



FTSE Fixed Income Country Classification Process



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Introduction

A distinguishing feature of global multi-currency fixed income benchmarks is their approach to local market inclusion. There are a number of dimensions across which global debt markets can be evaluated to determine how they are represented as peer groups in broad-based benchmarks. These can include market size, credit rating, asset type, designation as an emerging or developed market, and degree of market accessibility for foreign investors.

Since 2003, FTSE Russell has maintained an evidence-driven equity country classification framework, which has been used by investors to assess the eligibility of equity markets across the full spectrum of country classifications, spanning from frontier through emerging to developed market status. To enhance the foundation of our benchmarking approach, FTSE Russell has implemented a similar robust and process-oriented framework for fixed-rate, local currency government markets. It assigns a Market Accessibility Level based on the criteria and minimum requirements outlined in this document. The transparent nature of the assignment of these accessibility levels allows engagement with central banks and regulators in those countries where the market is being considered for potential reclassification, and provides portfolio managers and asset allocators with a clear view of expected future index evolution. The classification process itself is designed to be benchmark agnostic; its output can be applied in the construction of both flagship and bespoke benchmarks.

Our goal as an index provider is to offer index users and stakeholders with clarity and transparency into the country classifications that underpin our benchmark construction for both fixed income and equity markets, while acknowledging and preserving the clear and important nuances between the two asset classes.

Background¹

Historically, inclusion of local markets within global fixed income multi-currency government benchmarks, such as the FTSE World Government Bond Index (WGBI), has been based on both objective (market size and credit rating) and relatively subjective (barriers-to-entry) criteria. To be considered for index inclusion, a local currency government debt market is required to first meet a series of index criteria that are designed to assess the liquidity and credit quality of candidate countries based on easily observable and commonly used metrics. An assessment of whether barriers-to-entry for foreign investors exist would subsequently take place to evaluate the eligibility of new markets, with ongoing monitoring of existing markets for any significant deterioration in accessibility. Market inclusion in dedicated fixed income Emerging Markets (EM) benchmarks also requires that a local currency market be classified as emerging under a given index provider's EM definition.

To add transparency to the barriers-to-entry assessment process, FTSE Russell has established a robust and evidence-driven country classification framework, which includes assignment of a Market Accessibility Level for fixed-rate, local currency government bond markets. The new classification process incorporates feedback gathered through a market consultation conducted in 2018 and is maintained through the FTSE Russell governance process. Effective March 30, 2019, Market Accessibility Levels will replace existing barriers-to-entry inclusion criterion in the methodology of the flagship FTSE World Government Bond Index (WGBI) and FTSE Emerging Markets Government Bond Index (EMGBI), and indexes that derive their membership from them. They will also be available for use in custom indexes. Use of Market Accessibility Levels as described in this document applies exclusively to fixed-rate, local currency nominal government bond markets tracked by FTSE indexes. We intend to expand this framework to account for additional fixed income asset types, such as the global inflation-linked government bond market tracked by the FTSE World Government Inflation-Linked Securities Index (WorldILSI) and address the inclusion of other asset types into broad-based, multi-currency and multi-sector indexes, such as the FTSE World Broad Investment-Grade Bond Index (WorldBIG®).

FTSE Fixed Income Country Classification Approach

The FTSE fixed income country classification process provides the framework for local market entry and exit within our benchmarks. It includes the following elements:

- **Market Accessibility Levels** calibrated for a super-set of fixed-rate, local currency government bond markets. Accessibility is measured across four dimensions: Market, Macroeconomic and Regulatory Environment; Foreign Exchange Market Structure; Bond Market Structure; and Global Settlement and Custody. These levels are designed for use in the inclusion criteria of flagship FTSE multi-currency government benchmarks and in custom indexes.
- A **Watch List** of fixed income local markets that are on the cusp of meeting the criteria for either a higher or lower Market Accessibility Level.
- An **annual schedule for determining country classification** and Watch List composition culminating in country classification changes being reviewed each September.
- **Governance Oversight** by the FTSE Russell Regional Fixed Income Advisory Committees, the FTSE Russell Country Classification Advisory Committee, the FTSE Russell Policy Advisory Board and the FTSE Russell Product Governance Board.
- **Synchronization of the application of objective market inclusion criteria** (market size and credit rating) for flagship FTSE fixed income benchmarks to the annual cycle of the Market Accessibility Level review.
- Annual review and publication of the FTSE fixed income **emerging and developed market classifications**.

Further details of these elements are provided in the remainder of this document.

¹ FTSE Russell also maintains a country classification framework for its global equity indexes, which has a concurrent review cycle to the fixed income country classification process. We believe important distinctions between these two asset classes merit a tailored approach for each. Please see Appendix 1 for further details.

Review Cycle and Mechanisms

Market Accessibility Levels are determined by FTSE Russell via a predefined, rigorous governance process whereby index users and market practitioners provide feedback on their assessment of a local market's fulfillment of the stated criteria outlined in this document. Relative market accessibility is reviewed on an annual basis each September, along with changes in market eligibility due to objective criteria (market size and credit rating upgrades), and emerging and developed market designations. External stakeholder-led advisory committees ensure that the criteria used to determine country classification meet the needs of global investors and are evaluated objectively. Feedback gathered through these channels is used to assess whether a local market's accessibility level warrants adjustment if there is a failure to meet the existing thresholds or if there are material changes to the local investment conditions that merit a higher value.² These external committees include:

- **Regional Fixed Income Advisory Committees** - Comprised of senior market participants in the US, Canada, EMEA and Asia Pacific who are representative of the appropriate sectors of the investment community. The regional committees comment on markets as an international investor.
- **Country Classification Advisory Committees** - Comprised of market practitioners with technical expertise in trading, portfolio management, and custody who are able to provide first-hand experience of each of these areas.
- **Policy Advisory Board** - The most senior of FTSE Russell's external advisory committees drawing its membership from senior personnel at investment management companies, investment consultants and asset owners. The FTSE Russell Policy Advisory Board ensures that proposals for classification changes are consistent with the perceptions of seasoned investors.

FTSE Russell also consults the broader market on changes to methodology to ensure that the indexes continue to meet investors' requirements, and are representative of the investment choice-set they are meant to track. The proposals set out in formal consultation documents are put forward in order to gather market feedback, and may or may not result in changes to FTSE Russell methodologies. Ultimate decision making is taken by FTSE Russell with oversight provided by the internal FTSE Russell Product Governance Board.

The Watch List

FTSE Russell maintains a Watch List of local fixed income government bond markets that are being considered for potential reclassification of their Market Accessibility Level for either failing to meet the accessibility thresholds of their existing level or on the cusp of meeting the thresholds for a higher level. Inclusion of a market on the Watch List signals our intent to engage with governments, central banks and regulators to address specific feedback from investors on the fulfilment of the criteria for the proposed accessibility level. It also provides transparency for index users into the future evolution of our benchmarks. In the case of a market disruption event (i.e., the introduction of prohibitive capital controls), FTSE Russell will reference its Statement of Principles to determine whether an off-cycle review of Market Accessibility Levels should be triggered.

Following the implementation of the FTSE fixed income country classification framework, an inaugural March 2019 review and assignment of Market Accessibility Levels will take place, with the annual cycle formally commencing in September 2019. A Watch List of markets whose accessibility levels will be considered at the next review will be made available on the FTSE Russell website.

² Prior to March 30, 2019, market eligibility for both the FTSE World Government Bond Index (WGBI) and FTSE Emerging Markets Government Bond Index (EMGBI) was reviewed on a continual basis. Once a market met all of the requirements, including both objective criteria and market accessibility thresholds, an announcement would be made that this market is eligible for inclusion into the index. If it continued to meet all the requirements for three consecutive months after the announcement, the market would join the index at the end of the three months that followed.

Communication

Following the September meeting of the FTSE Russell Product Governance Board, Market Accessibility Level reclassification decisions and Watch List changes are formally communicated to the countries affected, together with the rationale as evidenced by their fulfillment of the criteria. Reclassification and Watch List decisions are subsequently published in a public notice along with the timetable for their implementation. Any resulting benchmark changes are also announced alongside changes to Market Accessibility Levels. The notice period between announcement and implementation of index inclusion changes is communicated to the market to allow for sufficient lead time for clients.

The fixed income country classification process also allows for an interim update each March to the Watch List composition, and communication to index users of the specific reforms or improvements to the investment conditions for foreigner investors that are required for reclassification to a higher level or continued status at a current level in the event of a deterioration of conditions. Therefore, a market must be on the Watch List for a minimum of six months before a change to its Market Accessibility Level can be made.

Determination of Market Accessibility Levels

Market Accessibility Levels are central to the FTSE fixed income country classification framework and are assigned to each fixed-rate, local currency government market based on its fulfillment of a set of observable, transparent criteria. The countries that are tracked by our indexes are assigned a level of 0, 1 or 2, with 2 representing the highest level of accessibility. A Level 2 market is assumed to already satisfy the Level 1 minimums; a Level 1 market is assumed to already satisfy the Level 0 minimums. A value of 0 represents the lowest level of accessibility a debt market must satisfy to be tracked by a FTSE fixed income benchmark. The required degree to which a criterion must be met (full or partial) depends on the Market Accessibility Level. Assessment takes place across the same four broad dimensions for each accessibility level, however, it is possible that a given factor might not be applicable for all levels.

Initial Assignment and Incorporation into FTSE Fixed Income Indexes

Minimum Market Accessibility Levels will replace the barriers-to-entry criteria of the methodology for the flagship FTSE World Government Bond Index (WGBI) and FTSE Emerging Markets Government Bond Index (EMGBI), and indexes that explicitly derive their membership from them according to their methodologies.³ effective March 30, 2019. A local currency government debt market must have a value of 2 to satisfy the accessibility criteria for the WGBI and a value of at least 1 for the EMGBI. Countries measured by the EMGBI Additional Markets Index must have a value of 0.⁴

In implementing the country classification framework, FTSE Russell assigned a preliminary level of “2” to countries currently included in the WGBI and a preliminary level of “1” to countries currently included in the EMGBI, but not eligible for the WGBI (i.e., crossover markets were assigned a level of “2”). Local markets not tracked by these indexes, including candidate markets that may warrant introduction of FTSE Russell local currency government benchmark tracking, will have their preliminary level assigned in March 2019. The Market Accessibility Level review will commence its annual cycle in September 2019.

³ For avoidance of doubt, this includes the FTSE Debt Capacity Government Bond Index (DCWGBI), the FTSE World Government Bond Index – Japanese Investment Trust (WGBI-JIT), the FTSE Emerging Markets Government Bond Index – Japanese Investment Trust (EMGBI-JIT) and the FTSE MPF World Government Bond Index (MPF WGBI), as well as indexes that are sub- or super-sets of the WGBI or EMGBI, such as the FTSE World Broad Investment Grade Index (WorldBIG®).

⁴ Appendix 2 summarizes the market inclusion criteria of these indexes, effective March 30, 2019, which are a combination of objective elements and minimum Market Accessibility Levels. Appendix 3 provides a list of the fixed-rate, local currency government markets currently tracked by FTSE fixed income indexes.

Criteria and Assessment of Market Accessibility Levels

The market criteria which will be considered to assign a Market Accessibility Level are provided below:

1. Market, Macroeconomic and Regulatory Environment

- **Investment Restrictions** – Includes restrictions on investment into eligible assets or repatriation of principal and cash flows of eligible assets for foreign investors. Unduly discriminatory quotas or capital controls towards foreign investors should not be present. Access Level 2 markets should have no recent history of capital controls.
- **Sustainable Issuance and Debt Management Practices**– Formal commitment and/or clear evidence of a commitment from local debt management agents to sustain issuance and support primary and secondary market liquidity. Issuance will be assessed in absolute terms, and consideration may also be given to issuance at specific tenor points and across the yield curve. Debt management practices may be evidenced to support market liquidity through establishment of a primary dealer network, issuance patterns (i.e., regular issuance with published auction schedule, reopening of existing issuance), open market operations, etc.
- **Sound Regulatory Environment** – Evidence of consistency and perceived stability of regulations that impact fixed income investment conditions for foreign investors, and active monitoring / regulatory oversight of fixed income dealing landscape (either broker-dealers that operate in the over-the-counter markets or exchanges where fixed income instruments are traded). Consideration will also be given to transparency and communication of monetary policy.
- **Foreign Exchange Policy and Communication** – Consistent and transparent FX policy environment where policies and parameters are clearly communicated to market participants. Consideration will be given to the degree to which core FX and forward fixings are determined via open market mechanisms.
- **Taxation Regime** – Taxes, including those applied to FX, coupons and principal payments, should not unduly discriminate against foreign investors. Consideration will be given to the level of taxation, tax administration and ease of tax collection. Where tax exemptions for foreigners exist, the process should not be cumbersome and lengthy.
- **Registration Process for Foreign Investors** – Clear registration process with low latency where required for foreign investors.

2. Foreign Exchange Market Structure

- **FX Liquidity and Investability** – “Hedgeable” and tradable spot FX and availability of hedging instruments that lend themselves to the replicability of index currency return calculations which currently use one-month forward contracts. Liquidity is measured by daily turnover and compared to the Accessibility Level peer group. Consideration will also be given to the practicality of offshore and third party FX for foreign investors.
- **Currency Convertibility** – Local currency that can be bought and sold without overly prohibitive or costly government restrictions for purposes of investment activity. Consideration will be given to regulatory constraints on offshore and third party FX.
- **Currency Hedging** – Evidence of an established and developed onshore forward market or offshore non-deliverable forward (NDF) market. The degree to which a market with offshore / NDF meets this criterion is based on the divergence between the onshore forward and offshore NDF markets.

3. Bond Market Structure

- **Bond Liquidity** – Representative two-way pricing should be available from multiple sources. Relative liquidity will be measured against an Accessibility Level peer group and continually monitored given its dynamic nature. Metrics that may be used to assess the liquidity of a local market include, but are not limited to, average bid/offer spreads, trading volume, turnover ratios and depth of ownership (both foreign and domestic). Both contemporary and historic observations may be considered.
- **Transaction Costs** – The cost of investment for foreign investors should be reasonable and not prohibitive. The investment costs are assessed across the entire investment process, including but not limited to foreign exchange, dealing, clearing, custody and settlement. Fees that may be considered include, but are not limited to: costs related to transaction capture and processing; pre-matching and matching efforts; transaction reporting (including regulatory reporting); CSD charges; costs related to safekeeping; and asset servicing fees.
- **Fixed Income Dealing and Trading Landscape** – Presence of an over-the-counter (OTC) or exchange market(s) that facilitate efficient price discovery and stability. A well-organized, local network of trading relationships inclusive of multiple dealers for OTC markets or exchange trading should allow for easy trade execution by foreigners.
- **Bond Conventions** – Replicable bond conventions that support unconstrained calculation of returns and analytics. Reliable and accessible terms and conditions data, and supported analytics capabilities must be freely available for markets to be tracked by FTSE Russell.
- **Bond Pricing** – Availability of suitable pricing, which is representative and conforms to the local/appropriate convention (i.e. bid/mid or dirty). Reliable prices for index calculation purposes must be seamlessly available for markets to be tracked by FTSE Russell.

4. Global Settlement and Custody

- **Global Settlement** – Settlement via a global clearing agency is desirable, otherwise an equivalent seamless and frictionless solution that does not restrict local market access to foreign investors should be evident.
- **Availability of Delivery vs Payment (DvP)** – DvP should be available for Market Accessibility Levels 1 and 2.
- **Competitive Custody Market** – Multiple custody options from both global and domestic custodians should be available. Important considerations include, but are not limited to, account opening procedures without high operational hurdles (simple / unbureaucratic, low latency, pre-approval not required, etc.), the ability to block trade and allocate client holdings post trade, and the availability of omnibus account structures.

Table 1 summarizes the requirements that must be met for the classification of each Market Accessibility Level, which are defined as follows:

- A criterion marked with ■ indicates that it is **fully required** for a market to meet that accessibility threshold.
- A criterion marked with ◻ indicates that the criterion only needs to be **partially met** for a market to meet the overall accessibility threshold.
- A criterion marked with □ indicates that the criterion **does not apply** to the evaluation of the accessibility factor.

Table 1: Market Accessibility Value Requirements for Fixed-Rate, Local Currency Government Bond Markets

Market Accessibility Level	Level 2 (WGBI minimum)	Level 1 (EMGBI Minimum)	Level 0
Criteria/Factors	Minimum Requirements	Minimum Requirements	Minimum Requirements
1. Market, Macroeconomic and Regulatory Environment			
No Unduly Investment Restrictions on Foreign Investors	■	▣	□
Sustainable Issuance and Debt Management Practices Supportive of Market Liquidity	■	■	■
Sound Regulatory Environment	■	▣	□
Transparent FX Policy and Communication	■	▣	□
Taxation Regime not Burdensome to Foreigners	■	▣	□
Clear Registration Process for Foreign Investors	■	■	□
2. Foreign Exchange Market Structure			
Sufficient FX Liquidity and Investability	■	▣	□
No Overly Prohibitive Currency Restrictions for Investment Purposes	■	▣	□
Currency Hedging Onshore or Offshore using NDF with Limited Divergence to Onshore	■	▣	□
3. Bond Market Structure			
Sufficient Bond Liquidity in Primary and Secondary Markets	■	■	▣
Competitive Transaction Costs	■	▣	□
Efficient Fixed Income Dealing and Trading Landscape	■	■	▣
Bond Conventions that Support Index Calculations	■	■	■
Availability of Suitable Bond Pricing for Index Calculation	■	■	■
4. Global Settlement and Custody			
Settlement Accommodative of Global Investors	■	▣	□
Availability of DvP	■	■	□
Competitive Custody Market	■	▣	□

Application of Objective Index Inclusion Criteria

The FTSE fixed income country classification process also encompasses the manner in which objective criteria (market size and credit rating) and fixed income emerging and developed markets designations are assessed and applied to ensure a consistent approach to market inclusion. The objective index criteria outlined in methodology for the FTSE WGBI and FTSE EMGBI is evaluated on an annual basis, will be from March 30, 2019.⁵

Market Size

Market size is determined based on par amount outstanding as of the month end prior to the date of the September annual review. Only those bonds that would qualify for index inclusion based on other index rules (i.e., amount outstanding, time to maturity, coupon type, etc.) count towards market size for the purpose of index inclusion. Sub-one year-to-maturity and other fixed-rate, local currency bonds that do not meet minimum bond-level amount outstanding do not count towards total debt outstanding for market size assessment. Each Eurozone market must meet the market size criteria with its own eligible issues.

⁵ Prior to March 30, 2019, local market eligibility was reviewed on a continual basis with a three month notice period for entry and removal due to market s after a market started or failed to meet the stated thresholds.

The WGBI and EMGBI market size rules are provided below:

- To qualify for entry to the FTSE WGBI, the outstanding amount of a market's eligible issues must total at least USD 50 billion, EUR 40 billion and JPY 5 trillion of index eligible debt. When the outstanding amount of a market's eligible issues falls below half of the entry-level market size criteria (USD 25 billion, EUR 20 billion and JPY 2.5 trillion), it no longer meets the minimum market size.
- To be included in the FTSE EMGBI, the amount outstanding in a market's eligible issues must total at least USD 10 billion for the market to be considered eligible for inclusion. When the amount outstanding of a market's eligible issues falls below half of the entry-level market size criteria (USD 5 billion), it no longer meets the minimum market size.

Credit Rating

The credit rating for local currency government bond markets is based on the long term local currency debt rating assigned by Moody's Investors Service, Inc. ("Moody's") and Standard & Poor's Financial Services LLC ("S&P"). Newly eligible markets for credit rating changes are required to meet index criteria minimums both as of the September annual review date and at the time of inclusion. Markets downgraded to below the minimum index criteria will continue to exit the index at the next monthly rebalance.

The WGBI and EMGBI credit rating rules are provided below:

- To qualify for entry into the WGBI, a market must have a minimum credit quality of A- by S&P and A3 by Moody's. In the event that it is subsequently downgraded, a market will not exit until its credit rating fell below BBB- by S&P and Baa3 by Moody's.
- EMGBI countries must have a minimum rating of C by S&P and Ca by Moody's.

FTSE Fixed Income Emerging and Developed Designations

For purposes of inclusion in FTSE Emerging Markets hard and local currency fixed income benchmarks, a market is considered to be emerging if it defined by the IMF⁶ to be among "emerging and developing economies" or if it is defined by the World Bank⁷ to be among "low-income economies", "lower-middle-income economies" or "upper-middle-income economies. The WGBI is comprised of high quality, generally developed markets, but can and does have overlap with dedicated EM benchmarks, such as the EMGBI; markets that are eligible for both WGBI and EMGBI benchmarks are commonly referred to as "crossover markets".

Updates to the EM list are made on an annual basis each September based on updated data from the IMF and World Bank. The current list will be published to the FTSE Russell website.

Conclusion

The FTSE country classification process used for its equity indexes was introduced in 2003 and has evolved into a transparent and objective mechanism for classifying markets in a way that is designed to meet the ongoing needs of institutional investors. Our goal is to create a similar forward-looking, proactive and evolutionary framework that managers can depend on for efficiently managing global debt markets.

FTSE Russell welcomes the views of all stakeholders on the future evolution of its approach to ensure it exhibits thought leadership and meets their needs. Comments can be sent to committeesecretary@ftserussell.com.

⁶ <http://www.imf.org/external/ns/cs.aspx?id=28>

⁷ <http://data.worldbank.org/about/country-classifications/>

Appendix 1

The Distinctions between Fixed Income and Equity Country Classifications

In their simplest sense, benchmark families define peer groups: peer groups of investments by asset class (fixed income vs equities; government vs corporate); by industry (industrial vs financial); by country (developed vs emerging), and so on... with endless possible permutations thereafter. The method by which this grouping or classifying is achieved has been fundamental to the evolution of many established and widely used benchmarks, across asset classes.

The classification process for countries employed by FTSE Russell for global equity indexes, for example, is a transparent and evidence driven process, which ensures that country classification, is judged objectively and meets the needs of index users. At first glance, one could envisage the same rigorous and transparent criteria could also be applied to local markets represented by fixed income benchmarks. However doing so would ignore the important idiosyncrasies discussed below that warrant a more tailored approach to account for them.

- In the global equity index world, a clearly defined graduation pathway for individual countries to progress from frontier through emerging through to developed classification exists, with benchmark inclusion mutually exclusive. Conversely, in the design of global investment grade multi-currency fixed income benchmarks for global portfolios, credit quality tends to supersede formal emerging markets (EM) definitions creating what are commonly referred to as “crossover markets”. Benchmarks such as the WGBI are comprised of high quality, generally developed markets, but have overlap with dedicated EM benchmarks such as the EMGBI with inclusion of high-grade crossover markets such as Mexico. This is broadly an accepted feature of the fixed income market, which we believe merits preservation within a fixed income benchmark design.
- Within fixed income benchmarks, currency denomination of a security is used to determine local market inclusion and an issuer’s country of risk is used to determine inclusion in hard currency emerging markets and high yield indexes. The diversity of sub-asset classes represented by fixed income benchmarks can require assignment of different accessibility levels within a grouping of securities denominated in the same currency (i.e. fixed-rate treasury vs inflation-linked). Local market inclusion within broad-based multi-sector benchmarks, such as the FTSE World Broad Investment Grade Index (WorldBIG®), for example, will include considerations for which asset classes and sectors should be included once a currency becomes eligible. This is particularly relevant for smaller local currency markets and crossover markets where determinations must be made around whether investment grade corporate, quasi-sovereign and securitized issuance in a given local currency are appropriate for inclusion.
- Unlike equities, fixed income instruments are generally not exchange listed. This means the quality and sourcing of pricing can present challenges for certain markets and must be formally considered as part of the fixed income country classification framework.
- Fixed income sub-asset classes can exhibit specific idiosyncrasies which may mean recalibrating either the market size, credit quality or market accessibility criteria accordingly across distinct flagship multi-currency benchmarks. For example, central government issuance patterns of inflation-linked debt can vary greatly from its issuance of nominal debt. Similarly, the degree to which issuance exhibits exotic or non-standard conventions can vary across a single government issuer for these types of assets. Global high yield and EM hard currency markets are other examples where the factors considered as part of the country classification framework may warrant tailoring to asset-class specific conventions.

- Within fixed income, additional variables such as coverage of local bonds from international rating agencies and availability of a deep and vibrant derivatives market are also among variables important to foreign investors.

Despite these idiosyncrasies, there are many shared features in the country classification framework across equities and fixed income: a country's regulatory environment, foreign exchange market, and dealing landscape are just a few of the considerations that will apply to both frameworks (perhaps with a different outcome). Our goal as an index provider is to draw inspiration from the equity country classification process to create a transparent framework for fixed income index users, while at the same time acknowledging and preserving the clear and important differences between the two asset classes.

Appendix 2

Summary of flagship FTSE multi-currency fixed-rate government bond indexes inclusion criteria, incorporating the FTSE fixed income country classification framework, effective March 30, 2019.

	FTSE WGBI	FTSE EMGBI	FTSE EMGBI Additional Markets
Minimum Market Accessibility Level	2	1	0
EM vs DM Requirement	n/a	EM	EM
Minimum Credit Rating	A3 / A-	C	n/a
Minimum Market Size	USD 50 billion, EUR 40 billion, AND JPY 5 trillion	USD 10 billion	-

FTSE World Government Bond Index (WGBI) – A flagship measure of fixed-rate, local currency, investment-grade sovereign bonds. For inclusion in the WGBI, a market can be considered either developed or EM (according to FTSE's fixed income EM definition).

FTSE Emerging Markets Government Bond Index (EMGBI) – A flagship measure of fixed-rate, local currency emerging markets debt. Countries classified as developed are excluded by rule from the EMGBI.

FTSE Emerging Markets Government Bond Index Additional Markets – A measure of local currency emerging markets that are tracked by FTSE Russell, but do not meet the minimum requirements for inclusion to the EMGBI.

Minimum market accessibility levels will also be incorporated into the methodologies of indexes that are derived from these including the FTSE Debt Capacity Government Bond Index (DCWGBI), the FTSE World Government Bond Index – Japanese Investment Trust (WGBI-JIT), the FTSE Emerging Markets Government Bond Index – Japanese Investment Trust (EMGBI-JIT) and the FTSE MPF World Government Bond Index (MPF WGBI), as well as indexes that are sub- or super-sets of the WGBI or EMGBI, such as the FTSE World Broad Investment Grade Index (WorldBIG®).

As of March 30, 2019, the country classification process will not apply to the following regional local currency government indexes, such as the FTSE Asia Government Bond Index (AGBI) and FTSE Central and Eastern Europe, Middle East and Africa Government Bond Index (CEEMEAGBI). FTSE Russell intends to review the inclusion criteria and market inclusion of these benchmarks through the relevant FTSE Russell fixed income internal and external governance committee in the future.

Appendix 3

Fixed-rate, local currency government markets tracked by FTSE indexes as of December 2018.

Region	Country	Currency	EM vs DM Designation	Preliminary Accessibility Level	FTSE WGBI	FTSE WGBI Additional Markets	FTSE EMGBI	FTSE EMGBI Additional Markets	Regional Benchmarks *	Index Credit Rating	Market Size (USD bn)*
Americas	US	USD	Developed	2	•					AA+	7,981.2
	Canada	CAD	Developed	2	•					AAA	319.0
	Mexico	MXN	Emerging	2	•		•		•	A-	135.8
	Brazil	BRL	Emerging	1		•	•		•	BB-	100.0
	Chile	CLP	Emerging	1		•	•		•	AA-	30.9
	Colombia	COP	Emerging	1		•	•		•	BBB	54.2
	Peru	PEN	Emerging	1		•	•		•	A-	28.7
	EMEA	United Kingdom	GBP	Developed	2	•					AA
	Eurozone Markets*	EUR	Developed	2	•					AA-	5,919.7
	Denmark	DKK	Developed	2	•					AAA	75.4
	Norway	NOK	Developed	2	•					AAA	38.8
	Sweden	SEK	Developed	2	•					AAA	60.6
	Switzerland	CHF	Developed			•				AAA	19.0
	Poland	PLN	Developed	2	•		•		•	A	104.9
	South Africa	ZAR	Emerging	2	•		•		•	BBB-	107.8
	Greece	EUR	Developed			•				B+	36.3
	Portugal	EUR	Developed			•				BBB-	133.6
	Czech Republic	CZK	Developed			•			•	AA	40.0
	Israel	ILS	Developed			•			•	AA-	50.6
	Russia	RUB	Emerging	1		•	•		•	BBB	70.0
	Hungary	HUF	Emerging	1		•	•		•	BBB-	38.5
	Romania	RON	Emerging	1		•	•		•	BBB-	29.2
	Turkey	TRY	Emerging	1		•	•		•	BB-	57.9
APAC	Japan	JPY	Developed	2	•					A+	3,738.0
	Australia	AUD	Developed	2	•				•	AAA	331.5
	Singapore	SGD	Developed	2	•				•	AAA	66.2
	Malaysia	MYR	Emerging	2	•		•		•	A	78.7
	New Zealand	NZD	Developed			•			•	AA+	35.7
	South Korea	KRW	Developed			•			•	AA	468.1
	Hong Kong	HKD	Developed			•			•	AA+	11.1
	China Onshore	CNY	Emerging	1		•	•		•	A+	1,359.2
	Indonesia	IDR	Emerging	1		•	•		•	BBB-	119.3
	Philippines	PHP	Emerging	1		•	•		•	BBB	43.1
	India	INR	Emerging	0		•		•		BBB-	706.8
	Sri Lanka	LKR	Emerging	0		•		•		B	10.7
	Taiwan	TWD	Developed			•				AA-	116.1
	Thailand	THB	Emerging	1		•	•		•	A-	92.3

Source: FTSE Russell. Data are as of December 2018.

*As of December 2018, Eurozone markets eligible for the WGBI include: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Netherlands, and Spain.

* Regional benchmarks include the FTSE Asian Government Bond Index (AGBI), FTSE Asia Pacific Government Bond Index (APGBI), FTSE Central and Eastern Europe, Middle East, and Africa Government Bond Index (CEEMEAGBI), FTSE Latin America Government Bond Index (LATAMGBI).

*Market Size includes index eligible instruments only.

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