ECPI BOND INDEX METHODOLOGY

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INTRODUCTION

The present document defines the rules for the calculation and management of the ECPI Bond Indices.

The Index Rules and Index Constituents are available on ECPI’s website, www.ecpigroup.com, as well as on the Source: StatPro website at: https://source.statpro.net and/or can be requested at ecpi.indices@statpro.com.

ECPI SUSTAINABLE INDICES

The objective of ECPI Indices is that of providing the user with tradable indices that in their construction and management take into account, in addition to traditional financial criteria, also non-financial dimensions.

All of ECPI Indices are characterized by (i) either a rigorous exclusion of companies that operate in certain sectors in coherence with the ethical sensibility of the investor and/or by (ii) a positive selection of companies that demonstrate a solid ESG profile.

ECPI Indices may be used as the basis for various investment vehicles: they allow for an efficient implementation of socially responsible or sustainable mandates as well as index-tracking portfolios and exchange traded funds.

Socially Responsible and Sustainability criteria used to select the indices’ constituents, offer a conduit for investors to jointly express their interest in sustainability and, thus, to collectively move the relevant issues up the corporate agenda.

StatPro Ltd is the Index Administrator of the ECPI Bond Index Family.
The ECPI Socially Responsible & ESG Bond Indices family is built and maintained according to the following principles:

- **Market Representation**
  The indices represent the reference markets and reflect the opportunities available to the investors. The main criteria used to ensure market representation are market capitalization and sector composition.

- **Investible and Replicable**
  The indices should be capable of being replicated by users, this objective is achieved by: free float adjusting of constituent capitalization and selection of securities with reasonable size and liquidity.

- **Disciplined Approach**
  ECPI Indices are constructed and managed using a set of principles, rules and guidelines. This approach is followed to maintain the attributes of a benchmark, such as stability of the index, proper diversification across industries and securities and accurate respect of the socially responsible criteria.

- **Transparency**
  The indices are built and maintained using clear and transparent rules, available on public sources; moreover the indices are published daily on the most important financial info providers worldwide (Bloomberg, Refinitiv, StatPro Revolution).

- **Independence and Objectivity**
  The indices are based on independent and objective content decisions. ECPI believes in an open dialogue with its clients, considering with objectivity their suggestions to enhance the indices’ provision. Analyzing all the feedback received by its clients, ECPI takes the final decision in order to preserve the quality of the indices via the adoption of a rigorous mechanism of “Approval of Index Rules Revisions”.

- **Continuity and Indices’ Turnover**
  ECPI Indices are managed to ensuring the continuity of the indices. Continuity refers to the consistent application of the index methodology. The indices are also managed with the aim of keeping the level of index turnover relatively low, while at the same time reflecting the evolution of the reference market.

- **Sustainability**
  Every Instrument which composes the indices has to satisfy defined socially responsible investment criteria.
**SELECTION CRITERIA**

The selection criteria for the inclusion of bonds in the ECPI Global Bond indices are:

- Bond Type
- Bond Classification
- Credit Rating
- Time to maturity
- Amount Outstanding
- Eligible Countries
- Eligible Currencies
- Sustainability

**BOND TYPE**

General inclusion criteria: only fixed rate bonds whose cash flow can be determined in advance are eligible for the indices.

In particular, bonds with the following characteristics are included:

- Fixed coupon bonds
- Zero coupon bonds
- Step-ups
- Event-driven bonds, such as rating- or tax-driven bonds with a maximum of one coupon change per period
- Dated and undated callable corporate bonds, including fixed-to-floater bonds that change to a floating rate note at or after the first call date. Undated bonds must be callable. In the index calculation, these bonds are always assumed to redeem at the first call date
- Inflation-linked bonds, exclusively for the indices belonging to the ECPI Inflation Linked Bond Index Family

The following bonds are specifically excluded: index-linked bonds, sinking funds and amortizing bonds, other callable and undated bonds, floating rate notes and other fixed-to-floater bonds, convertible bonds, private placements, subordinated bank or insurance debt with mandatory contingent conversion features or with any conversion options before the first call date, CDOs (Collateralized Debt Obligations) and bonds collateralized by CDOs, covered bonds (bonds secured by a general pool of assets).

**BOND CLASSIFICATION**

Each bond is classified into one of the three categories: Sovereigns, Sub-Sovereigns and Corporate Bonds as well as a number of category-specific subsectors.

- **Sovereigns**: bonds issued by a central government

- **Sub-sovereigns**: bonds issued by local governments (e.g. German Bundeslaender) and bonds guaranteed or issued by entities guaranteed by governments such as government agencies (e.g. Cades, KfW), public banks or supranational entities (e.g. EIB, World Bank), bonds issued by unguaranteed financial institutions with an irrevocable and explicit guarantee issued by the government of the issuer country that covers amount and timeliness of all interest and principal payments until the maturity of the bond. The two main sub-sovereign sectors are: agencies and supranationals. Agency's bonds are issued by entities whose major business is to fulfill a government-sponsored role to provide public services. Supranational bonds are issued by supranational entities, i.e. entities that are owned by more than one central government.

- **Corporate bonds**: bonds issued by public or private corporations.

**CREDIT RATING**

All bonds in the ECPI Bond index family are categorized as either investment grade or sub-investment grade with substantial or high credit risk. Obligations that present a higher credit risk are excluded.
TIME TO MATURITY
All bonds must have a minimum remaining time to maturity of at least one year at the rebalancing date. For callable bonds, the first call date is always assumed to be the expected redemption date. The expected remaining life is calculated as the number of days between the rebalancing date and the expected redemption date.

AMOUNT OUTSTANDING
All bonds require a specific minimum amount outstanding in order to be eligible for the indices, as shown below. The minimum amount outstanding is defined for each bond classification used and for each eligible currency:

GLOBAL DEVELOPED GOVERNMENT BONDS
- AUD, CAD, EUR, GBP, SEK, USD: 2bn
- CHF, DKK, ILS, NOK, NZD: 1bn
- JPY: 150bn

SUB-SOVEREIGNS BONDS
- EUR: 1bn

EMERGING MARKETS GOVERNMENT BONDS
- EUR, USD: 500mln

INVESTMENT GRADE AND HIGH YIELD CORPORATE BONDS
- AUD, CAD, CHF, DKK, EUR, ILS, NOK, NZD, SEK, USD: 500mln
- GBP: 250mln
- JPY: 50bn

GLOBAL DEVELOPED ELIGIBLE COUNTRIES
The following list reports the eligible countries of incorporation for indices belonging to the ECPI Global Developed Indices:

- Australia
- Austria
- Belgium
- Canada
- Denmark
- Finland
- France
- Germany
- Greece
- Ireland
- Israel
- Italy
- Japan
- Luxembourg
- Netherlands
- New Zealand
- Norway
- Portugal
- Spain
- Sweden
- Switzerland
- United Kingdom
- United States

EUROZONE ELIGIBLE COUNTRIES
The following list reports the eligible countries of incorporation for indices belonging to the ECPI Euro Indices:

- Austria
- Belgium
- Finland
- France
- Germany
- Greece
- Ireland
- Italy
- Luxembourg
- Netherlands
- Portugal
- Spain

EMERGING MARKETS
Sovereigns and Sub-sovereigns incorporated in countries not belonging to the Global Developed Eligible Countries’ list are eligible for inclusion in the ECPI Emerging Markets ESG Government Bond Index.
ELIGIBLE CURRENCIES
The following list reports the eligible currencies for indices belonging to the ECPI Bond Index Family:

- AUD
- CAD
- CHF
- DKK
- EUR
- GBP
- ILS
- JPY
- NOK
- NZD
- SEK
- USD

WEIGHTING
The market value of each bond is used to calculate its index weight. The indices are capitalization-weighted.

SUSTAINABILITY SCREENING
All bonds included in the ECPI Bond Index Family are issued by entities that are eligible according to ECPI Rating Methodology, in particular:

- ECPI Ethical Indices are issued by entities that are eligible according to ECPI ESG Screening Methodology and pass the ECPI Sector Screening, when applicable.
- ECPI ESG Indices are issued by entities that are eligible according to ECPI ESG Screening Methodology /ECPI Government Governance Rating Methodology.
ECPI Bond indices are reviewed and re-balanced on a monthly basis. This includes:

**BOND SELECTION**
The universe of bonds is reviewed monthly; the issues meeting the criteria described above at the end of the month are included in the indices. The cut-off date for meeting the amount outstanding criteria is three business days prior to month-end. The rating information includes all rating actions published three trading days before the end of the month. Intra-month rating changes are reflected at the beginning of the following month. The time to maturity is measured from the rebalancing date to the final specified maturity date of the bond.

**INDEX COMPOSITION**
All bonds are assigned to the indices according to their classification. The assignment of a bond to a certain maturity bucket is based on its expected remaining life. The expected remaining life is expressed in years and calculated as follows:

- For plain vanilla bonds, the expected remaining life of the bond is its time to maturity, calculated as the number of days between the last calendar day of the current month and its maturity;
- For dated and undated callable bonds, the first call date is always assumed to be the expected redemption date. The expected remaining life is calculated as the number of days between the last calendar day of the month and the expected redemption date.

All bonds remain in their maturity bucket for the entire month.

**WEIGHTING ADJUSTMENTS**
Within an index, each bond is weighted according to its market value. Intra-month changes of the amount outstanding for each bond are reflected in the index through the rebalancing procedure at the beginning of the next month.

**COUPON ADJUSTMENTS**
Coupon changes to corporate bonds are taken into account in the calculation of the indices from the exact date on which the coupon was altered.

**RE-BALANCING TIMEFRAME**
Two business days before the end of each month, a final list of securities entering and exiting the index is published (Review).
INDEX CALCULATION

CALCULATING THE INDICES
The indices are calculated based on bid prices. Bonds that currently are not in the index but become eligible at the next rebalancing will enter the indices at their ask price. If necessary, other pricing sources may be selected by ECPI in order to guarantee representativeness and the quality of the index.

CURRENCY OF CALCULATION
The indices are calculated in EURO using 4pm UK time spot rates for conversion.

MINIMUM NUMBER OF BONDS
An index is calculated if at least one available bond matches all index criteria. If no more bonds qualify for an index, that index is no longer calculated and the index level remains at the last published level. If at least one bond qualifies again, calculation of the index is resumed.

MATURITY BUCKETS
All bonds are categorized into maturity buckets. As a principle, the bands are defined as 1-3, 1-5, 1-10, 1-20, 3-5, 5+, 5-7, 5-10, 5-15, 7+, 7-10 and 10+ years.

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

REINVESTMENT OF CASH
Payments from coupons and scheduled partial and unscheduled full redemptions are held as cash until the next rebalancing when the cash is reinvested in the index.

SETTLEMENT CONVENTIONS
The settlement convention is t+0.

INDEX FORMULAS
The indices are calculated as basket indices based on real bonds. All indices are published as total return indices.

The ECPI Bond indices are calculated on a capitalization-weighted basis that recognizes the relative changes in value compared to the beginning of each month. The composition and weightings of the index are adjusted at the beginning of each month.
CALLED BONDS
Bonds that are called during the month are treated immediately: the value of the called bond is kept constant at the call price plus accrued interest as of the call date and brought forward until the next rebalancing.

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:

- After the funge date, the price from the parent tranche is used for the funged tranche;
- Funged tranche leaves the index at the next rebalancing and parent amount outstanding increases accordingly.

EX-DIVIDEND CONVENTION
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 treatment of such bonds is as follows:

- At the rebalancing: a bond is not included as a new component of the index if it is under the ex-dividend period
- For index components with ex-dividend conventions: the index calculation will consider the coupon on the relevant payment date.
BOND INDICES

DEFINITION
ECPI bond indices are calculated as capitalization-weighted indices. A capitalization-weighted (or "cap-weighted") index, also called a market-value-weighted index is a bond market index whose components are weighted according to the total market value of their outstanding bonds.

The ECPI Bond Index Family is composed of:

- ECPI Global Developed ESG Corporate Bond Index
- ECPI Euro ESG Corporate Bond Index
- ECPI Global Developed ESG Corporate Ex Financials Bond Index
- ECPI Global Developed ESG Corporate Financials Bond Index
- ECPI Global Developed ESG High Yield Corporate Bond Index
- ECPI Emerging Markets ESG Corporate Bond Index
- ECPI Global Developed Governance Government Bond Index
- ECPI EMU Governance Government Bond Index
- ECPI Global Developed ex EMU Governance Government Bond Index
- ECPI US Governance Government Bond Index
- ECPI Emerging Markets ESG Government Bond Index
- ECPI Global Developed Ethical Corporate Bond Index
- ECPI Euro Ethical Corporate Bond Index
- ECPI Euro Ethical Corporate Ex Financials Bond Index
- ECPI Euro Ethical Government Bond Index
- ECPI Euro Ethical Government Bond 1-3 y Index
- ECPI Italy Government Bond 1-3 y Index
- ECPI Euro Ethical Agency & Supranational Bond Index

The ECPI Global Developed ESG Corporate Bond Index selects investment grade global corporate bond issues denominated in major currencies which have a positive ESG rating according to ECPI ESG Rating Methodology. Bloomberg Ticker: ECAPGCB Index

The ECPI Euro ESG Corporate Bond Ex Military Index selects investment grade global corporate bond issues denominated in Euro which have a positive ESG rating according to ECPI ESG Rating Methodology and excludes issuers involved in armaments production. Bloomberg Ticker: ECAPCEXM Index

The ECPI Global Developed ESG Corporate Ex Financials Bond Index selects non-financials bonds which are members of the ECPI Global Developed ESG Corporate Bond Index (ECAPGCB). Bloomberg Ticker: ECAPGCF Index

The ECPI Global Developed ESG Corporate Financials Bond Index selects financial sector bonds which are members of the ECPI Global Developed ESG Corporate Bond Index (ECAPGCB). Bloomberg Ticker: ECAPGCF Index

The ECPI Global Developed ESG High Yield Corporate Bond Index selects sub-investment grade global corporate bond issues denominated in major currencies which have a positive ESG rating according to ECPI ESG Rating Methodology. Bloomberg Ticker: ECAPHYCB Index

The ECPI Emerging Markets ESG Corporate Bond Index is composed of emerging markets investment grade and sub-investment grade global corporate bond issues denominated in EUR and USD which have a positive ESG rating according to ECPI ESG Rating Methodology. Bloomberg Ticker: ECAPEMCB Index

The ECPI Global Developed Governance Government Bond Index selects developed countries investment grade government bonds which are eligible investments according to ECPI Government Governance Rating Methodology.
Bloomberg Ticker: ECAPDGB Index

The ECPI EMU Governance Government Bond Index selects bonds in the ECPI Global Developed Governance Government Bond Index (ECAPDGB) issued by EMU country members which are eligible investments according to ECPI Government Governance Rating Methodology.

Bloomberg Ticker: ECAPGGE Index

The ECPI Global Developed ex EMU Governance Government Bond Index selects bonds in the ECPI Global Developed Governance Government Bond Index (ECAPDGB) issued by non-EMU countries which are eligible investments according to ECPI Government Governance Rating Methodology.

Bloomberg Ticker: ECAPGGXE Index

The ECPI US Governance Government Bond Index is composed of bonds in the ECPI Global Developed Governance Government Bond Index issued by the U.S. Government.

Bloomberg Ticker: ECAPUSGB Index

The ECPI Emerging Markets ESG Government Bond Index is composed of emerging markets investment grade and sub-investment grade government and sub-sovereign bond issues denominated in EUR and USD which have a positive rating according to ECPI Government and Supranational ESG Rating Methodology.

Bloomberg Ticker: ECAPEGB Index

The ECPI Euro Ethical Corporate Bond Index includes investment grade corporate bond issues from companies incorporated in the Eurozone Eligible Countries and denominated in Euro that have a positive ESG rating and do not belong to controversial sectors according to ECPI Sector Screening.

Bloomberg Ticker: ECAPECB Index

The ECPI Euro Ethical Corporate Ex Financials Bond Index is composed of non-financial sector bonds which are members of the ECPI Euro Ethical Corporate Bond Index (ECAPECB).

Bloomberg Ticker: ECAPECBX Index

The ECPI Euro Ethical Government Bond Index is composed of investment grade government bonds of the Eurozone Eligible Countries with a positive rating according to ECPI Government and Supranational Screening Methodology.

Bloomberg Ticker: ECAPEGB Index

The ECPI Euro Ethical Government 1-3y Bond Index is composed of bonds in the ECPI Euro Ethical Government Bond (ECAPEGB) that belong to the 1-3 years maturity bucket.

Bloomberg Ticker: ECAPEG13 Index3

The ECPI Italy Government 1-3y Bond Index is composed of bonds in the ECPI Euro Ethical Government 1-3y Bond Index (ECAPEG13) issued by the Italian Government.

Bloomberg Ticker: ECAPIG13 Index

The ECPI Euro Ethical Agency & Supranational Bond Index includes investment grade global agency bond issues denominated in Euro that have a positive ESG assessment according to ECPI ESG Screening Methodology.

Bloomberg Ticker: ECAPEAB Index
TOTAL RETURN INDEX
For total return indices the monthly adjustment involves the reinvestment of coupon payments into the index at the beginning of the new month.
Total return indices are calculated as follows:

\[ TR_t = TR_{t-s} \frac{\sum_{i=1}^{n} (P_{t,i} + A_{t,i} + XD_{t,i} \cdot (CP_{t,i} + G_{t,i})) \cdot N_{t,i}}{\sum_{i=1}^{n} (P_{t,i} + A_{t,i} + XD_{t,i} \cdot CP_{t,i}) \cdot N_{t,i}} \]

NOTATION
- \( A_{t} \) Accrued interest of bond \( i \) at time \( t \)
- \( A_{t-s} \) Accrued interest of bond \( i \) on the last calendar day of the previous month
- \( CP_{t} \) Value of the next coupon payment of bond \( i \) during an ex-dividend period (because the next coupon is separated from the bond during the ex-dividend period). Outside the ex-dividend period, the value is 0
- \( CP_{t-s} \) Value of the next coupon payment of bond \( i \) at the last re-balancing during an ex-dividend period (because the next coupon is separated from the bond during the ex-dividend period). Outside the ex-dividend period, the value is 0;
- \( G_{t} \) Coupon payment received from bond \( i \) between the day of the payment and month-end. If none the value is set to 0
- \( n \) = Number of bonds resp. number of future cash flows in the index
- \( N_{t,i} \) Notional of bond \( i \) at the last rebalancing
- \( P_{t} \) Price of bond \( i \) at time \( t \);
- \( P_{t-s} \) Closing price of bond \( i \) on the last trading day of the previous month
- \( P_{i,t} \) Price index level at time \( t \);
- \( P_{i,t-s} \) Closing price index level on the last calendar day of the previous month
- \( s \) = Time since last rebalancing
- \( t \) = Time of calculation
- \( TR_t \) Total return index level at time \( t \)
- \( TR_{t-s} \) Closing total return index level on the last calendar day of the previous Month
- \( XD_{t,i} \) = 0, if the bond enters the index during its current ex-dividend period (to ensure that the next coupon payment is not included in the total return calculation)
- \( XD_{t,i} = 1, if \ (a) \ the \ bond \ does \ have \ ex-dividend \ conventions, \ (b) \ has \ not \ entered \ the \ index \ during \ an \ ex-dividend \ period, \ or \ (c) \ entered \ the \ index \ during \ a \ previous \ ex-dividend \ period. \)
INFLATION LINKED BOND INDICES

DEFINITION
Inflation-linked bonds, primarily issued by sovereign governments, are indexed to inflation so that the principal and interest payments rise and fall with the rate of inflation.
ECPI Inflation-linked bond indices are calculated as capitalization-weighted indices. A capitalization-weighted (or "cap-weighted") index, also called a market-value-weighted index is a bond market index whose components are weighted according to the total market value of their outstanding bonds.

The ECPI Inflation Linked Bond Index Family is composed of:
- ECPI EMU Governance Government Inflation Linked Bond Index

The ECPI EMU Governance Government Inflation Linked Bond Index represents investment grade EURO denominated inflation linked debt issued by the Eurozone Eligible Countries that have a positive ESG rating according to ECPI Government and Supranational Screening Methodology.
Bloomberg Ticker: ECAPEGIL Index

INFLATION LINKED TOTAL RETURN INDEX
For total return indices the monthly adjustment involves the reinvestment of coupon payments at the beginning of the month. Consequently, total return indices are calculated as follows:

\[
TR_t = TR_{t-s} \frac{\sum_{i=1}^{n} \left( P_{i,t} \times IR_{i,t} + A_{i,t} \times IR_{i,t} + \left( CP_{i,t} \times IR_{i,t} + G_{i,t} \times IR_{i,t} \right) \right) \times N_{i,t-s}}{\sum_{i=1}^{n} \left( P_{i,t-s} + A_{i,t-s} + CP_{i,t-s} \right) \times N_{i,t-s} \times IR_{i,t-s}}
\]

\[
N_{i,t}^n = N_{i,t} \times IR_t
\]

\[
IR_t = \frac{CPI_t}{CPI_{t=0}}
\]

NOTATION
- \( A_{i,t} \) Accrued interest of bond \( i \) at time \( t \)
- \( A_{i,t-s} \) Accrued interest of bond \( i \) on the last calendar day of the previous month
- \( CP_{i,t} \) Value of the next coupon payment of bond \( i \) during an ex-dividend period (because the next coupon is separated from the bond during the ex-dividend period). Outside the ex-dividend period, the value is 0
- \( CP_{i,t-s} \) Value of the next coupon payment of bond \( i \) (at the last re-balancing) during an ex-dividend period (because the next coupon is separated from the bond during the ex-dividend period). Outside the ex-dividend period, the value is 0;
- \( G_{i,t} \) Coupon payment received from bond \( i \) between the day of the payment and month-end. If none the value is set to 0
- \( n \) Number of bonds resp. number of future cash flows in the index
- \( N_{i,t-s} \) Notional of bond \( i \) at the last rebalancing
- \( P_{i,t} \) Price of bond \( i \) at time \( t \); \( P_{i,t-s} \) Closing price of bond \( i \) on the last trading day of the previous month
- \( P_{i,t} \) Price index level at time \( t \)
- \( P_{i,t-s} \) Closing price index level on the last calendar day of the previous month
- \( s \) Time since last rebalancing
- \( t \) Time of calculation
- \( TR_t \) Nominal Total return index level at time \( t \)
- $TR_{t-s}$ = Nominal Closing total return index level on the last calendar day of the previous Month
- $CPI_t$ = Reference Consumer Price Inflation on settlement date $t$
- $CPI_{0}$ = Base index level applying to the interest accrual date of the bond
**HEDGED BOND INDICES**

**DEFINITION**
A currency hedged index is constructed by adding a layer of currency forward contracts to the underlying unhedged indexes. The Hedged Indexes are calculated as daily return indexes and hedged on a monthly basis. The Hedged Indexes are designed to represent returns for global investment strategies that involve hedging currency risk, but not the underlying constituent risk.

ECPI multi-currency bond indices are also available in the hedged to EUR version:

- ECPI Global Developed ESG Corporate Hedged Bond Index - ECAPGCBH Index
- ECPI Global Developed ESG Corporate Ex Financials Hedged Bond Index - ECAPGXFH Index
- ECPI Global Developed ESG Corporate Financials Hedged Bond Index - ECAPGCFH Index
- ECPI Global Developed ESG High Yield Corporate Hedged Bond Index - ECAPHYCH Index
- ECPI Global Developed ex EMU Governance Government Hedged Bond Index - ECAPUSGH Index
- ECPI Emerging Markets ESG Government Hedged Bond Index - ECAEMGH Index
- ECPI Emerging Markets ESG Corporate Hedged Bond Index - ECAEMCH Index

**HEDGING ALGORITHM**
The hedged index performance is calculated as the performance of the unhedged index in the base currency plus the hedge impact in the base currency, as derived from the forward positions.

The hedge impact (HI) is calculated according to the following formula:

\[ HI(t) = NAF \times \sum_{i=1}^{n} \left( Weight_{i,M-2} \times FXRate_{i,M-2} \times \left( \frac{1}{FFRate_{i,M-1}} - \frac{1}{FFRate_{i,old-days_t}} \right) \right) \]

Where
- \( T \) = Index calculation date
- \( NAF = \frac{HedgedIndex_{M-2}}{HedgedIndex_{M-1}} \)
- \( M \) = First calendar day of the month
- \( HI(t) \) = Index Hedge Impact at time \( t \)
- \( Weight_{i,M-2} \) = Currency weight in the index 2 days before next month first day
- \( FXRate_{i,M-2} \) = Spot rate of the currency \( i \) two business days before the start of the current calendar month. This term determines the notional amount of the foreign currency to be sold corresponding to its weight in the index
- \( FFRate_{i,M-1} \) = 1-month Forward for the currency \( i \) one business day before the start of the current calendar month (or last business day of the previous calendar month)
- \( FFRate_{i,old-days_t} \) = Interpolated odd-days forward rate of the currency \( i \) on day \( t \).

The interpolated odd-days forward rate is calculated according to the following formula:

\[ FFRate_{odd-days_t} = FXRate_t + \left( (FFRate_{1-month_t} - FXRate_t) \times \frac{Odd-days_t}{TotNbOfCalcDaysDuringMonth} \right) \]

Where
- \( FXRate_t \) = Spot rate at time \( t \)
- \( FFRate_{1-month_t} \) = 1 month forward rate at time \( t \)
- \( Odd-days_t \) = Number of days until the last business day of the current month (not counting \( t \)
The performance of the hedged index total return net is calculated as:

$$Hedged\ Index = \frac{I(\text{TRNet})_t}{I(\text{TRNet})_{M-1}} - 1 + HI(t)$$
BALANCED INDICES

DEFINITION
The index tracks a rules-based strategy comprised of a government bond index and an equity index with predetermined index weights.

The ECPI Balanced Indices Family is composed of:

▪ ECPI Ethical Index Balanced

The ECPI Ethical Index Balanced is a blend of the ECPI Euro Ethical Government Bond (ECAPEGB) and the ECPI Global Ethical Equity Index (ECAPGP) with the following asset mix proportions: 70% ECAPEGB / 30% ECAPGP. Bloomberg Ticker: ECAPBI Index

The ECPI Euro Ethical Government Bond Index is composed of investment grade government bonds of the EMU countries, selected according to their guaranteed rights level, with a positive rating according to ECPI Government and Supranational Screening Methodology.

The ECPI Global Ethical Equity Index selects the 300 top capitalized companies in the Global Developed market which are eligible investments according to ECPI ESG Rating Methodology and Controversial Sectors Screening (Military, Pornography, Gambling, Tobacco, Alcohol, Nuclear energy, GMO Food Production and Contraceptives).

INDEX FORMULA
The index strategy daily return is calculated as follows:

\[ R_t^{ECAPBI} = 0.7 \times R_t^{ECAPEGB} + 0.3 \times R_t^{ECAPGP} \]

and the index strategy daily level is calculated as:

\[ I_t^{ECAPBI} = (1 + R_t^{ECAPBI}) \times I_{t-1}^{ECAPB} \]

NOTATION
1. \( R_t^{ECAPBI} \): ECPI Ethical Index Balanced daily return at time \( t \)
2. \( R_t^{ECAPEGB} \): ECPI Euro Ethical Government Bond daily return at time \( t \)
3. \( R_t^{ECAPGP} \): ECPI Global Ethical Equity daily return at time \( t \)
4. \( I_t^{ECAPBI} \): ECPI Ethical Index Balanced level at time \( t \)
COMPLIANCE STATEMENT

Retrospective Changes
The ECPI Index Methodology does not allow retrospective changes to previously published index values ("Backfilling"). Divisor corrections, index input changes due to late dividend announcements and other similar adjustments are not considered "backfilling".

Conflict of Interests
ECPI keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units ECPI may have information that is not available to other business units.

ECPI has established policies and procedures that prohibit constituents to its indices to be included in an index on the basis of payment volunteered from them.

Frequency of the Index Rules review
This Index Rules document is subject to periodic review to ensure that it remains representative of the relevant market it was created to evaluate and continues to meet the current and future requirements of index stakeholders.

Such a review will take place at a frequency determined by a number of factors outlined below, but will be undertaken at least annually.

Revisions to the Index Rules
Revisions to the Index Rules may originate as a result of recommendations from internal review, modifications to the regulatory regime, feedback from clients or in response to changes in the financial markets structure.

In the case of material alterations, for example, those with the potential to change the composition of an index, such as index eligibility criteria, frequency of index reconstitution or index construction rules, a wider consultation with relevant stakeholders may also be undertaken.

Approval of Index Rules revisions
The final approval of an Index Rules revision is made by The Index Governance Committee. Following the approval of a revision to the Index Rules, index users and other stakeholders are notified through the publication of a notice. Such notices can be found on the Source: StatPro website at: https://source.statpro.net/index-governance/.

Any feedback received from stakeholders following the implementation of revised Index Rules may be considered by The Index Governance Committee as part of the ongoing management and development of future index rules and methodologies.

Potential limitations of the Index Rules methodology
Given the objective and robust methodology of the ECPI indices, any limitations are most likely to arise due to external factors. Such factors could include an inadequate availability of market data, poor quality data or an insufficient number of eligible constituents available for inclusion in the index. In the unlikely event that such periods of stress were prolonged, then it is probable that The Index Governance Committee would consider decommissioning the index or index series. This would be essential if the index was unable to continue to adequately measure the market or economic reality it was intended to evaluate.

Decommissioning an index
ECPI have a documented procedure which is followed when considering decommissioning an index or index series. Any decommissioning proposal must be approved by The Index Governance Committee. The reasons for decommissioning an index may include those mentioned above, and additionally, an absence of clients using the index or that it is uneconomic to continue to produce the index.
In the event that an index or index series is decommissioned the following process will occur to facilitate the stakeholder’s transitions to alternative indices:

- Identification of stakeholders of the index
- Publish notice to stakeholders of the index decommission at least three months prior to the decommissioning date
- Remind stakeholders one month prior to the decommission
- Publish a notice confirming decommission of the index on ECPI website
ECPI ESG COMPANY RATING

ECPI research process follows an objective, rigorous and disciplined proprietary methodology that translates qualitative data into quantitative indicators, assigning to each issuer an Environmental, Social and Governance (ESG) score and a rating.

ECPI uses a rule-based non-discretionary approach considering approximately 100 key performance indicators to evaluate an issuer’s environmental, social and governance sustainability.

ECPI evaluates companies in the following areas

| 7 | Environmental Strategy and Policy |
| 13 | Environmental Management |
| 3/4 | Products – sector specific |
| 6/11 | Production Process – sector specific |
| 9 | Employees and Human Capital |
| 12 | Community Relations |
| 11 | Markets |
| 19 | Corporate Governance & Shareholders |

The traditional pillars of ESG scrutiny are the following:

“E”
Environmental strategy, policy and management system. Industry-specific environmental impact of production processes and products.

“S”
Social strategy and policy: assessing the quality of the company’s relationships with its employees and local communities (labour and human rights, health & safety)

“G”
Relation with other stakeholders (customers, competitors, management, public agencies and regulators, shareholders, creditors, local government and international institutions), market positioning and competitor analysis. Governance structure: assessing both market and internal management issues, identifying the structure of the company’s governing bodies, its main operating characteristics, as well as the political and regulatory/legal specifics of the firm’s country of affiliation.

The analysis produces a score and a rating. A company’s overall rating is the sum of the scores from each indicator; the higher the final score, the higher the final rating.

ECPI also monitors the involvement of companies in the following controversial activities:

- **Alcohol**: Production and/or promotion of alcoholic products and its use
- **Gambling**: Involvement in horse betting, betting centers, casinos, gambling machine manufacturing
- **Weapons and Violence**: Involvement in the spread of violence, such as manufacture of firearms for the consumer market, manufacture of landmines, major weapons contractors contributing to the spread of global militarism
- **Tobacco**: Manufacturing, processing, trading or distributing wholesale tobacco, and tobacco products
- **Pornography**: Production aimed exclusively at inducing sexual excitement or a prurient interest in sex e.g. the objectification of women as sexual objects
Classification | Public

- **Nuclear energy**: Involvement in the production of Nuclear energy, with relation to possible accidents and disasters, residual generation of plutonium and raw material used in nuclear armament production (proliferation)
- **Contraceptives**: In the pharmaceutical industry, production of contraceptives, medicines and equipment related to abortion or birth control methods
- **GMO - Genetically modified organism – food production**: Involvement in the research, development and production of biotechnologies and in the genetic modification and production of species, produce and other organisms

Exclusions are driven by the percentage contribution of the controversial activity to the total revenues of the issuer.

ECPI's proprietary rating scale ranges from “NE” to “EEE”, along 10 notches.

<table>
<thead>
<tr>
<th>RATING</th>
<th>LEVEL</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEE</td>
<td>Very good</td>
<td>Companies display innovative long-term strategic attitudes, strong operational management and proactive contribution towards society and the environment.</td>
</tr>
<tr>
<td>EEE-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE+</td>
<td>Good</td>
<td>Companies display clear long-term strategic attitudes, sound operational management and positive contribution towards society and the environment.</td>
</tr>
<tr>
<td>EE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E+</td>
<td>Fair</td>
<td>Companies display basic long-term strategic attitude, standard operational management and average contribution towards society and the environment.</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Poor</td>
<td>Companies display poor long-term strategic attitude, weak operational management and ineffective/negative contribution towards society and the environment.</td>
</tr>
<tr>
<td>NE</td>
<td>Controversial</td>
<td>Companies are involved in controversial sectors.</td>
</tr>
</tbody>
</table>

Other controversial activities (applied only to specific indices, see single index rules for details) monitored are:
- **Unconventional Oil & Gas**: involvement in unconventional oil & gas extraction (tar sands, shale gas through hydraulic fracturing)
- **Coal – Mining**: involvement in the extraction and management of thermal coal mines
- **Coal – Thermal**: companies in the Utilities industry involved in the production of energy from thermal coal

**ECPI ESG COUNTRY RATING**

ECPI Sustainability methodology applied to government issuers is aimed to guarantee investors that the investment portfolio is built exclusively with financial instruments issued by Governments which are compliant with international Environmental, Social and Governance (ESG) standards and without any significant liabilities in any of the aforementioned areas.

Since 1948, when the Universal Declaration of Human Rights was created, nations have begun to recognize the importance of respecting human dignity, the freedom of expression and movement, equal opportunities in the work and political spheres, non-exploitative labour practices, respect for the environment, and a non-belligerent approach to conflicts.

Therefore, ECPI developed the Methodology to assess the government’s adherence to principles and to practices in aspects such as respect for human and labour rights; respect for the environment and anti-corruption.

**REGULATION**
The Methodology assesses the level of compliance of a government with a number of international treaties, conventions and best practices, which represent the international standard.
IMPLEMENTATION
The Methodology verifies the effectiveness of a Government in implementing national legislation compliant with international standards and in enforcing it efficiently.

<table>
<thead>
<tr>
<th>RECOGNIZED PUBLIC INDICATORS</th>
<th>ENVIROMENTAL SECTION 33%</th>
<th>SOCIAL SECTION 33%</th>
<th>GOVERNANCE SECTION 33%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Environmental Regulation (e.g. Basel Convention)</td>
<td>Environmental Implementation (e.g. Environmental Performance Index - EPI)</td>
<td>Social Regulation (e.g. Human Right Conventions - UN)</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Social Implementation (e.g. Death Penalty - Amnesty International)</td>
<td></td>
<td>Governance Regulation (e.g. Doing Business Report - World Bank)</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Implementation (e.g. Corruption Perception Index - Transparency Int.)</td>
<td></td>
<td>Implementation</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td></td>
<td>50%</td>
</tr>
</tbody>
</table>

**RATING** | **LEVEL** | **DEFINITION**
--- | --- | ---
EEE | Very good | Countries display full compliance with international ESG standards, effective implementation, and efficient enforcement.
EE | Good | Countries display adequate compliance with international ESG standards, good implementation, and sound enforcement.
E | Fair | Countries display partial compliance with international ESG standards, acceptable implementation, and basic enforcement.
F | Poor | Countries display poor overall ESG performance or very poor performance in one single area (Environment, Social or Governance).
NE | Controversial | Countries retain death penalty and/or are classified not free/partly free in terms of civil liberties and political rights.

ESG RATING
Score max 10
Rating (4 notches)
F => EEE
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www.ecpigroup.com
Bloomberg: ECPS
Reuters: ECAPITAL

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