S&P Dow Jones Indices

A Division of S&P Global

CDS Index Family (Total, Excess Return and Strategy)

Benchmark Statement

Mar 2024

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General Disclosures

Benchmark family name	CDS Indices (Total, Excess Return and Strategy) Benchmark Family
Benchmark administrator	**IHS Markit Benchmark Administration Ltd**. (**IMBA UK**)
Date of initial publication of this document	9 July 2018
Date of last update to this document	11 March 2023
ISIN (where available)	There are presently no ISINs available or accessible for the benchmarks covered by this Benchmark Statement.
Determination by contributions of input data	The administrator receives contributions of "input data" (as defined by the **BMR**) in relation to this family of benchmarks. The CDS Indices (Total, Excess Return and Strategy) utilize CDS spreads contributed by **IHS Markit CDS Pricing,** who is subject to annual attestation of a Contributor Code of Conduct. Other local pricing sources are also used to determine the prices used for the index calculations.
Qualification of the benchmark family	The CDS Indices (Total, Excess Return and Strategy) are administered as significant benchmarks.

Market or Economic Reality of the Benchmark

General description of the market or economic reality

Underlying the CDS Indices (Total, Excess Return and Strategy) are CDS indices which measure the total or excess return of tradeable baskets. These underlying baskets are rolled onto a new series every 6 months. The CDS Indices (Total, Excess Return and Strategy) operate under the assumption that the investor is always invested in the underlying on-the-run (i.e. current) credit index series and transitioned semiannually to the newly issued CDS index series. Further, they take into account the quarterly coupons on the underlying basket (a protection seller receives the coupon whereas a protection buyer pays the coupon), transaction costs and auction recovery from defaults.

Geographical boundaries of the market or economic reality

Geographical regions are defined by the underlying CDS index contracts being tracked by the CDS Indices (Total, Excess Return and Strategy). The CDS Indices (Total, Excess Return and Strategy) cover the US, Asia, Australia and Europe.

Other relevant information relating to the market or economic reality

Market participants include asset managers, retail and investment banks, insurers, pensions funds, hedge funds and endowment funds. The underlying CDS indices are the most liquid indices traded in the global CDS markets.

Potential Limitations of the Benchmark

Circumstances in which we would lack sufficient input data to determine the benchmark according to the methodology

For IMBA to be able to publish the daily CDS Indices (Total, Excess Return and Strategy) level, the relevant CDS index prices must be published. Scenarios may arise where underlying input data is not available in order to determine the index, such as if in periods of market stress or disruption as well as in illiquid or fragmented markets preventing the publication of a daily iTraxx/CDX price.

Generally, in the case of a market or data source disruption, IMBA will either proceed with or defer the determination of the respective index levels in accordance with the relevant Index Methodology or actions determined by the Index Committee. Such scenarios remain rare. The Index Committee serves as the index governance body tasked with ensuring that:

- The index objective is clearly stated, and the index is expected to achieve its objective.
- The procedures documented in the methodology are transparent and clearly described.
- The eligible universe, selection criteria and weighting method for constituents are fully detailed and described.
- All aspects of an index – data, calculation, maintenance, presentation and governance – are consistent with IMBA's practices and any exceptions are explicitly discussed and decided upon by the Index Committee.

Circumstances in which the degree of liquidity of the underlying market becomes insufficient to ensure the integrity and reliability of the benchmark determination according to the methodology

IHS Markit CDS Pricing requires at least three independent price sources to consolidate a price/spread. If this not achieved the last available price will be used in the CDS Indices (Total, Excess Return and Strategy).

There may be instances where the liquidity in an underlying market is not sufficient to adequately represent the economic reality that the index seeks to measure. Potential liquidity issues may be identified as part of the standard input data validation (e.g. abnormally long periods of stale prices) or may be identified in the context of market disruptions or brought forward through third party index owners, such potential issues are escalated to the Index Committee who will assess and determine the appropriate course of action in such cases.

Exercise of Expert Judgment and Discretion

Position of each function or body that may exercise discretion in the calculation of a benchmark and governance thereof

These indices are rules based and do not typically permit the use of discretion unless there are exceptional circumstances that are not addressed by either the index rules or policy. Such scenarios may include (but are not limited to):

- Failure of data providers;
- Significant changes to the underlying market;
- Complex corporate events;
- Action by governmental or regulatory bodies that causes market disruption; and
- Events beyond human control.

In the event that the Index Committee needs to take action or make a decision that has not been foreseen by the methodology or associated policy, the Index Committee and makes a determination that is consistent with the objective of the index in question and that causes minimal disruption to index stakeholders

Ex-post evaluation process

As above, the exercise of expert judgment or discretion in the calculation of the CDS Indices (Total, Excess Return and Strategy) would need to be approved by the Index Committee prior to the publication of the Indices to ensure that no conflict of interest arises and the index continues to reflect the underlying economic reality. A record of the Index Committee decision detailing the nature of the expert judgment or exercised discretion is maintained.

Methodology Changes and Benchmark Cessations

The methodology

The CDS Indices (Total, Excess Return and Strategy) methodology is applied to produce indices which measures the performance of holding on-the-run CDS index contracts. The indices reflect either a long or short credit position and replicates the behavior of a fictitious portfolio that buys or sells CDX or iTraxx contracts to always remains invested in the on-the-run contract, while taking into account all relevant cash flows. This allows investors to benchmark their CDS positions and use these indices as an ongoing performance measure of CDS positions for relevant regions and various trading assumptions.

The Indices are divided into three categories reflecting different performance attributes prevalent in the CDS index markets. Though there are differences in determining the returns, all CDS Indices (Total, Excess Return and Strategy) utilise the same IHS Markit CDS Pricing source and the ISDA CDS Standard Model is applied to relevant aspects of the calculation (such as coupon accrual convention).

1. **CDS Excess return benchmark indices** - The excess return benchmark indices reflect the mark to market returns on the underlying CDS index of a protection seller or buyer (i.e. a long position on the underlying on-the-run CDS index).
2. **CDS Total return benchmark indices** - The total return benchmark indices reflect the mark to market returns of the underlying CDS index plus the applicable overnight cash accrual on the same.
3. **CDS strategy benchmark indices** - These indices blend two or more CDS index contracts to reflect diversified exposure to different segments of the underlying CDS market. The strategy indices can be a manifestation of specific investor preferences such as risk-adjusted returns, weighted index exposure, leveraged returns etc.
4. The methodology is subject to at least annual review by the administrator.
5. Membership of the underlying CDS indices is determined by clear, transparent and objective rules that are publicly available. Example criteria include credit rating, liquidity and currency. The constituents of the underlying CDS indices is determined every six months.
6. The pricing used in the CDS Indices (Total, Excess Return and Strategy) is sourced from IHS Markit CDS Pricing and additional local pricing providers are included where appropriate. Once the set of contributions have been selected, they are passed through an iterative outlier cleaning process. Experienced analysts manage the process of determining the CDS prices based on a rules-based methodology.
7. The exercise of judgment or discretion is very rarely used and governed as described above.
8. In the situation of extreme market disruption or a severe decrease in liquidity in the underlying CDS indices, the administrator would need to resort to modelled pricing provided by IHS Markit CDS Pricing. The depth of the prices published by the IHS Markit CDS Pricing Services should be high enough to ensure reliability of the composite to represent market sentiment. IHS Markit CDS Pricing requires at least three independent price sources to consolidate a price/spread. If this not achieved, the last available price will be used in the CDS Indices (Total, Excess Return and Strategy). A notification will be sent to users if there is a situation where the indices cannot be calculated or when the calculation of a significant part of the index is based on assumptions due to the lack of available data. In exceptional situations where it is not possible to calculate an index at all, an index calculation day may be declared a non-trading day.
9. The CDS Indices (Total, Excess Return and Strategy) are subject to an official *Restatement Policy* that describes how errors in the calculation or the membership is handled. The key determinants to decide if an index needs to be restated following an error are the magnitude of the error on the index performance as well as the impact on the users of the index.

10. The identification of potential limitations of the CDS Indices (Total, Excess Return and Strategy), including its operation in illiquid or fragmented markets are addressed above.

Further details of the *CDS Benchmarks Indices Restatement Policy* are available on the website here.

Rationale for adopting the methodology

The key elements of the methodology of the CDS Indices (Total, Excess Return and Strategy) are input data and the semi-annual roll.

Sources of input data - The CDS Indices (Total, Excess Return and Strategy) are calculated using IHS Markit CDS Pricing Service which is a contribution-based pricing service. The pricing composites are created using robust quality screening methodology to ensure the inputs are reflective of the underlying market.

Semi-annual roll - The indices roll into the latest on-the-run series semi-annually as a new series of the underlying iTraxx/CDX indices is launched every six months, typically in March and September.

Possible impact of Changes or the Cessation of Benchmarks

Where it consults, IMBA will make reasonable efforts to address stakeholder concerns expressed in response to consultations and to allow for reasonable advance notice for stakeholders to accommodate changes, unwind existing positions in contracts/instruments referencing the benchmark, or seek an appropriate substitute benchmark.

There may be circumstances where external factors beyond the control of IMBA could lead to short-term changes or the termination of the Index, e.g. where a continuous disruption of the underlying market or an underlying data point requires a change to the methodology or impacts the viability of the index. In such cases, IMBA may shorten the notice period as is appropriate to the urgency of the situation.

Further details of the *S&P Dow Jones Indices Index Cessation Policy* can be found here.

Key Terms

BMR	means the retained EU law version of the Benchmarks Regulation ((EU) 2016/1011) that has applied in the UK from the end of the Brexit transition period (11pm on 31 December 2020).
Board	means the Board of Directors of IMBA UK.
ESG	means Environmental, Social, Governance.
IHS Markit Benchmark Administration Ltd. (IMBA)	means the administrator, which is the UK entity authorised by the FCA responsible for the daily provision of the CDS Indices (Total, Excess Return and Strategy).
IHS Markit CDS Pricing	means IHS Markit CDS Pricing standalone service that is independent of the index administrator and is based on contributed data, observed quotes in the market and parsed data.
Index Committee	means the committee with responsibility for overseeing day to day administration of the CDS Indices (Total, Excess Return and Strategy).
Internal Oversight Committee	means the Internal Oversight Committee, the independent function which coordinates and directs IMBA's benchmark oversight function.
ISDA CDS Standard Model	means the standard methodology for CDS mark-to-market calculations. More information is available at www.cdsmodel.com.

Additional Information

Updates to this Benchmark Statement

This Benchmark Statement will be updated whenever the information it provides is no longer correct or sufficiently precise and at least where:

(a) there is a change in the type of the benchmark;

(b) there is a material change in the methodology for determining the benchmark or, where the Benchmark Statement refers to a family of benchmarks, in the methodology for determining any benchmark within the family of benchmarks.

This Benchmark Statement will be updated at least every two years.

Further Information

For more information, including methodology documents please visit https://www.spglobal.com/spdji/en/.

Appendix I - Consideration of ESG Factors

Type of benchmark family	Other benchmarks
Name of the benchmarks	CDS Indices (Total, Excess Return and Strategy)
Does the benchmark pursue ESG objectives?	No
Where the answer to the above question is negative,is any EU Climate Transition Benchmark or EU Paris-Aligned Benchmark available in the portfolio of IMBA UK or does IMBA UK have benchmarks that pursue ESG objectives or benchmarks that take into account ESG factors?	Yes

Appendix II - Disclosure of the Alignment with the Objectives of the Paris Agreement

Does the benchmark align with the target of reducing carbon emissions or the attainment of the objectives of the Paris Agreement?	No
The temperature scenario, in accordance with international standards, used for the alignment with the target of reducing GHG emissions or attaining of the objectives of the Paris Agreement.	Not applicable. The benchmarks do not pursue the objective of seeking to reduce carbon emissions or attaining the objectives of the Paris Agreement and therefore a temperature scenario is not relevant to the benchmarks.
The name of the provider of the temperature scenario used for the alignment with the target of reducing GHG emissions or the attainment of the objectives of the Paris Agreement.	Not applicable
The methodology used for the measurement of the alignment with the temperature scenario.	Not applicable
The hyperlink to the website of the temperature scenario used.	Not applicable
Date on which information has last been updated and reason for the update.	Not applicable

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

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.

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