INDEX RULE BOOK

Euronext Eurozone PAB 50

Euronext Core Europe PAB 50

Version 21-01

Effective from 2 June 2021

indices.euronext.com

Index

1. INDEX SUMMARY

	Euronext Eurozone PAB 50 Euronext Core Europe PAB 50
Objective	The Euronext Eurozone PAB 50 Index is designed comply with the current regulatory requirements of the Paris Aligned Benchmark (PAB) while incorporating ESG and Energy Transition thematic overlays.
Administrator	Euronext Paris
Index type	Price index; Net return index, Gross return and 5% Decrement version.
Index governance structure	Euronext internal supervisor
Index Universe	**Euronext Eurozone PAB 50:** Constituents of Euronext® Eurozone 300 Index. **Euronext Core Europe PAB 50:** Constituents of Euronext® Eurozone 300 Index with MIC of reference in France (XPAR), Germany (XETR), Netherlands (XAMS), Belgium (XBRU), Luxembourg (XLUX). This list of stocks is then further reduced by a series of screens. The stocks with the following characteristics are excluded: • Facing critical controversies with regards to UNGC principles • 3 month ADV of less than €10m • Involvement in controversial weapons (Cluster munitions, Anti-personnel mines) • Production of tobacco • Involvement in Coal (>0%), Oil (>10%), Natural Gas (>10%) and Electricity producers with lifecycle GHG Emissions higher than 100Gco2/kWh • ESG score less than 30
Selection	30% worst-in-class stocks based on Energy Transition are excluded. 50 companies, based on the largest FFMC, are selected.
Number of constituents	50
Weighting	Free Float Market Capitalisation as basis. Further weighting adjustments to meet PAB objectives.
Capping	Not applicable
Review cut-off date	Penultimate Friday of November.
Review of composition	Effective after the close of the third Friday of December.
Base Currency	Euro

Note: the factsheet is a summary of the rule book for information purposes only. The text of the rulebook is leading.

Reference Data

Index name	ISIN	Mnemo	Bloomberg Code	Reuters code	Base date	Base value	Publication since
Euronext Eurozone PAB 50	FR0014003PR0	EPABP	EZPAB5P		1 Jan 2010	1000	2 Jun 2021
Euronext Eurozone PAB 50 NR	FR0014003PM1	EPABN	EZPAB5N		1 Jan 2010	1000	2 Jun 2021
Euronext Eurozone PAB 50 GR	FR0014003PL3	EPABG	EZPABG		1 Jan 2010	1000	2 Jun 2021
Euronext Eurozone PAB 50 Decrement 5%	FR0014003PK5	EPAB5	EZPAB50		1 Jan 2010	1000	2 Jun 2021
Euronext Core Europe PAB 50	FR0014003PU4	CPABP	CEPAB5P		1 Jan 2010	1000	2 Jun 2021
Euronext Core Europe PAB 50 NR	FR0014003PP4	CPABN	-		1 Jan 2010	1000	2 Jun 2021
Euronext Core Europe PAB 50 GR	FR0014003PN9	CPABG	CEPABG		1 Jan 2010	1000	2 Jun 2021
Euronext Core Europe PAB 50 Decrement 5%	FR0014003PV2	CPAB5	CEPAB50		1 Jan 2010	1000	2 Jun 2021

Version notes:
21-01 First version

2. GOVERNANCE AND DISCLAIMER

2.1 INDICES

This rule book applies to the following indices (hereinafter "index") owned by Euronext N.V. or its subsidiaries (hereinafter jointly "Euronext"):

- Euronext Eurozone PAB 50 (and the return versions thereof)
- Euronext Core Europe PAB 50 (and the return versions thereof)

2.2 ADMINISTRATOR AND SUPERVISOR

Euronext is the supervisor ("Supervisor") and Administrator of the index ("Administrator"). The Supervisor is responsible for monitoring the selection of constituents for the index and ensuring that the index offers a reliable and representative view of the market. The Administrator is responsible for the day-to-day management of the index and is also responsible for decisions regarding the interpretation of these rules

2.3 CASES NOT COVERED IN RULES

In cases which are not expressly covered in these rules, operational adjustments will take place along the lines of the aim of the index. Operational adjustments may also take place if, in the opinion of the Administrator, it is desirable to do so to maintain a fair and orderly market in derivatives on this index and/or this is in the best interests of the investors in products based on the index and/or the proper functioning of the markets. The Administrator will report to the Supervisor if it took a decision about a case which is not specifically covered in the rules for comments and review.

2.4 RULE BOOK CHANGES

These rules may be supplemented, amended in whole or in part, revised or withdrawn at any time. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the index is compiled or calculated or affect the index in another way. The Administrator will submit all decisions regarding supplementing, amending, revising or withdrawing these rules to the Supervisor for recommendations or approval.

2.5 LIABILITY

Euronext, the Administrator and the Supervisor are not liable for any losses resulting from supplementing, amending, revising or withdrawing the rules for the index.

The Administrator will do everything within its power to ensure the accuracy of the composition, calculation, publication and adjustment of the index in accordance with relevant rules. However, neither Euronext, nor the Administrator, nor the Supervisor are liable for any inaccuracy in index composition, share prices, calculations and the publication of the index, the information used for making adjustments to the index and the actual adjustments. Furthermore, Euronext, the Administrator and the Supervisor do not guarantee the continuity of the composition of the index, the continuity of the method of calculation of the index, the continuity of the dissemination of the index levels, and the continuity of the calculation of the index.

2.6 OWNERSHIP AND TRADEMARKS

Euronext owns all intellectual and other property rights to the index, including the name, the composition and the calculation of the index. Euronext® is a registered trademark of Euronext.

3. PUBLICATION

3.1 DISSEMINATION OF INDEX VALUES

3.1.1 Opening

The opening level is calculated using the last known prices of traded constituents or in the case of constituents that have non-traded, halted or suspended status, the previous day reference prices or estimated prices (for IPOs, buyouts and swap offers).

The official opening level is the first level published after a share price is available for all constituents. Index levels published before the official opening level is published are considered pre-opening index levels.

If, for whatever reason, share prices are not available for all constituents five minutes after Euronext Markets (as defined in the Euronext harmonised rule book) started regular daytime trading, the official opening level will be published as soon as the companies whose share prices are available of the current trading day represent at least 80% of the value of the index at the close of the previous trading day.

3.1.2 Calculation and dissemination

The index is calculated based on the most recent prices of transactions concluded on the markets of reference of each stock. The level of the index is in principle published every 15 seconds. The index is calculated from 09:00 hours until Euronext Markets stop regular daytime trading on the days when Euronext Markets are open for trading.

3.1.3 Closing level

The closing level is the last level disseminated on the trading day.

3.2 EXCEPTIONAL MARKET CONDITIONS AND CORRECTIONS

In the event that part of the constituents is reserved, suspended from trading or if technical problems prohibit normal trading, index values will continue to be calculated and published. For those constituent stocks that are not available for trading, the last known value will be used when determining index values.

The general procedures in case of index outages and other situations in which the normal provision of indices is interrupted are described in Euronext Indices Correction Policy on indices.euronext.com/index-rules.

3.3 ANNOUNCEMENT POLICY

The announcement policy is described in the Euronext Indices Announcement policy document that is available on indices.euronext.com/index-rules.

4. CALCULATION

4.1 CALCULATION OF THE PRICE INDEX

The index is calculated on a price return basis. The calculation is based on the current Free Float (see section 8. Definitions) market capitalization divided by the divisor. The divisor was determined on the initial capitalization base of the index and the base level. The divisor is adapted as a result of corporate actions and composition changes.

4.2 CURRENCY CONVERSION

The base currency of the index is Euro (“Base Currency”).

Share prices that are quoted in other currencies than the Base Currency will be converted to the Base Currency using the last known exchange rate observed on Reuters. Closing prices will be converted based on the most recent WM/Reuters spot rates, which are published each business day around 17:00 CET.

4.3 TOTAL RETURN INDEX CALCULATION

4.3.1 Return indices

A net total return index as well as a gross total return index, is calculated and disseminated at the same frequency as the price index. The return indices are obtained by reinvesting the net and gross dividends respectively.

4.3.2 Withholding tax rate

The net dividend is calculated as the gross dividend minus the applicable withholding tax. A table detailing the percentages that are applied is available on the website of Euronext.

4.3.3 Ordinary dividends in shares

If a dividend is distributed in the form of shares only and if this is regarded as ordinary dividend, the return index will be reinvesting a cash equivalent of the dividend. If shareholders may choose between cash or shares the amount which is reinvested will be based on the cash option.

4.3.4 Conversion of dividends declared in other currencies

If a dividend for a constituent is declared in another currency than the Base Currency of the index, then in first instance the Base Currency amount will be used if investors have the option to be paid in that currency. If the dividend amount is available only in currencies that deviate from the Base Currency, the dividend amount will be converted using the reference rate for the cum-day (the business day prior to the ex-date). In principle the reference rate will be based on the foreign exchange reference rates as published daily by the ECB.

5. INDEX REVIEWS

5.1 GENERAL AIM AND FREQUENCY OF REVIEWS

5.1.1 General aim of the periodical review

The general aim of the periodical review of the index is to ensure that the selection and weighting of the constituents continues to reflect the underlying market or market segment it represents.

5.1.2 Review Cut-Off Dates and Review Effective Dates

ANNUAL REVIEW

The Review Cut-Off Date is after the market close of the penultimate Friday day of November.

The Review Announcement Date is at least six trading days before the Review Effective Date.

The Review Composition Announcement Date is at least two trading days before the Review Effective Date.

The Review Effective Date is after market close of third Friday in December.

5.2 INDEX METHODOLOGY PRINCIPLES

5.2.1 General methodology objectives

The Index seeks compliance with Paris Aligned Benchmark (PAB) objectives.

The Index targets 50 constituents after exclusion process. Compliance with PAB is aimed to via weight adjustments following core selection and preliminary weights.

The weight of the highest Weighted Carbon Intense stock in the index is diminished up to 30% and rebalanced to less Carbon Intense companies. We reiterate this process with a second company if needed and so on, until the index is compliant with the PAB Carbon Intensity requirements.

5.2.2 Basic Definitions and Data Partners

Data partner

- Vigeo Eiris (VE) provides research datapoints related to EGS, Energy transition, Carbon exposure, Controversies and Activity involvement

Index Universe

- **Euronext Eurozone PAB 50:** Constituents of Euronext® Eurozone 300 Index after all exclusion based on activity involvement and similar, detailed in section 5.3
- **Euronext Core Europe PAB 50:** Constituents of Euronext® Eurozone 300 Index with MIC of reference in France (XPAR), Germany (XETR), Netherlands (XAMS), Belgium (XBRU), Luxembourg (XLUX) after all exclusion based on activity involvement and similar, detailed in section 5.3

Investable Universe

- Same as Index Universe

Climate Impact sections

- Grouping of companies based on NACE section classification (Annex I to EC Regulation No 1893/2006) into two sections
  - High Climate Impact section
    - NACE Sections A to H and Section L
  - Low Climate Impact section
    - NACE Section that are not part of the High Climate Impact section

NACE Section	NACE Section Name	Climate Impact Section Group
A	AGRICULTURE, FORESTRY AND FISHING	High
B	MINING AND QUARRYING	High
C	MANUFACTURING	High
D	ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLIES	High

E	WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES	High
F	CONSTRUCTION	High
G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES	High
H	TRANSPORTATION AND STORAGE	High
I	ACCOMMODATION AND FOOD SERVICE ACTIVITIES	Low
J	INFORMATION AND COMMUNICATION	Low
K	FINANCIAL AND INSURANCE ACTIVITIES	Low
L	REAL ESTATE ACTIVITIES	High
M	PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	Low
N	ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIE	Low
O	PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY	Low
P	EDUCATION	Low
Q	HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	Low
R	ARTS, ENTERTAINMENT AND RECREATION	Low
S	OTHER SERVICE ACTIVITIES	Low
T	ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS- AND SERVICES-PRODUCING ACTIVITIES OF HOUSEHOLDS FOR OWN USE	Low
U	ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES	Low

5.2.3 Outline of key steps of the index review

A) Core Method of Selection and Preliminary Weights

- **Creation of Index Universe**
  - Eligible companies after baseline exclusions
- **Worst-in-class exclusion**
  - Energy Transition
- **Stock selection**
  - Adjusted FFMC-based
- **Preliminary weights**
  - Based on FFMC

B) Adjustments to preliminary weights targeting PAB Compliance

- **Climate impact allocation constraint**
  - Aggregate weight of high climate impact sectors to be at least equal to that of the Index Universe
- **Iterative re-weighting process to meet decarbonization objectives**
  - The weights of stocks with highest contribution to the target carbon metric of the index will be decreased compared to their preliminary weights in a stepwise procedure, stocks with lower carbon intensity

5.3 CREATION OF INDEX UNIVERSE

Euronext Eurozone PAB 50: Constituents of Euronext® Eurozone 300 Index.
Euronext Core Europe PAB 50: Constituents of Euronext® Eurozone 300 Index with MIC of reference in France (XPAR), Germany (XETR), Netherlands (XAMS), Belgium (XBRU), Luxembourg (XLUX).

This list of stocks is then further reduced by a series of screens. The stocks with the following characteristics are excluded:

- Facing critical controversies with regards to UNGC principles, revenue linked to tobacco production or controversial weapons (cluster munitions and anti-personnel landmines)
- ADV of less than €10m on the market of reference
- Involvement above 0% in Coal, 10% in Oil, 10% in Natural Gas and Electricity producers with lifecycle GHG Emissions higher than 100Gco2/kWh
- ESG score below 30

5.4 WORST-IN-CLASS EXCLUSIONS

Stocks passing the index universe screenings are then ranked on Energy Transition score and FFMC in decreasing order (i.e. following the principle of better ESG score = better rank and in case of equal ESG score, higher FFMC stock will rank higher). 30% bottom ranked are eliminated. The actual number of stocks that constitute these 30% is rounded down (e.g. with 35 stocks, 3 (35 * 10% rounded down) will be excluded).

5.5 STOCK SELECTION

The largest 50 companies based on FFMC are selected.

5.6 CLIMATE IMPACT ALLOCATION CONSTRAINT

PAB indices must comply with exposure constraints to sectors linked to climate impact. This will be achieved via proportional adjustments of the Preliminary Index Weights that were computed in sections above.

Each stock in the Index selection is assigned to a NACE Letter Section. Companies belonging to NACE Sections A to H and L (subject to change in line with regulation) will be collectively referred to as High Climate Impact Section (HCIS). The rest of stocks in the Index selection will be referred to as Low Climate Impact Section (LCIS).

The Preliminary Index Weights will be aggregated and grouped by the two Climate Impact Sections. The same will be done with weights of the Investable Universe. Depending on the comparison of these weights, the index preliminary weight may or may not be adjusted, as described in the following two sections. Options 1 and 2 outlined below are mutually exclusive and only one of them will be true at any given Index Review.

Option 1)

If the sum of Preliminary Index Weights in the HCIS is *lower* than the sum of weights in the HCIS of the Investable Universe, adjustments will be performed. The objective is to increase the exposure of the index to the HCIS and make it at least equivalent to the exposure of the Investable Universe.

Ex:	Index Preliminary Weights	Investable Universe	Adjustments Needed to Index Preliminary Weights?
High Climate Impact Section	60%	70%	Yes, +10%
Low Climate Impact Section	40%	30%	Yes, -10%

- Preliminary weights will be multiplied by an Adjustment Ratio where AR_i is the Adjustment Ratio depending on the Climate Section (i) of the corresponding stock whose weight is being adjusted, according to the following definition

Value of i	Climate Section Name	AR_i
HCIS	High Climate Impact	$$\mathrm{AR}_{\mathrm{HCIS}} = \frac{\mathrm{MIU}_{\mathrm{HCIS}}}{\mathrm{PREL}_{\mathrm{HCIS}}}$$ where $\mathrm{MIU}_{\mathrm{HCIS}}$ = Weight of HCIS in the Investable Universe $\mathrm{PREL}_{\mathrm{HCIS}}$ = Preliminary Index Weight of HCIS
LCIS	Low Climate Impact	$$\mathrm{AR}_{\mathrm{LCIS}} = \frac{\mathrm{MIU}_{\mathrm{LCIS}}}{\mathrm{PREL}_{\mathrm{LCIS}}}$$ where $\mathrm{MIU}_{\mathrm{LCIS}}$ = Weight of LCIS in the Investable Universe $\mathrm{PREL}_{\mathrm{LCIS}}$ = Preliminary Index Weight of LCIS

Option 2)

If the sum of Preliminary Index Weights in the HCIS is *higher or equal* than the sum of weights in the HCIS of the Investable Universe, no adjustments will be performed.

Ex:	Index Preliminary Weights	Investable Universe	Adjustments Needed to Index Preliminary Weights?
High Climate Impact Section	80%	70%	No
Low Climate Impact Section	20%	30%	No

5.6.1 Climate Impact Section-Adjusted Preliminary Weights

Following the process above, the weights of the index will be referred to as Climate impact Section-Adjusted Preliminary Weights. This is for differentiation purposes and consistency, even if no adjustments were made due to Option 2. Once the total weights of the two sections are established, they are locked and will not change on aggregate, even if individual stock weights within each of these sections can be adjusted further to comply with decarbonization objectives, as described in the next section.

5.7 DECARBONIZATION OBJECTIVES

5.7.1 Carbon Intensity calculation and targets

Euronext will calculate the Carbon Intensity (CI) (see Step 2 below) for each of the companies in the Index as well as for each company in the Investable Universe.

The target metric for decarbonization objectives is the Weighted Average Carbon Intensity (WACI) (see Step 3 below). The following two objectives need to be respected at the same time – they form the **PAB Double Cap**.

i) Carbon Intensity reduction of the Index vs the Investable Universe of at least 50%

- The WACI of the Index each year will be compared to the WACI of the Investable Universe

ii) Year-on-year self-decarbonization trajectory of the Index[1]

- During the review in base year Euronext will calculate the WACI of the Index and calculate a decreasing trajectory of carbon intensity target for future years, with 7% annual geometrical decrease
- This self-decarbonization trajectory will be made public

Ex:	Index WACI Trajectory	Trajectory Formula
Base Year T	1000	$WACI_T$
Year T+1	930	$(1 – 0.07) * WACI_T$
Year T+2	864.9	$(1 – 0.07)^2 * WACI_T$

5.7.2 Weight adjustments to achieve decarbonization objectives

Climate Impact Section-Adjusted Preliminary Weights (see section above) will be further adjusted iteratively, one company at a time, until the WACI of the Index complies with the targets. This process is described in the following steps.

Step 1: Initialize the Temporary Index weights

- The initial stock weights used for the Index in this iterative process are set to be the Climate Impact Section-Adjusted Preliminary Weights

Step 2: Establish the CI and weighted CI of all companies individually

- For each stock in Index and in the Investable Universe calculate:

$$CI = \frac{\text{Sum of Emissions}}{\text{Enterprise Value incl.Cash}}$$

  - Emissions are Scope 1+2+3 carbon emission, provided by VE[2]
  - Enterprise Value incl. Cash = Market capitalization + Debt

- For Index:

Stock-level weighted CI = CI * Temporary Index weight

- For Investable Universe:

[1] Trajectory calculation only applicable since the publication of the index

[2] Carbon intensity of stocks not covered by Scope 3 VE data is estimated with sector medians

Stock-level weighted CI = CI * FFMC weight

Step 3: Establish the WACI of the Index and the Investable Universe

- Both follow a generic calculation for a portfolio of stocks
- WACI of Portfolio = $\sum$ Stock-level weighted CI

Step 4: Establish the targets for decarbonization objectives

- Target 1 = 50% * WACI of Investable Universe in the year of the review
- Target 2 = WACI value of the self-decarbonization trajectory in the year of the review
    - N.B.: Target 2 in Base Year (2021) is not applicable, applies only from Base Year + 1
- The minimum of Target 1 and Target 2 is the PAB Double Cap

Step 5: Compare the WACI of the Index from Step 3 with the PAB Double Cap from Step 4

- Condition: WACI of the Index needs to be lower or equal to the PAB Double Cap
    - If this condition is satisfied, stop with the process, no more adjustments to the Temporary Index weights are done and they become the final index weights, proceed to Step 11
    - If this condition is *not* satisfied, continue with the process

Next steps comprise the iterative process itself and are only executed if the condition in Step 5 is not satisfied.

Step 6 [Outer Loop]: Determine the candidate stock for reduction of Temporary Index weight

- 1^{st} iteration only
    - Choose the company with the highest weighted CI
- 2^{nd} - 5^{th} iteration
    - Choose the company with the highest weighted CI subject to it being different from stocks already chosen in the 1^{st}-5^{th} iteration
- Principle - perform loops in batches of 5 iterations where stocks will be selected based on highest weighted CI but always at least 5 different stocks will be chosen successively (6^{th}-10^{th} iter., 11^{th}-15^{th} iter. and so on) until the targets are met
    - N.B.: As a consequence of these rules and as an example of permissible action, if stock has had its weight reduced in the first batch (1^{st}-5^{th} iteration), its weights can be further reduced in the next batches if it happens to still have the highest weighted CI at any point

Step 7 [Inner Loop]: Decrease the Temporary weight of the candidate stock from Step 6

- First decrease of -10%
- If PAB targets not met (Step 10), further 2 decreases, each of -10%, for an aggregated maximum reduction of -30%

Ex:	Weight of Stock ABC
Temporary weight when entering Step 7	4%
Temporary weight after -10%	3.6% = 4% x (1 - 0.1)
Temporary weight after -20%	3.2% = 4% x (1 - 0.2)
Temporary weight after -30%	2.8% = 4% x (1 - 0.3)

Step 8: Determine stocks eligible for rebalancing the weight decreased in Step 7

Companies with the following attributes are eligible for weight increase rebalancing:

- Same Climate Impact Section as stock from Step 6

- Lower CI (*not* necessarily weighted CI) compared to stock from Step 6
- No weight reduction so far within the current batch
    - N.B.: this in no way contradicts the further 10% decrements in Step 7 as the stocks being eligible for weight rebalancing are by definition different from the stock in step 7
- Not capped

Step 9: Rebalance the weight taken in Step 7 to eligible companies from Step 8

- The weight redistribution is proportional to 1/(FFMC), taking into account only the FFMC of the eligible companies, subject to the following constraints:
    - If a stock reaches one of the weight limits before the reallocation of the weight corresponding to its proportion according to the 1/(FFMC) principle, the weight is capped at maximum and the excess weight that was no allocated is distributed among the rest of the eligible stocks using the 1/(FFMC) principle again, excluding the FFMC of the capped stock

Step 10: Compare the new WACI of the re-weighted Index against the PAB Double Cap

- Condition: WACI of the Index needs to be lower or equal to PAB Double Cap
- If this condition is satisfied, stop with the iterations and proceed to Step 11
- If this condition is *not* satisfied, continue with the iterations
    - If the weight in stock in Step 7 has been decreased *less than 3 times* within this instance of the inner loop
        - Stay within the inner loop, go back to Step 7 and decrease the weight by further 10%
    - If the weight in stock in Step 7 has been decreased *3 times* within this batch of iterations
        - Keep the rebalanced weights, exit the inner loop and go back to Step 6 to select a different stock

Step 11: Final weights, publish index and the final WACI

In case the algorithm above does not converge to a solution, stock selection from Step 5.6 is modified such as the stock with the highest Carbon Intensity is replaced by the largest FFMC eligible stock with lower Carbon intensity. Sections 5.6 and 5.7 are then performed again. This might continue iteratively until the index meets all the objectives.

6. CORPORATE ACTIONS

6.1 GENERAL

The index may be adjusted in order to maintain the continuity of the index level and the composition. The underlying aim is that the index continues to reflect as closely as possible the value of the underlying portfolio.

Adjustments take place in reaction to events that occur with constituents in order to mitigate or eliminate the effect of that event on the index.

6.2 REMOVAL OF CONSTITUENTS

A constituent will be removed from the index if it has appeared that the liquid trading will be significantly affected due to a takeover, merger, bankruptcy or has ceased to be a viable constituent as defined by the rules. The constituent in question will either be removed or will be replaced by the acquiring company.

If a company is removed from the index, the divisor will be adapted to maintain the index level.

6.2.1 Mergers and acquisitions

Acquisitions in cash

In the event of a bid in cash, the target company will be removed from the index. The removal will take place with effect after the close of the first full business day following the acceptance of the bid and the bid becomes unconditional. If a company is removed from the index, the divisor will be adapted to maintain the index level.

Mergers and takeovers in shares

In the event of a merger, acquisition or similar situation where the bid is made in the form of shares, the constituent will be replaced by the newly formed company, provided that this company is included in the Index Universe as well as any continuous eligibility criteria as defined in the index reviews section. The replacement will take place in line with the schedule of the transaction. The replacement of the shares of the relevant index constituent by the shares of the newly formed company will be executed on the basis of the bid ratio.

Mixed transactions

In case a of a mixed bid of cash and shares the bid will be treated as merger in shares if the share part amounts to at least 75% of the offer price, on the day of the publication of the terms of the offer. The replacement of the shares of the relevant index constituent by the shares of the company that continues to be traded will be executed on the basis of the bid ratio. The divisor will be adapted only for the cash part of the offer price.

Specific treatments

Index Design reserves the right to apply a specific treatment in non-standard situations including but not limited to:

- Competing bids with differing closing dates or structures;
- Offers made without the intention to gain full control.

In case of a specific treatment a separate announcement detailing the specific treatment will be issued timely to the market.

6.2.2 Delistings, suspensions and company distress

If a constituent is suspended, Index Design will consider whether the constituent should be removed on the understanding that a transitional period with a maximum of three months may be observed.

If a constituent will be delisted from Euronext, it will be removed from the index as soon as possible and on a day determined by Index Design.

The company will be deleted from the index based on either the last known price established during regular daytime trading or else a price determined by Index Design, whereby the company may also be deleted at EUR 0.

In the event that the trading in shares is suspended, the last known price established during regular daytime trading will be used.

6.3 SPLIT UP / SPIN-OFF

In the event that a company included in the index is split up, the companies resulting from the split, including the original company where appropriate will continue to be included in the index providing they still qualify as an eligible company in their own right. The index may then temporarily consist of fewer than, or more than the standard number of constituents until the next periodical review takes place.

For the purposes of these rules a split up is taken to mean a legal demerger, a spin-off or another situation which Index Design deems to be similar.

In case the shareholder of the company which was originally included in the index does not automatically receive shares in a company which is created as a result of the split up, this company is considered to be a newly listed company.

The removal of any non-qualifying company resulting from a split up will take place after the close of the first day of trading in the shares of that company. If all companies resulting from the split are to be removed, the removal will take place at the close of the last trading day before the split.

6.4 EARLY INCLUSION OF NON-CONSTITUENTS

As a rule newly listed companies are considered for inclusion in the index at the time of the periodical index rebalancing.

6.5 DIVIDENDS

6.5.1 Distinction ordinary and special dividend

The price index will be adjusted for dividends that are special.

The following criteria will be applied to decide whether a dividend should be considered a special dividend:

a) The declaration of a company of a dividend additional to those dividends declared as part of the company's normal results and dividend reporting cycle; merely an adjustment to the timing of the declaration of a company's expected dividend would not be considered as a special dividend circumstance; or
b) The identification of an element of a dividend paid in line with a company's normal results and dividend reporting cycle as an element that is unambiguously additional to the company's normal payment.

For the purpose of clarification, no adjustment will be made for the following situations:

1. Payment of ordinary dividends, irrespective of how they are financed;
2. Issue of redeemable shares or any other entitlement in lieu of an ordinary dividend; or
3. Unexpected increase or decrease, resumption or cessation, or change in frequency to an ordinary dividend.

6.5.2 Adjustment for special dividend

The adjustment of the index takes place by a reduction of the closing price of the share in question. Subsequently the divisor will be adapted in order to maintain the index level. The adjustments will be based on gross amounts.

6.6 RIGHTS ISSUES AND OTHER RIGHTS

In the event of a rights issue the new shares will be included in the index on the ex-date of the rights issue and an adjusted closing price will be applied. The adjustment will be made based on the shares currently in the index. The divisor will be adapted in such a way that the level of the index remains the same.

The new shares are only added if less than 0.4 share is issued for every share that is currently held and if the new shares are fungible with the existing line of shares (e.g. no dividend disadvantage). Otherwise the index is adjusted based on the value of the rights only.

The index will be adjusted only if the rights represent a positive value.

The index will also be adjusted if a value can be attributed to a subscription right for convertible bonds, bonds with warrants or warrants with preferential rights for shareholders or similar situations.

6.7 BONUS ISSUES, STOCK SPLITS AND REVERSE STOCK SPLITS

For bonus issues, stock splits and reverse stock splits, the number of shares included in the index will be adjusted in accordance with the ratio given in the corporate action. The divisor will not be changed because of this. Index Design may regard a bonus issue as the issue of an entitlement in lieu of an ordinary dividend and therefore treat this in accordance with 6.5.1.

6.8 CHANGES IN NUMBER OF SHARES OR FREE FLOAT

In between the reviews the number of shares included in the index and free float factors will remain unchanged.

6.9 PARTIAL TENDER OFFERS ON OWN SHARES

The divisor of the index will be adjusted if the premium represents more than 5% of the share price of the close on the penultimate day before the ex-date (the day prior to the last day before the ex-day). The premium is calculated as the difference between the offered price and the closing price, multiplied by the percentage of the share capital targeted in the offer. If the divisor is adjusted, the number of shares in the index will be adjusted as well.

7. INDEX CALCULATION FORMULAS

The general formula for the **price index** is:

$$I_t = \frac{\sum_{i=1}^{N} Q_{i,t} F_{i,t} f_{i,t} C_{i,t} X_{i,t}}{d_t}$$

Where:

t	Time of calculation
N	Number of constituent equities in index
$Q_{i,t}$	Number of shares of equity i included in the index on day t
$F_{i,t}$	Free Float factor of equity i [3]
$f_{i,t}$	Capping factor of equity i [1]
$C_{i,t}$	Price of equity i on t
$X_{i,t}$	Current exchange rate on t [1]
d_t	Divisor of the index on day t

The **total return index** calculation takes two steps: the first step is to transpose the announced dividend payment into index points. This is called the XD adjustment. This uses the following formula:

$$\text{XD adjustment} = \sum_{i=1}^{N} \frac{g_i * w_i}{d}$$

Where:

N	Number of constituent equities in index
g_i	The announced dividend per share of the i^{th} component stock (for net return index withholding tax is deducted from this dividend);
w_i	The weighting of the i^{th} component stock in the index, based on number of shares included in the index, Free Float factor, capping factor and exchange rate;
d	Divisor of the index.

The second step of the calculation uses the figures calculated in step one (XD adjustment). The dividend is assumed to be reinvested at the close of the ex-date.

$$TR_t = TR_{t-1}\left(\frac{IV_t + XD}{IV_{t-1}}\right)$$

Where:

TR_{t-1}:	Total return index value yesterday;
TR_t:	Total return index value on t;
IV_{t-1}:	Underlying price index yesterday;
IV_t:	Underlying price index on t;

[3] Factor is equal to 1 if not applied for the index

The **Decrement return index** uses the following formula:

$$\mathrm{DI}_t = \mathrm{DI}_{t\text{-}1}\left(\frac{\mathrm{NR}_t}{\mathrm{NR}_{t\text{-}1}} - Dcr \times \frac{day}{365}\right)$$

Where:

DI_{t-1}	Decrement Return Index value on day t-1
DI_t	Decrement Return Index value on day t
NR_{t-1}	Net Return Index value on day t-1
NR_t	Net Return Index value on day t
Dcr	5%
day	Number of calendar days between day t and day t-1

8. DEFINITIONS

8.1 FREE FLOAT FACTOR

The Free Float Factor is the percentage representing all listed securities of the selected line of the relevant company eligible for index inclusion (as described in section 5.2), minus any shareholdings that are considered non-free float. The Free Float Factor is based on public information available on the Review Cut-Off Date. The Free Float Factor will be rounded to the nearest 5%.

The following shareholdings are considered non-free float (based on public information available on the Review Cut-Off Date):

- Any single shareholder who holds 5% or more of the listed securities in the selected line eligible for index inclusion, with the exception of collective entities or pension funds. Collective entities are those entities that fulfill all the following criteria:
    i. are open for investment to investors or tradable on the market; and
    ii. have a diversified portfolio; and
    iii. have an open ended structure.

  Collective entities include mutual funds and other open end-funds.
- Collective entities or pension funds that hold 5% or more of the listed securities in the selected line eligible for index inclusion and are represented in any governing body of the company in question.
- Parties acting in concert that collectively hold 5% or more of the listed securities in the selected line eligible for index inclusion.
- Employee shareholding plans, employee pension plans, individual employees, management or members of the board of directors of the relevant company when their cumulative shareholding is 5% or more of the listed securities in the selected line eligible for index inclusion.
- Shares held by the relevant company that represent 5% or more of the listed securities in the selected line eligible for index inclusion (e.g. treasury shares).

8.2 REVIEW RELEVANT DATES

The **Index Universe Cut-Off Date** is the date on which, after the market close, relevant data are gathered that will serve as basis to construct the Large Universe.

The **Review Cut-Off Date** is the date on which, after the market close, relevant data are gathered that will serve as basis for the periodical review of the index.

The **Review Announcement Date** is the date on which, after the market close, the changes relating to the periodical review are announced as well as the preliminary free float factors.

The **Review Composition Announcement Date** is the date on which, after the close, the full details are announced regarding the index composition that will come into effect after the review effective date. this includes numbers of shares, free float factors and capping factors of all companies included in the new index portfolio.

The **Review Effective Date** is the date on which, after the market close, the changes relating to the periodical review are being effectuated in the index portfolio.

9. DATA PARTNER DEFINITIONS

9.1 ENERGY TRANSITION SCORE

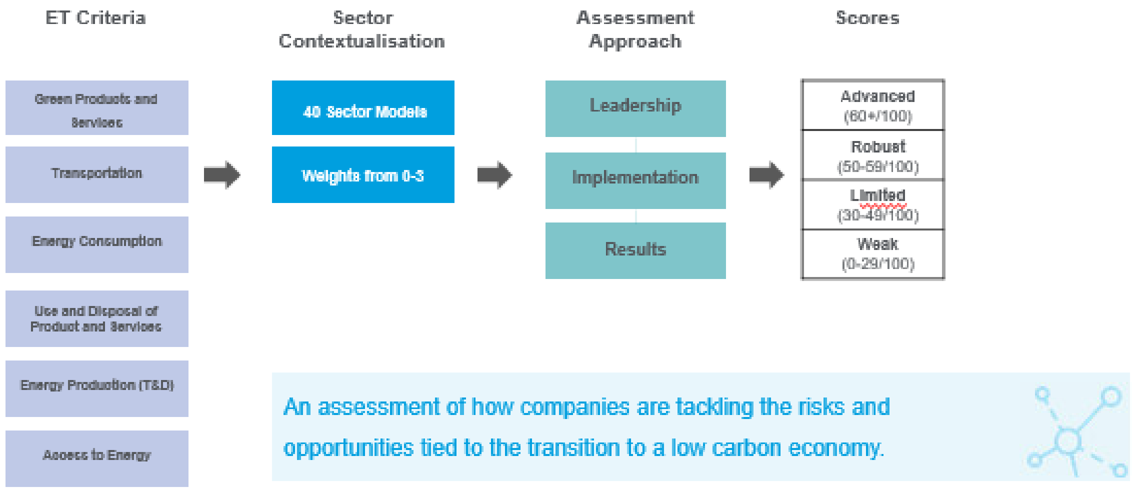
VE's Energy Transition assessment informs clients of an issuers' strategic approach to reduce their emissions and to adapt their business model to address the risks and opportunities tied to the **transition to a low-carbon economy**. 6 assessment criteria are used to produce scores from 0-100.

The Energy Transition Concept: Companies' responsibility to consider and mitigate the impacts of their activity, products, services and behavior on climate change;

- to reduce significantly carbon emission and to contribute to the 2° objective
- to integrate climate change risks and opportunities within their business case so as to adapt and transform their business model towards a low-carbon economy
- to integrate the Energy Transition into Board agenda
- and to account on objectives, results and trends.

The Energy Transition assessment is based **on three cardinal principles:** impact mitigation, risk management and contribution.

The Energy Transition framework for analysis is shaped by the following international and national authoritative norms, regulations, standards and initiatives; which define the principles of action upon which we question and assess companies Energy Transition Performance;



9.2 ESG SCORE

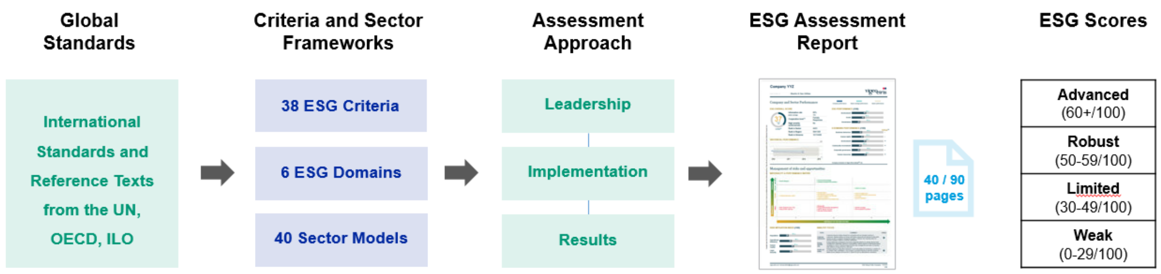
Step 1:
Vigeo-Eiris assesses and rates the performances of companies according the Equitics® methodology based on 38 criteria, divided in to six key areas of corporate environmental, social and governance responsibility, namely:

- Environment: Protection, safeguard, prevention of attacks on the environment, implementation of an adequate managerial strategy, ecodesign, protection of biodiversity and reasonable control of environmental impacts on the overall life cycle of products and services.

- Human Rights: Respect of trade unions' freedom and promotion of collective negotiation, non-discrimination and promotion of equality, eradication of banned working practices, and prevention of inhumane or humiliating treatments.
- Human Resources: Constant improvement of industrial relations, career development, as well as quality of working conditions.
- Community Involvement: Contribution to economic and social development of the territories of establishment and their human communities, concrete commitment in favor of the control of societal impacts of products and services, transparent and participative contribution to causes of general interest .
- Business Behaviour: Taking into account clients' rights and interests, integration of social and environmental standards both in the process of selection of suppliers and in the overall supplying chain, efficient prevention of corruption, and respect of competition laws.
- Corporate Governance : Efficiency and integrity, insurance of both independence and effectiveness of the Board of Directors, effectiveness and efficiency of audit and control systems, and in particular inclusion of social responsibility risks, respect of shareholders' rights and most of all of the minorities, transparency and moderation in executive remuneration.

Step2 – Overall score

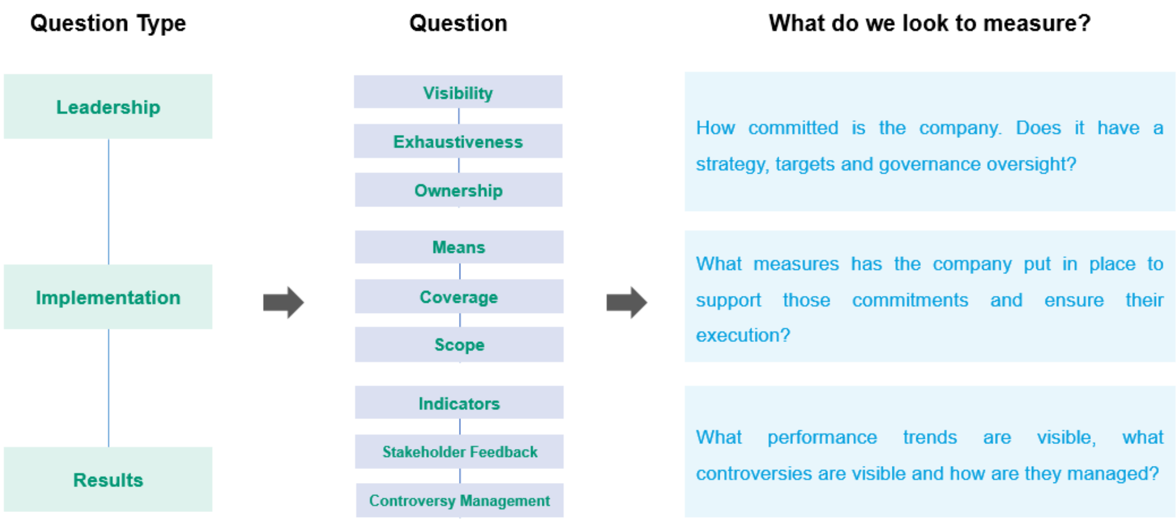
- Each issuer is assigned an overall score out of 100 (the higher the better) which is a weighted and consolidated score of all sustainability factors in a given sector



Vigeo's methodology is customized by sector and, to a certain extent, by company, to reflect sector-specific ESG risks and opportunities. Of the 38 sustainability criteria in the ESG rating framework, approximately 20-25 are evaluated for a given sector. The weight assigned to each sustainability criteria, for a given sector, corresponds to a number from 0 to 3, based on 3 criteria:

i. Nature: the nature of the criteria i.e. the contribution of that criteria to the general interest of society and stakeholders. This will be consistent across all sectors.
ii. Exposure: the vulnerability of stakeholders to a criterion. This will be sector specific.
iii. Corporate Risk: the type of risk a criterion exposes a company to: human capital; operational efficiency; reputation; legal security. This will be sector specific

The global ESG scores are the weighted average of the scores obtained by the company regarding 3 managerial pillars on the criteria activated by sector: Leadership (how the company is committed toward the criteria assesses), Implementation (what are the means and measures taken to implement policies & commitments) & Results (what performance the company has toward each sustainability driver)



9.3 E, S AND G SCORES

- **Global assessment**: Vigeo Eiris defines social responsibility as a managerial commitment towards the legitimate rights, interests and expectations of a company's stakeholders with a view to continuously improve performance and risk management
- **Focus on Social**: VE's Social assessment provides insight into a company's capacity to manage the risks and opportunities faced in relation to two key stakeholders: the labour force, and the wider society in which it interacts. Composed of up to 19 criteria, assessments are tailored at sector level to ensure their materiality
- **Focus on Governance**: VE's Governance assessment provides insight into a company's capacity to manage the risks and opportunities faced in relation to its corporate governance and business ethics responsibilities. Composed of up to 7 criteria, assessments are tailored at sector level to ensure their materiality.
- **Focus Environmental:** VE's Environment assessment provides insight into a company's capacity to manage the risks and opportunities gathers in all the criteria that are linked to the Environment, from an internal management perspective, a supply chain perspective and from a product safety perspective

The Environment, Social and Governance score are the weighted average of the criteria that are affected to each pillar as described in the following table :

Environment	Social	Governance
Environmental Strategy	Social Dialogue	Anti-Corruption
Accidental Pollution	Employee Participation	Anti-Competition
Green Products	Reorganization	Lobbying
Biodiversity	Career Management	Board of Directors
Animal Testing	Remuneration	Audit & Internal Controls
Water	Health & Safety	Shareholders
Energy	Working Hours	Executive Remuneration
Atmospheric Emissions	Information to Customers	Product Safety (G)
Waste	Customer Relations	
Local Pollution	Suppler Relations	
Transportation	Social Standards in the Supply Chain	
Use & Disposal of Products	Social & Economic Development	
Environmental Standards in the Supply Chain	Societal Impacts of Products & Services	
	Philanthropy	
	Fundamental Human Rights	
	Fundamental Labour Rights	
	Non-Discrimination	
	Child & Forced Labour	
	Product Safety (S)	

9.4 UNGC EXCLUSIONS

To determine if a company is aligned or not, we base our assessment following 10 UNGC principles that can be regrouped in 4 pillars:

i. Environment: Environmental impact management. It covers all issues relevant to a given company according to its sector and core business (environmental strategy, biodiversity protection, water resource management, energy consumption and emissions, etc.).

ii. Human Right: Respect and promotion of fundamental human rights

iii. Labour Right: Respect and promotion of fundamental labour rights (freedom of association and the right to collective bargaining, non-discrimination, health and safety conditions, etc.).

iv. Corruption: Corporate commitments, due diligence and internal control systems to prevent any type of corruption or non-compliant behavior

A company faces an UNGC exclusion if :

- A critical controversy has been spotted for one or several UNGC pillars (Human Rights, Labour Rights, Environment and Corruption)
- The company is involved in production of tobacco
- The company is involved in manufacturing Full weapon, key parts or services for Munitions and delivery platform for Cluster munition or anti personal landmines.

A company can also be set ineligible if the average of UNGC Pillar Score is below 15 (Non communicative and/or controversial)

10. ESG DISCLOSURE

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY	
Item 1. Name of the benchmark administrator.	Euronext Paris
Item 2. Type of benchmark	Equity Benchmark
Item 3. Name of the benchmark or family of benchmarks.	**Euronext Eurozone PAB 50 and Core Europe PAB 50 Index**
Item 4. Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?	Yes
Item 5. If the response to Item 4 is positive, please find below the ESG factors that are taken into account in the benchmark methodology and how they are used for selection, weighting and exclusion	
a) List of combined ESG factors	**Exclusion:** • Companies facing critical controversies with regards to UNGC principles • Companies involvement in controversial weapons (Cluster munitions, Anti-personnel mines) • Companies involved in production of tobacco • Companies involved in Coal, Oil, Natural Gas and Electricity producers with lifecycle GHG Emissions higher than 100Gco2/kWh • Companies with an ESG score below than 30 • Companies not covered by VE research on Carbon Emissions **Weighting:** • Weighting based on Free Float Market Capitalization. • Further weighting adjustments to meet PAB objectives. If the weights stemming from the core methodology and alignment of High Carbon Impact sections do not satisfy the decarbonization targets, we proceed to an iterative reweighting of the constituents. The weight of the highest Weighted Carbon Intense stock in the index is diminished up to 30% and rebalanced in in its Super-sector, to less Carbon Intense companies. We reiterate this process with a second company if needed and so on, until the index is compliant with the PAB Carbon Intensity requirements.
b) List of environmental factors considered:	Please refer to a)
c) List of social factors considered:	Please refer to a)
d) List of governance factors considered:	Please refer to a)
Item 6. Data and standards used.	
a) Data input. *(i) Describe whether the data are reported, modelled or, sourced internally or externally.*	**V.E** • ESG score • VE research on Carbon Emissions • United Nations Global Compact (UNGC) screening • Controversial weapons involvement

(ii) Where the data are reported, modelled or sourced externally, please name the third-party data provider.	• Fossil fuel involvement
b) Verification of data and guaranteeing the quality of those data. *Describe how data are verified and how the quality of those data is ensured.*	**V.E** Vigeo-Eiris represents and warrants that to the best of its knowledge the Methodology is robust and reliable, rigorous, and capable of validating and verifying including, but not limited to, the following: • Shall promptly correct any errors made in its computations of the Data and inform Euronext thereof, immediately. • Periodically review the Methodology • Has clear written rules identifying how and when discretion may be exercised when deviating from the methodology • Will inform Euronext prior to making any material change to the Methodology and will provide Euronext with the rationale for such change.
c) Reference standards *Describe the international standards used in the benchmark methodology.*	**V.E** The methodology behind ESG performance indicators and the assessment of controversies severity is based on the following international standards: • Global Reporting Initiative (GRI) • OECD Guidelines for Multinational Enterprises, and sectorial guidance • G20/OECD recommendations on Corporate governance • UN Conventions and recommendations, • UN Global Compact Principles • UN Sustainable Development Goals • ILO Conventions, including the core ones, and recommendations • TFCD recommendations • Paris Agreement (UNFCCC)
Information updated on:	July 2021