

**S&P Dow Jones
Indices**

A Division of **S&P Global**

Multi-Asset Allocation Indices *Methodology*

VanEck[®]

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1 Index Significant Administration Events

The following Index Administration events apply to each index of the **Multi-Asset Allocation Indices**.

Table 1: Index Administration Events

Date	Index Administration Event
6 September 2022	<p>As of the 2022 annual rebalance, two constituent indices are replaced with versions inclusive of ESG factors:</p> <ul style="list-style-type: none"> • Solactive Sustainable World Equity Index GTR (BBG/Refinitiv tickers: TMTTSWE/.TSWE) replaces Solactive Global Equity Index GTR (BBG/Refinitiv tickers: TGLOEI/.TGETTR) • iBoxx SD-KPI EUR Liquid Corporates Index (BBG/Refinitiv tickers: IBXXELTR/.IBXXELTR) replaces Markit iBoxx EUR Liquid Corporates (BBG/Refinitiv tickers: IB8A/.IBLEU0008)
1 November 2019	<p>Legal name ThinkCapital ETF's N.V. changes to VanEck Vectors™ ETFs N.V and the legal name of Think ETF Asset Management B.V. changes to VanEck Asset Management B.V. Index names also change as follows: Think Total Market UCITS ETF Defensief changes to Multi-Asset Conservative Allocation Index; Think Total Market UCITS ETF Neutraal changes to Multi-Asset Balanced Allocation Index; Think Total Market UCITS ETF Offensief changes to Multi-Asset Growth Allocation Index</p>
30 July 2018	IHS Markit officially commences Index Administration
18 May 2018	<p>The four Underlying Indices added on 15 December 2017 are removed from Multi-Asset Allocation Indices composition. The weighting strategies revert back to the initial ones which are described in this document</p>
15 December 2017	<p>Four new Underlying Indices are added into the composition of Multi-Asset Allocation Indices and are following new weighting strategies</p>
25 August 2017	<p>The Underlying Think Global Equity Index is replaced by Solactive Global Equity Index GTR</p>
18 January 2017	<p>The Underlying Think Global Real Estate Index is replaced by GPR Global 100 Index</p>
2 September 2015	Index Commencement Date
14 December 2009	Index Base Date

2 Index Overview

Each of the Multi-Asset Allocation Indices (the Indices) tracks four Underlying Indices (the Index Components) based on a rules-based weighting process that allocates weights across the constituent indices, which comprise a combination of sustainable developed equities, property stocks, EUR denominated [SD-KPI](#)-adjusted bonds, and government bonds.

Table 2: Multi-Asset Allocation Indices

Index Name	Currency	Bloomberg Ticker	Reuters RIC	Rounding (d.p.)
Multi-Asset Conservative Allocation Index	EUR	TTMTIDF	.TTMTIDF	4
Multi-Asset Balanced Allocation Index	EUR	TTMTINL	.TTMTINL	4
Multi-Asset Growth Allocation Index	EUR	TTMTIOF	.TTMTIOF	4

3 Index Family and Construction

The Multi-Asset Allocation Indices are composed of four Underlying Indices (tracking corporate bonds, government bonds, global developed equities, and global investable real estate equities). There are three indices representing different strategies in the Index Family.

Table 3: Multi-Asset Allocation Indices Strategies

Underlying Index Name	Ticker (BBG/Refinitiv RIC)	Multi-Asset Conservative Allocation Index Weights	Multi-Asset Balanced Allocation Index Weights	Multi-Asset Growth Allocation Index Weights	Price Type	Underlying Level Precision
GPR Global 100 Index	GPR100GI / .GPR100GI	5%	10%	10%	Last price[1]	4 digits
Solactive Sustainable World Equity Index GTR [2]	TTMTTSWE / .TSWE	25%	40%	60%	Official Close	3 digits
Markit iBoxx EUR Liquid Sovereigns Diversified 1-10	IES11TR / .IBLEU0029	35%	25%	15%	Official Close	4 digits
iBoxx SD-KPI EUR Liquid Corporates Index [3]	IBXXELTR / .IBXXELTR	35%	25%	15%	Official Close	4 digits

[1] Due to its late publishing time, the price of the GPR Global 100 used is the last price at the **Exchange** closing time. All of the other Underlying Levels are official close prices.

[2] As of the 2022 annual rebalance, a constituent version including ESG factors replaces the prior constituent - Solactive Global Equity Index GTR (BBG/Refinitiv tickers: TGLOEI/.TGETTR) effective on close of 6 September 2022.

[3] As of the 2022 annual rebalance, a constituent version including ESG factors replaces the prior constituent - Markit iBoxx EUR Liquid Corporates (BBG/Refinitiv tickers: IB8A/.IBLEU0008) effective on close of 6 September 2022.

For information on universe selection and index construction for the Underlying Indices, please refer to their respective index rule documents.

4 Index Calculation

4.1 Rebalancing Process

Each of the Multi-Asset Allocation Indices is rebalanced yearly at the close of the **Index Rebalance Day**. The Index Rebalance Day occurs every year on the first Tuesday of September. If the first Tuesday of September is not an **Index Business Day**, then the Index Rebalance Day is the next Index Business Day.

On the Index Rebalance Day the weights of the Underlying Indices are reset to their original fixed values as defined in [Table 3: Multi-Asset Allocation Indices Strategies](#).

Table 4: Examples of the Index Rebalance Day table

Annual Rebalance	Rebalance Date
2017	5 September 2017
2018	4 September 2018

4.2 Index Level Calculation

For each of the Multi-Asset Allocation Indices and on any Index Business Day t , the **Index Level** is calculated as the **Index Value** divided by the **Index Divisor** :

$$IndexLevel_t = \frac{IndexValue_t}{Divisor_{t-1}}$$

For each of the Multi-Asset Allocation Indices and on any Index Business Day t , the Index Value is calculated as the sum of the **Underlying Index Value** :

$$IndexValue_t = \sum_{i=1}^n UnderlyingIndexValue_{i,t}$$

On any Index Business Day t and for each Underlying Index i of any of the Multi-Asset Allocation Indices, the Underlying Index Value is calculated as the product of the **Underlying Index Level** at close of the Index Business Day times the **Underlying Cap Factor** as of the previous Index Business Day.

$$UnderlyingIndexValue_{i,t} = UnderlyingLevel_{i,t} \cdot CapFactor_{i,t-1}$$

On any Index Rebalance Day and for any of the Multi-Asset Allocation Indices, the Underlying Cap Factors are calculated as the product of the **Underlying Fixed Weight** as defined in the [Section 3 — Index Family and Construction](#), and the proportion of the Underlying Index Level in the sum to the Underlying Index Levels:

$$CapFactor_{i,r} = \frac{Weight_i \cdot UnderlyingLevel_{i,r}}{\sum_{k=1}^n UnderlyingLevel_{k,r}}$$

On the same date and for each of the Multi-Asset Allocation Indices, a new Index Divisor is calculated as the sum product of the Underlying Index Levels and the Underlying Cap Factors, divided by the Index Level:

$$Divisor_r = \frac{\sum_{i=1}^n CapFactor_{i,r} \cdot UnderlyingLevel_{i,r}}{IndexLevel_r}$$

Where:

t	Any Index Business Day
$t-1$	The Index Business Day prior to t
r	Any Index Rebalance Day

i	1, 2, 3..., n refers to the Underlying Index i
n	The number of Underlying Indices of each of the Multi-Asset Allocation Indices
$IndexLevel_t$	The Index Level as of Index Business Day t
$IndexLevel_r$	The Index Level as of Rebalance Day r
$IndexValue_t$	The Index Value as of Index Business Day t
$UnderlyingLevel_{i,t}$	The Index Level of the Underlying Index i of any of the Multi-Asset Allocation Indices at close of the Index Business Day t
$UnderlyingLevel_{i,r}$	The Index Level of the Underlying Index i of any of the Multi-Asset Allocation Indices at close of the Rebalance Day r
$UnderlyingIndexValue_{i,t}$	The Underlying Index Value of the Underlying Index i on the Index Business Day t
$CapFactor_{i,t-1}$	The value assigned to each Underlying Index i of any of the Multi-Asset Allocation Indices in order to respect the capping rules as of rebalance, applied as of close of date $t-1$
$CapFactor_{i,r}$	The value assigned to each Underlying Index i of any of the Multi-Asset Allocation Indices in order to respect the capping rules as of rebalance, applied as of close of date $t-1$
$Divisor_{t-1}$	The fixed value as of index launch used to rebase unadjusted Index Value to the desired launch value as of $t-1$
$Divisor_r$	The fixed value as of index launch used to rebase unadjusted Index Value to the desired launch value as of the Rebalance Day r
$Weight_i$	The fixed weights as defined in Table 3: Multi-Asset Allocation Indices Strategies

4.3 Index History

As limited historical performance data exist with respect to the Indices, any notional investment in the Indices may involve greater risk than a notional investment in indices or strategies with a proven track record. Each Index will be first calculated on or around the Index Commencement Date. All such retrospective closing levels are simulated based on quantitative screening only. They must be considered hypothetical and illustrative only.

The actual performance of the Indices may be materially different from the results presented in any simulated history relating to such Indices. Past performance should not be considered indicative of future performance.

4.4 Rounding and Calculated Values

Each Index Level published by the **Index Administrator** shall be rounded as defined in [Table 2: Multi-Asset Allocation Indices](#).

The rounding convention applied is **Half Away from Zero**.

4.5 Calendar

The Index Level will be calculated on each Index Business Day; subsequent target publication time will be 11:30 pm London Time time on the same Index Business Day.

5 Risk Factors

IHS Markit operates as Index Administrator and is independent of the **Index Owner**. IHS Markit does not act as an investment adviser nor provides advice of any nature and therefore does not assume any fiduciary obligation to any **Index Product Investors** buying, selling, entering into or holding products linked to the Index.

For any further information about risk factors, contact the Index Owner.

6 Governance and Regulatory Compliance

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

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

Further information about IMBA UK can be found on the [Index Administrator's website](#)

7 Construction of this Index Manual

The **Index Manual** is published by the Index Administrator. In the event of any inconsistency between the English language version of this Index Manual and that translated into any other language, this English version shall prevail.

8 Disclaimer, Licensing and Trademark

8.1 Disclaimers

No legal relationship (whether in contract, tort, or otherwise) exists between any Index Product Investors and the Index Administrator or the Index Owner and neither the Index Administrator nor the Index Owner owes any duties (whether in contract, tort, or otherwise) to any Index Product Investor. No claims, actions or legal proceedings may therefore be brought against the Index Administrator or the Index Owner in any manner whatsoever by an Index Product Investor or any other person. Neither the Index Administrator nor the Index Owner makes any representation, warranty or guarantee whatsoever, express or implied, either as to the results to be obtained as to the use of the Index or the figures or levels at which the Index stands at any particular day or otherwise. In addition, neither the Index Administrator nor the Index Owner gives any assurance regarding any modification or change in any Methodology used in calculating the Index and is under no obligation to continue the calculation, publication and dissemination of the Index. Neither the Index Administrator nor the Index Owner warrants or represents or guarantees to any person the accuracy or completeness of the Index and its computation or any information related thereto and makes no warranty or representation or guarantee of any kind whatsoever relating to the Index is given or may be implied. The process and basis of computation and compilation of the Index and the related formulae, constituent Benchmarks and factors may at any time be changed or altered by the Index Administrator. No responsibility or liability is accepted by either the Index Administrator or the Index Owner (whether for negligence or otherwise) in respect of the use of and/or reference to the Index by us or any other person in connection with securities, or for any inaccuracies, omissions, mistakes or errors in the computation of the Index (and neither the Index Administrator nor the Index Owner shall be obliged to advise any person or any Index Product Investor of any error therein) or for any economic or other loss which may be directly or indirectly sustained by any Index Product Investor or any other persons dealing with securities as a result. Any Index Product Investor or other person dealing with securities does so, therefore, in full knowledge of this disclaimer and can place no reliance whatsoever on the Index Administrator or the Index Owner. This document contains data derived as a result of back-testing of data and is provided by the Index Administrator or the Index Owner in good faith using its standard Methodology for information of this kind. The Methodology relies on proprietary models, empirical data, assumptions and such other information that the Index Administrator or the Index Owner believes to be accurate and reasonable. Neither the Index Administrator nor the Index Owner makes, however, any representation, warranty or guarantee as to the accuracy, completeness or appropriateness of such Methodology and neither the Index Administrator nor the Index Owner accepts any liability for the use of such information. Specifically, there is no assurance that other banks or brokers would derive the same results for the back-test period.

Nothing in the disclaimers in this section shall exclude or limit liability to the extent such exclusion or limitation is not permitted by law or regulations to which the Index Administrator or the Index Owner is subject.

8.2 Licensing and Trademark

The use of the mark and name of the Index is licensed to VanEck Vectors™ ETFs N.V.. The Multi-Asset Allocation Indices, and all intellectual property rights therein, are owned by or licensed to VanEck Vectors™ ETFs N.V. and have been licensed for use by VanEck Vectors™ ETFs N.V. in connection with the calculation of the Index Level.

9 Further Information

For any general index enquiries, contact the Markit Index Administration support group at support@ihsmarkit.com.

Ownership: The Index Owner is VanEck Asset Management B.V. (or any successor thereto).

A Glossary

Term	Definition
Benchmark	has the meaning specified in the IOSCO Principles.
Disrupted Day	is determined by the Index Administrator as a day that affects the Index, any or all of the Index Components or the methodology in respect of the Index, as a result of an Index Market Disruption Event or a Force Majeure Event that occurs on one or more Index Business Days.
EU Benchmark Regulation	means the Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016
Exchange	means, in respect of each Index Component, the exchange or quotation system on which such Index Component is principally traded.
Exchange Business Day	means any day (other than a Saturday or Sunday) that is (i) a day on which Euronext Amsterdam is scheduled to be open for trading during their regular trading sessions, and (ii) not a Disrupted Day.
Half Away from Zero	means the rounding method whereby the decimal to be omitted is rounded as follows: away from zero when it is equal or greater than 5 (e.g. 7.55 rounds to 7.6, -7.55 rounds to -7.6) and towards zero when it is less than 5 (e.g. 7.54 rounds to 7.5 and -7.54 rounds to -7.5)
IHS Markit Website	means the following website: www.markit.com/Product/VanEckAssetManagementBV .
Index Administrator	means IHS Markit Benchmark Administration Limited (IMBA UK)
Index Base Date	means the date of the initial level of the Index (Index Base Level) as defined in Section 2 — Index Overview .
Index Business Day	means any day that is an Exchange Business Day .
Index Commencement Date	means the date the Multi-Asset Allocation Indices went live as outlined in Table 1: Index Administration Events .
Index Component	and together Index Components, means each Underlying Index that comprises the Multi-Asset Allocation Indices.
Index Divisor	means the fixed value as of Index launch used to rebase unadjusted Index Value to the desired launch value.
Index Level	means the level of the Index determined in accordance with the Section 4.2 — Index Level Calculation on each Index Business Day.
Index Manual	means this document, as amended, replaced or substituted, where necessary.
Index Owner	means VanEck Asset Management B.V. (or any successor thereto).
Index Product Investors	means the persons or entities who own contracts or financial instruments that reference a Benchmark in the Index.
Index Rebalance Day	means the Index Business Day when the rebalancing process occurs.
Index Value	means the sum of the Underlying Index Value on the same Index Business Day

Term	Definition
IOSCO Principles	means the Principles on Financial Benchmarks published by the International Organization of Securities Commissions (IOSCO) in July 2013
Methodology	has the meaning specified in the IOSCO Principles.
Stakeholders	means Index Product Investors, relevant public sector entities and any other entity or person with a reasonable interest in the Index.
Underlying Cap Factor	means the value assigned to each Underlying Index in order to respect the capping rules as of rebalance.
Underlying Index	and together Underlying Indices, means the indices listed in Table 3.
Underlying Index Level	means the level of the Underlying Index on each Index Business Day.
Underlying Index Value	means the product of the Underlying Index Level at close of the Index Business Day and the Underlying Cap Factor as of the previous Index Business Day.
Underlying Fixed Weight	means the fixed weight of the Underlying Index within the Index as defined by the Index strategy.