FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index

v1.5



Contents

Section 1 Introduction	3
Section 2 Management responsibilities	5
Section 3 FTSE Russell index policies	6
Section 4 Composition and design criteria	8
Appendix A Further information	11

Introduction

1. Introduction

1.1 FTSE Goldman Sachs US Investment-Grade Bond 10+ Years Index

- 1.2 The FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index tracks the performance of US Dollar-denominated investment-grade corporate debt. The index provides a broad representation of the US investment grade corporate bond market while excluding issuers with the lowest operating margin and highest leverage.
- 1.2.1 The index is created from the FTSE US Broad Investment-Grade Corporate Bond Index, which includes US and non-US corporate securities issued in registered form and bonds issued under rule 144A with registration rights. The universe includes the bonds with average life greater than or equal to 10 years and screens issuers based on amount outstanding and issuance to represent the more liquid portion of the market and by applying fundamental indicators. The bonds are then divided into two maturity buckets: 10 to 25 years and 25+ years. The weights of each maturity bucket are adjusted to match the weighted average effective duration of the bonds in the FTSE US Broad Investment-Grade Corporate Index with average life greater than or equal to 10 years. Within each maturity bucket, constituents are assigned weights in proportion to their market capitalization. Issuer weights are then capped at 5% for issuers with fundamental indicators and 3% for issuers where fundamental indicators are not observable.
- 1.2.2 The liquid universe is ranked within their respective industries based on fundamental indicators. Bonds from the lowest ranked 10% of issuers are excluded. The index contains bonds from the 90% of issuers with high operating margin and low leverage. The remaining bond subset, along with bonds of issuers that satisfy the size screening criteria but have neither fundamental indicator available are included in the final bond subset¹. Furthermore, a final issuer capping is performed to help manage the concentration risk. This document details the index design, composition and calculation methodology.

For more information on the FTSE US Broad Investment-Grade Corporate Bond Index, please see the FTSE Fixed Income Index Guide.

1.3 The FTSE Goldman Sachs US Investment-Grade Bond 10+ Years Index does not take account of ESG factors in its design.

1.4 FTSE Russell

FTSE Russell is a trading name of FTSE International Limited, Frank Russell Company, FTSE Global Debt Capital Markets Limited (and its subsidiaries FTSE Global Debt Capital Markets Inc. and FTSE Fixed Income Europe Limited), FTSE Fixed Income LLC, The Yield Book Inc. and Beyond Ratings.

FTSE Russell 3 of 12

¹ Issuers with neither fundamental indicator available, first included in the June 2018 index.

- 1.5 FTSE Russell hereby notifies users of the index that it is possible that factors, including external factors beyond the control of FTSE Russell, may necessitate changes to, or the cessation, of the index and therefore, any financial contracts or other financial instruments that reference the index or investment funds which use the index to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index.
- 1.5.1 Index users who choose to follow this index or to buy products that claim to follow this index should assess the merits of the index's rules-based methodology and take independent investment advice before investing their own or client funds. No liability whether as a result of negligence or otherwise is accepted by FTSE Russell or any members of the FTSE Russell Policy advisory board (or any person concerned with the preparation or publication of these Ground Rules) for any losses, damages, claims and expenses suffered by any person as a result of:
 - any reliance on these Ground Rules;
 - any inaccuracies in these Ground Rules;
 - any non-application or misapplication of the policies or procedures described in these Ground Rules;
 and/or
 - any inaccuracies in the compilation of the Index or any constituent data.

FTSE Russell 4 of 12

Management responsibilities

Management responsibilities

2.1 FTSE Fixed Income LLC (FTSE)

- 2.1.1 FTSE is the benchmark administrator of the index².
- 2.1.2 FTSE is responsible for the daily calculation, production and operation of the index series, and will:
 - maintain records of all the constituents;
 - be responsible for the addition and deletion of bonds and changes of nominal amounts, in accordance with the Ground Rules; and
 - disseminate the indices.

2.2 Amendments to these Ground Rules

- 2.2.1 These Ground Rules shall be subject to regular review (at least once a year) by FTSE Russell to ensure that they best reflect the aim of the index series. Any proposals for significant amendments to these Ground Rules will be subject to consultation with FTSE Russell advisory committees and other stakeholders if appropriate. The feedback from these consultations will be considered by the FTSE Russell index governance board before approval is granted.
- As provided for in the Statement of Principles for FTSE Russell Fixed Income Indices, where FTSE Russell determines that the Ground Rules are silent or do not specifically and unambiguously apply to the subject matter of any decision, any decision shall be based as far as practical on the Statement of Principles. After making any such determination, FTSE Russell shall advise the market of its decision at the earliest opportunity. Any such treatment will not be considered as an exception or change to the Ground Rules, or to set a precedent for future action, but FTSE Russell will consider whether the Ground Rules should subsequently be updated to provide greater clarity.

FTSE Russell 5 of 12

The term administrator is used in this document in the same sense as it is defined in Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (the European Benchmark Regulation) and The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019 (the UK Benchmark Regulation). FTSE Fixed Income LLC administers the index series in line with the third country transitional provisions contained within Article 51(5) of the European Benchmark Regulation and the third country transitional provisions as amended by Article 42(5) of the UK Benchmark Regulation.

FTSE Russell index policies

3. FTSE Russell index policies

These Ground Rules should be read in conjunction with the following policy documents, which can be accessed using the links below or by contacting fi.index@lseg.com. These policies are reviewed annually and any changes are approved by the FTSE Russell Index governance board.

3.1 Statement of Principles for FTSE Fixed Income Indices (the Statement of Principles)

Indices need to keep abreast of changing markets and the Ground Rules cannot anticipate every eventuality. Where the Ground Rules do not fully cover a specific event or development, FTSE Russell will determine

the appropriate treatment by reference to the Statement of Principles for FTSE Fixed Income Indices, which summarises the ethos underlying FTSE Russell's approach to index construction. The Statement of Principles is reviewed annually and any changes proposed by FTSE Russell are presented to the FTSE Russell Policy advisory board for discussion before approval by the FTSE Russell Index governance board.

The Statement of Principles for Fixed Income Indices can be accessed using the following link:

Statement of Principles Fixed Income Indices.pdf

3.2 Queries and Complaints

FTSE Russell's complaints procedure can be accessed using the following link:

Benchmark Determination Complaints Handling Policy.pdf

3.3 Recalculation Policy and Guidelines

The Recalculation Policy and Guidelines for Fixed Income Indices document is available from the FTSE Russell website using the link below or by contacting fi.index@lseg.com.

Fixed Income Recalculation Policy and Guidelines.pdf

3.4 Index Policy in the Event Clients are Unable to Trade a Market or a Security

3.4.1 Details of FTSE Russell's treatment can be accessed using the following link:

Index_Policy_in_the_Event_Clients_are_Unable_to_Trade_a_Market_or_a_Security.pdf

3.5 Policy for Benchmark Methodology Changes

Details of FTSE Russell's policy for making benchmark methodology changes can be accessed using the following link:

Policy for Benchmark Methodology Changes.pdf

FTSE Russell 6 of 12

FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index, v1.5, November 2022

3.6 FTSE Russell Governance Framework

3.6.1 To oversee its indices, FTSE Russell employs a governance framework that encompasses product, service and technology governance. The framework incorporates the London Stock Exchange Group's three lines of defence risk management framework and is designed to meet the requirements of the IOSCO Principles for Financial Benchmarks³, the European benchmark regulation⁴ and the UK benchmark regulation⁵. The FTSE Russell Governance Framework can be accessed using the following link:

FTSE Russell Governance Framework.pdf

FTSE Russell 7 of 12

³ IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013.

Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds.

The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019.

Composition and design criteria

4. Composition and design criteria

4.1 Figure one details the design criteria and calculation assumptions for the FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index.

Figure one: design criteria and calculation assumptions for the FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index

Currency	USD				
Coupon	Fixed rate, fixed-to-floating rate and zero coupon				
Minimum maturity	At least 10 years.				
	Fixed-to-floating rate bonds are removed one year prior to the fixed-to-floating rate start date.				
Minimum issue size and bond count	USD 250 million minimum amount outstanding per issue				
	Minimum two bonds per issuer				
Minimum credit quality	BBB- by S&P or Baa3 by Moody's				
Composition	US and non-US corporate securities issued in registered form and bonds issued under rule 144A with registration rights.				
	Convertibles, private placements and fixed-rate perpetual bonds are excluded.				
Redemption features	Bullet, sinking fund, putable, extendable or callable				
Weighting	Market capitalization, subject to capping and duration adjustments as described in reconstitution.				
Rebalancing	Once a month at the end of the month.				
Reconstitution	 Each month, after filtering for minimum issue size and bond count, securities are ranked, capped and weighted through an iterative process to make sure all criteria are met. Duration adjustment – bonds are divided into two maturity buckets based on weighted average life: 10 to 25 years and 25+ years. The weight of each maturity bucket is adjusted to match the weighted average effective duration of the FTSE US Broad Investment-Grade Corporate Index with average life greater than or equal to 10 years. Within each maturity bucket, constituents are assigned weights in proportion to their market capitalization. Issuer capping – issuer weights are capped at 5% for issuers with fundamental indicators and 3% for issuers where fundamental indicators are not observable. Fundamental screening and ranking – the bond universe is screened by two fundamental indicators reported by the issuers: improvement over the past year in (1) operating margin and (2) leverage, both determined quarterly at the end of February, May, August and November. Operating margin is measured by earnings before interest and taxes margin (EBIT margin), while leverage is measured by debt to enterprise value (debt to EV)⁶. The issuers are ranked within their respective industry (finance, industrial and utility) positively by operating margin and negatively by leverage, accounting for market capitalization to determine the percentile ranking. The percentile rankings of individual indicators are combined to calculate each issuer's composite rank. When only a single indicator is available, that single indicator will be used to calculate the issuer's composite rank. The issuers within the lowest 				

⁶ The source data for fundamental indicators uses Worldscope data from Refinitiv.

FTSE Russell 8 of 12

 The remaining universe, along with bonds that satisfy the size screening criteria but do not have fundamental indicators, are included in the final universe, in accordance with their market capitalization⁷.
5. Finally, the iterative process is repeated to meet criteria – market capitalization weights are duration-adjusted and issuer weights are capped at 5% for issuers with fundamental indicators and 3% for issuers where fundamental indicators are not observable.
6. For the non-quarter-end months, bonds that no longer meet the liquidity, rating or maturity requirements are removed from the index. Newly issued bonds from the qualified issuers of the most recent quarterly rebalancing are included. The monthly profiles will reflect the latest par amount and market value of all included bonds.
Screening utilizes pricing and amounts outstanding of the base index in order to reconstruct index holdings and weights.
5% for issuers with fundamental indicators.
3% for issuers where fundamental indicators are not observable.
Intra-month cash flows from interest and principal payments are not reinvested as part of monthly index total return calculations ⁸ .
Daily
Monthly: settlement is on the last calendar day of the month.
Daily: same-day settlement except if the last business day of the month is not the last calendar day of the month; then, settlement is on the last calendar day of the month.
Each month, the upcoming month's index constituents are fixed on the profile fixing date ⁹ . The profile fixing dates for each year are available on the website at www.yieldbook.com/m/indices .
Refinitiv mid-market pricing at 16:00 (New York)
August 31, 2009

4.2 Holiday calendar

4.2.1 The index is calculated Monday through Friday except Christmas Day (observed) and New Year's Day (observed). Each local market will observe its own holiday calendar: if a local market is on holiday, the closing prices used for that day will be the closing prices from the previous day.

4.3 Index quality

An index quality is assigned to each index bond as of profile fixing. The quality is first mapped to the Standard & Poor's Financial Services LLC (S&P) rating. If a bond is not rated by S&P but it is rated by Moody's Investors Service, Inc (Moody's), the S&P equivalent of the Moody's rating is assigned to the index quality. If a bond is rated by neither S&P nor Moody's, the bond is not assigned an index quality. If a bond is rated as investment grade by one rating agency and high yield by the other, the S&P equivalent of the investment-grade rating is assigned to the index quality. These ratings remain unchanged for the entire performance month.

4.4 Defaults

4.4.1 When an issuer defaults, is assigned a D rating by S&P regardless of whether that issuer has filed for bankruptcy protection or enters into chapter 7 or chapter 11 bankruptcy protection in the US (or equivalent in its local market), its bonds remain in the index until the end of the month. The bonds will be included in the calculation of the current month's average profile statistics of the index. The returns are calculated without coupon payment or accrued interest, where applicable.

FTSE Russell 9 of 12

Issuers with neither fundamental indicator available are first included in the June 2018 index.

⁸ Prior to November 1, 2022, reinvestment income was included in the total return calculation.

⁹ Fixing dates provide a clear reference point for index users to know in advance of any changes to the composition of the index for the upcoming month. On each fixing date, publically available securities information is used to determine index eligibility and indicative values for the following month's index profile.

¹⁰ Back-tested data from the base date up to and including May 29, 2020 was produced using pricing from Refinitiv 16:00 bid. From June 1, 2020 onwards the price source is Refinitiv 15:00 mid.

4.5 Return computation

4.5.1 Total returns are computed on the assumption that each security is purchased at the beginning of the period and sold at the end of the period. An issue's total rate of return is the percentage change in its total value over the measurement period (see figure four). The components of total return are price change, principal payments, coupon payments and accrued interest. The total returns use each individual security's beginning-of-period market value.

Figure four: total rate of return calculation methodology

Beginning-of-period value	-	(Beginning price + Beginning accrued) x Beginning par amount outstanding
End-of-period value	-	[(Ending price + Ending accrued) x (Beginning par amount outstanding – Principal payments)] + Coupon payments + Principal payments
Total rate of return (%)	-	[(End-of-period value/Beginning-of-period value) - 1] x 100

A note on precision: returns are computed to at least six decimal places but reported to a maximum of four. In addition, owing to rounding inaccuracies inherent in computer floating-point arithmetic, the last digit in any reported value may sometimes be off by one from its true value.

Ticker for the FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index

Ticker	Index
CFIIGLIG	FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index, in USD terms

Chronological summary of events

FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index summary of event

	Year	Monthly highlights
November: intra-month cash flows from interest and principal payments are not reinveste total return calculations.		November: intra-month cash flows from interest and principal payments are not reinvested as part of monthly index total return calculations.
	2021	June: change in timing of pricing used in index.

FTSE Russell 10 of 12

Appendix A

Further information

A Glossary of Terms used in FTSE Russell's ground rule documents can be found using the following link:

Fixed_Income_Glossary_of_Terms.pdf

For contact details, please visit the FTSE Russell website or contact FTSE Russell client services at fi.index@lseg.com.

Website: www.lseg.com/en/ftse-russell/

FTSE Russell 11 of 12

Disclaimer

© 2023 London Stock Exchange Group plc and its applicable group undertakings (the "LSE Group"). The LSE Group includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) FTSE Fixed Income Europe Limited ("FTSE FI Europe"), (5) FTSE Fixed Income LLC ("FTSE FI"), (6) The Yield Book Inc ("YB") and (7) Beyond Ratings S.A.S. ("BR"). All rights reserved.

The FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index is calculated by or on behalf of FTSE Fixed Income LLC or its affiliate, agent or partner. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB and BR. "FTSE®", "Russell®", "FTSE Russell®", "FTSE4Good®", "ICB®", "The Yield Book®" "Beyond Ratings®" and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of the LSE Group or their respective licensors and are owned, or used under licence, by FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB or BR.

All information is provided for information purposes only. Every effort is made to ensure that all information given in this publication is accurate, but no responsibility or liability can be accepted by any member of the LSE Group nor their respective directors, officers, employees, partners or licensors for any errors or for any loss from use of this publication or any of the information or data contained herein.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the results to be obtained from the use of FTSE Goldman Sachs US Investment-Grade Corporate Bond 10+ Years Index or the fitness or suitability of the Index for any particular purpose to which it might be put.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any representation regarding the advisability of investing in any asset. A decision to invest in any such asset or whether such investment creates any legal or compliance risks for the investor. Indices cannot be invested in directly. Inclusion of an asset in an index is not a recommendation to buy, sell or hold that asset nor confirmation that any particular investor may lawfully buy, sell or hold the asset or an index containing the asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of the LSE Group. Use and distribution of the LSE Group index data and the use of their data to create financial products require a licence with FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB, BR and/or their respective licensors.

