA- ≤ 725
	A+	A1	A+	710	A	705 < A+ ≤ 715
	A	A2	A	700		695 < A ≤ 705
	A-	A3	A-	690		685 < A- ≤ 695
	BBB+	Baa1	BBB+	680	BBB	675 < BBB+ ≤ 685
	BBB	Baa2	BBB	670		665 < BBB ≤ 675
	BBB-	Baa3	BBB-	660		655 < BBB- ≤ 665
HIGH YIELD	BB+	Ba1	BB+	650	BB	645 < BB+ ≤ 655
	BB	Ba2	BB	640		635 < BB ≤ 645
	BB-	Ba3	BB-	630		625 < BB- ≤ 635
	B+	B1	B+	620	B	615 < B+ ≤ 625
	B	B2	B	610		605 < B ≤ 615
	B-	B3	B-	600		595 < B- ≤ 605
	CCC+	Caa1	CCC+	590	CCC	585 < CCC+ ≤ 595
	CCC	Caa2	CCC	580		575 < CCC ≤ 585
	CCC-	Caa3	CCC-	570		565 < CCC- ≤ 575
	CC	Ca	CC	560	CC	555 < CC ≤ 565
	C	C	C	550	C	545 < C ≤ 555
DEFAULTED	D		D	540		D ≤ 545

Governance

The construction of the III Equity Universe and the III Bond Universe is managed by the Index Review Team (IRT). The IRT consists solely of members of Invesco Indexing. The IRT meets at least annually, as appropriate, to review and revise index related methodologies described in this document. All changes to the universe are subject to the approval of the IRT, and the IRT may make adjustments to the universe at its discretion when such changes are deemed reasonable.

Changes to III Universe

The following has been modified and is effective at the close of March 9, 2022:

Country Review

- Russia removed as an eligible country from the III Equity Universe

The following has been modified and is effective at the close of March 31, 2022:

Region Classification

- Russia removed as an eligible country from the III Bond Universe

Appendix

Appendix 1

Free Float and Foreign Ownership Limits

Free float for each security in the III Equity Universe is calculated to determine the shares available in the public equity market by international investors. The shares in the following cases are considered unavailable to the public.

- Foreign ownership limits (FOL): limits imposed by a government or company on a proportion of a security's shares outstanding available for ownership by foreign investors.

- Strategic share ownership: Shares held by certain shareholders whose investment strategy and purpose limit their ability or desire to sell the shares within a short horizon. These include shares owned by employee stock ownership plans, governments, holding companies, insiders, company cross holdings, subsidiaries, and venture capital or private equity firms.

Let non-FOL free float be defined as total shares outstanding less strategic share ownership. Then, free float is calculated as follows:

- If foreign ownership limits exist, then free float = min (FOL - strategic foreign owners, non-FOL free float)

- Otherwise, free float = non-FOL free float

Appendix 2

Stock Exchanges Covered by the III Equity Universe

Exchange	Country
Abu Dhabi	United Arab Emirates
ASX	Australia
Athens	Greece
BSE India	India
Budapest	Hungary
CBOE BZX	United States
Colombia	Colombia
Dubai	United Arab Emirates
Egyptian	Egypt
Euronext Amsterdam	Netherlands
Euronext Brussels	Belgium
Euronext Dublin	Ireland
Euronext Lisbon	Portugal
Euronext Paris	France
Hanoi	Vietnam
Ho Chi Minh City	Vietnam
Hong Kong	Hong Kong
Indonesia	Indonesia
Istanbul	Turkey
JASDAQ	Japan
JSE	South Africa
Korea	South Korea
Kuwait	Kuwait
Lima	Peru
London	United Kingdom
Madrid	Spain
Malaysia	Malaysia
Mexico	Mexico

Exchange (continued)	Country
Milan	Italy
NASDAQ	United States
New Zealand	New Zealand
NYSE	United States
NYSE American	United States
OMX Nordic Copenhagen	Denmark
OMX Nordic Helsinki	Finland
OMX Nordic Stockholm	Sweden
Oslo	Norway
Philippines	Philippines
Prague	Czech Republic
Qatar	Qatar
Santiago	Chile
Sao Paulo	Brazil
Sapporo	Japan
Saudi	Saudi Arabia
Singapore	Singapore
SIX Swiss	Switzerland
Taipei	Taiwan
Taiwan	Taiwan
Tel Aviv	Israel
Thailand	Thailand
Tokyo	Japan
Toronto	Canada
TSX Venture	Canada
Vienna	Austria
Warsaw	Poland
XETRA	Germany

As of March, 2022

Appendix 3

III Bond Universe Eligibility Requirements

<table>
<tr><th>Requirement</th><th>Sovereign</th><th>Government-Related</th><th>Corporate</th><th>Securitized</th><th>Municipal (Tax-Exempt)</th></tr>
<tr><td>Coupon Type</td><td colspan="3">No restriction</td><td>Fixed Rate: (ABS, MBS, CMBS)
Covered: No restriction</td><td>Fixed Rate and > 0</td></tr>
<tr><td>Placement Type</td><td colspan="4">Private placements excluded except 144A/Reg S</td><td>All private placements excluded</td></tr>
<tr><td>Amount Outstanding</td><td colspan="3">USD 10 mil or equivalent</td><td>ABS and CMBS:
• Original deal size: ≥ USD 300 mil
• Current deal size: ≥10% of original
• Current tranche size: ≥USD 50 mil for senior, ≥USD 10 mil for mezzanine and subordinated

MBS:
• Each generic coupon: ≥USD 5 bil
• Each cohort:
≥ USD 300 mil

Covered:
• USD 10 mil or equivalent</td><td>USD 10 mil</td></tr>
<tr><td>Credit Ratings</td><td colspan="3">No restriction</td><td>ABS and CMBS: Investment Grade

Covered: No restriction</td><td>Highest rating: Investment Grade</td></tr>
<tr><td>Maturity</td><td colspan="3">Time remaining to maturity >0</td><td>ABS and CMBS:
• ≥ 1 yr to final maturity
• ≥ 1 month to expected last cash flow

MBS:
• ≥ 1 yr WAL

Covered:
• Time remaining to maturity >0</td><td>Greater than current month end</td></tr>
<tr><td>Pricing Availability</td><td colspan="5">Pricing must be available</td></tr>
<tr><td>Currency</td><td colspan="3">No restriction</td><td>ABS, CMBS, MBS: USD

Covered: No restriction</td><td>USD</td></tr>
<tr><td>Taxation</td><td colspan="4">No restriction</td><td>Exempt from US federal taxes, not subject to AMT</td></tr>
<tr><td>Exclusions</td><td colspan="3">No restriction</td><td>ABS:
• IO, PO, re-securitized and Agency deals

CMBS:
• IO, PO and re-securitized deals

MBS:
• IO, balloon payment, mobile home, graduated payment, and quarter coupon fixed rate mortgages

Covered
• No restriction</td><td>Defaulted, 3a3 commercial paper, securities from the housing or tobacco sectors</td></tr>
<tr><td>MBS Specific</td><td colspan="3">-</td><td>Only passthrough mortgage securities issued by US Agencies (Ginnie Mae, Fannie Mae, Freddie Mac) are eligible</td><td>-</td></tr>
</table>