

**S&P Dow Jones
Indices**

A Division of **S&P Global**

iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices Guide

September 2023

Table of Contents

1) iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices	3
2) Selection criteria for the iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices	4
2.1) Long position	4
2.2) Inflation swap position	4
3) Index calculation	5
3.1) Bond and inflation swap prices	5
3.2) Rebalancing process	5
3.2.1) Rebalancing procedure	5
3.3) Determining the distribution weight	5
3.4) Index calculation	6
3.5) Monthly reinvestment	6
3.6) Index history	7
3.7) Settlement conventions	7
3.8) Calendar	7
3.9) Publication of the iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices	7
3.10) Data publication and access	7
3.11) Annual index review	8
4) Governance and regulatory compliance	9
5) Appendix	10
5.1) Annotations	10
6) Changes to the iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices	11
7) Further information	12
A) ESG Disclosures	13
Disclaimer	14

1) iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices

The iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices aim to provide an inflation hedge to the iBoxx GBP Non-Gilts ex-Financials Indices (“Underlying Indices”).

The indices hedge long positions in the Underlying Indices with positions in GBP UK RPI zero coupon inflation rate swaps. The eligible contracts for the swap position include: 3-Year, 5-Year, 7-Year, 10-Year, 15-Year, 20-Year, 25-Year and 30-Year GBP UK RPI zero coupon inflation rate swaps.

The iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices are rebalanced once a month at the month-end (the “rebalancing date”).

This document covers the index selection rules and calculation methodology.

2) Selection criteria for the iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices

The indices have long positions in the iBoxx GBP Non-Gilts ex-Financials Underlying Indices and short positions in GBP UK RPI zero coupon inflation rate swaps.

2.1) Long position

The Underlying Indices in the long position are subsets of the Markit iBoxx GBP Benchmark universe, with additional filters for average life and sector as follows:

Index Name	Level 1	Level 2	Average Life
iBoxx GBP Non-Gilts ex-Financials 1-5	Non-Gilts	ex-Financials	Greater Than Equal to 1 & Less Than 5
iBoxx GBP Non-Gilts ex-Financials 5-10	Non-Gilts	ex-Financials	Greater Than Equal to 5 & Less Than 10
iBoxx GBP Non-Gilts ex-Financials 10-15	Non-Gilts	ex-Financials	Greater Than Equal to 10 & Less Than 15
iBoxx GBP Non-Gilts ex-Financials 15-20	Non-Gilts	ex-Financials	Greater Than Equal to 15 & Less Than 20
iBoxx GBP Non-Gilts ex-Financials 20-25	Non-Gilts	ex-Financials	Greater Than Equal to 20 & Less Than 25
iBoxx GBP Non-Gilts ex-Financials 25-30	Non-Gilts	ex-Financials	Greater Than Equal to 25 & Less Than 30
iBoxx GBP Non-Gilts ex-Financials 30-40	Non-Gilts	ex-Financials	Greater Than Equal to 30 & Less Than 40

Detailed methodology for the Markit iBoxx GBP Benchmark index is available at <https://www.spglobal.com/spdji/en/>.

2.2) Inflation swap position

The eligible contracts for the swap position include: 3-Year, 5-Year, 7-Year, 10-Year, 15-Year, 20-Year, 25-Year, 30-Year GBP UK RPI zero coupon inflation rate swaps with a notional value of GBP 1,000,000 each.

3) Index calculation

3.1) Bond and inflation swap prices

Inflation swap prices are provided by S&P DJI's Portfolio Valuation team.

For more details please refer to the "Markit iBoxx Pricing Rules" document, available at <https://www.spglobal.com/spdji/en/>.

3.2) Rebalancing process

The iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices are rebalanced monthly on the last business day of the month.

The iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices use GBP UK RPI zero coupon inflation rate swaps to hedge inflation. The hedge positions are reset at each monthly rebalancing day.

A preliminary membership list is published on the 6th calendar day of the month (moved to the next business day in case of holiday/weekend).

Three business days before the end of each month an updated membership list is published.

On the last business day of each month, S&P DJI publishes the final membership.

3.2.1) Rebalancing procedure

On the rebalancing day each bond in the underlying index is paired to a certain number of specific inflation swap contracts. These bond/swap pairs are then aggregated into the inflation hedged index.

The rebalancing process follows the following steps:

- Determine the term for each j swap contract, with $j = \{3,5,7,10,15,20,25,30\}$
- Each bond is assigned to the two neighboring swap contracts, where available, based on the distance between the bond's annual modified duration and the term of the inflation swap. If only one neighboring swap is available, the bond is assigned to the swap solely.
- The *delta distribution ratio* $\delta_{i,j,t-s}$ is determined for each bond/swap pair. The distribution weight can be between 0 and 1.
- Determine the notional for each swap contract.
- Calculate the index.

3.3) Determining the distribution weight

The "*delta distribution ratio*" is determined for each bond and swap combination:

1. For all bonds with an annual modified duration below the term of the 3-Year inflation swap contract or greater than the term of the 30-Year inflation swap contract, the "*delta distribution ratio*" is 1. The "*delta distribution ratio*" ratio is 1 also for bonds with an annual modified duration of exactly 3,5,7,10,15,20,25 or 30 years.
2. For all bonds where the annual modified duration is in between the terms of two neighboring swap contracts the "*delta distribution ratio*" is calculated as:

$$\delta_{i,j,t-s} = 1 - \frac{\text{abs}(AMD_{i,t-s} - \text{SwapTerm}_{j,t-s}^S)}{\text{SwapTerm}_{j+1,t-s}^S - \text{SwapTerm}_{j,t-s}^S}$$

and

$$\delta_{i,j+1,t-s} = 1 - \delta_{i,j,t-s}$$

Where

$$\text{SwapTerm}_{j,t-s}^S \leq AMD_{i,t-s} \leq \text{SwapTerm}_{j+1,t-s}^S$$

3.4) Index calculation

Step 1: Calculate the hedge ratio for each of the two swaps used to hedge each bond

$$HR_{i,j,t-s} = \frac{(DV01_{i,t-s} * \delta_{i,j,t-s})}{\text{SwapIE01}_{j,t-s}^S}$$

Step 2: Calculate the number of contracts for each swap needed to hedge the bond

$$S_{i,j,t-s} = \frac{(HR_{i,j,t-s} * N_{i,t-s})}{N_{j,t-s}^S}$$

Step 3: Aggregate the number of swap contracts needed each month

$$\#contracts_{j,t-s}^S = \text{round}\left(\sum_{i=1}^n S_{i,j,t-s}, 0\right)$$

Step 4: Calculate the ratio of each swap contract

$$W_{j,t-s}^S = \frac{\#contracts_{j,t-s}^S * N_{j,t-s}^S}{\sum_{i=1}^n BMV_{i,t-s}}$$

With $N_{j,t-s}^S = \text{GBP } 1,000,000$

Step 5: Calculate the index level

$$IL_t = IL_{t-s} * \left(\frac{IL_t^{long}}{IL_{t-s}^{long}} + \sum_{j \in \text{Swap}} W_{j,t-s}^S [P_{j,t}^S - P_{j,t-s}^S] \right)$$

For specific index formulae please refer to iBoxx Bond Calculus document, available on the iBoxx Documentation page in the Methodology section.

3.5) Monthly reinvestment

P/L from the index is reinvested in the Underlying Indices.

3.6) Index history

The Index history starts on 31 December 2017. The indices have a base value of 100 on that date.

3.7) Settlement conventions

All iBoxx indices are calculated using the assumption of T+0 settlement days.

3.8) Calendar

S&P DJI publishes an index calculation calendar in the *iBoxx Calendars* section of the iBoxx Documentation page at <https://www.spglobal.com/spdji/en/>. This calendar provides an overview of the index calculation holidays of the iBoxx bond index families in a given year.

3.9) Publication of the iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices

The iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices are calculated as end-of-day indices and distributed once daily after close of UK markets.

Bond and index analytical values are calculated end of day Monday to Friday using that day's closing prices and inflation swap valuations. In addition, bond and index analytical values are calculated using the previous trading day's closing prices and inflation swap valuations on the last calendar day of each month if that day is not a regular trading day as well as on common bank holidays as published in the iBoxx index calculation calendar available at <https://www.spglobal.com/spdji/en/>. Index data is also available from the main information vendors. Closing index values and key statistics are published at the end of each calculation day at <https://www.spglobal.com/spdji/en/> for registered users.

3.10) Data publication and access

The table below summarizes the publication of iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices at <https://www.spglobal.com/spdji/en/> for registered users and on the FTP server.

Table 1: Frequency, File type and Access

Frequency	File Type	Access
Daily	Underlying file – Bond level	FTP Server
	Indices file – Index level	FTP Server / website / Bloomberg for index levels only
Daily from the 6th calendar day of the month (or the next index publication day if the 6th calendar day falls on a non-business day)	Forwards	FTP Server
Monthly	End of Month Components	FTP Server / website

Below is a summary of the IDs for each publication channel:

Index Name	Return Type	ISIN	Bloomberg	RIC
iBoxx GBP Non-Gilts ex-Financials 1-5 RPI Inflation Hedged	TRI	GB00BRWSL185		.IBXXGRP1
iBoxx GBP Non-Gilts ex-Financials 5-10 RPI Inflation Hedged	TRI	GB00BRWSL292		.IBXXGRP2
iBoxx GBP Non-Gilts ex-Financials 10-15 RPI Inflation Hedged	TRI	GB00BRWSL300		.IBXXGRP3
iBoxx GBP Non-Gilts ex-Financials 15-20 RPI Inflation Hedged	TRI	GB00BRWSL417		.IBXXGRP4
iBoxx GBP Non-Gilts ex-Financials 20-25 RPI Inflation Hedged	TRI	GB00BRWSL524		.IBXXGRP5
iBoxx GBP Non-Gilts ex-Financials 25-30 RPI Inflation Hedged	TRI	GB00BRWSL631		.IBXXGRP6
iBoxx GBP Non-Gilts ex-Financials 30-40 RPI Inflation Hedged	TRI	GB00BRWSL748		.IBXXGRP7

3.11) Annual index review

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

4) Governance and regulatory compliance

IHS Markit Benchmark Administration Limited (IMBA UK) is the Index Administrator of iBoxx indices. Information on IMBA UK's governance and compliance approach can be found [here](#). This document covers:

- Governance arrangements, including external committees
- Input data integrity
- Conflicts of interest management
- Market disruption and Force Majeure
- Methodology changes and cessations
- Complaints
- Errors and restatements
- Reporting of infringements and misconduct
- Methodology reviews
- Business continuity

More details about IMBA UK can be found on the [Administrator's website](#).

5) Appendix

5.1) Annotations

$BMV_{i,t-s}$	Base market value of the i -th bond constituent at the rebalancing day t -s
$\delta_{i,j,t-s}$	"delta distribution ratio" for bond i and j -th swap contract at the rebalancing day t -s
IL_t	Index level on day t
IL_t^{long}	Index level of the long index on day t
$AMD_{i,t-s}$	Annual modified duration of the i -th bond constituent at the rebalancing day t -s
$SwapTerm_{j,t-s}^S$	Term of the j -th swap contract at the rebalancing day t -s
$N_{j,t-s}^S$	Notional of the j -th swap contract at the rebalancing day t -s [1]
$N_{i,t-s}$	Notional of the i -th bond constituent at the rebalancing day t -s
$P_{j,t-s}^S$	Price of the j -th swap contract at the rebalancing day t -s
$\#contracts_{j,t-s}^S$	Number of the j -th swap contract at the rebalancing day t -s
Swap	Set of eligible swap contracts (3-Year, 5-Year, 7-Year, 10-Year, 15-Year, 20-Year, 25-Year and 30-Year)
$W_{j,t-s}^S$	Ratio of the j -th swap contract on the rebalancing day t -s

[1] The notional is GBP 1,000,000 for the 3Y, 5Y, 7Y,10Y,15Y,20Y,25Y, 30Y GBP UK RPI zero coupon inflation rate swaps.

6) Changes to the iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices

Sep. 26, 2023	<ul style="list-style-type: none">• Launch of the iBoxx GBP Non-Gilts ex-Financials RPI Inflation Hedged Indices

7) Further information

Client support

For client support please contact:

E-mail:	indices@ihsmarkit.com		
Phone:	Asia Pacific	Japan: Singapore:	+81 3 6402 0127 +65 6922 4210
	Europe	General: UK:	+800 6275 4800 +44 20 7260 2111
	USA	General:	+1 877 762 7548

Formal complaints

Formal complaints should be emailed to spdji_compliance@spglobal.com.

Please note: spdji_compliance@spglobal.com should only be used to log formal complaints.

General index inquiries

For general index inquiries, please contact indices@ihsmarkit.com.

A) ESG Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY [1]		
1	Name of the benchmark administrator.	IHS Markit Benchmark Administration Limited (IMBA)
2	Underlying asset class of the ESG benchmark. [2]	N/A
3	Name of the S&P Dow Jones Indices benchmark or family of benchmarks.	iBoxx Benchmark Statement
4	Do any of the indices maintained by this methodology take into account ESG factors?	No
Appendix latest update:		September 2023
Appendix first publication:		September 2023

[1] The information contained in this Appendix is intended to meet the requirements of the European Union Commission Delegated Regulation (EU) 2020/1817 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the minimum content of the explanation of how environmental, social and governance factors are reflected in the benchmark methodology and the retained EU law in the UK (The Benchmarks (amendment and Transitional Provision) (EU Exit) Regulations 2019).

[2] The ‘underlying assets’ are defined in European Union Commission Delegated Regulation (EU) 2020/1816 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

Disclaimer

Performance Disclosure/Back-Tested Data

Where applicable, S&P Dow Jones Indices and its index-related affiliates (“S&P DJI”) defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index’s Launch Date are considered back-tested. S&P DJI defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company’s public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed “Date of introduction”) is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index’s public release date.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Information presented prior to an index’s launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate certain ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using “Backward Data Assumption” (or pulling back) of ESG data for the calculation of back-tested historical performance. “Backward Data Assumption” is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as “product involvement”) were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on “Backward Data Assumption” please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used. Index returns shown do not represent the results of actual trading of investable assets/securities. S&P DJI maintains the index and calculates the index levels and performance shown or discussed but does not manage any assets.

Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US \$100,000 investment for a 12-month period (or US \$10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US \$1,650), the net return would be 8.35% (or US \$8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US \$5,375, and a cumulative net return of 27.2% (or US \$27,200).

Intellectual Property Notices/Disclaimer

© 2023 S&P Dow Jones Indices. All rights reserved. S&P, S&P 500, SPX, SPY, The 500, US500, US 30, S&P 100, S&P COMPOSITE 1500, S&P 400, S&P MIDCAP 400, S&P 600, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, Select Sector, S&P MAESTRO, S&P PRISM, S&P STRIDE, GICS, SPIVA, SPDR, INDEXOLOGY, iTraxx, iBoxx, ABX, ADBI, CDX, CMBX, MBX, MCDX, PRIMEX, HHPI, and SOVX are registered trademarks of S&P Global, Inc. ("S&P Global") or its affiliates. DOW JONES, DJIA, THE DOW and DOW JONES INDUSTRIAL AVERAGE are trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P DJI does not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P DJI is impersonal and not tailored to the needs of any person, entity, or group of persons. S&P DJI receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P DJI does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P DJI makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P DJI is not an investment advisor, commodity trading advisor, fiduciary, "promoter" (as defined in the Investment Company Act of 1940, as amended) or "expert" as enumerated within 15 U.S.C. § 77k(a), and S&P DJI makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. S&P DJI is not a tax advisor. Inclusion of a security, commodity, crypto currency, or other asset within an index is not a recommendation by S&P DJI to buy, sell, or hold such security, commodity, crypto currency, or other asset, nor is it considered to be investment or trading advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse engineered, reproduced, or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P DJI. The Content shall not be used for any unlawful or unauthorized purposes. S&P DJI and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness, or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" "WHERE IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIMS ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any

direct, indirect, incidental, exemplary, compensatory, punitive, special, or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related information and other analyses, including ratings, research and valuations are generally provided by licensors and/or affiliates of S&P Dow Jones Indices, including but not limited to S&P Global's other divisions such as S&P Global Market Intelligence. Any credit-related information and other related analyses and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. Any opinion, analyses and rating acknowledgement decisions are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P Dow Jones Indices does not assume any obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P DJI does not act as a fiduciary or an investment advisor. While S&P DJI has obtained information from sources it believes to be reliable, S&P DJI does not perform an audit or undertake independent verification of any information it receives. S&P DJI reserves the right to vary or discontinue any index at any time for regulatory or other reasons. Various factors, including external factors beyond S&P DJI's control might necessitate material changes to indices.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P Global Ratings reserves the right to assign, withdraw or suspend such acknowledgement at any time and in its sole discretion. S&P Dow Jones Indices, including S&P Global Ratings, disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgement as well as any liability for any damage alleged to have been suffered on account thereof. Affiliates of S&P Dow Jones Indices LLC, including S&P Global Ratings, may receive compensation for its ratings and certain credit-related analyses, normally from issuers or underwriters of securities or from obligors. Such affiliates of S&P Dow Jones Indices LLC, including S&P Global Ratings, reserve the right to disseminate its opinions and analyses. Public ratings and analyses from S&P Global Ratings are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P Global Ratings publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

S&P Global keeps certain activities of its various divisions and business units separate from each other to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions, and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate, or otherwise address.

Some indices use the Global Industry Classification Standard (GICS[®]), which was developed by, and is the exclusive property and a trademark of, S&P Global and MSCI. Neither MSCI, S&P DJI nor any other party involved in making or compiling any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability, or fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P DJI, any of their affiliates or any third party involved in making or compiling any GICS classifications have any liability for any direct,

indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

S&P Dow Jones Indices products are governed by the terms and conditions of the agreements under which they may be provided. A license is required from S&P Dow Jones Indices to display, create derivative works of and/or distribute any product or service that uses, is based upon and/or refers to any S&P Dow Jones Indices and/or index data.