S&P Dow Jones Indices

A Division of S&P Global

iBoxx € Germany Covered Capped Index Guide

May 2023

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1) iBoxx € Germany Covered Capped Index

The iBoxx € Germany Covered Capped Index reflects the performance of EUR denominated investment grade, covered bonds from German issuers. The index rules have been designed to offer a broad coverage of the market with emphasis on diversification. The iBoxx € Germany Covered Capped Index is rebalanced once a month at the month-end (the “rebalancing date”) and consists of investment grade EUR denominated covered bonds issued by German issuers and rated by at least one of the following three rating services: Fitch Ratings, Moody’s Investors Service, or S&P Global Ratings. The index is market-value-weighted with an issuer cap of 25%.

The bonds in the iBoxx € Germany Covered Capped Index must meet all the criteria described below as of the close of business three business days prior to the rebalancing date provided that the relevant information can be verified, as of such date (“bond selection cut-off date”). The new index composition becomes effective on the first business day of the next month.

All iBoxx indices are priced based on multiple data inputs. The Markit iBoxx EUR Index family uses multi-source prices as described in the document *Markit iBoxx Pricing Rules* publicly available under Methodology on www.ihsmarkit.com.

This document covers the index rules and calculation methodology.

2) Bond selection rules

All bonds in the iBoxx € Germany Covered Capped Index are part of the universe of the Markit iBoxx EUR Benchmark indices. To remain consistent with the benchmark indices, all bonds in the iBoxx € Germany Covered Capped Index retain the same classification they have in the benchmark indices. To ensure that only suitable bonds enter the iBoxx € Germany Covered Capped Index, further selection criteria are applied.

The following selection criteria are used to determine the index constituents:

- Bond type
- Credit rating
- Time to maturity
- Amount outstanding
- Bond age

2.1) Bond type

The list of proposed eligible bond types is as follows:

- Bullet fixed coupon Germany Covered Capped bonds (plain vanilla bonds)
- Zero-coupon bonds

The following bond types are specifically excluded from the index:

- Structured bonds and bonds with optional characteristics, particularly those whose cash flows cannot be determined in advance
- Sinking funds
- Amortizing bonds
- Rating-driven bonds
- Step-up bonds
- Retail bonds
- Private placements

In addition, insurance-wrapped bonds are excluded from the index as they do not directly subject the bondholder to the credit risk of the issuer.

For retail bonds and private placements, publicly available information is not always conclusive and the classification of a bond as a retail bond or a private placement will be made at IHS Markit's discretion based on the information available at the time of determination. IHS Markit may consult with the specific Index Advisory Committees to review potential retail bonds or private placements. Any bond classified as retail or private placement is added to the list of excluded private placements and retail bonds. The list is published on www.ihsmarkit.com for future reference and to ensure decision's consistency.

In instances where a new bond type is not specifically excluded or included according to the published index rules, IHS Markit will analyze the features of such securities in line with the principles set out in 2.1 of this guide. IHS Markit may consult the specific Index Advisory Committees. Any decision as to the eligibility or ineligibility of a new bond type will be published and the index rules will be updated accordingly.

2.2) Credit rating

All bonds in the iBoxx € Germany Covered Capped Index must have an iBoxx Rating of investment grade. Ratings from the following three credit rating agencies are considered for the calculation of the iBoxx Rating:

- Fitch Ratings
- Moody's Investor Service
- S&P Global Ratings

Investment grade is defined as BBB- or higher from Fitch Ratings and S&P Global Ratings and Baa3 or higher from Moody's Investor Service.

If a bond is rated by more than one of the above agencies, then the iBoxx rating is the average of the provided ratings. The rating is consolidated to the nearest rating grade. Rating notches are not used. For more information on how the average rating is determined, please refer to the *iBoxx Rating Methodology* document. The methodology can be found on www.ihsmarkit.com under *Methodology*.

Prior to 1 January 2008, the lowest rating was used as the Markit iBoxx Rating. Prior 1 July 2009, implied issue ratings were derived from issuer ratings in the absence of issue ratings for non-collateralized, unguaranteed bonds.

2.3) Time to maturity

To qualify for inclusion all eligible bonds must have a remaining time to maturity of at least 1 year measured from the rebalancing date to the maturity date.

Bonds in the index with a remaining time to maturity of less than 1 year are excluded at the next rebalancing.

2.4) Amount outstanding

All bonds must have a minimum amount outstanding of EUR 500 million (EUR 1 billion for legacy bonds) in order to be eligible for the iBoxx € Germany Covered Capped Index. Bonds with an issue size between EUR 500 million and EUR 1 billion only qualify for inclusion in the indices if they have at least three lead managers (not including the issuer itself). Tranche bonds with issue size between EUR 500 million and EUR 1 billion qualify for inclusion in the indices irrespective of the number of lead managers provided the parent bond is eligible for the index. Bonds subject to a tender offer (i.e. where the issuer has announced its intention to buy back, tender or call parts or the whole amount of a bond) will not be eligible for the iBoxx € Germany Covered Capped Index. If a bond under a tender offer is already in the iBoxx € Germany Covered Capped Index, it will be removed at the next rebalancing.

2.5) Bond age

Eligible bonds must have an age of no greater than 4 years. The age is defined as the minimum of the following:

- Time since initial issuance, as measured as the difference between the first settlement day and the next rebalancing date
- Time since last tap issuance via the primary market, defined as the difference between the date of the last single notional increase of at least EUR 250 million and the next rebalancing date

2.6) Index size, bond ranking and selection

Index Size

The maximum number of bonds in the index is 25.

Bond Ranking

Should more than the maximum number of bonds be available for the index, ordering criteria are applied in order to rank the eligible bonds for the iBoxx € Germany Covered Capped Index.

The following four criteria are applied:

1. Higher amount outstanding
2. More recent first settlement date
3. Longer time to maturity
4. Lower coupon

These criteria are applied to each bond in the order stated above until a difference can be established (i.e. if two bonds have the same amount outstanding and the same first settlement date, but one has a longer time to maturity, then criteria 1 to 3 are applied, but 4 is not). With the help of the ranking criteria, a bond hierarchy can be defined, with the bond that has the highest amount outstanding at the top of the hierarchy.

Limit on number of bonds from any issuer

The number of bonds from an issuer, determined by Ticker, that may enter the iBoxx € Germany Covered Capped Index is limited to 3 bonds.

2.7) Issuer cap

Each issuer, determined by Ticker, is capped at 25% of the overall market value denominated in EUR.

3) Index calculation

3.1) Static data

Information used in the index calculation is sourced from offering circulars and checked against standard data providers.

3.2) Bond prices

For more details please refer to the *Markit iBoxx Pricing Rules* document, available in the *Methodology* section of the iBoxx Documentation page on www.ihsmarkit.com.

3.3) Rebalancing process

The iBoxx € Germany Covered Capped Index is rebalanced monthly on the last business day of the month after the close of business. Changes to outstanding amounts are only taken into account if they are publicly known three business days before the end of the month. Changes in ratings are only taken into account if they are publicly known two business days before the end of the month. New bonds issued are taken into account if they are publicly known to settle until the last calendar day of the month, inclusive, and if their rating has become known at least three trading days before the end of the month.

The rebalancing procedure for the iBoxx € Germany Covered Capped Index is analogous to the rebalancing of the Markit iBoxx EUR Benchmark indices. 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, a membership list with final amount outstanding for each bond is published.

Two business days before the end of each month, the rating information for the constituents is updated and the list is adjusted for all rating changes which are known to have taken place two trading days before the end of the month. Bonds which are known to have been upgraded to investment grade two trading days before the end of the month are not included in the membership, but bonds which are known to have been downgraded to sub-investment grade two trading days before the end of the month do get excluded from the membership. However, if any bonds which are part of the broader EUR universe become eligible two business days prior to rebalancing because of rating or amount changes, they will be included in the Index.

On the last business day of each month, IHS Markit publishes the final membership with closing prices for the bonds, and various bonds analytics based on the index prices of the bonds.

3.3.1) Rebalancing procedure

In a first step the selection criteria are applied:

- Amounts outstanding are applied as of three business days before the rebalancing date
- A bond remains in its respective maturity bucket until the next rebalancing
- Only bonds with a first settlement date on or before the rebalancing date are included in the selection process

Once the eligible bond universe has been defined, the ranking criteria are employed to determine a distinct hierarchy of bonds in the universe.

Bonds enter the respective index according to their rank in the hierarchy (with the highest rank entering first) until the maximum number of bonds per index has been reached.

3.3.2) Weekly preview

In addition to the regular monthly rebalancing, a preview list (including sector classification for new bonds) is published each Friday with predicted changes to the index constituents at the next rebalancing. The preview list includes the next month's index constituents and shows bonds joining or leaving the indices at the next rebalancing, based on information available on such Fridays.

The first weekly preview will be published on the Friday that is at least three business days after the preceding month-end rebalance.

3.4) Index data

The calculation of the index is based on bid prices. New securities are included in the index at their respective ask prices when they enter the index family. In the event that no price can be established for a particular security, the index continues to be calculated based on the last available price. This might be the case in periods of market stress, or disruption as well as in illiquid or fragmented markets. If the required inputs become impossible to obtain, IHS Markit may consult market participants prior to the next rebalancing date. Decisions are made publicly available on a timely basis and IHS Markit may refer back to previous cases.

The iBoxx EUR Liquid indices are computed and disseminated Monday to Friday at the end of the day after 5:15 p.m. CET. The indices are calculated every day except on common European bank holidays. The indices are also calculated on the last calendar day of each month irrespective of holidays and weekends. If the index is calculated on a day that is a non-business day, then the consolidated prices from the previous trading day will be carried forward and the index will be calculated using those prices and the current accrued interest and coupon payment data.

The rebalancing takes place after close of market on the last trading day of a rebalancing month.

The indices are transaction cost adjusted. For specific cost factor calculation formulae please refer to the Markit iBoxx Bond Index Calculus document, available in the Methodology section of the Markit iBoxx Documentation page on www.ihsmarkit.com.

3.5) Index calculus

For specific index formulas please refer to the *Markit iBoxx Bond Index Calculus* document, available in the *Methodology* section of the iBoxx Documentation page on www.ihsmarkit.com.

3.6) Treatment of the special intra-month events

Data for the application of corporate actions in the index may not be fully or timely available at all times, e.g. the final call prices for make-whole calls or the actual pay-in-kind percentage for PIK-payment options. In such cases, S&P DJI will estimate the approximate value based on the available data at the time of calculation.

3.6.1) Index and analytics weights

The iBoxx € Germany Covered Capped Index is market-value-weighted. The amount outstanding of a bond is only adjusted within the rebalancing process.

All calculations are based on the adjusted amount outstanding that reflects the outstanding bond notional at the last rebalancing. The bond prices relate to the nominal value of 100.

3.6.2) Funged bonds

Bonds may be issued in several tranches. The different tranches are initially legally separate and therefore trade independently for a certain period. On and after the funge date, the tranches will be combined into one bond, i.e. the parent tranche will contain the original security, as well as the additional notional(s) from the new tranche(s). After the funge date, the prices for both the securities are the same, because they constitute one uniform bond. This is reflected in the indices as follows:

3.6.2.1) Parent and new tranche are both index constituents

- After the funge date, the price from the parent tranche is used for the funged tranche; no price for the funged bond
- Funged tranche leaves the index at the next rebalancing and parent amount outstanding increases accordingly

3.6.2.2) Parent is an index constituent, but the new tranche is not

- No special intra-month treatment necessary
- Parent amount outstanding increases at the next rebalancing

3.6.2.3) Parent is not an index constituent but the new tranche is

- No special intra-month treatment necessary
- Funged tranche leaves the index; parent tranche enters the index at the next rebalancing

3.6.3) Full redemptions: exercised calls, puts and buybacks

If a bond is fully redeemed intra-month, the bond effectively ceases to exist. In all calculations, the redeemed bond is treated as cash based on the last price, the call price or repurchase price, as applicable. The redemption factor, redemption and the redemption price are used to treat these events in the index and analytics calculation. In addition, the clean price of the bond is set to the redemption price, and the interest accrued until the redemption date is treated as an irregular coupon payment.

3.6.4) Bonds trading flat of accrued

If a bond is identified as trading flat of accrued, the accrued interest of the bond is set to 0 in the total return index calculation and is excluded from the calculation of all bond and index analytical values.

Bonds will be considered trading flat of accrued in any of the following situations:

- a bond has been assigned a default rating and/or
- issuer has announced a failure to pay a coupon and/or
- issuer has announced an intention not to make a payment on an upcoming coupon (grace period).

3.6.5) Ex-dividend conventions

Some markets have ex-dividend conventions. Ex-dividend means that the next coupon is detached from the bond several days in advance of the coupon payment date. The date on which the next coupon is detached is the ex-dividend date and the period between the ex-dividend date and the coupon payment date is the ex-dividend period. If a bond is in the ex-dividend period, the next coupon payment will not be paid to a buyer of this bond, but will be paid to the original bond holder.

The indices and analytics calculations take ex-dividend conventions into account. During the ex-dividend period, the accrued interest of the bond is negative, while the next coupon payment is held separate in the variable coupon adjustment. If the bond enters the index during the ex-dividend period, then the next coupon payment and the coupon adjustment will not accrue to the index. However, if the bond was already in the index, the next coupon payment needs to be included in the total return calculations. This is controlled via the ex-dividend indicator which is 0 if the bond enters the index during the current ex-dividend period and 1 if not. The same treatment is also applied to all analytics calculation, i.e. the first cash flow is excluded from the calculations if the bond enters during the current ex-dividend period.

3.7) Determination of benchmarks

A benchmark bond of the Markit iBoxx EUR Benchmark universe is defined as the most liquid and low risk bond in each of the maturity bands listed below.

The procedure starts at first running a regression algorithm on all bonds in the Markit iBoxx Eurozone index in order to determine the benchmark curve, and bonds with a positive spread to the curve are eliminated. The procedure is then repeated until one of the following is met:

1. R-square above 0.99
2. Standard deviation of yield-spread to curve is less than 3.5 bps
3. Number of bonds left is between 15 and 40.

The bonds remaining after running the procedure above are assigned to Sets A or B depending on their age. An eligible bond is assigned to Set A within a maturity band if it is not older than two years. Otherwise, it is assigned to Set B. The age of a bond is calculated from the first settlement date to the current rebalancing date. The largest bond (by amount outstanding) of all bonds in Set A is selected as the respective benchmark for each defined maturity band. If Set A is empty, then the most recently issued bond of Set B is chosen as the respective benchmark of the band.

Maturity bands are defined as follows:

Benchmark Maturity Bands	Bond Maturity
1 year	< 1.5 years
2 years	1.5 to < 2.5 years
3 years	2.5 to < 3.5 years
4 years	3.5 to < 4.5 years
5 years	4.5 to < 5.5 years
6 years	5.5 to < 6.5 years
7 years	6.5 to < 7.5 years
8 years	7.5 to < 8.5 years
9 years	8.5 to < 9.5 years
10 years	9.5 to < 12.5 years
15 years	12.5 to < 17.5 years
20 years	17.5 to < 25 years
Long	≥ 25 years

For every bond in the Markit iBoxx EUR indices, the benchmark bond with the closest maturity is selected as a benchmark. Therefore, the chosen benchmark is not necessarily the same as the benchmark for the maturity band of the bond. If the time to maturity distance of a bond to its two neighboring benchmarks is exactly the same, then the benchmark bond with the closer coupon is chosen. If the coupon distance of the two neighbouring bonds is also exactly the same, then the younger of the two benchmark bonds is chosen.

3.8) Index history

The Index history starts on 31 December 1998. The index has a base value of 100 on that date.

3.9) Settlement conventions

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

3.10) Calendar

IHS Markit publishes an index calculation calendar in the *iBoxx Calendars* section of the iBoxx Documentation page on www.ihsmarkit.com. This calendar provides an overview of the index calculation holidays of the iBoxx bond index families in a given year.

3.11) Sub-indices

In addition to the iBoxx € Germany Covered Capped Index sub-indices with the following maturities are published: 1 – 3 years, 3 – 5 years, 5 – 7 years, 7 – 10 years and 10+ years.

3.12) Publication of the Index

The iBoxx € Germany Covered Capped Index is calculated as end-of-day index and distributed once daily after market close.

Bond and index analytical values are calculated end of day Monday to Friday using that day's closing prices. In addition, bond and index analytical values are calculated using the previous trading day's closing prices 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. This index calculation calendar is available on www.ihsmarkit.com under *iBoxx Calendars*. 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 in the *Indices* section on www.ihsmarkit.com for registered users.

3.13) Data publication and access

The table below summarises the publication of iBoxx € Germany Covered Capped Index in the *Indices* section of the IHS Markit website www.ihsmarkit.com for registered users and on the FTP server.

Table 1: Data publication and access

Frequency	File Type	Access
Daily	Underlying file – Bond level	IHS Markit FTP Server
	Indices files – Index level	IHS Markit FTP Server / IHS Markit website/ Bloomberg for index levels only
T-4, T-3, T-2	Preview components	IHS Markit FTP Server / IHS Markit website
Monthly	End of month components	IHS Markit FTP Server / IHS Markit website
	XREF files	IHS Markit FTP Server

The index identifiers for the publication channels are:

Index Name	iBoxx € Germany Covered Capped Index	
Return Type	TRi	CPi
SEDOL	--	--
ISIN	GB00B5MVV462	GB00B5SHNG41
Ticker	IBOXGCA0	IBOXGCA1
RIC	--	--

3.14) Annual index review

The rules for the index are reviewed at least once per year during the public annual index review consultation process to ensure that the index provides a balanced representation of the EUR denominated debt market. Decisions made following feedback from market participants, the annual index review and External Advisory Committees (EAC) will be published on www.ihsmarkit.com shortly after the EAC meetings have been held. The publication will contain a detailed overview and timelines for implementation of any rules changes.

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) Changes to the iBoxx € Germany Covered Capped Index

30 Jun 2022	• Monthly forward start date updated from 10th calendar day to 6th calendar day
01 Sep 2021	• Monthly forward start date updated from 12th calendar day to 10th calendar day
31 Mar 2021	• Governance and Regulatory Compliance section added
31 Jan 2020	**Annual Index Review 2019** • Definition update of ‘Other Sub-Sovereigns’ classification • Addition of German structural covered bonds as eligible bond type under 'Covered bonds' • Inclusion of zero coupon bonds into EUR Liquid indices
30 Sep 2018	**Annual Index Review 2018** • Treatment of bond rating upgrades on t-2 • Clarification on bond eligibility during tender • Clarification of treatment of called bonds
31 July 2017	**Annual Index Review 2017** • Inclusion of Senior Callable Bank bonds • Classification of Insurance Tier 3 notes
30 Nov 2016	**Annual Index Review 2016** • Eligibility of subordinated financial debt with a contingent conversion feature at the point of non-viability
01 Dec 2014	• Markit iBoxx EUR index family will follow the pricing methodology described in the document ‘Markit iBoxx Pricing Rules’ • Index restatement, complaints sections added • Additional clarifications on bond eligibility, classification and corporate actions
31 Dec 2009	• Launch of of Markit iBoxx Germany Covered Capped Index

6) Further information

Glossary of key terms

The Markit iBoxx Glossary document of key terms is available in the *Methodology* section of the iBoxx *Documentation* page on www.ihsmarkit.com.

Contractual and content issues

For contractual or content issues please contact:

Markit Indices GmbH
Friedrich-Ebert-Anlage 35-37
60327 Frankfurt am Main
Germany
email: indices@ihsmarkit.com
web: www.ihsmarkit.com

Technical issues and client support

For technical issues and 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

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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:		May 2023
Appendix first publication		May 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).

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