S&P Global Carbon Credit Indices
Methodology

February 2024

Table of Contents

Introduction

Index Objective

The S&P Global Carbon Credit Indices measure the performance of carbon credits traded on global Compliance Carbon Markets. The indices apply capping on a regional basis into EMEA, the Americas, and APAC jurisdictions, as well as on a program-level basis within each region to ensure diversification.

Index Highlights and Family

The index family consists of the following indices:

- **S&P Global Carbon Credit Index**. The index uses carbon credit futures in order to access carbon credit markets due to their liquidity and accessibility to investors. The index selects eligible carbon credit futures based on the most liquid segments of the relevant markets. The index weights according to the trade volumes of eligible constituent programs subject to a capping methodology.

- **S&P Global Carbon Credit UCITS Index.** The index consists of the same carbon programs as the S&P Global Carbon Credit Index and a cash component to satisfy the UCITS 35/20 rule.

Pricing Data Source

The indices use ICE Futures Pricing for all constituents.[1]

For more details on ICE Futures Pricing information, please refer *here*.

For more details on the Oil Price Information Service (OPIS) used for CCA and RGGI physically settled futures contracts prior to December 22, 2022, please refer *here*.

Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific topic. The list of the main supplemental documents for this methodology and the hyperlink to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices' Commodities Indices Policies & Practices Methodology	Commodities Indices Policies & Practices
S&P Dow Jones Indices' Commodity Index Mathematics Methodology	Commodity Index Mathematics Methodology

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

---

[1] Prior to December 22, 2022, the S&P Global Carbon Credit Index used Oil Price Information Service (OPIS) pricing for CCA and RGGI contracts.

Eligibility Criteria

Carbon Credit Selection Rules

As of the close of business three business days prior to the rebalancing date, carbon credit futures must meet all the following criteria to be included in the indices:

- **Accessibility of Futures Markets:** must be easily accessed by institutional investors for trading purposes. Markets restricting trading within carbon credit futures are not eligible.

  For a list of eligible futures, please see Appendix III.

- **Liquidity and Contract Selection**[2]**:** must be liquid to ensure that the index can be replicated. Programs whose carbon credit futures have limited trading volume are not eligible. To be eligible, carbon credit futures must meet the following criteria:

  - Current or next year December expiry[3]

  - Current or next year vintage matching the current or next future's year of expiry, respectively

  - Minimum $10 million average monthly program trade volume within the prior six-month period, as described in *Index Calculation*

- **Program Maturity:** must belong to cap-and-trade programs with recognizable stability regarding the sustainability and future existence of the program. Carbon credit futures that are part of unstable or extremely uncertain cap-and-trade programs are not eligible.

---

[2] For further historical information related to contract selection, please refer to *Appendix III*.

[3] Expiry refers to the year that a given futures contract matures, while Vintage, where applicable, refers to the year that the allowance may be used for compliance. Note that "Current" and "Next" expiries are from the perspective of the index basket at a given date. Therefore, immediately after rebalancing in November, "Current" references the next calendar year, and the "Next" references the year after that. For example, in December 2022, "Current" references 2023 while "Next" refers to 2024.

Index Calculation

Rebalancing

Rebalance Frequency	Indices	Description
Annual Rebalance	S&P Global Carbon Credit Index and S&P Global Carbon Credit UCITS Index	The indices rebalance annually on the last index calculation day of November after the close of business. Three business days before the last index calculation day of November ("constituent selection cut-off date"), the constituents of the index are determined, and an updated membership list with constituent weights is published. On the last index calculation day of each November, S&P Dow Jones Indices publishes the final membership with closing prices for the carbon credit futures and various analytics based on the securities. (The UCITS index rebalances over a period of five index calculation days starting on the first index calculation day of December. For more information, see *Index Calculus*.)
Semiannual Reweighting	S&P Global Carbon Credit Index	In addition to the November rebalancing, the S&P Global Carbon Credit Index reweights on the last index calculation day of May after the close of business. The constituent weights reset to match the November rebalancing weights and new contract units calculate based on latest contract prices.
Monthly Reweighting	S&P Global Carbon Credit UCITS Index	In addition to the November rebalancing, the constituent weights of the S&P Global Carbon Credit UCITS Index reset monthly to the November rebalancing weights. This occurs on the last index calculation day of each month after the close of business. New numbers of units are then determined for each futures contract based on the latest contract prices, effective on the first index calculation day of the following month.

Index Data

An index level calculates if there is at least one security available that matches all inclusion criteria. If no further securities qualify for the index, then its level remains constant. If at least one security becomes available again, the index calculation resumes from the last calculated level.

Calculation occurs on a daily basis as soon as the consolidated quotes are available. Price quotes are provided, and the indices calculate on every index calculation day. Index calculation is based on market prices. In the event there are no new quotes for a particular security, the index continues to calculate based on the last available prices. This could occur in periods of market stress or disruption, as well as in illiquid or fragmented markets.

The index converts all constituent pricing into United States dollars daily using the respective mid-rates for given currencies as of the 4:00 PM London Time snap.

Index Calculus

S&P Global Carbon Credit Index

Index Weights. Determine the weights and capping factors for the subsequent year three index calculation days before the end of November using the average monthly USD trade volume for each constituent program for the six-month lookback period prior to rebalancing. The end date of the lookback period is three index calculation days before the end of November, and the start date is six calendar months before the end date. For instance, in 2021, the lookback period ran from 05/25/2021 to 11/24/2021 included. At each annual rebalancing, cap the exposure to a given region or program according to the following limits:

- Maximum weight of 65% for given geographical region (EMEA, Americas, APAC)

- Minimum weight of 5% for any given carbon credit program

- Weight of 5% for the next year expiry futures contract for any given carbon credit program where the rebalancing weight is 20% or greater

Rebalancing Weight. On the rebalancing day of November each year, the rebalancing weight for each futures contract calculates as the constituent program's average monthly trade volume during the lookback period divided by the aggregate average monthly trade volume during the lookback period of all index constituent programs. Daily trading volume calculates by multiplying the number of futures contracts traded by their respective daily end-of-day ICE price assessments, and any volumes that are not in USD convert using the respective mid-rate exchange rate at 4:00 PM London Time. After these weights calculate, apply the index capping rules if needed:

$$W_{i,Rebal} = \frac{LookbackVolume_{i,Rebal}}{\sum_{i=1}^{n} LookbackVolume_{i,Rebal}}$$

Number of Units. On the rebalancing day in November and reweighting day in May, determine the number of units by taking the product of the total return level prior to rebalancing/reweighting and the calculated rebalancing weight for each given constituent of the index and then divide this figure by the respective constituent's price. The number of units remains static in the index basket until the subsequent rebalancing/reweighting event, which is when said contract allocations change to match the new rebalancing composition and weights:

$$NumberOfUnits_{i,t} = \frac{TotalReturnLevel_{Rebal} * W_{i,Rebal}}{ContractPrice_{i,Rebal}}$$

Total Return Calculation. The total return index level calculation considers the changes in the market prices of the underlying contracts and the yield earned on the cash collateral held for the futures, which are captured and discussed below. The total return level for a given day is the previous calculation day's total return level times one plus the current day's total return:

$$TotalReturn_t = PriceReturn_t + CollateralYield_t$$
$$TotalReturnLevel_t = TotalReturnLevel_{t-1} * (1 + TotalReturn_t)$$

Price Return Calculation. Determine the price return as the daily change in the underlying futures prices. Each Calculation Day, calculate the price level by multiplying the daily contract pricing for each constituent by the number of units assumed to be held in the index basket. Furthermore, rescale this price level in the price return calculation after the underlying index basket has changed immediately after the rebalancing event. The price return level for a given day is the previous calculation day's price return level times one plus the current day's price return:

$$PriceLevel_t = \sum_{i=1}^{n} ContractPrice_{i,t} * NumberOfUnits_{i,t}$$

$$PriceReturn_t = \frac{PriceLevel_t}{PriceLevel_{t-1}} - 1$$

$$PriceReturnLevel_t = PriceReturnLevel_{t-1} * (1 + PriceReturn_t)$$

Collateral Yield Calculation. Determine the yield earned on the cash collateral daily as the product of the prior business day's weighted composite of overnight rates based on the currency exposure in the index and the ACT/360 day-count difference between the calculation days. The Federal Funds Overnight Rate is used for USD currency exposure, the Euro Short Term Rate (ESTR) is used for EUR currency exposure, and the Sterling Overnight Index Average (SONIA) is used for GBP exposure. Furthermore, the weighted composite of overnight rates is determined by summing up the products of a currency's selected overnight rate times the total market weight of all constituents sharing that given currency across all index currencies held:

$$CollateralYield_t = \frac{DayCount_{t-1,t}}{360} * CompositeRate_{t-1}$$

$$CompositeRate_t = \sum_{i=1}^{n} OvernightRate_{i,t} * \frac{ContractPrice_{i,t} * NumberOfUnits_{i,t}}{\sum_{j}^{n} = ContractPrice_{j,t} * NumberOfUnits_{j,t}}$$

Weighted Carbon Price Calculation. Determine the weighted carbon price daily as the product of each constituent's share weight in the index and the closing value of the constituent's contract price for a given day:

$$WeightedCarbonPrice_t = \sum_{i=1}^{n} ContractPrice_{i,t} * \frac{NumberOfUnits_{i,t}}{\sum_{j=1}^{n} NumberOfUnits_{j,t}}$$

Rolling Futures. On the last index calculation day of May and November, after the daily returns are calculated against the existing index basket's components and weights, the index reweighting/ rebalancing occurs and is reflected on the next business day. During the November index rebalancing, the existing index basket's futures roll such that all maturities and vintages are extended by a year with the number of units for the new index basket calculated as described above. Daily returns calculated on the first business day of June and December are calculated against the components and weights featured in the new index basket after rebalancing.

S&P Global Carbon Credit UCITS Index

Index Weights. Once the composition of the S&P Global Carbon Credit UCITS Index is determined, select the rebalancing weight for each security. Set the weights for the futures positions and the cash component at each yearly rebalancing date, allowing sufficient buffer to account for UCITS maximum concentration rules.

See below for the weights in the index as of the index base date 05/28/2021:

Table 1

	CCA 1Y	CCA 2Y	RGGI 1Y	EUA 1Y	EUA 2Y	UKA 1Y	UKA 2Y	Cash
Weights	12.9%	4.3%	17.1%	25.7%	4.3%	12.9%	4.3%	18.5%

Number of Units. On the rebalancing day in November, select the number of units for each contract by taking the product of the total return level prior to rebalancing and the calculated roll-adjusted rebalancing weight for each given constituent of the index, and then divide this figure by the respective constituent's price converted to USD using the respective mid-rate exchange rate as of the 4:00 PM London time snap. The number of units remains static in the index basket until the subsequent monthly weight reset event, which is when said contract allocations change to match the annual rebalancing composition and weights. Derive the number of units according to the following formula, taking Total Return Level, Weight, and Contract Price as of the last index calculation day of November.

$$NumberOfUnits_{i,t} = \frac{TotalReturnLevel_{Rebal} * RollFactor_{i,t} * W_{i,Rebal}}{ContractPrice_{i,Rebal}}$$

The Roll Factor applies over the five index calculation days roll period (the first to fifth business days of the month) to each future constituent as per below while rolling from each current contract to the next. For the avoidance of doubt, on any other index calculation day and after each future contract has rolled, set the Roll Factor to 1.

Table 2 Roll Factors

Roll Period	Current Contract Roll Factor	Next Contract Roll Factor
Day 1	80%	20%
Day 2	60%	40%
Day 3	40%	60%
Day 4	20%	80%
Day 5	0%	100%

In between annual rebalancing events, which is when said contract allocations change to match the annual rebalancing composition, on the last index calculation day of each month (the "reset date"), reset the number of units according to the following formula:

$$NumberOfUnits_{i,t} = \frac{TotalReturnLevel_{Reset} * Weight_{i,reset}}{ContractPrice_{i,reset}}$$

For the avoidance of doubt, $Weight_{i,reset} = Weight_{i,rebalancing}$ is determined during the previous annual rebalancing event.

For information on Market Disruption Events, please refer to the Index Policy section of S&P Dow Jones Indices' Commodities Indices Policies & Practices.

Total Return Calculation. The total return index level calculation considers the changes in the market prices of the underlying contract and the yield earned on the cash collateral held for the futures. In addition, the index allocates to a cash component that earns a yield. The total return level for a given day is the previous calculation day's total return level times one plus the current day's total return:

$$TotalReturn_t = (FuturesWeight_{t-1}) * PriceReturn_t + CashYield_t + CollateralYield_t$$

where:

$$FuturesWeight_t = \frac{PriceLevel_t}{TotalReturnLevel_t}$$

$$TotalReturnLevel_t = TotalReturnLevel_{t-1} * (1 + TotalReturn_t)$$

For the avoidance of doubt, if date *t* falls on the first five index business days of December or the first index business day of any other month, it is based on the new number of units calculated as per *Number of Units.*

Price Return Calculation. Determine the price return as the daily change in the underlying futures prices. Each Calculation Day, the price level calculates by multiplying the daily contract pricing for each constituent by the number of units assumed to be held in the index basket. Furthermore, make an adjustment to rescale this price level in the price return calculation after the underlying index basket has changed immediately after the rebalancing event. The price return level for a given day is the previous calculation day's price return level times one plus the current day's price return:

$$PriceLevel_t = \sum_{i=1}^{n} ContractPrice_{i,t} * NumberOfUnits_{i,t}$$

$$PriceReturn_t = \frac{PriceLevel_t}{PriceLevel_{t-1}} - 1$$

$$PriceReturnLevel_t = PriceReturnLevel_{t-1} * (1 + PriceReturn_t)$$

For the avoidance of doubt, if date *t* falls on the first five index calculation days of December or the first index calculation day of any other month, $PriceLevel_{t-1}$ used in the calculation of the $PriceReturn_t$ is based on the new number of units calculated as per *Number of Units.*

Cash Yield Calculation. The cash yield is the weighted product of the prior trading day's Federal Funds Overnight Rate and the ACT-360 day-count difference between the calculation days.

$$CashYield_t = (1 - FuturesWeight_{t-1}) * \frac{DayCount_{t-1,t}}{360} * FedFundRate_{t-1}$$

Collateral Yield Calculation. Determine the yield earned on the cash collateral daily as the product of the prior trading day's weighted composite of overnight rates based on the currency exposure in the index and the ACT-360 day-count difference between the calculation days. The Federal Funds Overnight Rate is used for USD currency exposure, the Euro Short Term Rate (ESTR) is used for EUR currency exposure, and the Sterling Overnight Index Average (SONIA) is used for GBP exposure. Furthermore, determine the weighted composite of overnight rates by summing the products of a currency's selected overnight rate times the total market weight of all constituents sharing that given currency across all index currencies held:

$$CollateralYield_t = \frac{DayCount_{t-1,t}}{360} * CompositeRate_{t-1}$$

$$CompositeRate_t = \sum_{i=1}^{n} OvernightRate_{i,t} * \frac{ContractPrice_{i,t} * NumberOfUnits_{i,t}}{TotalReturnLevel_t}$$

For the avoidance of doubt, if date *t* falls on the first five index calculation days of December or the first index business day of any other month, $CompositeRate_{t-1}$ is based on the new number of units calculated as per *Number of Units*.

In the specific case where the Federal Funds Overnight Rate is not a valid business day (according to the U.S. rate calendar) and the last available rate is used from a prior date instead, the Euro Short Term Rate and Sterling Overnight Index Average will also be retrieved from that same Federal Funds Overnight Rate prior retrieval date.

Rolling Futures. On the last index calculation day of November after the daily returns are calculated against the existing index basket's component and weight, the index rebalancing occurs and is reflected gradually over the next five index calculation days (the "roll period", each a "roll day"). During the November index rebalancing, the existing index basket's futures are rolled such that the existing maturity and vintage is extended by a year with the number of units for the new index basket calculated as per Number of Units. Daily returns computed on the first index calculation day of December are calculated against the component and weight featured in the new index basket after rebalancing adjusted according to the five index calculation days roll schedule described in *Table 2: Roll Factors*. On each annual rebalancing event, futures rolling would occur over five consecutive index calculation days starting from December 1st and ending on the fifth index calculation day. On each roll day, a 20% additional share rolls from each invested contract to the following year expiry contract as per the roll schedule. In December after the close of the fifth index calculation day, the rolling is complete, with 0% weight assigned to the contracts expiring in December of the year the annual rebalancing occurred.

Index Maintenance

Settlement Conventions

The S&P Global Carbon Credit Index calculates using the assumption of *T*+0 settlement days.

Currency of Calculation and Additional Index Return Series

Foreign exchange spot rates are sourced from WMR. The index calculation uses the foreign exchange mid rates at 4:00 PM London Time. If the rebalancing day is a non-business day, the 4:00 PM London Time foreign exchange rates from the previous business day are used.

In addition to the indices detailed in this methodology, additional return series versions of the indices may be available, including, but not limited to: currency, currency hedged, decrement, fair value, inverse, leveraged, and risk control versions. For a list of available indices, please refer to the *IMBA Benchmark Register*.

Base Date and History Availability

The index history availability, base date, and base value are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P Global Carbon Credit Index	07/25/2019	07/31/2014	07/31/2014	100
S&P Carbon Credit CCA Index	10/04/2021	07/31/2014	07/31/2014	100
S&P Carbon Credit EUA Index	08/19/2021	07/31/2014	07/31/2014	100
S&P Global Carbon Credit UCITS Index	12/22/2021	05/28/2021	05/28/2021	100

Index Dissemination

Tickers

The table below lists headline indices covered by this document. All versions of the below indices that may exist are also covered by this document. Please refer to the *IMBA Benchmark Register* for a complete list of indices covered by this document.

Index Name	BBG	RIC
S&P Global Carbon Credit Index	GLCARB	.GLCARB
S&P Carbon Credit CCA Index	GLCCCA	.GLCCCA
S&P Carbon Credit EUA Index	GLCEUA	.GLCEUA
S&P Global Carbon Credit UCITS Index	GLCUCITS	.GLCUCITS

Index Data

Daily constituent and index level data are available via subscription.

For product information, please contact S&P Dow Jones Indices at https://www.spglobal.com/en/contact-us/.

Index Governance

Index Committee

An S&P Dow Jones Indices Index Committee maintains the index. All committee members are full-time professional members of S&P Dow Jones Indices' staff. The Index Committee meets regularly. At each meeting, the Committee reviews pending corporate actions that may affect index constituents, statistics comparing the composition of the indices to the market, companies that are being considered as candidates for addition to the indices, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting companies, treatment of dividends, share counts or other matters.

S&P Dow Jones Indices considers information about changes to its indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

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.

For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Commodities Indices Policies & Practices Methodology.

Index Policy

Announcements

All index constituents are evaluated daily for data needed to calculate index levels and returns. All events affecting the daily index calculation are typically announced in advance via the Index Corporate Events report (.SDE), delivered daily to all clients. Any unusual treatment of a corporate action or short notice of an event may be communicated via email to clients.

For more information, please refer to the Announcements section of S&P Commodities Indices Policies & Practices Methodology.

Holiday Schedule

The S&P Global Carbon Credit Index calculates on all NYSE trading days.

Rebalancing

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Unexpected Exchange Closures

For information on Unexpected Exchange Closures, please refer to S&P Commodities Indices Policies & Practices Methodology.

Recalculation Policy

For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Commodities Indices Policies & Practices Methodology.

Contact Information

For questions regarding an index, please contact: index_services@spglobal.com.

Appendix I

Methodology Changes

Methodology changes since July 25, 2019, are as follows:

	Effective	Methodology	
Change	**Date**	**Previous**	**Updated**
Index Names: S&P Global Carbon Credit Indices	01/10/2024	IHS Markit Global Carbon Indices	S&P Global Carbon Credit Indices
Index Names: S&P Global Carbon Credit Index (UCITS)	01/10/2024	IHS Markit Global Carbon UCITS Index	S&P Global Carbon Credit UCITS Index
Constituent Pricing Data Source	12/22/2022	Carbon credit futures pricing is sourced from ICE Futures Pricing for European Union Allowance (EUA) futures and IHS Markit OPIS Pricing for California Carbon Allowance (CCA) and Regional Greenhouse Gas Initiative (RGGI) physically-settled futures contracts.	Carbon credit futures pricing is sourced from ICE Futures Pricing for all physically-settled futures contracts.
Publication Schedule: S&P Global Carbon Credit Indices	12/01/2022	Index level is always calculated for the last calendar day in May and November	Index Level will be calculated only on the last NYSE trading day in May and November
Publication Schedule: S&P Global Carbon Credit Index (UCITS)	12/01/2022	--	Every month, the last publication day for the Index will be the last index calculation day of that month.
Minimum Program Weight: S&P Global Carbon Credit Indices	09/27/2021	The minimum program weight is 10%.	The minimum program weight is 5%.
Rebalancing Frequency: S&P Global Carbon Credit Indices	09/27/2021	The index rebalances semi-annually.	The index rebalances annually.

Appendix II

ICE Futures Pricing Change for CCA and RGGI contracts

Effective December 22, 2022, the CCA and RGGI contracts are being sourced from ICE. The number of units for the new ICE contract effective 22 December 2022 (date *t*) is calculated as per below using end of day prices as of 21 December 2022 (date *t-1*):

$$NumberOfUnits_{i,t} = \frac{NumberOfUnits_{i,t-1} * ContractPrice_{i,t-1,OPIS}}{ContractPrice_{i,t-1,ICE}}$$

Where $ContractPrice_{i,t-1,OPIS}$ and $ContractPrice_{i,t-1,ICE}$ refer to the price of impacted futures contract sourced from OPIS and ICE respectively on December 21, 2022.

Appendix III

Eligible Futures Markets

The following markets are eligible:

- European Union Allowance (EUA)

- UK Allowance (UKA)

- California Carbon Allowance (CCA)

- Regional Greenhouse Gas Initiative (RGGI)

Contract Expiration Schedules

Schedule 1: S&P Global Carbon Credit Index

Trading Facility	Commodity Contract	Commodity Codes	Designated Contract Expirations at Month Begin											
			1	2	3	4	5	6	7	8	9	10	11	12
ICE	California Carbon Allowance	CCA-A	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1
		CCA-B	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+2
ICE	Regional Greenhouse Gas Initiative	RGGI	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1
ICE	European Union Allowance (EUA)	CFI2-A	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1
		CFI2-B	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+2
ICE	UK Allowance (UKA)	UKAFM	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1

Schedule 2: Single Commodity Indices

Trading Facility	Commodity Contract	Commodity Codes	Designated Contract Expirations at Month Begin											
			1	2	3	4	5	6	7	8	9	10	11	12
ICE	California Carbon Allowance	CCA-A	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1
		CCA-B	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+2
ICE	European Union Allowance (EUA)	CFI2-A	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1
		CFI2-B	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+2

Schedule 3: S&P Global Carbon Credit UCITS Index

Trading Facility	Commodity Contract	Commodity Codes	Designated Contract Expirations at Month Begin											
			1	2	3	4	5	6	7	8	9	10	11	12
ICE	California Carbon Allowance	CCA-A	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1
		CCA-B	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+2
ICE	Regional Greenhouse Gas Initiative	RGGI	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1
ICE	European Union Allowance (EUA)	CFI2-A	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1
		CFI2-B	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+2
ICE	UK Allowance (UKA)	UKAFM-A	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z+1
		UKAFM-B	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+1	Z+2

Appendix IV

ESG Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[4]		
1.	**Name of the benchmark administrator.**	IHS Markit Benchmark Administration Limited (IMBA)
2.	**Underlying asset class of the ESG benchmark.[5]**	N/A
3.	**Name of the S&P Dow Jones Indices benchmark or family of benchmarks.**	S&P Global Carbon Credit Index Family Benchmark Statement
4.	**Do any of the indices maintained by this methodology take into account ESG factors?**	No
Appendix latest update:	February 2024	
Appendix first publication:	March 2023	

---

[4] 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.

[5] 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 by 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. Also, the treatment of corporate actions in back-tested performance may differ from treatment for live indices due to limitations in replicating index management decisions. 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

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.

ESG Indices Disclaimer

S&P DJI provides indices that seek to select, exclude, and/or weight index constituents based on, but not limited to, certain environmental, social or governance (ESG) indicators, or a combination of those indicators, including the following: environmental indicators (including the efficient use of natural resources, the production of waste, greenhouse gas emissions, or impact on biodiversity); social indicators (such as, inequality and investment in human capital); governance indictors (such as sound management structures, employee relations, remuneration of staff, tax compliance, respect for human rights, anti-corruption and anti-bribery matters), specific sustainability or values-related company involvement indicators (for example, production/distribution of controversial weapons, tobacco products, or thermal coal), or controversies monitoring (including research of media outlets to identify companies involved in ESG-related incidents).

S&P DJI ESG indices use ESG metrics and scores in the selection and/or weighting of index constituents. ESG scores or ratings seek to measure or evaluate a company's, or an asset's, performance with respect to environmental, social and corporate governance issues.

The ESG scores, ratings, and other data used in S&P DJI ESG indices is supplied directly or indirectly by third parties (note these parties can be independent affiliates of S&P Global or unaffiliated entities) so an S&P DJI ESG index's ability to reflect ESG factors depends on these third parties' data accuracy and availability.

ESG scores, ratings, and other data may be reported (meaning that the data is provided as disclosed by companies, or an asset, or as made publicly available), modelled (meaning that the data is derived using a proprietary modelling process with only proxies used in the creation of the data), or reported and modelled (meaning that the data is either a mix of reported and modelled data or is derived from the vendor using reported data /information in a proprietary scoring or determination process).

ESG scores, ratings, and other data, whether from an external and/or internal source, is based on a qualitative and judgmental assessment, especially in the absence of well-defined market standards, and due to the existence of multiple approaches and methodologies to assess ESG factors and considerations. An element of subjectivity and discretion is therefore inherent in any ESG score, rating, or other data and different ESG scoring, rating, and/or data sources may use different ESG assessment or estimation methodologies. Different persons (including ESG data ratings, or scoring providers, index administrators or users) may arrive at different conclusions regarding the sustainability or impact of a particular company, asset, or index.

Where an index uses ESG scores, ratings or other data supplied directly or indirectly by third parties, S&P DJI does not accept responsibility for the accuracy of completeness of such ESG scores, ratings, or data. No single clear, definitive test or framework (legal, regulatory, or otherwise) exists to determine 'ESG', 'sustainable', 'good governance', 'no adverse environmental, social and/or other impacts', or other equivalently labelled objectives. In the absence of well-defined market standards and due to the existence of multitude approaches, the exercise of judgment is necessary. Accordingly, different persons may classify the same investment, product and/or strategy differently regarding 'ESG', 'sustainable', 'good governance', 'no adverse environmental, social and/or other impacts', or other equivalently labelled

objectives. Furthermore, the legal and/or market position on what constitutes an 'ESG', 'sustainable', 'good governance', 'no adverse environmental, social and/or other impacts', or other equivalently labelled objectives may change over time, especially as further regulatory or industry rules and guidance are issued and the ESG sustainable finance framework becomes more sophisticated.

Prospective users of an S&P DJI ESG Index are encouraged to read the relevant index methodology and related disclosures carefully to determine whether the index is suitable for their potential use case or investment objective.