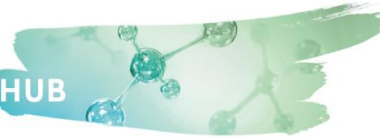


EU CLIMATE BENCHMARKS

Reality and consistency check



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Natixis Green & Sustainable Hub is delighted to share with you its **EU Climate Benchmarks special report: “Reality and consistency check”**

Published on September 30th, the [EU TEG Report on Benchmarks](#) defined minimum technical criteria for the newly created EU Climate Benchmarks, as well as ESG disclosure requirements for all benchmarks.

Less under the spotlight than the EU Taxonomy and Green Bond standard, **EU Climate Benchmarks represent nevertheless a major milestone for sustainable capital markets as they should bring more clarity** and homogeneity in the current climate/low carbon indices universe. Two climate benchmarks have been created: Climate Transition and Paris-Aligned benchmarks, with similar objectives but different levels of ambition.

- What does Paris Alignment mean at a portfolio level?
- Are proposed criteria usable for investors? Why, how, under which conditions?
- Reality check: are existing major climate indices (MSCI, Euronext) compliant with those criteria?

This report intends to address those questions by providing in-depth analysis of EU requirements and highlighting their implications for the market players.



Context

Genesis & context. The European Commission set up a Technical Expert Group on Sustainable Finance (TEG) to assist it in developing an EU classification system to determine whether an economic activity is sustainable (the so-called Taxonomy), an EU Green Bond Standard, guidance on corporate disclosure of climate related information and Benchmarks for low carbon investment strategies. It is part of an overall backdrop and evolution towards stricter transparency duties of financial intermediaries to end-investors with regard to sustainability risks, opportunities and investment targets. Initiated in France with the Article 173 of the French 'Energy Transition and Green Growth' Act (2015), this trend has since percolated into the European Agenda.

Amendment to Benchmark Regulation (BMR).

On February 25, 2019, the European Parliament and Member States reached an Agreement on the creation of two new categories of low-carbon benchmarks: a Climate-transition Benchmark and Paris-aligned Benchmark. The TEG is assisting the Commission in defining minimum standards for the methodologies of EU Climate Transition and Paris-aligned Benchmarks as well as ESG disclosure requirements that shall be applicable to all investment benchmarks.

On September 30, 2019, the TEG released its final report whose recommendations will feed the amendment of the BMR. It is poised to set criteria for the inclusion of climate-related parameters, the description of the constituents of the benchmark, and the criteria used for selecting and weighting them. Especially two articles of the Regulation (EU) 2016/1011 on “indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment fund”, will be modified: art. 13 on “Transparency of methodology” and art. 27 on “the Benchmark Statement”.

TEG's mission on EU Climate Benchmarks: aiming for the least bad “solution”. Overall, the task assigned to the TEG was challenging and handled in a short period of time but above all having far from a comprehensive vision and access to the tools or data available on the market.

With humility, the TEG has inserted the following disclaimer in their publication: “the current state of methodologies and available issuer-level data does not allow for an evident and irrefutable conversion of climate scenarios into detailed and informed portfolio construction methodologies”.

What came out with the EU Sustainable Finance package?

The Final Report on Benchmarks was published in September 2019

In line with the **European Commission 2018 “Action Plan on Financing Sustainable Growth”**, the Technical Expert Group published 4 reports in June 2019:

- EU Taxonomy of environmentally sustainable economic activities
- EU Green Bond Standard
- **Climate benchmarks and benchmarks’ ESG Disclosures (interim report) > Final report published on September 30th, 2019**
- Guidance to improve corporate disclosure of climate-related information



Taxonomy Technical report (414 pages)

- Full methodology
- Use cases and case studies
- 67 economic activities assessed
- Methodology for adaptation tested on 9 activities



The EU Green Bond Standard (79 pages)

- Proposed draft
- Core Components
- Accreditation regime
- Incentives
- Impact



User guide (26 pages)

- Concise guide to key concepts
- Examples
- Overview of the criteria



TEG Report on Benchmark (75 pages)

- Definition of minimum standards
- Technical challenges
- ESG disclosure requirements



TEG's proposals for Benchmarks Regulation

Content of the Report on Benchmarks



The Report on Benchmarks includes two main sections:

1. The methodology and minimum technical requirements for newly created Climate benchmarks and
2. ESG disclosure requirements for all benchmarks

1

EU Climate Benchmarks

The report sets out **minimum requirements** for

- ✓ EU Climate Transition Benchmarks
- ✓ EU Paris-Aligned Benchmarks

The requirements include a list of indicators and related computation methodologies. They are similar for both benchmarks. We notice two types of requirements:

- Absolute minimum standards, i.e. absolute quantitative metrics to comply with
- Relative minimum standards compared to investable universe

These two types of climate benchmarks are pursuing a **similar objective** but differentiate themselves in terms of their level of restrictiveness and ambition.

2

ESG disclosure requirements

- The report details **technical advice on minimum disclosure requirements to improve transparency and comparability of information** across benchmarks not only regarding climate-related information but also on a variety of ESG indicators.
- For each asset class, the report provides a template of disclosure indicators to be provided by benchmarks administrators.
- “Where to disclose”: formal aspects related to disclosure modalities are detailed notably as regards the location of the information to display: Methodology document, Benchmark statement, ESG disclosure template.

A dedicated section provides specific disclosures and measures for EU CTB and PAB benchmarks.

All you need to know about EU Climate Benchmarks

1. What are EU Climate benchmarks?

A benchmark means any index by reference to which the amount payable under a financial instrument or a financial contract, or the value of a financial instrument, is determined.

EU Climate benchmarks are investment benchmarks that incorporate specific objectives related to carbon emission reductions and the transition to a low-carbon economy. Two types of Climate benchmarks have been included in the Benchmark Regulation: “Climate-Transition Benchmark” (CTB) and “Paris-Aligned Benchmark” (PAB).

2. What is the difference between these two benchmarks?

They pursue the same objective of decarbonization trajectory but PAB is more ambitious and stringent. For example, companies involved in coal, oil & gas exploration are excluded from PAB but tolerated in CTB.

3. For whom have they been created?

Institutional investors, pension funds, benchmark administrators, but not only! The application scope goes far beyond benchmarks in practice. With these CTB and PAB criteria, the European Commission intends to provide all investors with a ready-to-use tool for asset allocation in order to align their portfolio with the Paris Agreement.

4. Why are they so important?

Current climate benchmarks do not always reflect investment beliefs and constraints of institutional investors, they also lack harmonization and clarity on objectives and methodologies. The EU TEG report (September 2019) provides the list of recommendations for minimum standards, which will constitute a common language for investors.

5. Which asset classes are concerned?

Listed equities and corporate fixed-income benchmarks only. A pity that sovereign bonds are not in the scope.

6. What are the minimum standards to qualify as CTB or PAB?

A list of 7 criteria are defined, including notably i/ carbon reduction compared to the investable universe, ii/ minimum exposure to high

impact sectors, iii/ year-on-year self-decarbonization. The criteria apply both to CTB and PAB but the thresholds are different for some of them. The main difference between the EU approach and current market practices is that standards are considered at portfolio level (weighted average), and not on a single-name basis.

7. Do these criteria make sense? Are they usable by investors?

Taken individually, yes, they do make sense: the level of stringency on carbon reduction is justified (-30% and -50% respectively), the differentiation between CTB and PAB based on activity exclusions is well defined, exposure to high impact sectors is a must-have.

However, the accumulation of criteria brings complexity in the portfolio construction. In addition, we are skeptical as regards the -7% YoY self-decarbonization requirement which disadvantages the good performers and presents a backward-looking bias.

8. Are existing major climate/low carbon indices already actually compliant with EU Paris-Aligned Benchmark requirements?

According to our compliance test (6 benchmarks tested), none are aligned with the EU PAB. **And with Climate-Transition requirements?** Very few of them. It is not surprising, as the first generation of low carbon indices were not always meant to follow a decarbonization trajectory.

9. Which relationship with the EU Taxonomy?

None of the requirements explicitly refers to the EU Taxonomy, but references are disseminated. In particular, the green / brown share ratio, albeit under a voluntary form, will be highly dependent of EU taxonomy which, so far, doesn't provide any guidelines as regards brown shares and can be considered incomplete as to green shares.

10. What about the legislative process?

Now that the TEG recommendations are published and communicated to the EC, the Delegated Act to be published by the EC will enter into force on April 30th 2020 if Parliament and Council do not formulate any objections.

CONTENTS

1. Context, rationale, legislative process
2. EU's Climate Benchmarks
3. Deep dive into CTB and PAB minimum standards: how usable and stringent are they for equity benchmarks?
4. Are existing equity climate indices compliant with EU CTB and PAB benchmarks?
5. Fixed income corporate debt: how usable are the criteria?
6. Case study on the ECB's corporate sector purchase program portfolio
7. Appendix





1

CONTEXT, RATIONALE, LEGISLATIVE PROCESS



Why a dedicated TEG Report on Benchmarks?

Reminder of the legislative process

EU Sustainable Finance context

In May 2018, the Commission adopted a package of measures implementing several key actions announced in its action plan on sustainable finance. The package includes notably a proposal for **a regulation amending the Benchmark Regulation**.

The proposed amendment will create a new **category of benchmarks comprising low-carbon and positive carbon impact benchmarks**, which will provide investors with better information on the carbon footprint of their investments (Proposal available [here](#)).



Benchmark Regulation

In March 2019, the European Parliament and Member States reached an agreement on two essential measures regarding investment benchmarks (available [here](#)) to come as amendments to the BMR:

1/ The creation of two types of climate benchmarks:

- EU Climate Transition Benchmark
- EU Paris-aligned Benchmark

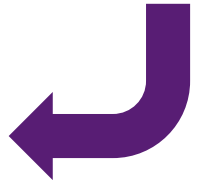
2/ The definition of **Environmental, Social and Governance (ESG) disclosure requirements** that shall be applicable to all investment benchmarks (with the exception of currency and interest rate benchmarks)

Due to the start of the 2019-2024 legislature, the final compromise could not go through all the validation processes and **entered a corrigendum procedure**: even though the former Members of European Parliament (MEPs) voted on the text in March, the compromise will have to be approved by the newly-elected MEPs in plenary session before being validated by the Council and then published in the Official Journal of the European Union => **new vote from the MEPs expected October-November 2019**.

TEG REPORT ON BENCHMARK IN SEPTEMBER 2019




In order to help specify the provisions, the European Commission mandated the **Technical Expert Group to make recommendations** on the basis of the agreement reached by the EU co-legislators in March 2019.



What is the Benchmark Regulation?

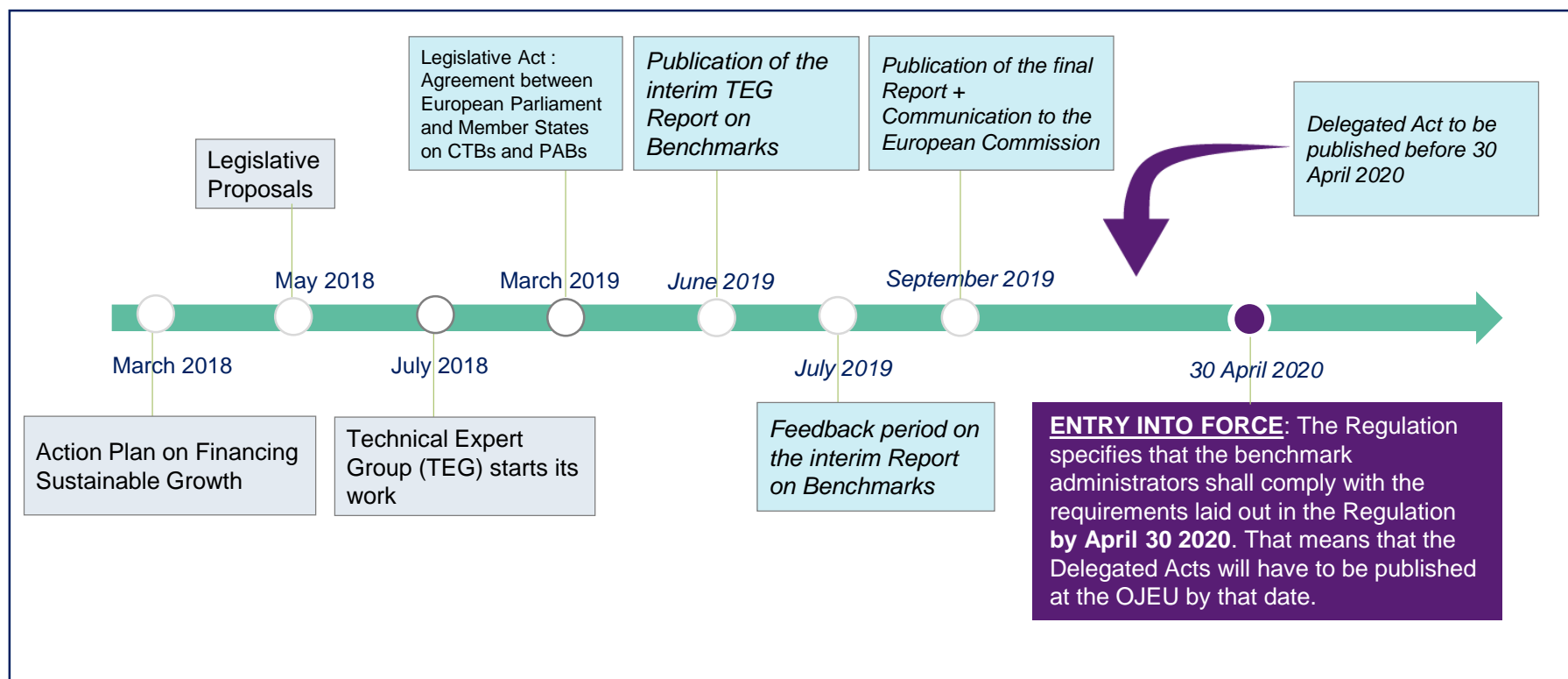
The Benchmarks Regulation (BMR) introduces a regime for benchmark administrators that ensures the accuracy and integrity of benchmarks.

- ✓ **The BMR** was introduced to overcome concerns of accuracy and integrity of indices used as benchmarks, following the Libor scandal.
- ✓ The BMR (*Regulation 2016/1011 of the European Parliament and the Council* – [download here](#)) is a European Union regulation that came into force in January 2018.
- ✓ Each index administrator shall get a formal green light from its national Regulator (AMF for France) **by the 31th of December 2019**.
- ✓ The Benchmarks Regulation has the following objectives:
 - Improving governance and controls over the benchmark process, in particular to ensure that administrators avoid conflicts of interest, or at least manage them adequately;
 - Improving the quality of input data and methodologies used by benchmark administrators;
 - Ensuring that contributors to benchmarks and the data they provide are subject to adequate controls, in particular to avoid conflicts of interest;
 - Protecting consumers and investors through greater transparency and adequate rights of redress.

- 
- ☞ The BMR is still to be implemented by benchmark administrators (full compliance expected in Jan 2020).
 - ☞ The introduction of Climate benchmarks and ESG disclosure in the BMR would be an additional layer of requirements in a newly defined regulation.

Legislative process: What happens next? (1/2)

The Delegated Act to be published by the European Commission will enter into force on **April 30 2020** if Parliament and Council do not formulate any objections.



Legislative process: What happens next? (2/2)

Recommendations issued by the TEG will have to be translated into European law

**DELEGATED ACT
(before 30 April 2020)**



ENTRY INTO FORCE: The Regulation specifies that the benchmark administrators shall comply with the requirements laid out in the Regulation **by 30 April 2020**. That means that the Delegated Acts will have to be published at the OJEU by that date.

Mandate is given to the European Commission to adopt **Delegated Acts** which will specify some provisions laid out in the Regulation.
On the **Delegated Act procedure**, the Benchmark Regulation is amended so that:

1

The delegation of power may be revoked at any time by the European Parliament or by the Council: such a decision shall not affect the validity of any delegated acts already in force.

2

Before adopting a delegated act, the Commission shall consult experts designated by each Member State.

3

As soon as it adopts a delegated act, the European Commission shall notify it simultaneously to the European Parliament and to the Council who have 3 months to express any objection. If no objection has been expressed, **the Delegated Act shall enter into force** after the 3 months period. No national transposition is needed.

TEG's proposals for Benchmarks Regulation

Content of the Report on Benchmarks



The Report on Benchmarks includes two main sections:

1. The methodology and minimum technical requirements for newly created Climate benchmarks and
2. ESG disclosure requirements for all benchmarks.

EU Climate Benchmarks

These two types of climate benchmarks are pursuing a **similar objective** but differentiate themselves in terms of their level of restrictiveness and ambition.

The report sets out **minimum requirements** for

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The requirements recommended by the TEG include a list of indicators and related computation methodologies. They are similar for both benchmarks. We notice two types of requirements:

- Absolute minimum standards, i.e. absolute quantitative metrics to comply with.
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ESG disclosure requirements

- The report details **technical advice on minimum disclosure requirements to improve transparency and comparability of information** across benchmarks not only regarding climate-related information but also on a variety of ESG indicators.
 - For each asset class, the report provides a template of disclosure indicators to be provided by benchmarks administrators.
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2

CLIMATE BENCHMARKS

👉 EU CLIMATE TRANSITION

👉 EU PARIS-ALIGNED





EU Climate Benchmarks: Natixis Green & Sustainable Hub opinion (1/2)

First, we welcome the introduction of Climate benchmarks in the BMR as it should bring more clarity and homogeneity in the current climate/sustainability/low-carbon indices universe. This report of the TEG paves the way for a new generation of climate strategies.

We believe it could usher in a new era for sustainable finance. First, a double-sword approach is at last pushed, meaning that it is not only focusing on climate change risks management as most of the existing low-carbon benchmarks do, but also take into account opportunities arising from the transition to a low-carbon economy.

Existing low-carbon benchmarks have been mostly built from a risk management standpoint. The philosophy of EU CTBs and EU PABs is different; it aims not only at hedging against climate transition risks, but also at contributing to the transition and reaping its benefits and opportunities.

Yet, how usable and scalable those benchmarks are will depend on the right balance between ambition and pragmatism.

Sovereigns not included: what a pity. We bemoan that Sovereign Debt is not (yet) included in the scope whereas resources and tools to assess their alignment exist and are

more robust than for equity. Due to the sheer weight of sovereign debt in portfolios, it is the elephant in the room we must address, now rather than later. At least as a policy benchmark to help guide asset allocation (discretionary use of the criteria). It is wrong to say there is a lack of data, it is even quite the contrary, so-called alignment and assessment of the level of ambition of nationally determined contribution (NDC) and implementation exist and tend to be more robust and relevant (the more holistic you get, the most relevant an alignment assessment becomes!).

Taken individually, the criteria do make sense: the level of stringency on carbon reduction is justified, the differentiation between CTB and PAB based on activity exclusions is well defined, exposure to high impact sectors is a must-have. The green vs. brown share ratio on a voluntary basis is a nice to have indicator but hard to implement (until more robust methodologies and clarifications on brown revenues are available).

You need to get your portfolios dirty to clean up. The sectorial constraints weighting is “a must have” and fortunately it is a prerequisite. As a matter of fact, “you need to get your hands dirty to clean up”, meaning that the higher potential for decarbonization lies by essence within high-emitting sectors.



EU Climate Benchmarks: Natixis Green & Sustainable Hub opinion (2/2)

Overload of criteria. However, the accumulation of constraints and objectives restricts flexibility and technological options for benchmark administrators. Some criteria may even reveal incompatible. Asking cumulatively for a 30 or 50% cut in emissions against comparable universe, a 7% annual decrease and the respect of sectorial weights (compared to parent index) seems hard to reach. Scalability is questionable as such complexity is barely compatible with systematic index rules (and national regulators' requirements).

The YoY self-decarbonization requirement disadvantages the good performers and presents a backward-looking bias. YoY self-decarbonization of the benchmark of at least 7% is not taking into account efforts made by companies previously to this scenario. By requiring such annual rate, there is a risk to exclude companies that have in the past significantly reduced their emissions and that could be currently operating under science-based targets. Nor this 7% captures the non-linearity of emissions reductions. Furthermore, the forward-looking dimension is absent. We agree that it is challenging, because the information is missing but maybe that “green-brown capex ratio” or the ambition of public climate (science-based) targets would be an interesting indicators.

Intensity twists. Not a new issue, nonetheless still very relevant : Carbon intensity may not always reveal to be a meaningful metric. The question of absolute emissions is

eluded, and it remains unclear if the 7% self-decarbonization is an average of the constituents individual self-decarbonization rates. In that sense, as it is formulated, the criteria would treat equally self-decarbonization rate from a media or health company than from an oil and gas one, ignoring absolute emissions.

For PAB, companies involved in coal, oil and natural gas are excluded. While a clear difference between CTB and PAB is welcomed, such exclusion thresholds appear a bit dogmatic, especially for oil and natural gas companies. They could historically and predominantly belong to fossil fuel industry but having boldly started their transition with extensive diversification towards low-carbon energy sources. Furthermore, such exclusion thresholds hurt the 7% self-decarbonization rate which is more likely to be achieved by transitioning oil and gas companies.

Reality check. We tried to test TEG's proposals to assess if the existing auto-labelled climate / low carbon indices comply with these EU forthcoming criteria. Unsurprisingly, we found hard to come up with examples of benchmarks fulfilling the proposed conditions. The next question mark now is whether a new generation of climate indices as defined in this report is able to fulfill the need for transparent, impactful, yet scalable benchmarks.

Back to basics: what is an index? a benchmark?

► Definitions according to the EU Benchmark Regulation (BMR) :

The Benchmark Regulation was introduced to overcome concerns of accuracy and integrity of indices used as benchmarks, following the Libor scandal.



Index

Index means any **figure** :

- That is published or made available to the public.
- That is regularly determined :
 - i) By the application of a formula, any other method of calculation or by an assessment.
 - ii) On the basis of the value of one or more underlying assets or prices [...].

Index provider

A natural or legal person that has control over the provision of an index.

Benchmark

Benchmark means any index by reference to which the amount payable **under a financial instrument or a financial contract, or the value of a financial instrument, is determined.**

Or an index that is used to measure the performance of an investment fund with the purpose of tracking the return of such index or of defining the asset allocation of a portfolio or of computing the performance fees.

Benchmark administrator

A natural or legal person that has control over the provision of a benchmark.

In practice these terms are used interchangeably, in this report the terms are used without distinction.

Major index providers are in charge of writing and publishing the selection rules that will be applied regularly to select each index's constituents, these rules may include climate criteria or not. **Leading index providers include :**

Index provider	STOXX	FTSE Russell	MSCI	S&P Dow Jones Indices
				<small>A Division of S&P Global</small>
Examples of reference Benchmarks	STOXX 600	FTSE 100	MSCI World	S&P 500
Examples of climate benchmarks	STOXX Global Climate Change Leaders	FTSE All-World ex CW Climate Index	MSCI Global Low Carbon Leaders	S&P 500 Carbon Efficient

New definition of climate benchmarks

A need for clarity and transparency



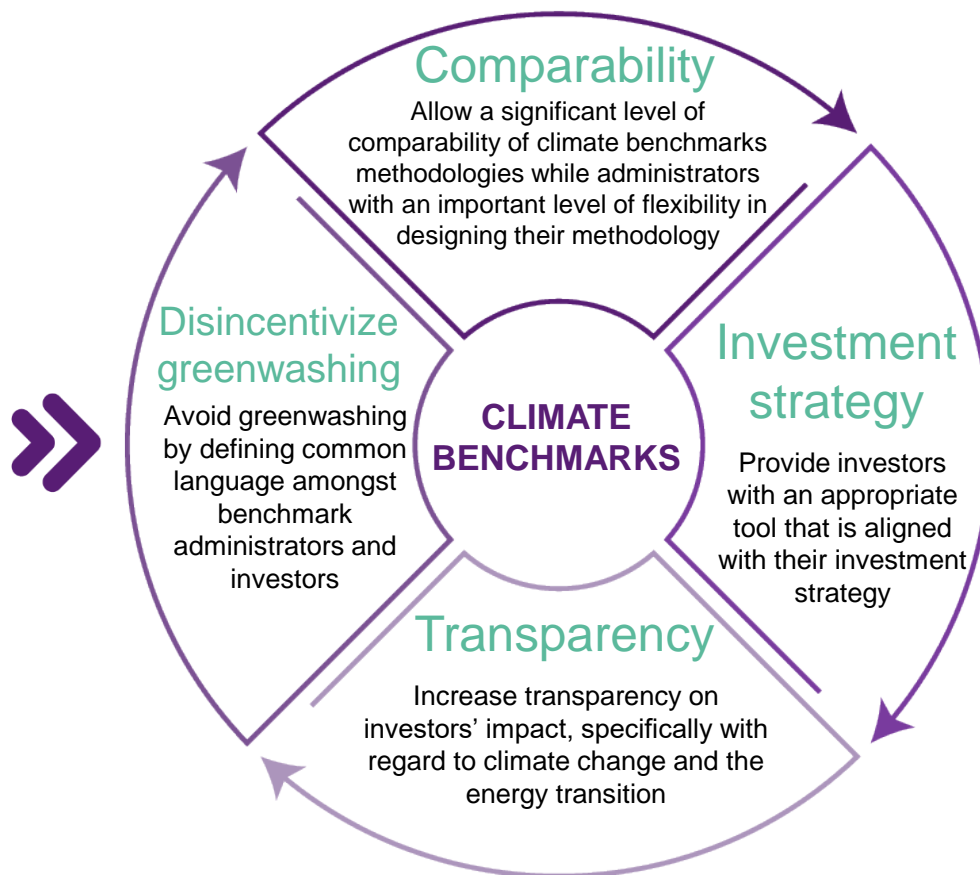
A **climate benchmark** is defined as an investment benchmark that incorporates specific objectives related to greenhouse gas (GHG) emission reductions and the transition to a low-carbon economy – based on the scientific evidence of the IPCC – through the selection and weighting of underlying constituents.

Objectives of the proposed climate benchmarks definition

CURRENT CHALLENGES

- 1 Self labelled climate or low carbon benchmarks **do not always reflect investment beliefs** and constraints of institutional investors
- 2 **Lack of harmonization and clarity** on objectives and methodologies
- 3 Underlying GHG emissions data **not yet sufficiently harmonized**
- 4 No standardized transcription or methodologies for a **1.5°C scenario alignment**
- 5 **Varying degrees of reporting** hinders market players' ability to compare indices and choose adequate benchmarks for their strategy
- 6 Low carbon benchmarks mainly focused on reducing investment **risks related to climate change**

OBJECTIVES OF CLIMATE BENCHMARKS



Why are those climate benchmarks so important ?



EU PAB and EU CTB Benchmarks are **less under the spotlight** than the EU Taxonomy and Green Bond Standard, **less understood** because of their technical intricacies, but **they could become very instrumental**:

“Indices and benchmarks are cornerstones of global capital markets. Benchmarks are usually constructed using weighted averages of the stock (or bond) market value and price performance of a defined number or group of securities” (HLEG, 2018)

The proposed Regulation states that:

*“Indices and benchmarks have an **indirect but important impact on investments**. Many investors rely on benchmarks in particular in portfolio allocation and to measure the performance of financial products”. [...]*

“A few benchmarks [none embedding climate considerations] have become widely used, general reference points to assess market movements within the financial system.”

The **European Commission** aims:



At creating market-maker climate benchmarks: while index providers have been developing a wide range of indices aimed at capturing sustainability and climate considerations, their significance in overall portfolio allocation reportedly remains limited as they are little used.



At levelling the playing field and mainstreaming climate finance prerequisites through ESG disclosure requirements.

Two types of Climate Benchmarks ...a similar objective



The two climate benchmarks pursue **similar objectives but vary in their level of ambition**. As a result, most of recommendations are common to both climate benchmarks but with different thresholds.

EU Climate transition benchmark (EU CTB)

The benchmark portfolio is on a **decarbonization trajectory**



The main users of EU CTBs are meant to be institutional investors such as pension funds and (re)insurance companies with the objective of **protecting a significant share of their assets against various investment risks related to climate change and the transition to a low-carbon economy, labelled as transition risks by the TCFD.**

Paris-aligned benchmark (EU PAB)

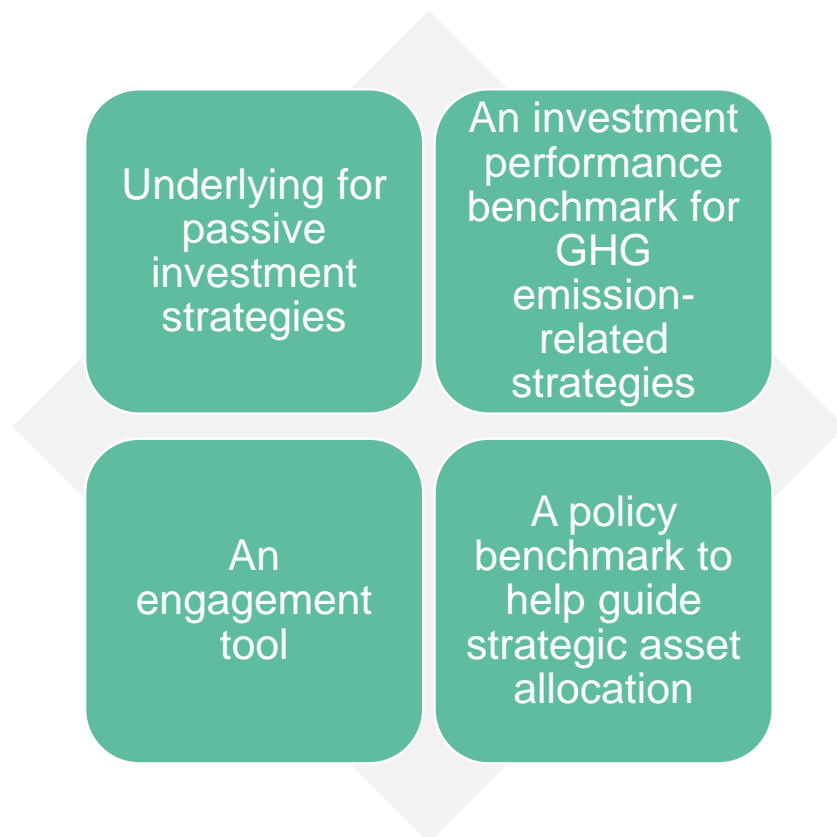
The benchmark portfolio's GHG emissions are **aligned with the long-term global warming target of the Paris Climate Agreement**



The main users of EU PABs are meant to be institutional investors which aim to **display more urgency than CTB investors and want to be at the forefront of the immediate transition towards a +1.5°C scenario.**

Use cases and users of climate benchmarks

Use cases identified by the TEG



Main users identified by the TEG

Pension funds

Insurance companies

Other institutional investors

Retail investors

GSH's comment

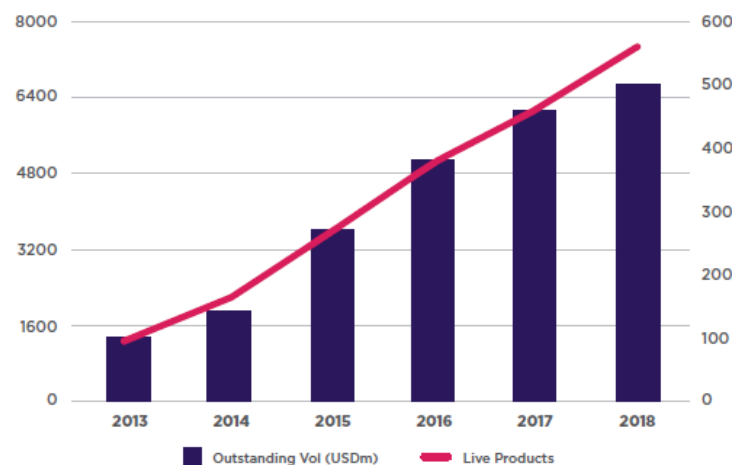


Retail investors are not identified by the TEG as one of the main users of climate benchmarks. While institutional investors represent the lion share of climate-oriented investments, we observe a **vivid demand in retail investments for climate-related products**. In particular, structured products with a performance linked to an ESG or climate index are gaining momentum in the retail market (see next page)

Are EU climate requirements fit for retail investors ?

ESG and climate benchmarks are increasingly used as underlyings for structured products, notably within the French market.

Outstanding volume of ESG structured products in Europe



Source : StructuredRetailProducts.com



Structured products could be under stringent national policies that limit the complexity of the underlyings.

Example with the French regulator AMF

In order to protect French retail investors, the AMF defines a set of rules in order to limit the complexity of products proposed to them. In particular, the number of mechanisms included in the formula for calculating the financial instrument's gain or loss should not be higher than 3.

Source: https://www.amf-france.org/en_US/Reglementation/Dossiers-thematiques/Epargne-et-prestataires/Commercialisation/Contr-le-des-documentations---caract-re-promotionnel---l-AMF-fait--voluer--son--approche--concernant-diff-rents-produits-financiers---destination-des-particuliers?langSwitch=true

Natixis GSH comment

The TEG's proposal on climate benchmarks could pave the way to a new generation of climate structured products and create new reference products in the retail market space.

However, the retail market is highly regulated and for example in the French market it will be very challenging for benchmarks administrators to design benchmarks that meet both the TEG's multiple and sophisticated criteria and the AMF's rules.

A scope limited to equities and corporate fixed-income ... and excluding sovereign debts



In scope:


Corporate issuance-based indices

- Listed equity
- Corporate fixed-income securities

Out of scope:

- Sovereign-based issuance indices

- Private market indices
- Sector or activity-specific indices (incl. those focused on solutions to the energy transition in a specific sector)



The reason for Sovereign-based issuance indices exclusion mentioned by the TEG is the lack of data to assess the carbon footprint.

The TEG recommends reassessing the sovereign index eligibility rules in the first review post-2020.

A pity that sovereign debt is not included in the scope

Too important, with existing resources to design specific criteria



It seems that sovereign debt benchmarks are far less used than for equity (overall in the context of passive asset management). However, climate sovereign debt benchmarks would be extremely useful for other uses of benchmarks, especially **to help fixed-income investors/asset managers by providing them on the shelves criteria.**



Therefore, we bemoan that Sovereign Debt is not (yet) included in the scope **whereas resources and tools to assess their alignment do exist and are more robust.** Due to the sheer weight of sovereign debt in portfolios, and the infancy of ESG/climate methodologies, it is the elephant in the room we must address, now rather than later.

It is **wrong to say there is a lack of data**, it is even quite the contrary, so-called alignment and assessment of the level of ambition of nationally determined contribution (NDC) and implementation exist. The TEG recommends that this policy is reviewed post-2020. Apart from OECD and World Bank data, specific resources exist to assess countries' climate policies (examples below)



Climate Change Performance Index (CCPI)
assess states' GHG Emissions Reduction Target compared to a well-below-2°C compatible pathway.



Climate Transparency
evaluates the climate policy of countries but will a limited coverage (mainly G20 countries).



Climate Action Tracker quantifies and evaluates climate change mitigation commitments, and assesses, whether countries are on track to meeting those. CAT tracks 32 countries covering around 80% of global emissions.

By contrast, in the detailed minimum disclosure requirements tables (table 3.3.2.3 page 23) for sovereign bond benchmarks, we get all we need for a consistent “do no harm principle”, the supporting standards and specifications suggested being for instance “Global Climate Risk Index”, “Environmental Performance index” (developed by UNEP, SOPAC and partners), for social, indicators such as the Gini Coefficient or Universal Human Right Index. On governance, Corruption Perception Index from Transparency International and Worldwide Governance Indicators from the World bank. Those standards might reveal useful and relevant.

Minimum standards involve both risk and opportunity-oriented indicators

Risk-oriented minimum standards

With respect to total GHG intensity, the TEG recommends **reduction thresholds compared to the investable universe** for both climate benchmarks.

Benchmarks shall **exclude companies** involved in controversial weapons activities and being found in violations of global norms. **Specific activity exclusions apply only on Paris-aligned benchmarks.**

1 Carbon intensity reduction

2 Scope 3 phase-in

3 Do no harm principles

Ideally, Scope 3 should be used across sectors but the current state of Scope 3 data does not provide exhaustive information. Administrators of climate benchmarks should **include Scope 3 in an incremental way**. The TEG suggests a data phase-in period up to four years.

Opportunities-oriented minimum standards

VOLUNTARY CRITERIA. Share of revenues attributable to **'green' activities** (contribution to the energy transition) **versus 'brown' activities**. The objective is to measure the shift a given benchmark allows from brown activities to green ones.

A **year-on-year self-decarbonization target of 7% in carbon intensity** of the climate benchmarks. This targets stems from significant assumptions we comment in the following pages.

4 Green to brown ratio

5 Exposure to High Impact sectors

6 Self decarbonization

This standard objective is to **avoid the overrepresentation of sectors with marginal impacts on climate change** in climate benchmarks. Compared to investment universe, exposure to high impact sectors must be equal or greater.



Corporate target setting: Weight increase shall be considered for companies which set evidence-based targets



Disqualification from label if 2 consecutive years of misalignments with trajectory

EU Climate benchmarks: minimum standards

Two benchmarks with differentiated thresholds

	EU Climate transition Benchmark	EU Paris-aligned Benchmark
Risk oriented minimum standards		
1 Carbon intensity reduction vs investable universe	30%	50%
2 Scope 3 phase-in	2-4 years	
3 Do no significant harm principle	Controversial Weapons Societal norms violators	Controversial Weapons Societal norms violators Activity Exclusions
Opportunity oriented minimum standards		
4 Minimum green share / brown share ratio compared to investable universe (on a voluntary basis)	At least equivalent	Significantly larger (factor 4)
5 Exposure to High Impact sectors	Minimum exposure to sectors highly exposed to climate change issues is at least equal to market benchmark value	
6 Year-on-year self-decarbonization of the benchmark	At least 7%: in line with or beyond the decarbonization trajectory from the IPCC's 1.5°C scenario	

CTB vs PAB : which differences?

Three out of six criteria have different thresholds:

1

-30% for CTB vs -50% for PAB

3

Activity exclusions for PAB (see below). None for CTB.

4

Green /brown shares ratio vs universe: > 400% for PAB vs > 100% for CTB
On a voluntary basis.

Activity exclusions

We welcome the activity exclusions for EU PABs.

In our view, this criteria is the most differentiating factor between CTB and PAB. Noteworthy is the number of companies excluded with this criteria : within the Stoxx 600 universe, **45 companies are excluded***, notably the Oil & Gas and Utilities sectors, while **50 companies of the S&P 500 index are excluded**.



While revenues stemming from coal, oil and natural gas can be identified, it is more difficult to obtain a systematic breakdown of electricity generation based on its lifecycle GHG emissions. An alternative would be a threshold on the overall energy generation mix GHG intensity.

LIST OF ACTIVITY EXCLUSIONS FOR EU PAB BENCHMARK

Activity	Threshold (% of revenue)
coal exploration or processing activities	1%
oil exploration or processing activities	10%
natural gas exploration or processing activities	50%
electricity generation with a GHG intensity of lifecycle GHG emissions above 100 gCO ₂ e/kWh	50%

* the exclusions on electricity generation are not applied due to the lack of relevant data, but some companies such as RWE, Enel, Uniper and Engie are very likely to be excluded (see slide 43)

How intertwined are the criteria with the EU Taxonomy

Extent to which EU PAB and EU CTB rely on the EU Taxonomy



Not explicitly today



But for sure tomorrow

None of the minimum standard explicitly refers to the EU Taxonomy, **but references are disseminated**. It is logical because assessment compliance (% of revenues) is not yet available nor possible for large universes (such assessment at individual company level can only be done superficially, especially for the DNSH and social safeguards criteria).

The Final report states: wherever sector breakdowns or **“green revenues or shares”** are recommended, reference to the actual features of the finalized EU Taxonomy will allow for greater precision in the description of the expected disclosure indicators.

For detailed minimum disclosure requirements for equity benchmarks (see our standalone publication on disclosure for more details), the EU Taxonomy is referred to determine portfolio exposure to green economy. For Sovereign Bond Benchmarks also, the EU Taxonomy is mentioned to determine SSA exposure to green economy, alongside the EU Green Bond Standard.

The TEG states that **sectorial scenarios should be transformed into activity based scenarios** once the TEG’s green taxonomy is completed. We believe it is of the utmost importance that the **green to brown ratio (voluntary criteria) is anchored into the Taxonomy for the green share calculation**.

It raises the question of a brown taxonomy, or highlights the shortcomings of a binary green taxonomy (“you are in or you are out”, without shades). As thresholds proposed by the TEG are quite stringent, **it is impossible to say that what does not meet them is brown**.

By contrast, intermediary level would have allowed so. For few activities, heterogeneous ones, manufacturing of steel, aluminum, or manufacturing of cars, intermediary ranges do not seem impossible.

How different from what already exists?

• **It could usher in a new era for sustainable finance.** First, a double-sword approach is at last pushed, meaning that it is not only focusing on climate change risks management as most of the existing low-carbon benchmarks do, but also take into account opportunities arising from the transition to a low-carbon economy. Existing Low-carbon benchmarks have been mostly built from a risk management standpoint (i.e. a tool for managing the risk of possible future regulatory intervention that might lead to “stranded” assets). They are mainly designed by removing or underweighting the companies with relatively high carbon emission footprints. The philosophy of EU CTB and EU PABs is different; it aims not only at hedging against climate transition risks, but also at contributing to the transition and reaping its benefits and opportunities.

• **You need to get dirty in your portfolios to clean up.** The sectorial constraints weighting is “a must have” and fortunately it is a prerequisite. As a matter of fact, “you need to get your hands dirty to clean up”, meaning that the higher potential for decarbonization lies by essence within high-emitting sectors. It is very much in line with our current work on the transition of brown industries (see [Natixis GSH’ current investors’ survey](#)).

• **Too stringent?** As for the EU Taxonomy technical screening criteria and thresholds, the question of stringency comes up. The minimum standards proposed by the TEG reminds us, from a different and more macro perspective (micro being covered at activity level by the EU Taxonomy), how far our economy is to the necessary trajectory to keep global temperature increase below 2°C by the end of the century.

This Benchmarks piece is important because **one says that transition must be rather monitored at holistic and aggregate level**, at least macro-sectors, and that making a view of an individual company alignment is of limited interest. So **we are definitely not on track, and the reality test we made when applying the criteria to existing indices revealed the magnitude of this gap**. Current benchmarks are more aligned with a business-as-usual scenario (constituents tend to be even more carbon emitting than non-listed companies), where temperature rise ranges from 4°C to 6°C.

Overview of our feedback on CTB and PAB requirements



Overload of criteria

The accumulation of constraints and objectives restricts flexibility and technological options for benchmark administrators
→ Scalability is questionable as such complexity is barely compatible with systematic index rules.

Absolute emissions matter

The question of absolute emissions is eluded, the overall average carbon intensity of the benchmark may decrease while the highest emitting companies in the benchmark continue to increase their absolute emissions.

Sovereign not included: what a pity


We bemoan that Sovereign Debt is not (yet) included in the scope whereas resources and tools to assess their alignment do exist and are more robust than for corporates.

How intertwined with the EU Taxonomy

A question that pops up is to what extent the two Benchmarks rely on the EU Taxonomy of sustainable activities. None of the minimum standard explicitly refers to the EU Taxonomy, but references are disseminated (especially for green revenues or shares).

YoY self-decarbonization requirement disadvantages the good performers and presents a backward-looking bias

YoY self-decarbonization of the benchmark of at least 7% is not taking into account efforts made by companies previously to this scenario. By requiring such annual rate, there is a risk to exclude companies that have in the past significantly reduced their emissions and that could be currently operating under science-based targets.



Overall, we welcome the introduction of Climate benchmarks in the BMR as it should bring more clarity and homogeneity in the current climate indices universe. **Taken individually, the requirements do make sense. Yet, how usable and scalable these benchmarks are depends not only on the usability of each criteria but also on the feasibility to implement the accumulation of all of them.**

3

DEEP DIVE INTO CTB AND PAB MINIMUM STANDARDS:

HOW USABLE AND STRINGENT ARE THEY FOR EQUITY BENCHMARKS?



How usable and stringent are they?

Methodology

In the following pages of this report, we applied the different criteria recommended by the TEG to the investment universes and existing climate indices. The computation allows to identify the criteria that are already fulfilled by the existing climate benchmarks and the ones that are not reached yet, notably in order to assess the difficulty (usability / stringency) to comply with the recommended thresholds.

- **Investment universes:** for the sake of simplicity, we define respectively the Stoxx 600 index and the S&P 500 index as proxies of Europe and US investment universes.
- **Climate indices:** various climate strategies co-exist in the market: low carbon, energy transition, etc. We analyzed in this report 6 different “climate” indices, including a wide range of strategies : 4 out of 6 strategies have an European focus, 2 out of 6 have a Global coverage.

Climate equity indices

	MSCI Europe Low Carbon Leaders	MSCI ACWI Low Carbon Leaders	MSCI ACWI Low Carbon Target	Euronext Climate Objective 50	Euronext Low Carbon 100 Europe	NXS Climate Optimum Prospective Index
Universe	MSCI Europe Index	MSCI ACWI global index	MSCI ACWI global index	300 most liquid companies in the Eurozone	300 highest free float Market Capitalizations of the Euronext Europe 500 Index	STOXX Europe 600 PR Index
Number of constituents	348	2170	1847	50	100	50
Date of creation	09/2014	11/2014	09/2014	09/2018	10/2008	11/2015
Strategy	Achieving 50% reduction in carbon footprint and minimizing the tracking error relative to MSCI Europe Index.	Achieving 50% reduction in carbon footprint and minimizing the tracking error relative to MSCI ACWI Index.	Minimizing carbon exposure while aiming for a tracking error target of 0.3% relative to MSCI ACWI Index.	Tracking the top 50 stocks in Eurozone based on climate scores as determined by Carbone 4.	Tracking the top stocks in Europe based on their climate scores and stocks with the highest green revenue.	Selecting companies that reduced their carbon intensity and committed to the development of low carbon solutions.

Source: Index rules of respective indices, see appendix

Our usability and stringency assessment scale



“The TEG wants to clearly acknowledge the fact that the current state of methodologies and available issuer-level data does not allow for an obvious and irrefutable conversion of climate scenarios into detailed and informed portfolio construction methodologies at the time of writing this report.”



Usability & Stringency assessment

In this Natixis GSH report, we will assess (1) the usability and (2) the stringency of each technical requirement recommended by the TEG:

(1) Usability

- ☹️ Limited usability due to a lack of available data or because the criteria is too qualitative
- 😐 Not usable in the short term as additional data is required to fulfill the criteria
- 😊 Usable as of now or very easily on the short-term

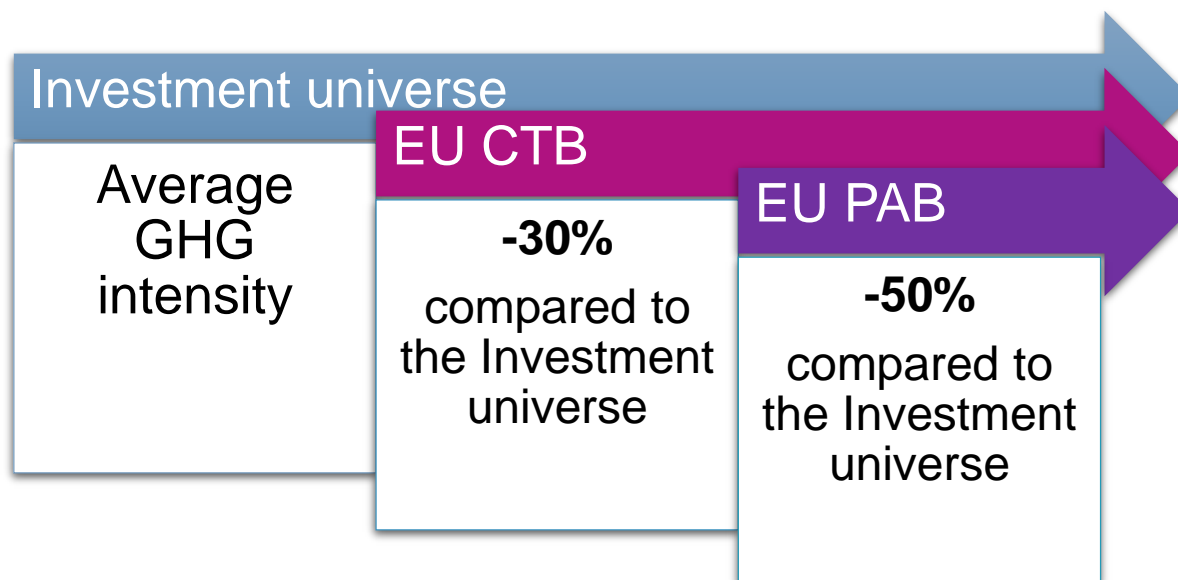
(2) Stringency

- ☹️ Too challenging thresholds with a very limited number of eligible companies **or** too loose thresholds that lack ambition compared to the investable universe
- 😐 Challenging thresholds with limited eligible companies in the short-term
- 😊 The level of stringency is fair, as it accounts for a significant number of companies and reflects a relevant level of ambition

1 Carbon intensity reduction (1/4)

With respect to total GHG intensity (combined Scopes 1, 2, 3 according to the phase-in), the TEG recommends requiring the following reduction thresholds:

- **EU CTB : Minimum reduction of 30% of GHG intensity calculated with total capital** at index level compared to the investable universe
- **EU PAB : Minimum reduction of 50% of GHG intensity calculated with total capital** at index level compared to the investable universe of all relevant sectors and/or geographies





Carbon intensity reduction (2/4)

Calculation of carbon intensity

$$\text{Carbon Intensity} = \frac{\text{GHG volume}}{\text{Financial Metric}}$$



Different financial metrics could be used as denominators to compute the carbon intensity :

- Flow financial metrics: the revenues for corporates and the GDP for sovereigns;
- Stock financial metrics: the market cap and enterprise value for corporates and the amount of issued debt for sovereigns;
- Accounting metrics: total capital, which encompasses both equity capital and debt. Total Capital is defined as the sum of the book values of common stock, preferred equity, long term debt and minority interest.

The TEG recommends to use Enterprise Value as denominator as it allows for the applicability of the methodology to both equity and fixed income investments.

Enterprise value is defined as the sum of the market capitalization of common stock at fiscal year end, the market capitalization of preferred equity at fiscal year-end, and the book values of total debt and minorities' interests minus the cash and cash equivalents held by the company.

GSH comment

Usability: 😊

Stringency: -

The use of Enterprise Value (EV) as denominator is easily usable as it is already widely used by main data providers. However, we do not believe that EV is the most relevant financial metric for the calculation of carbon intensity for equity benchmarks. As a rather static metric, it does not dynamically reflect the growth and intensity of companies' activities, which can drastically fluctuate on a year-on-year basis. **When changes occur in the EV amount, they are not necessary linked to operational activities but are rather due to modification of the equity or debt structure.** Fluctuations of operational activities need to be captured in the carbon intensity computation as they are better correlated to the absolute volume of GHG emissions. In our view, albeit not systematically comparable across sectors, revenues is the most appropriate financial metric for equity benchmarks.

☞ **We recommend however to leave the choice on the financial metric (enterprise value, revenues, etc.) to benchmark administrators.**

1 Carbon intensity reduction (3/4)

-30% (CTB) and -50% (PAB) targets



The 30% and 50% cut requirement is defined at the indices level, meaning that benchmark administrators have great flexibility on the composition as long as the average carbon intensity at the benchmark level complies with the threshold. In practice, those -30% and -50% targets will undoubtedly imply that most carbon intensive companies will be likely excluded from EU benchmarks, i.e. the eligible investment universes will be mechanically reduced. How do these thresholds impact the eligible universes for CTB and PAB benchmarks?

Natixis' GSH comment

Usability: 😊

Considered separately from other criteria, we do not see any particular difficulties in the implementation of those targets as the average carbon intensity is a standard and usable metric (the usability of Scope 3 will be considered in criteria 2).

Stringency: 😊

In order to assess the stringency of the criteria, we analyzed the distribution of carbon intensities in the European universe - Stoxx 600 index – by differentiating the high impact and low impact sectors. In the Stoxx 600 overall universe, the weighted carbon intensity average amounts to 279 tCO₂/m€ of enterprise value. 76% of companies have lower carbon footprint than this level, implying a great bias of the universe towards low impact sectors.

In order to comply with the -30% of carbon intensity vs the investment universe as required for the EU CTB, the benchmark needs to present an average carbon footprint of 195 tCO₂/m€ or below: **71%** of companies are below this threshold. In comparison, **67%** of companies are below the -50% EU PAB benchmark threshold. Overall, the requirement seems feasible to achieve.

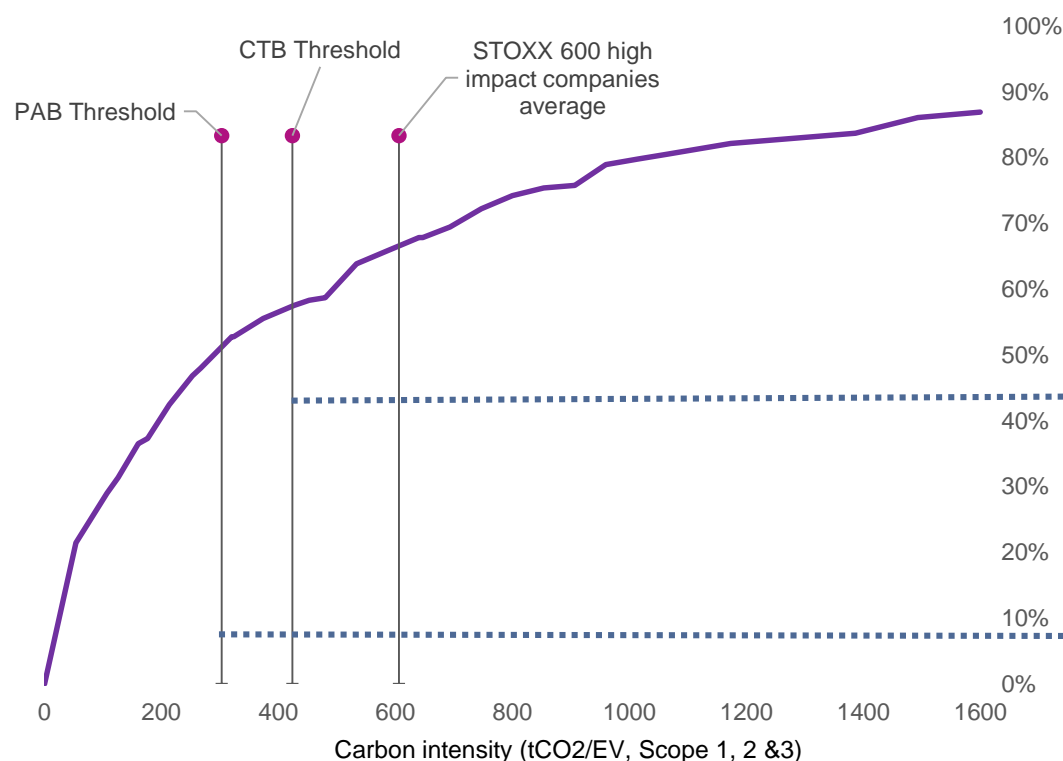
As 93% of low impact companies are already and unsurprisingly below the overall carbon intensity average (279 tCO₂/m€), the main difficulty stands in selecting eligible high impact companies. As shown in the next slide, which focuses on high impact sectors, we observe that **the -30% and -50% reduction targets do not dramatically reduce the eligible universes.**

Carbon intensity reduction (4/4)

Distribution of carbon intensity in high impact sectors

Taken individually, this requirement is achievable, even in the high impact sectors

Stoxx 600 high impact sectors – carbon intensity distribution



Sources: Carbone 4, Natixis

In high impact sectors, the carbon intensity average stands at 606 tCO₂/m€.

68% of high impact companies have lower carbon footprint than this level



EU CTB

58% of high impact companies have lower carbon footprint than the EU CTB requirement level



EU PAB

53% of high impact companies have lower carbon footprint than the EU PAB requirement level

Phase-in of Scope 3 GHG emissions (1/2)

The TEG recommends a stepwise implementation of Scope 3

The TEG refers to the GHG Protocol to distinguish three types of GHG emissions :

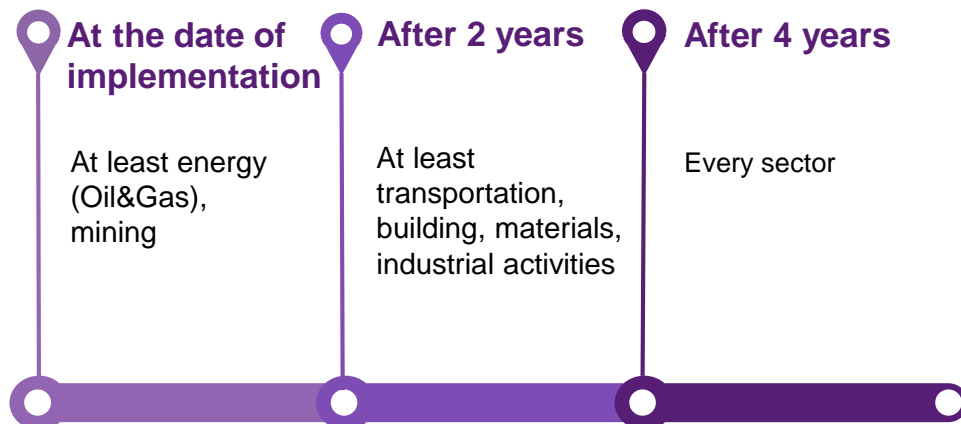
Scope 1: All direct GHG emissions

Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam.

Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, use of sold products, outsourced activities...

The TEG quotes ISO 14064, the Product Environment Footprint and the Organization Environmental Footprint as possible standards to calculate scope 3 emissions.

When should scope 3 GHG emissions be accounted for in the calculation of carbon intensities ?



Natixis GSH comment

Given the current state of corporate Scope 3 GHG reporting, Scope 3 data will likely be estimated.

- ➔ Effectiveness and efficiency of reduction targets will largely depend on either how firms will substantially increase the volume and quality of its Scope 3 GHG emissions reporting or the quality of the Scope 3 estimations.
- ➔ We can expect the Scope 3 phase-in to help improve the quality and reliability of data (in particular for oil & gas and mining).
- ➔ We also believe that the list of high impact sectors should be reviewed once the scope 3 emissions are implemented for every sector. **The financial sector** for example, considered as low impact by the TEG, has a very limited impact when considering scope 1&2 emissions but has very significant scope 3 emissions notably through the financing of carbon intensive projects and infrastructures.

Phase-in of Scope 3 GHG emissions (2/2)

Mind the gap

Scope 3 emissions data can be either calculated by an external agency or directly reported by the company.

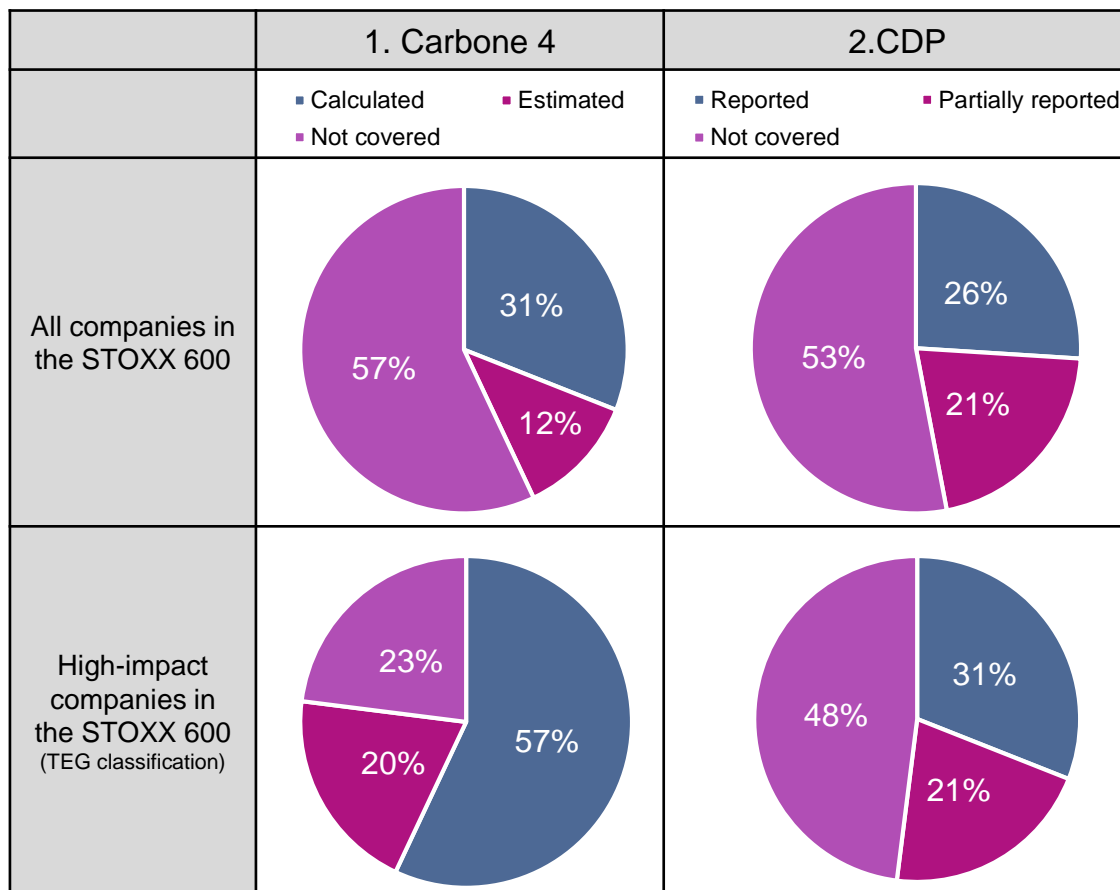
1. In this report we only use **Carbone 4 Finance** data that has built a model to determine scope 3 emissions even when the company doesn't report its scope 3 emissions directly. We looked at how many STOXX 600 companies are currently covered by Carbone 4.
2. To see just how far European large cap companies were from full disclosure we also looked at how many STOXX 600 companies had directly disclosed their scope 3 emissions under the **Carbon Disclosure Project's (CDP)** framework in 2018.

Natixis GSH comment

For high impact companies the level of reported scope 3 emissions is still low (**31%**). In contrast Carbone 4 provides a more extensive coverage (**57%** calculated and **20%** estimated through sectoral ratios).

As a consequence benchmark administrators are likely to use data that is calculated or estimated by an external provider to phase-in scope 3 emissions.

Phasing in scope 3 emissions for all sectors only 4 years after the regulation is an ambitious goal. Only **26%** of all STOXX 600 companies had fully reported their scope 3 emissions in 2018 under the CDP's framework.





Do no harm principles and activity exclusions

No activity exclusions related to climate issues for CTBs

The main differentiation between EU CTBs and EU PABs consists in activity exclusions. **PABs are designed for the most ambitious climate strategies** and therefore the TEG recommends exclusions of activities related to coal, oil and natural gas exploration and electricity generation based on fixed thresholds (% in the company's revenue).

	EU CTBs	EU PABs	
Baseline exclusions	Controversial weapons, incl. landmines and cluster bombs	Controversial weapons, incl. landmines and cluster bombs	
	Violations of global norms (e.g. UN Global Compact principles, OECD Guidelines)	Violations of global norms (e.g. UN Global Compact principles, OECD Guidelines)	
	Exclusion of companies being found in controversies arising from practices that significantly harm one or several of 6 environmental objectives.	Exclusion of companies being found in controversies arising from practices that significantly harm one or several of 6 environmental objectives.	
Activity exclusions	N/A		
		Activity	Threshold (% of revenue)
		coal exploration or processing activities	>1%
		oil exploration or processing activities	>10%
		natural gas exploration or processing activities	>50%
		electricity generation with a GHG intensity of lifecycle GHG emissions above 100 gCO2e/kWh	>50%

Do no harm principles and activity exclusions

Exclusions from PAB benchmark

We detail in the table below the number of companies to be excluded from indices under EU PAB conditions.

	STOXX Europe 600	MSCI Europe Low carbon leaders	Euronext Climate Objective 50	Euronext Low Carbon 100 Europe	NXS Climate Optimum Prospective Index	S&P 500	MSCI ACWI Low Carbon Leaders	MSCI ACWI Low Carbon Target
Controversial Weapons*	0	0	0	0	0	5	7	7
Coal** (>0%)	22	9	4	0	1	25	77	27
Oil (>10%)	14	5	0	0	1	21	48	16
Natural gas (>50%)	0	0	0	0	0	1	2	0
Total number of non-compliant companies	45/600	20/348	4/50	0/100	2/50	50/505	128/2170	48/1847

Natixis GSH comment

Such exclusion thresholds appear a bit dogmatic, especially for oil and natural gas companies. They could historically and predominantly belong to fossil fuel industry but having boldly started their transition with extensive diversification towards low-carbon energy sources. Furthermore, such exclusion thresholds hurt the 7% self-decarbonization rate which is more likely to be achieved by transitioning oil and gas companies.

SOURCES:

*Controversial weapons : based on ISS-ESG data, we obtain the list of companies involved in controversial weapons manufacturing and trading (anti-personnel mines, cluster munition, depleted uranium, biological weapons, chemical weapons).

Activity exclusions : based on ISS-ESG data for share of revenues derived from coal, oil and natural gas production and processing.

**Due to lack of data with the 1% threshold, we approximated to a 0% threshold.



PAB activity exclusions: Who's in? Who's out?

Examples in the European utilities sector

For EU PABs, the TEG recommends the exclusion of companies that derive **50% or more of their revenues come from electricity generation with a GHG intensity of lifecycle GHG emissions above 100 gCO₂e/kWh**. Breakdown of revenues per carbon intensity is not available, as a result, we have used a proxy which is the breakdown of power generation by energy source.

In practice, the CO₂ intensity split by production type cannot be simply and systematically obtained.

With the assumptions that:

- Coal, Oil and Gas-fired power plants generate more GHG emissions than 100gCO₂e/KWh
- Nuclear and renewable energy generate less than 100gCO₂e/KWh

The following companies are likely to be included/excluded from PAB benchmarks.

Breakdown by production type		> 100g CO ₂ e/KWh			< 100g CO ₂ e/KWh		
Company	Generation vol. (TWh)	Coal/lignite	Oil, Gas and CCGT	Total > 100g CO ₂ e/KWh	Nuclear	Renewable	Total of < 100g CO ₂ e/KWh
✓ EDF	584	1%	8%	9%	78%	12%	90%
✗ RWE	176	54%	27%	81%	12%	6%	18%
✗ Enel	262	28%	26%	54%	13%	33%	46%
✓ Vattenfall	127	12%	11%	23%	39%	35%	74%
✗ Engie	288	14%	48%	62%	15%	19%	34%
✗ Uniper	114	28%	53%	81%	9%	9%	18%
✓ Iberdrola	146	1%	34%	35%	17%	42%	59%
✓ CEZ	63	43%	3%	46%	49%	4%	53%
✓ Statkraft	62	0%	2%	2%	0%	98%	98%

Sources: companies, Natixis

Do no harm principles and activity exclusions

Natixis GSH comments

Natixis' GSH comment

Usability: 😊 **Stringency:** 😊

We welcome the additional activity exclusions for EU PABs. We believe this criteria will be a major differentiating factor between PABs and CTBs even more so than the carbon intensity reduction criteria.

However, such exclusion thresholds appear a bit dogmatic, especially for oil and natural gas companies. They could historically and predominantly belong to fossil fuel industry but having boldly started their transition with extensive diversification towards low-carbon energy sources. Furthermore, such exclusion thresholds hurt the 7% self-decarbonization rate which is more likely to be achieved by transitioning oil and gas companies.

The direct consequence of the chosen exclusion thresholds is that oil & gas companies are de facto excluded from EU PABs. Our study showed that the addition of all exclusions would ban about 10% of the companies in the S&P 500 for example. We find that this level of stringency is appropriate for EU PABs.

Concerning the level of usability, we were able to source the data for all activity exclusions except for the electricity generation criteria. It should be hard to obtain the breakdown of each company's electricity generation based on its lifecycle GHG emissions. **An interesting alternative would be to put a threshold on the overall GHG intensity.** That threshold would be complementary with the exclusion of oil, gas and coal that drive the electricity production carbon intensity. The current threshold is redundant with the three others, an electricity company that has more than 50% of its revenue coming from a "high emitting source" ($>100\text{gCO}_2/\text{kWh}$) will likely be using oil, coal or gas.

Regarding the exclusion of companies being found in controversies arising from practices that significantly harm one or several of 6 environmental objectives. While we welcome the introduction of environment-related exclusions we find that this exclusion not specific enough to be ready to use.

Green share/brown share ratio

A nice-to-have criteria

In the context of climate benchmarks, the green share/brown share ratio of EU PABs is expected to be **significantly larger (factor 4) than the one of its investable universe**, whereas the ratio for EU CTBs is expected to be **at the very least equivalent compared to the investable universe**.

What is the green/brown ratio?

The green/brown ratio is a metric designed to measure the involvement of a company in green activities *versus* brown activities.

Most methodologies compute this ratio as the share of revenues that is attributable to “green” activities *versus* “brown” activities.



This leaves the question of what is considered as “green” or “brown” activities by the regulator, the TEG report only gives hints and refers to the IPCC 1.5 report but does not provide a systematic classification. Only few examples of activities that could be considered as green or brown are provided by the report.

Green activities quoted in the report

Energy Efficiency
Renewable
Electricity T&D and storage

Brown activities quoted in the report

Fossil fuels extraction and conversion
Fossil electricity
Hydrogen

GSH comment

Usability: ☹️

Stringency: ☹️

Given the lack of systematic classification and data related to revenues attributable to ‘green’ and ‘brown’ activities, the usability of this criteria is very limited. In addition, the TEG provided no explicit guidelines to implement this criteria.

A question that pops up is to what extent the two Benchmarks rely on the EU Taxonomy of sustainable activities.



Exposure constraints (1/3)

A relevant criteria to avoid simple divestment from high impact sectors

Achieving minimum requirements set on carbon intensity at index level could be possible by simply divesting from GHG intensive sectors and reallocating to sectors with very little GHG intensities. To avoid the greenwashing risk for EU CTBs and EU PABs that would only consist in underweighting high-intensity sectors, a constraint on sector allocation is recommended: **compared to investment universe, exposure to high impact sectors must be equal or greater.**

The TEG provides a classification of high and low impact sectors according to the EU NACE classification of economic activities. **However, a correspondence table will be drafted by the TEG with the GICS classification table.**

GICS classification of high and low impact sectors



High climate impact

Energy equipment's & services
Oil, gas & consumable fuels
Chemicals
Construction materials
Containers & packaging
Metals & mining
Paper & forest products
Capital Goods
Transportation
Automobiles and components
Food Beverage and Tobacco
Real Estate
Semiconductors & Semiconductor Equipment
Technology Hardware and Equipment
Utilities

Low climate impact

Commercial and professional Services
Consumer Durables & Apparel
Consumer Services
Food & Staples Retailing
Health Care Equipment and Services
Household & Personal Products
Media & entertainment
Pharmaceuticals Biotechnology & Life Sciences
Retailing
Software & Services
Telecommunication Services
Banks
Diversified Financials
Insurance

GSH comment

Usability: 😊

We warmly welcome the constraint as regards the exposure to high impact sectors, in order to avoid simple divestment from sectors key to the transition. The GICS Industry level is a consistent and pragmatic choice, leading to an easy to use tool.

Exposure constraints (2/3)

A relevant criteria to avoid simple divestment from high impact sectors

Compared to investment universe, exposure to high impact sectors must be equal or greater.

By considering respectively the S&P 500 index and STOXX 600 index as listed equity investment universes, the minimum standards are therefore 42% and 37% in number and 44% for the STOXX 600 in percentage.

	Number of high impact companies	Weight of high impact companies
S&P 500	37%	<i>Not disclosed</i>
STOXX 600	42%	44%

GSH comment

Stringency: 😞 too low

The level of requirement lacks of ambition in our view. While it certainly allows to avoid greenwashing practices by simple divestment from high impact sectors, the actual share of high impact in main investment universes is low in absolute, which leads to a low level of stringency.

Given the current levels of the investment universes, we think an absolute floor level should be applied. We recommend to set this floor level to reach at least 50%.

Exposure constraints (3/3)

Which indices comply with the exposure to high impact sectors requirement?

CTB	Europe & Eurozone Indices					Global Indices		
Technical Standard	CTB Threshold (STOXX 600 universe)	MSCI Europe Low Carbon Leaders	Euronext Climate Objective 50	Euronext Low Carbon 100 Europe	NXS Climate Optimum Prospective Index	CTB threshold (STOXX 600 + S&P 500 Universe)	MSCI ACWI Low Carbon Leaders	MSCI ACWI Low Carbon Target
Exposure constraints (weight of high impact companies)	44%	37%	76%	36%	47%	40%	34%	34%
		✗	✓	✗	✓		✗	✗
Minimum carbon intensity reduction compared to investable universe	195 tCO ₂ /m€	275	293	108	128	141 tCO ₂ /m€	136	81
		✗	✗	✓	✓		✓	✓

Natixis GSH comment

Unsurprisingly, the Exposure constraint is contradictory with the Minimum carbon intensity reduction constraint. Except for the **NXS Climate Optimum Prospective index (Natixis proprietary index)**, the indices that comply with the exposure constraint do not fulfill the reduction target of -30% compared to the investment universe.

7% yoy self-decarbonization... Why? How relevant? (1/3)



Each index provider is required to calculate and disclose the GHG intensity of its benchmark on the first year as measured by the weighted average of each constituent's carbon intensity.

This first measure will serve as the base year to calculate the carbon intensity targets for the entire lifespan of the index. At the end of each year the index provider will have to prove that the carbon intensity of the index complies with the new corresponding target.

$$\text{Year N carbon intensity target} = (\text{Year 0 carbon intensity}) * (1 - 0,07)^N$$

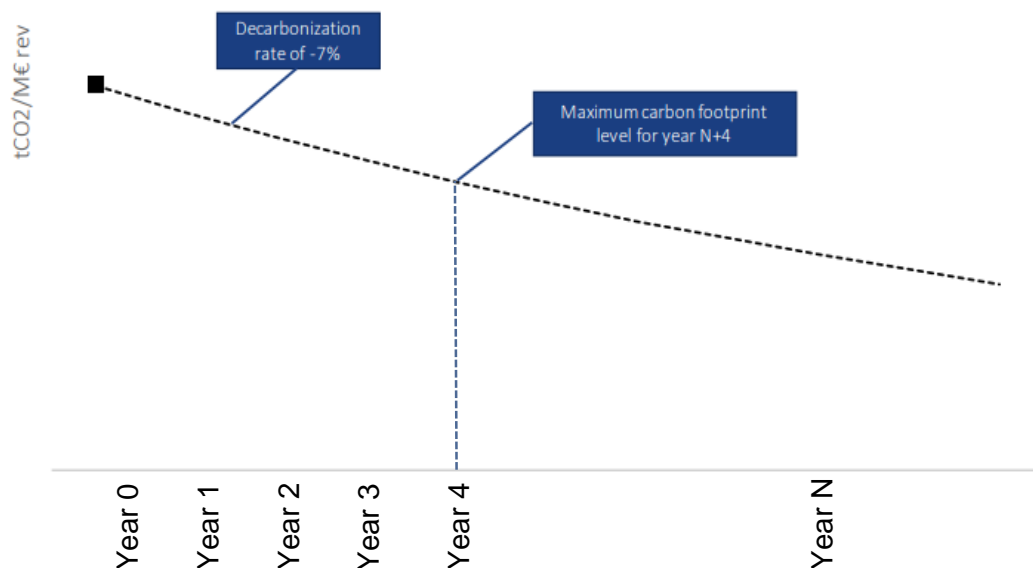
A dynamic criteria to make sure that CTB and PAB indices are on a decarbonization trajectory.

Remediation procedure

If the target is missed one year the index administrator has to provide explanations.

If the index does not make the adjusted target in two consecutive years, it should be disqualified.

Indices should also be disqualified if they miss the trajectory target on three occasions in a 10-year period.



7% yoy self-decarbonization... Why? How relevant? (2/3)

Climate-science derived target applied a bit uniformly



This figure comes from “climate science” and is derived from the **decarbonization efforts needed for “1.5°C with no or limited overshoot”** (see on the right) scenario from the IPCC.



Note that it is also **the minimum reduction rate endorsed by the SBTi** which accepts to only validate economic intensity targets that result in at least 7% year-on-year reduction of emissions per unit value added (this percentage has increased from 5% following GDP and emissions assumptions changes).



This figure is derived from the **GEVA method**, introduced by Jorgen Randers in 2012, which equates a carbon budget to total global GDP and a company's share of emissions is determined by its gross profit. It uses a simple geometric progression.

1.5°C climate scenario “with no or limited overshoot”

Overshoot temperature occurs because of pathways exceeding the stabilization level before the end of a time horizon of interest (e.g. before 2100). It refers to a temporary exceedance of a specified level of global warming. Overshoot implies a peak followed by a decline in global warming, achieved through anthropogenic removal of CO₂ exceeding remaining CO₂ emissions globally. It is seen as risky game because of the high uncertainty around the scalability of carbon dioxide removal (CDR) solutions, which notably refer to biodiversity collapse that undermines ocean and land CO₂ sinking capacities.

GSH comment

Usability: 😞

Stringency: 😞 too high

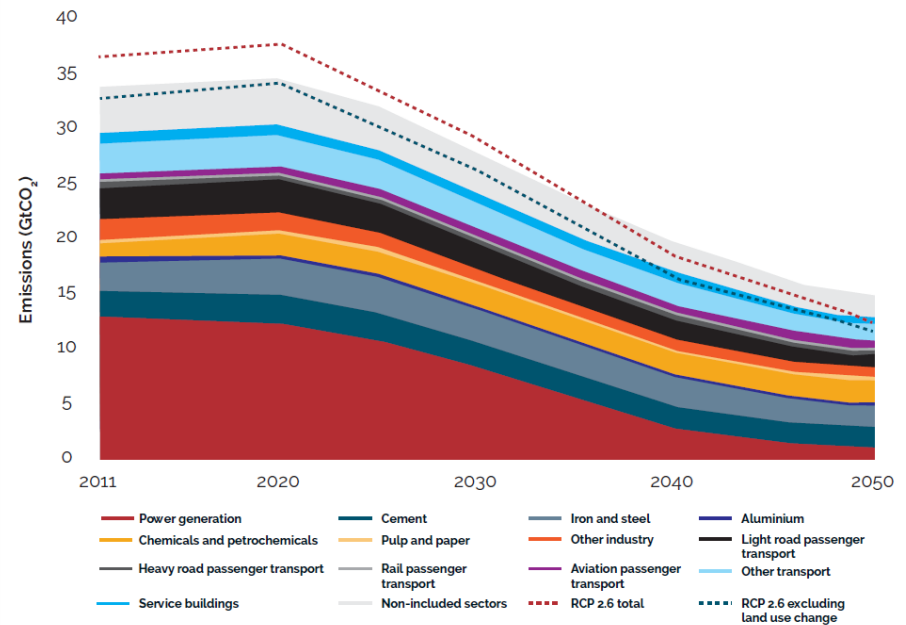
The YoY self decarbonization criteria disadvantages the good performers and has backward-looking bias.

Year-on-year self-decarbonization of the benchmark of at least 7% is not taking into account efforts made by companies previously to this scenario. By requiring such annual rate, **there is a risk to exclude companies that have in the past significantly reduced their emissions** and that could be currently operating under science-based targets.

Nor this 7% factors in non-linearity of emissions reductions (intrinsically linked to non-linearity of technological progress).

Furthermore, the **forward-looking dimension is not present**. We agree that it is challenging, because the information is hardly available but “green-brown capex ratio” would be an interesting indicator.













Sectoral breakdown of absolute CO2 emissions budget, 2011-50



Source: IEA ETP 2DS 2014.

EU Climate benchmarks : minimum standards

Natixis' GSH main comments

	Criteria	Usability	Stringency	GSH comment
1	Carbon intensity reduction vs investable universe			Thresholds levels are justified, but more flexibility on the computation methodology of the carbon intensity would be appreciated.
2	Scope 3 phase-in			The scope 3 GHG emissions phase-in may help making this data available and reliable for a much larger universe. However, the current state of the market show that a little part of Scope 3 is reported by companies. The differentiated date of implementation is relevant.
3	Do no significant harm principle			We welcome the additional activity exclusions for EU PAB. The level of stringency is in line with the current market practice. However, for better usability, the criteria on electricity production should be considered at the company level.
4	Minimum green share / brown share ratio compared to investable universe			Given the lack of systematic classification and data related to revenues attributable to 'green' and 'brown' activities, the usability is very limited. In addition, the TEG provided no guidelines to implement this criteria.
5	Exposure constraints			We welcome the constraint as regards the exposure to high impact sectors. However, we think an absolute minimum floor level should be applied, set at 50% for instance.
6	Year-on-year self-decarbonization of the benchmark			The criteria disadvantages the good performers and presents a backward-looking bias. More explicit guidelines on the computation methodology are needed.



4

**ARE EXISTING EQUITY
CLIMATE INDICES
COMPLIANT WITH EU CTB
AND PAB BENCHMARKS?**

Are existing equity climate indices EU compliant?

The objective of the compliance test is not to “name and shame” existing climate indices but rather to assess the feasibility of criteria and to analyze their interactions (potential contradictions or redundancies).

In addition, the results of this test on existing climate indices need to be interpreted with great caution, notably due to methodological bias and assumptions (investable universes, Scope 1, 2 & 3, carbon data provider) and our inability at this stage to test the green to brown share

Having said that, **we can now state with a certain degree of confidence that the tested existing climate indices are not compliant with EU PAB criteria and very few abide by EU CTB criteria, as at least 2 criteria are never met (except for NXS COP index).**



MAIN COMMENTS

- **Very few existing climate/low carbon benchmarks are compliant with CTB minimum standards** (only the NXS Climate Optimum Prospective index).
- **None is compliant with PAB minimum standards.**
- **The low carbon approach.** It is acknowledged that the first generation of low carbon indices were not meant to be aligned with the Paris agreement scenario, as the most widely used strategy being the minimization of carbon footprint. For those indices, the Carbon intensity reduction criteria is usually met while the “Exposure to High Impact sectors” criteria is unsurprisingly not abided by.
- **Green/Brown share ratio.** Given the high level of uncertainty around the notion of “brown share”, the lack of reliable data on “green share”, and the voluntary approach, we did not perform the test on this criteria.
- **YoY decarbonization.** Except for Euronext Climate Objective

and NXS COP, climate indices show carbon footprint evolution between 2016 and 2017* in a range of -1% to +3%, which is largely above the required -7% change. Note that in the case of these two indices this is not a “controlled” target at index rule level and is thus not bound to be met indefinitely and on a stable fashion. Noteworthy that giving the difficulty of the criteria, the TEG recommends flexibility by observing the average evolution over the 2 past years.

- **Which criteria is the most difficult to reach?** The “Activity exclusions” seems to be the most stringent for the PAB approach. Only the Euronext Low Carbon 100 Europe matches the criteria. In addition, none of existing indices comply with both this criteria and the “Exposure to high impact sectors” one.

*missing data in 2018

EU Climate Transition Benchmark (CTB) compliance matrix

1
2
3
4
5
6

	MSCI Europe Low Carbon Leaders	Euronext Climate Objective 50	Euronext Low Carbon 100 Europe	NXS Climate Optimum Prospective Index	MSCI ACWI Low Carbon Leaders	MSCI ACWI Low Carbon Target
Risk oriented minimum standards						
Carbon intensity reduction vs investable universe (Scope 1,2 & 3)	✗	✗	✓	✓	✓	✓
Scope 3 phase-in (energy (O&G) and mining)	✗	✓	✓	✓	✗	✗
Do no significant harm principle – Are exclusions defined in the Index rules ?	✗	✗	✓	✓	✗	✗
Opportunity oriented minimum standards						
Minimum green share / brown share ratio compared to investable universe	-	-	-	-	-	-
Exposure to High Impact sectors	✗	✓	✗	✓	✗	✗
Year-on-year self-decarbonization of the benchmark (2017 vs 2016)	✗ +2%	✓ -9%	✗ +3%	✓ -14%	✗ +3%	✗ -1%
CTB compliant ?	✗	✗	✗	✓	✗	✗

Sources: Carbon 4 Finance, Index rules, Natixis

* The exclusions on electricity generation are not applied due to the lack of relevant data

EU Paris Aligned Benchmark (PAB) compliance matrix

1
2
3
4
5
6

	MSCI Europe Low Carbon Leaders	Euronext Climate Objective 50	Euronext Low Carbon 100 Europe	NXS Climate Optimum Prospective Index	MSCI ACWI Low Carbon Leaders	MSCI ACWI Low Carbon Target
Risk oriented minimum standards						
Carbon intensity reduction vs investable universe (Scope 1,2 & 3)	✗	✗	✓	✓	✗	✓
Scope 3 phase-in (energy (O&G) and mining)	✗	✓	✓	✓	✗	✗
Do no significant harm – Is the composition compliant with criteria ? *	✗	✗	✓	✗	✗	✗
Opportunity oriented minimum standards						
Minimum green share / brown share ratio compared to investable universe	-	-	-	-	-	-
Exposure to High Impact sectors	✗	✓	✗	✓	✗	✗
Year-on-year self-decarbonization of the benchmark (2017 vs 2016)	✗ +2%	✓ -9%	✗ +3%	✓ -14%	✗ +3%	✗ -1%
PAB compliant ?	✗	✗	✗	✗	✗	✗

Sources : Carbon 4 Finance, Index rules, Natixis

* The exclusions on electricity generation are not applied due to the lack of relevant data

EU CTB/PAB constituency to become more than a simple award or marketing element for companies

Today, being constituent of a low-carbon benchmark is worth mentioning in CSR and investors communication but it does not have tangible financial impact

If EU CTB and EU PAB are successfully referred to and monitored, being a staple recurrent constituent of them will be rewarding for companies.

As the minimum standards are quite prescriptive, it is likely that the same constraints will often end with the same list of names, of at least recurrent ones.

How impactful for companies ?

The HLEG (2018) states that “Adjustments of companies’ weights in [traditional] benchmark indices can trigger concomitant capital flows (or outflows)”.

Corporate Target Setting

According to TEG’s recommendations: “Benchmarks administrators shall consider increasing the weight of a company that set and publish evidence based decarbonization objectives (e.g. SBTi).”



The features to display for companies

The optimal conditions for becoming a recurrent staple constituent (a sound pick) are :

- Belonging to a **high emitting sector**
- **Disclosing scope 1 to 3 emissions** with high consistency and accuracy
- **A high share of green revenues** (on the short term, taxonomy compliant revenues) compared to brown revenues
- Having an at least **3 years track-record self-decarbonization** of at least 7% per annum but **without all abatement potential exhausted** (i.e. not all the decarbonization low-hanging fruits already grabbed).
- Being able to **share forward-looking decarbonization targets** and forecasts
- **Having set evidence-based targets** (based upon scenario analysis and sectorial decarbonization pathways)

Examples of companies individually compliant with CTB standards

		Vinci	Danone	EMS Chemie Holding	STMicroelectronics	Stora Enso OYJ	
	Risk oriented minimum standards						
1	Carbon intensity reduction vs investable universe (-30%)		✓	✓	✓	✓	
2	Scope 3 data available		✓	✓	✓	✓	
	Opportunity oriented minimum standards						
5	High impact sector		Construction	Food Products	Chemicals	Semiconductors	Paper & Forest Products
6	Year-on-year self-decarbonization of the benchmark	2016 to 2017	-15%	- 40%	- 14%	- 39%	- 12%
		2015 to 2016	- 8%	- 16%	- 12%	- 39%	- 12%

Sources : Carbon 4 Finance, Natixis



5

FIXED INCOME CORPORATE DEBT: HOW USABLE?



Overview of our feedback on credit indices

We carried an analysis of the existing credit indices against the EU PAB and CTB Benchmarks proposed criteria. Compliant indices are likely to be found in the corporate Investment Grade universe. By contrast, they are less likely to be found in financials & High Yield segments.

Because of the current debate among central bankers regarding Climate or Green QE, we also analyzed the European Central Bank's Corporate Sector Purchase Program (CSPP), which is by design not meant to be compliant with those criteria. Unsurprisingly, there is room for improvement should European authorities decide to align with the EU PAB or even EU CTB.

Available carbon footprint information

79% of the € iBoxx credit indices do have exhaustive (incl. Scope 3 estimates) carbon emissions information... but only half of the €HY index (more non listed companies, notably LBOs).

High Climate impact sectors largely represented in credit indices

More than 60% of credit indices belong to High Climate impact sectors => enough leeway to reduce future carbon footprint, as required by potential Climate indices... but self decarbonisation remains to be tested : -12% from 2014 to 2017 for corporate debt when measured as CO2 / Ent. value => not enough for the -7% per annum trajectory to be in line with IPCC's 1.5°C scenario

EU CTB and EU PAB : reachable (at 1st stage) for non-financial debt indices, harder for financials

66% of high impact corporates have a lower carbon footprint than 70% of the av. CO2 emissions / EV (EU CTB compliant), 56% of companies are below the 50% boundary to become eligible for EU PAB indices. The Climate benchmark status will be much harder to reach for financial debts: 47% of high stake financials have lower carbon footprint (to EVs) than 70% * carbon footprint of the investable universe

CSPP: is the ECB corporate portfolio more carbon efficient than the benchmark ?

No. The CSPP's carbon footprint is roughly similar to the one of the iBoxx non-financial index.

ESG, CO2 & Green information in the iBoxx indices

- 79% of the € iBoxx credit indices do have exhaustive (incl. Scope 3 estimates) carbon emissions information... but only half of the €HY index (more non listed companies, notably LBOs).
- High climate impact sectors represent 63% of iBoxx credit indices on average => gives enough leeway to decrease future carbon emissions at the index level
- Disclosure: Green bonds only represent 3.6% of € credit indices as of September 2019
- Exclusions: UN Global Compact represent almost 11% of exclusion from credit indices

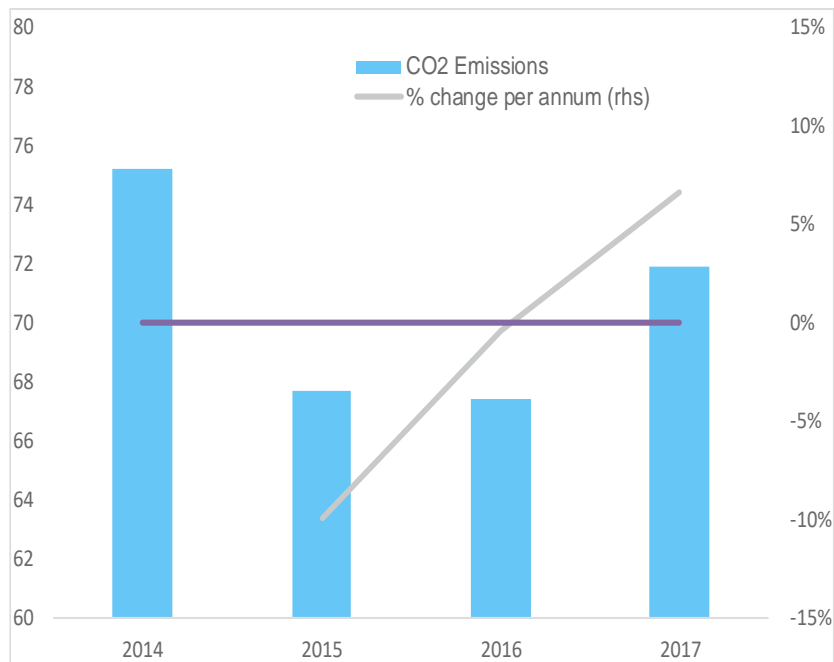
	Disclosure			Total Induced emissions intensity		Exclusion		€ debt outstanding (bn)
	% Carbon information (incl. Scope 3 estimates)	% High Climate	% Green Bonds	Per Revenue : tCO2e/€mn	Per Enterprise Value : tCO2e/€mn	C-W-T Exclusion*	UN Global Compact	
IG Corp Non-Financials	77.1%	71.4%	3.8%	1060	241	2.9%	10.8%	1236
IG Financials	74.0%	10.4%	4.2%	201		0.0%	10.2%	855
High Yield	46.6%	43.3%	1.4%	490	227	1.4%	4.0%	304
Total Credit indices	72.1%	46.1%	3.6%	681	238	1.7%	9.8%	2395

Sources: Carbone 4 Finance, Markit, Natixis; * = Controversial Weapon or Tobacco

Corporates : CO2 Emissions / EV edging lower

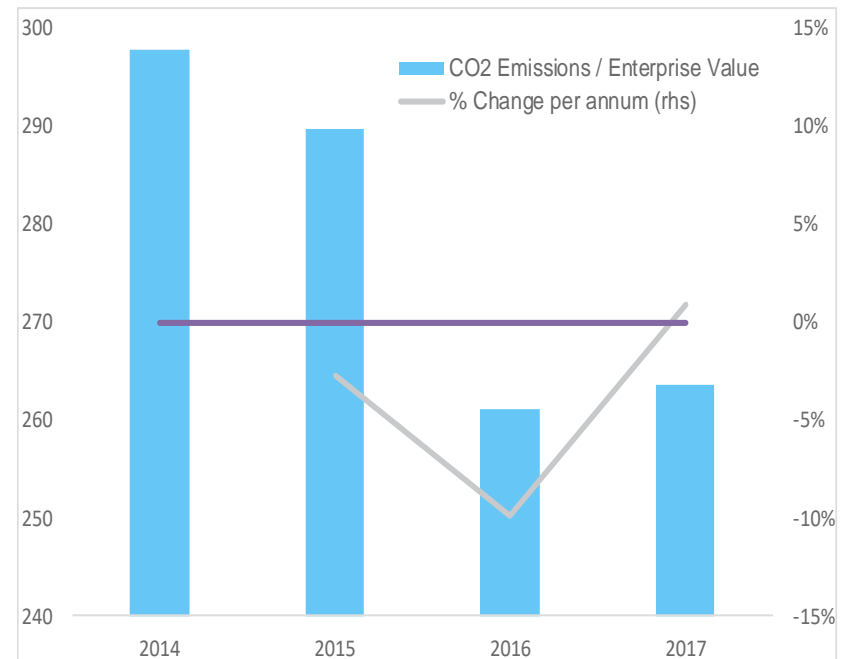
- Sharp drop in total Carbon emissions (Scope 1 +2 +3 estimated) from 2014 to 2016 for the iBoxx Corporate index... followed by a substantial increase in 2017 (mainly explained by VW) ...
- Relative to Enterprise Values, Carbon emissions have been drifting significantly lower since 2014 => -12% in 3 years time (right direction but below the 7% per year decrease threshold in order to be eligible to Climate indices) => need to optimise and increase the efforts

iBoxx Corp av. CO2 Emissions (Mt) and YoY change



Sources: Carbone 4 Finance, Bloomberg, Natixis

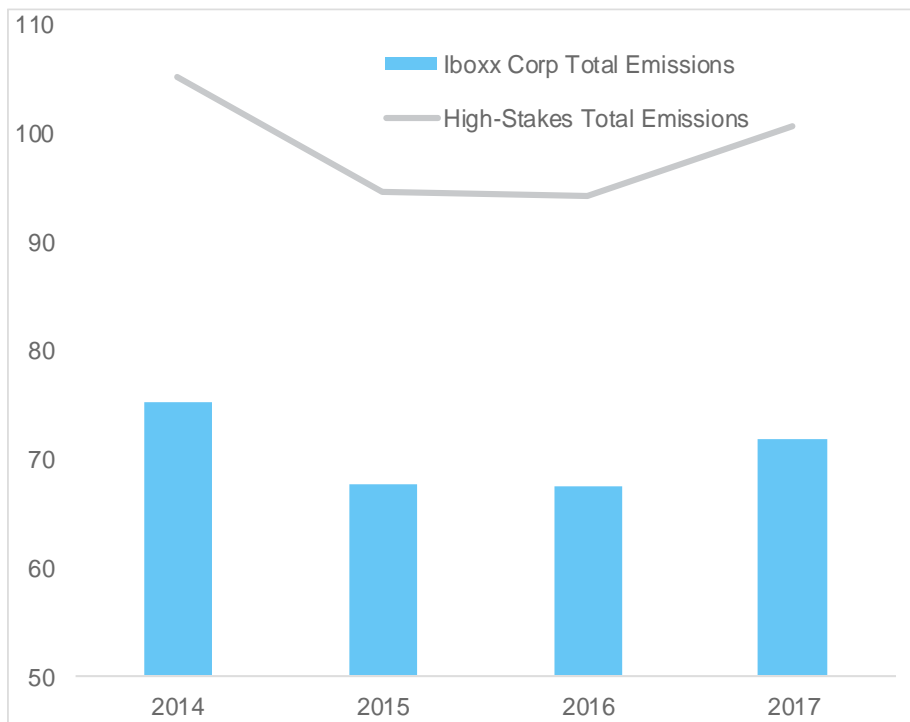
Average iBoxx Corp Emissions / Enterprise Value (tCO2e/M€) and YoY Change



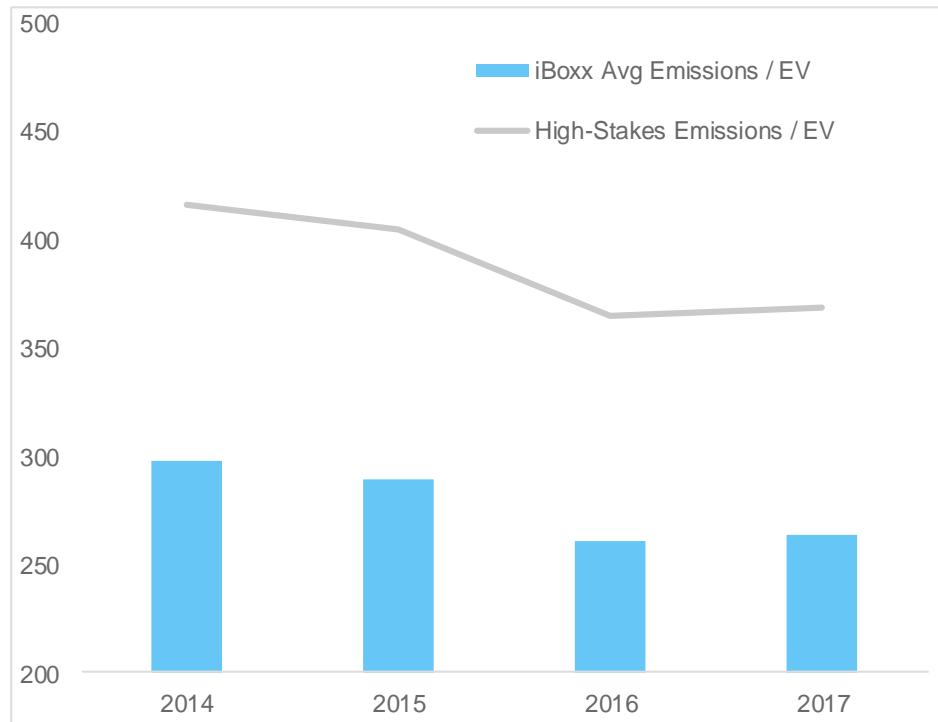
Corporates: Focus on High Climate impact sectors

- High Climate impact sectors represent around 71% of the iBoxx Corporate Non-financial index
- Overall, the average Carbon footprint has been reduced by 4.5% over the last 3 years, with High Climate impact sectors contributing to the bulk of it. However, total emissions have been increasing from 2016 to 2017, mainly due to VW restatements after the diesel scandal

iBoxx Corp vs High Climate impact sectors : Av. Total Emissions (MtCO2)



iBoxx Corp vs High Climate impact sector : CO2 Emissions / EV



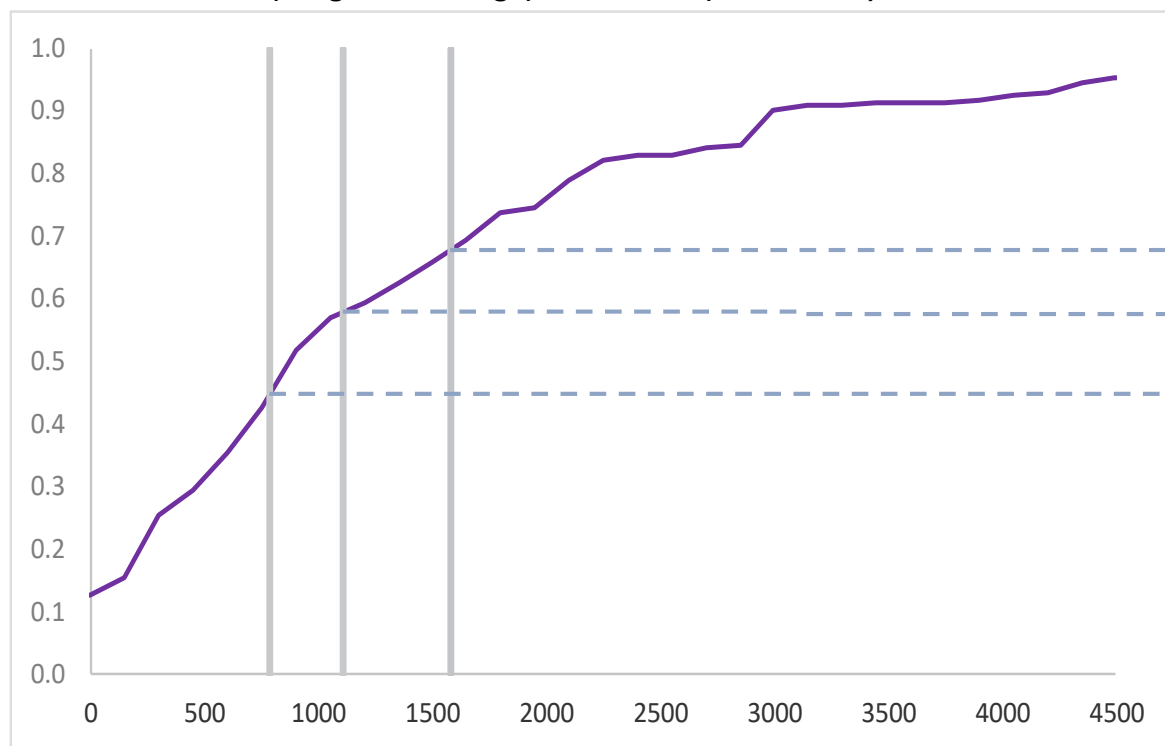
Sources: Bloomberg, Natixis

Carbon intensity reduction in the iBoxx Corp Index

Distribution of carbon intensity in high climate impact sectors

When compared **with revenue**, few outliers are responsible for the high emissions levels

Iboxx **high climate impact** sectors – carbon intensity distribution
(weighted average) to revenue (tCO₂ / €mn)



Sources: Carbone 4, Natixis

In high stake sectors, the carbon intensity average stands at 1580 tCO₂/m€.

→ **65%** of high climate impact companies have lower carbon footprint than this level



Iboxx Corp -30%

→ **57%** of high climate impact companies have lower carbon footprint than the associated performance at 1106 tCO₂/m€.



Iboxx Corp -50%

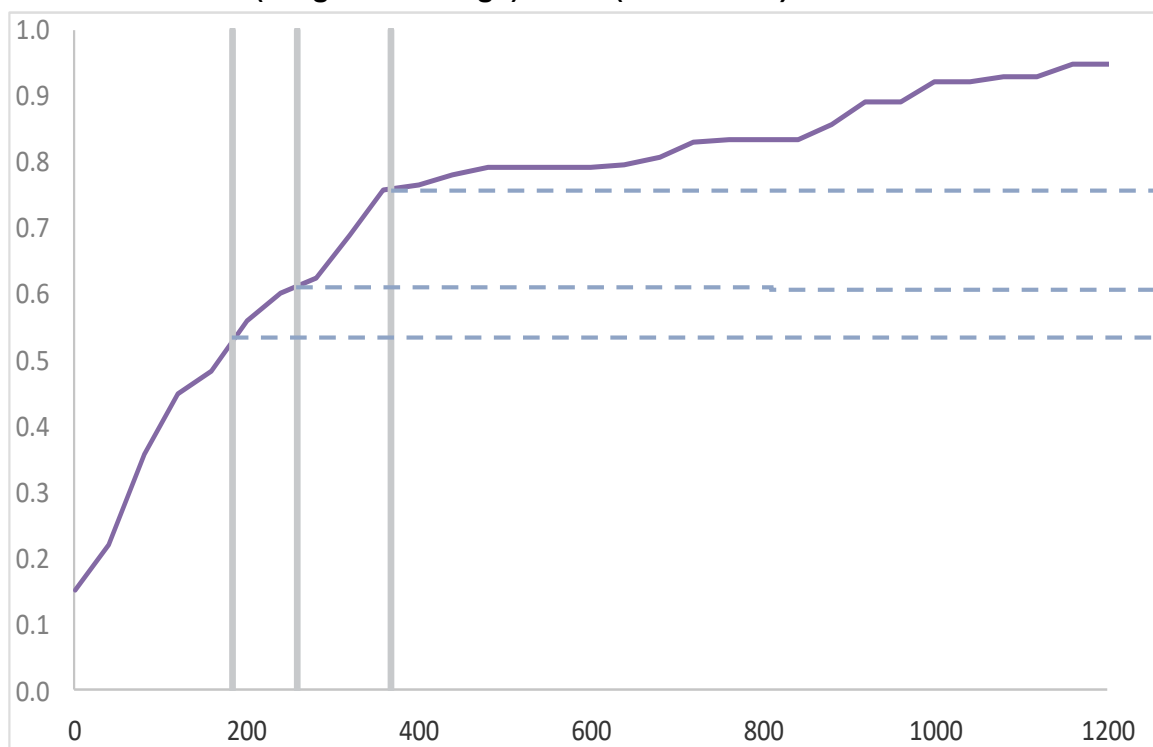
→ **42%** of high climate impact companies have lower carbon footprint than the associated performance at 790 tCO₂/m€.

Carbon intensity reduction in the iBoxx Corp Index

Distribution of carbon intensity in high climate impact sectors

When compared with **Enterprise Values**, an even smaller number of companies contribute to the relatively highest GHG emissions

Iboxx high climate impact sectors – carbon intensity distribution
(weighted average) to EV (tCO₂ / €mn)



Sources: Carbone 4, Natixis

In high stake sectors, the carbon intensity average stands at 368 tCO₂/€mn.

75% of high climate impact companies have lower carbon footprint than this level



Iboxx Corp -30%

60% of high climate impact companies have lower carbon footprint than the associated performance at 257 tCO₂/€mn.



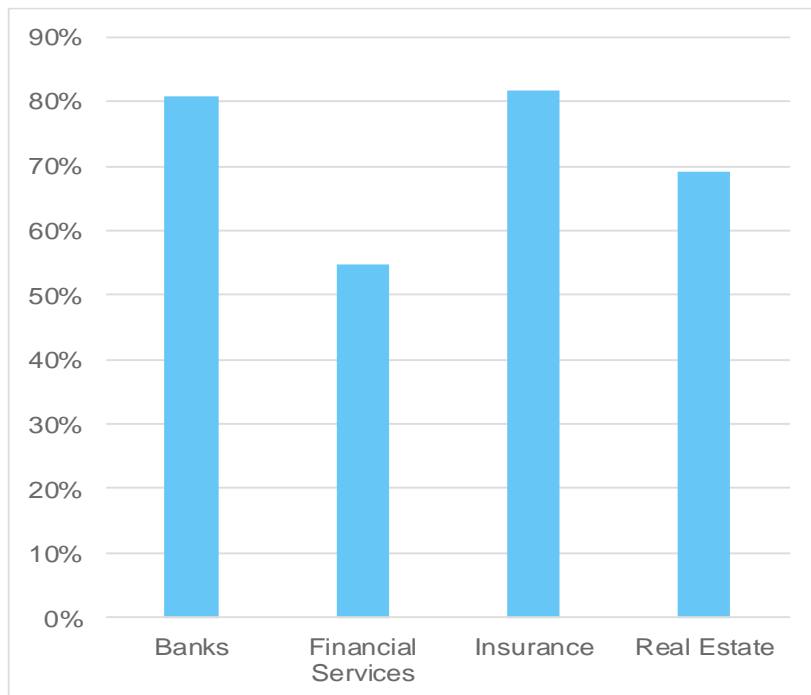
Iboxx Corp -50%

50% of high climate impact companies have lower carbon footprint than the associated performance at 184 tCO₂/€mn.

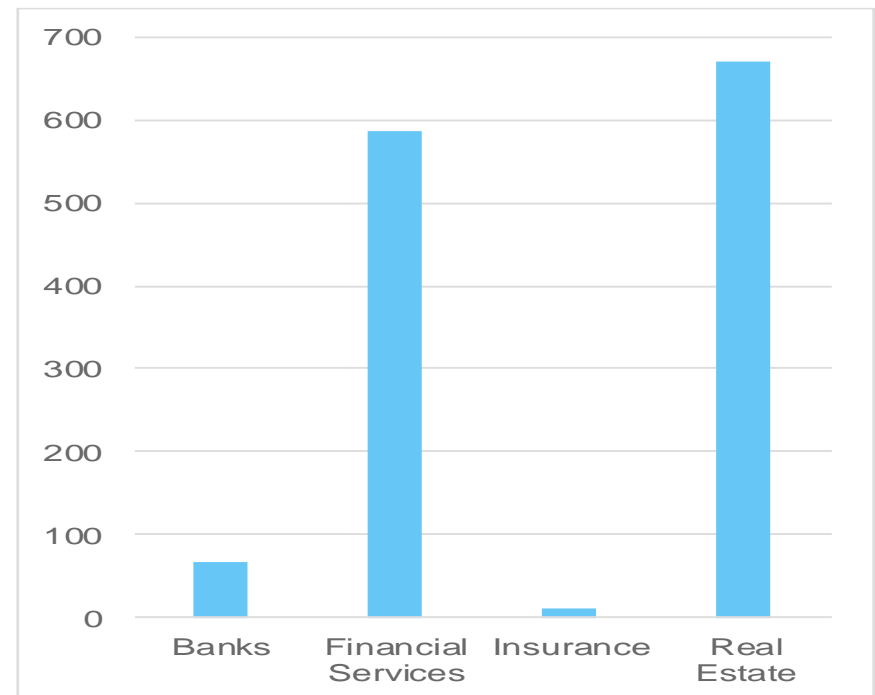
Carbon emissions information in Financial debts

- Estimates of full carbon emissions (incl. Scope 3 estimates) are available for 78% of the iBorr Financials index
- The Real Estate sector represents around 10% of the iBorr Financial index => This explains why High climate impact sectors are less represented in the iBorr Financial index relative to the Corp. Non-financial index

% of available Carbon emissions information by sector



Average iBorr Fin Senior Emissions / Revenue (tCO2e/M€) per sub sector

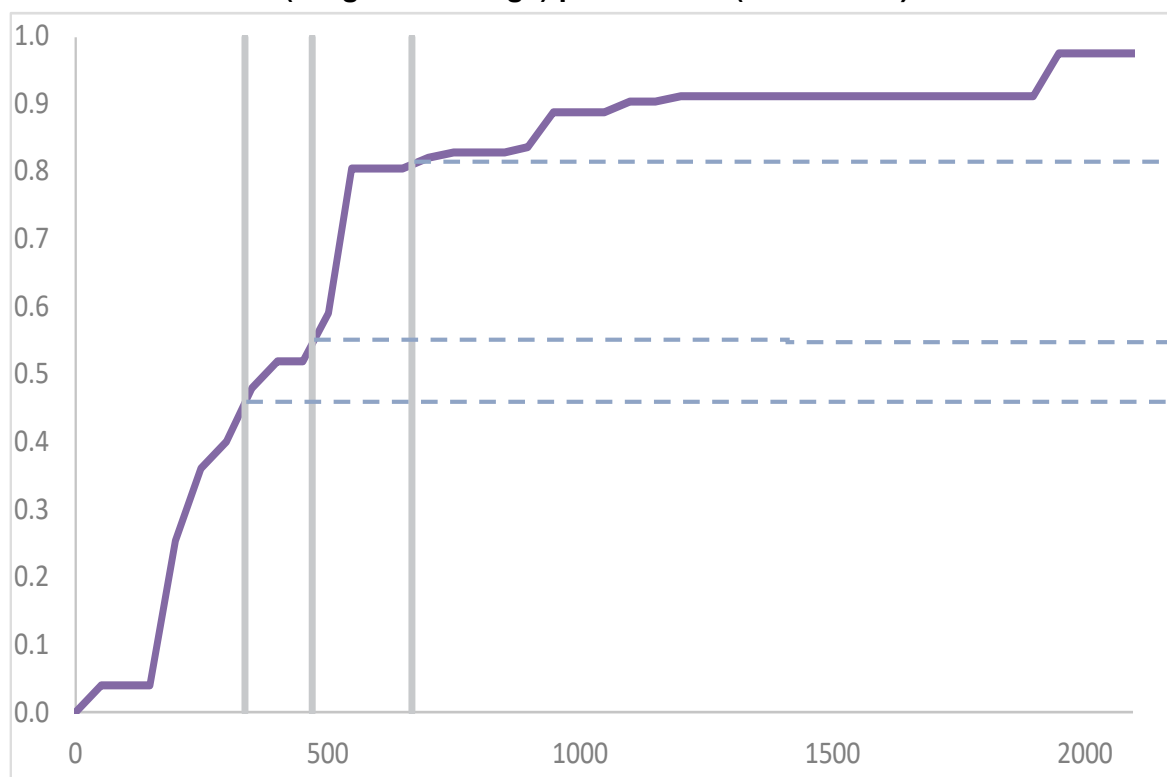


Sources: Markit, Carbone 4 Finance, Natixis

Carbon intensity reduction in the iBoxx Financial Index

Much more efforts are needed if one wants to reduce its carbon footprint in Financial debts

Iboxx Financials High Climate Impact – carbon intensity distribution (weighted average) per revenue (tCO2 / €mn)



Sources: Carbone 4, Natixis

The average carbon intensity stands at 668 tCO2/€mn revenue.

→ **65%** of High climate impact companies have lower carbon footprint than this level



Iboxx Fin -30%

→ **47%** of High climate impact companies have lower carbon footprint than associated performances at 468 tCO2/€mn.



Iboxx Fin -50%

→ **26%** of High climate impact companies have lower carbon footprint than associated performance at 334 tCO2/€mn

6

FIXED INCOME CORPORATE DEBT:

AND WHAT ABOUT THE ECB CORPORATE SECTOR PURCHASE PROGRAM ?



A new green ambition for the ECB ?



Recent statements from ECB members have cast the spotlight on the possible integration of climate considerations in central banks' policies. Until now, the ECB has strictly enforced the **dogma of market neutrality** that proscribes the ECB from preferring one sector over another and to avoid market distortion.

This is the case for the quantitative easing policies led by the ECB. Corporate and Sovereigns bond have been purchased indifferently on primary and secondary market, without consideration of the climate features. As of this date, **the ECB holds €177bn of Corporate Bonds under the Corporate sector purchase program (CSPP)**, the corporate leg of Asset Purchase Programmes (APP). The question of including climate criteria in this purchase program might be on the table.



Benoît Coeuré,
*Member of the ECB
Executive Board*
08/11/2018

Benoît Coeuré made a speech on the impact of climate change on monetary policies. He argues that to mitigate these risks, the ECB has a supporting role to play while staying within its mandate.



Ursula von der Leyen
*President of the European
Commission*
16/07/2019

The green EU momentum is also supported by the EU Commission. The newly elected president of the EU Commission promised to put forward a "Green Deal for Europe" in her first 100 days in office.



Christine Lagarde
President of the ECB
04/09/2019

During her public hearing Christine Lagarde opened the door to APP embedding climate criteria.

"As soon as such a taxonomy is agreed, the ECB will need to assess whether and how it can apply it to its APP."

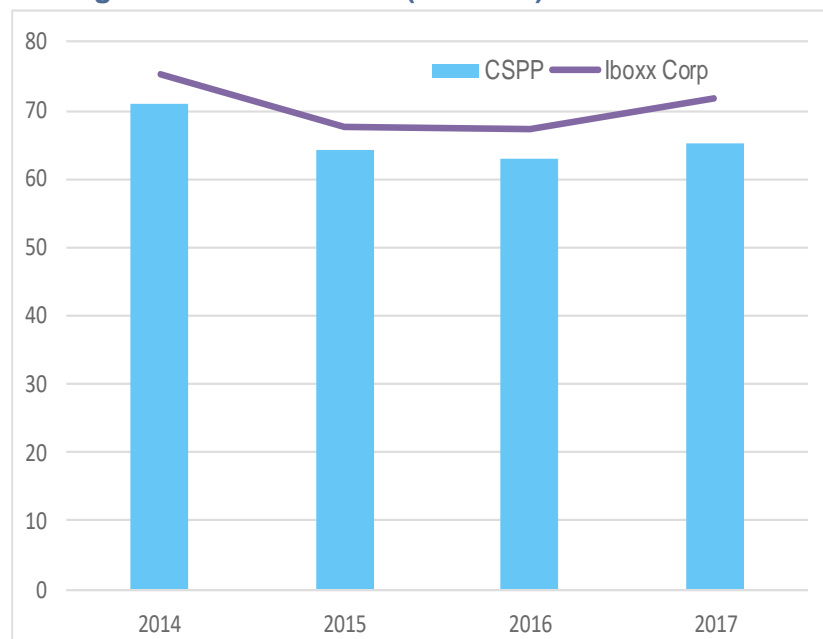
We can only speculate on how climate criteria could be implemented in ECB policies and Christine Lagarde did not mention Climate Benchmark alignment as an objective. However, the work of the European commission could be a source of inspiration for the ECB if its APP were to become green.

» In this section we looked at the current composition of the **Corporate sector purchase program (CSPP) holdings** to measure just how far from climate benchmark alignment the current ECB portfolio is.

Carbon footprint: CSPP outperforming the iBoxx index

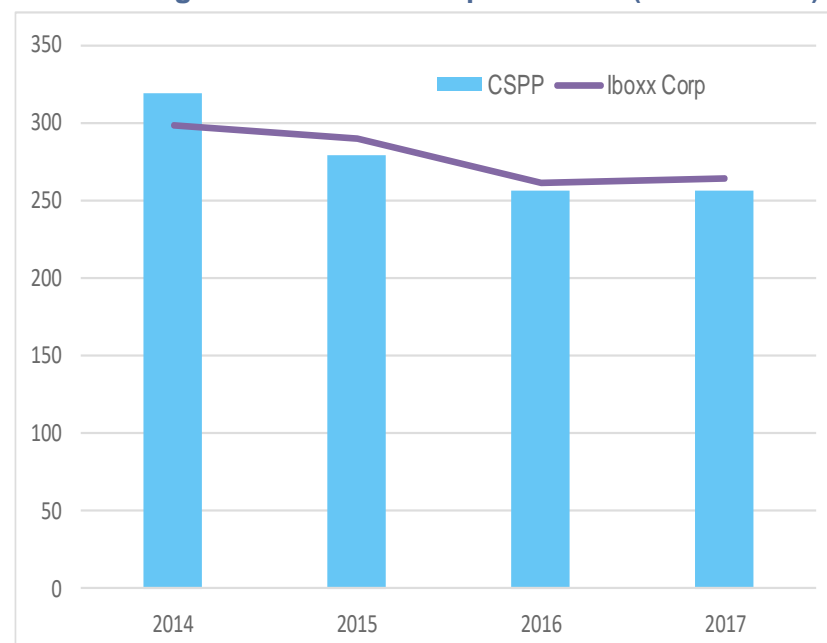
- According to our estimates and carbon emissions providers, we found that 83% of the CSPP current program benefit from carbon footprint information (including Scope 3 estimates)
- Carbon intensity has been decreasing faster on the CSPP perimeter (-20% from 2014 to 2017, considering carbon emissions /EV) than on the iBoxx Non-financial index => however, there is still some room for improvement on the ECB's portfolio given that the average carbon footprint is similar to the iBoxx index'

Average Carbon Emissions (Mte CO2): CSPP vs iBoxx Corp



Sources: Markit, Carbon4, Natixis

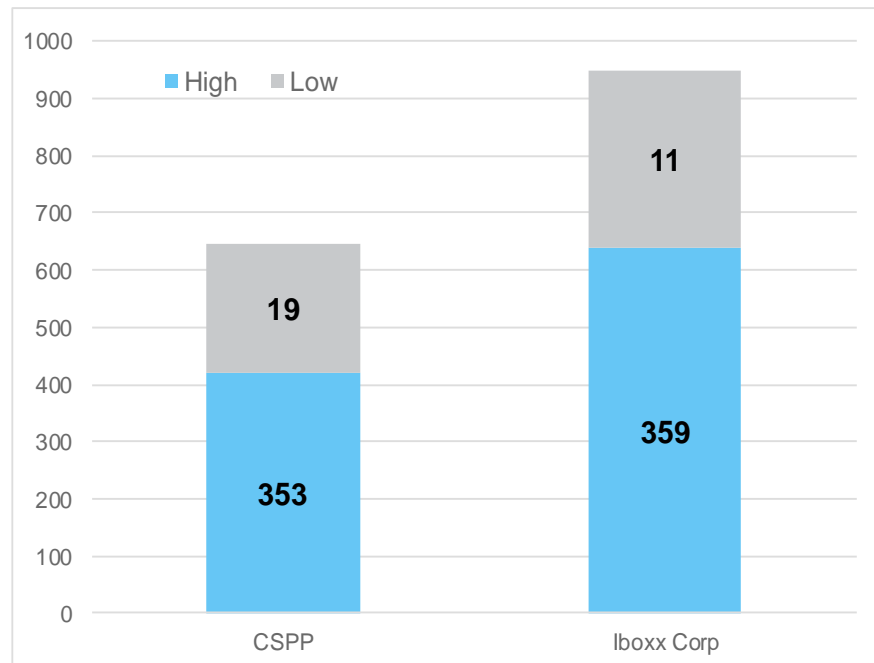
Average Emissions / Enterprise Value (Mt CO2 / M€)



Share of High climate impact companies in the CSPP portfolio

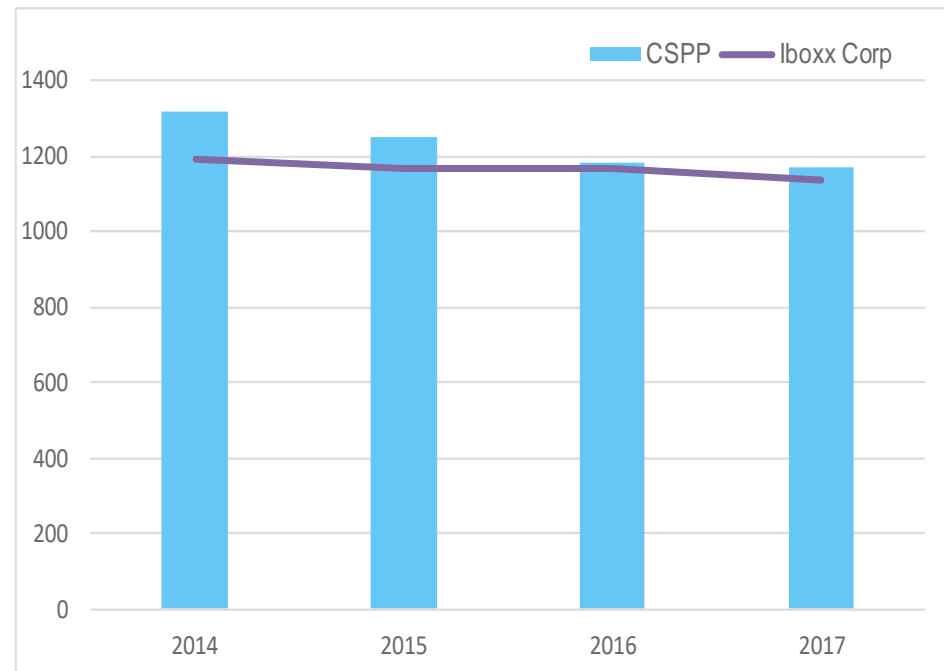
- High stake sectors represent only 65% of the CSPP portfolio, below the iBoxx corporate non-financial index
- Lower exposure of the CSPP program to Oil & Autos explains its outperformance vs the iBoxx index between 2014 and 2017

Outstanding amounts in CSPP and iBoxx (for available datas)



Sources: Carbone 4 Finance, Bloomberg, Natixis

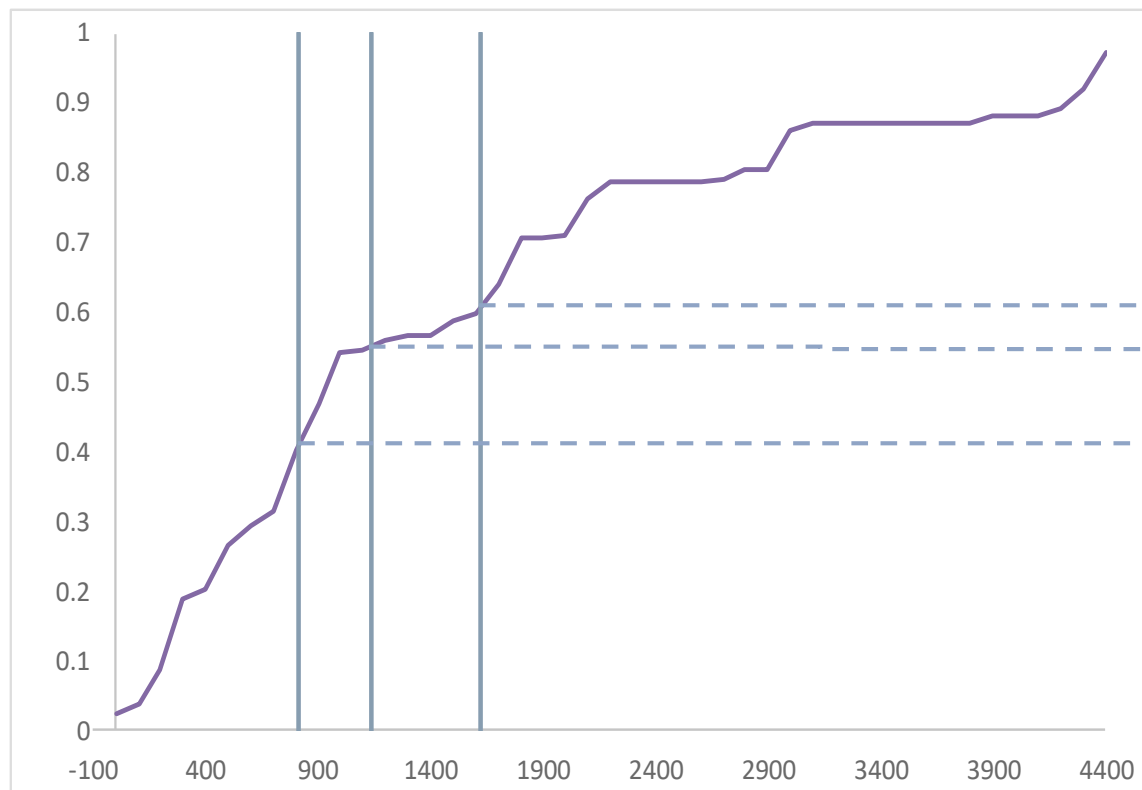
Average Emissions / Revenue (tCO₂e/M€) CSPP vs iBoxx Corp



Carbon intensity reduction for the CSPP portfolio

Distribution of carbon intensity to revenue in high stake sectors

CSPP high climate impact sectors – carbon intensity distribution by revenue (tCO₂ / €mn)



Sources: Carbone 4, Natixis

In high stake sectors, the iBoxx Corp carbon intensity average stands at 1620 tCO₂/€mn.

60% of CSPP high climate impact companies have lower carbon footprint than this level

Iboxx Corp -30%

54% of CSPP high climate impact companies have lower carbon footprint than the associated performance at 1134 tCO₂/€mn.

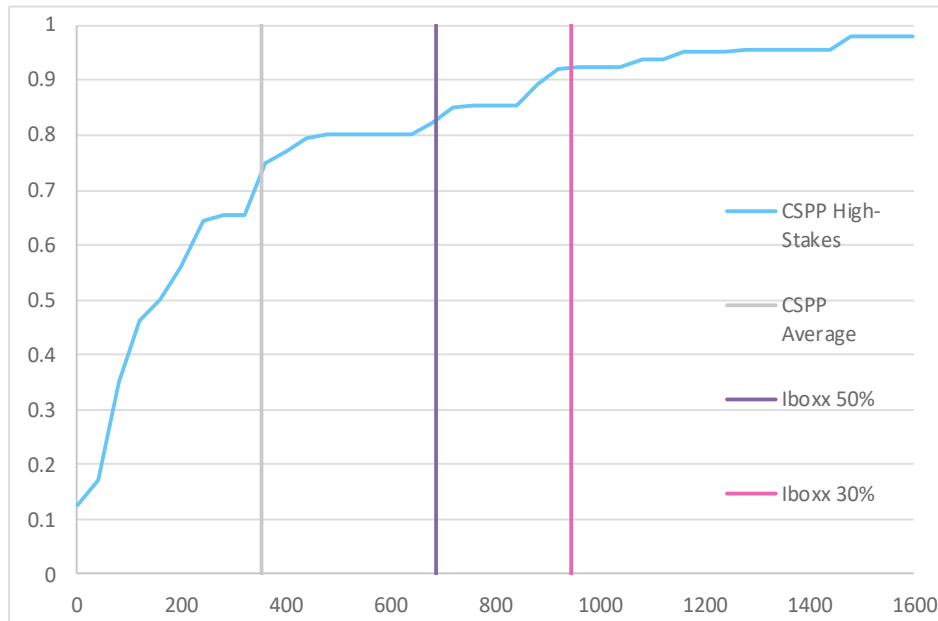
Iboxx Corp -50%

39% of CSPP high climate impact companies have lower carbon footprint than the associated performance at 810 tCO₂/€mn.

How many issuers from the CSPP should be excluded to significantly reduce the carbon footprint?

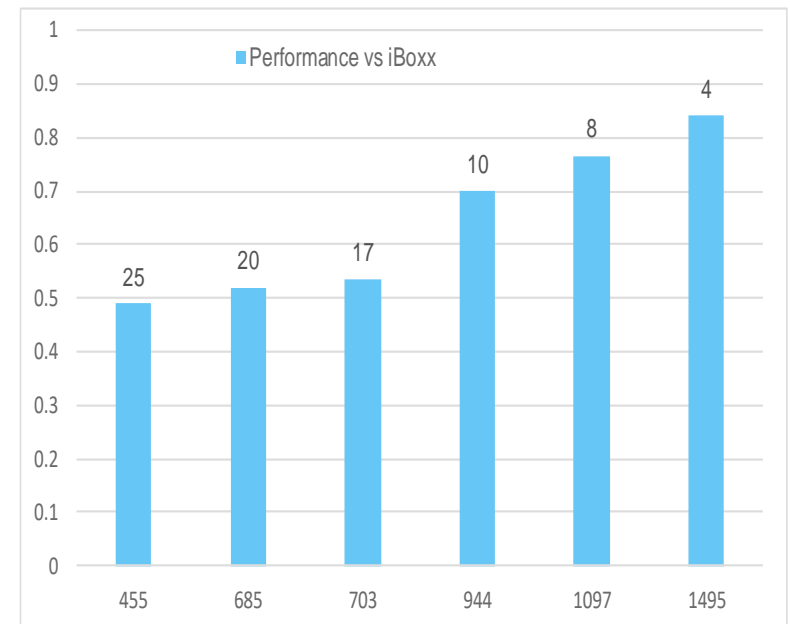
- Focus on carbon intensity: Excluding the 4 most carbon-intensive firms from the CSPP portfolio leads to - 16% in avg carbon footprint vs the iBoxx Corporate index
- In order to be aligned with a -50% carbon footprint reduction, the ECB would need to exclude 25 out of 113 issuers in the portfolio... but only 10 to be in line with a -30% reduction (i.e. 10% of the index)

CSPP High-Climate impact Emissions/Entreprise Value and upper emissions limits with associated performances



Sources: Bloomberg, Natixis

Performance vs Iboxx with associated upper limits and number of excluded firms (/113)





APPENDIX



INDEX RULES

MSCI Low Carbon Leaders

Universe

Global : MSCI ACWI global index (23 developed and 26 emerging markets)

Europe : MSCI Europe Index (15 developed countries in Europe)

Selection basis

The index aims to select companies with low exposure to carbon risk, identified as companies with low carbon emission intensity and low potential emissions per dollar of market capitalization.

Carbon emissions : the top 20% more emitting companies are excluded (limit : The cumulative weight of securities excluded from any sector is less than 30%)

Potential carbon emissions : Securities are ranked then excluded until the cumulative potential carbon emission of the excluded securities reaches 50% of the sum of the potential carbon emission of the constituents of the Parent Index.

An optimization process is then applied with constraints on tracking errors, maximum weight of index constituents, country weights, sector weights, index turnover to minimize Carbon Emission Intensity per dollar of market capitalization. The carbon intensity average should be at least 50% inferior to the parent Index.

Data provider

MSCI ESG Research

Sectors weighting

The sectors weights in the MSCI Global Low Carbon Leaders Index will not deviate more than +/-2% from the sector weights in the Parent Index.

INDEX RULES

MSCI ACWI Low Carbon Targets

Universe

Global : MSCI ACWI global index (23 developed and 26 emerging markets)

Selection basis

The carbon exposure (GHG emissions + potential emissions from fossil fuel reserves) of each parent index constituent is calculated.

An optimization process is applied with constraints on tracking errors, maximum weight of index constituents, country weights, sector weights, Index turnover to minimize carbon exposure.

Data provider

MSCI ESG Research, Carbonmetrics

Sectors weighting

The sector weights in the MSCI Global Low Carbon Target Index will not deviate more than +/-2% from the sector weights in the Parent Index with the exception of the Energy Sector where no sector weight constraint is applied.

INDEX RULES

Euronext Low Carbon Europe 100

Universe

The index Universe is made of the 300 highest Free Float Market Capitalisations of the Euronext Europe 500 Index.

Selection basis

A mix of green share and best in class :

Green share : Up to 15 Green Companies ('NG') with the highest percentage of activity related to "low carbon" technologies are selected (from the 1000 highest European Free Float Market Capitalisations)

Best in class : From the index Universe, 100-'NG' companies are selected based of their Climate score

Data provider

Carbone 4 produces a climate score.

CDP : a bonus/malus system is applied relative to Carbone 4 scores based on CDP scores.

Sectors weighting

The weight of green companies is limited to 5%.

A target number of companies within each sector is set proportionally to the Index Universe sectors distributions and the weight of each sector in the index is equal to the weight of the sector in the Index Universe.

INDEX RULES

Euronext Energy Transition Leaders

Universe

The Index Universe consists of the 300 companies included in the Euronext Eurozone 300 index.

Selection basis

Within the universe the 75 largest free float market capitalisations are ranked on Energy Transition performance. The 50 highest-ranking companies as evaluated by the Vigeo-Eiris agency, in term of their performance to a transition to a low-carbon economy, are selected.

Data provider

Vigeo Eiris produces an energy transition score.

Sectors weighting

Equal weight for the 50 selected companies.

INDEX RULES

Euronext Climate Objective 50 Euro EW

Universe

The universe is composed of the 300 most liquid companies in the Eurozone

Selection basis

Within the universe the companies with a free float market capitalization below €3B or an average daily turnover over the past 6 months below €22M at the cut-off date are excluded.

When at least 50% of the turnover of a company (classified as utility or extractive) stems from energy, then the company will be excluded if it emits more than 379 grams of CO₂ per kwh produced (for utilities) or if the forward looking score as defined by Carbone 4 is above C (for extractives)

The 50 best companies in terms of climate score are selected, in case of an equal score the company with the highest free float market capitalization will be selected.

Data provider

Carbone 4 produces a climate score

Sectors weighting

Equal weight for the 50 selected companies.

INDEX RULES

NXS Climate Optimum Prospective Index

Universe

The Index Universe consists of the 600 companies included in the STOXX Europe 600 PR index.

Selection basis

Within the universe 3 filters are applied to select companies, first an ethical filter with the exclusions of companies committed in tobacco and controversial activities, as well as company with no carbon-intensity data for the last 24 months (sustainalytics data). A climate filter is also applied with the exclusion of companies that have more than 10% of their turnover in high-impact fossil fuels.

Stocks are then selected based on their climate score (3 quantitative and 3 qualitative criteria) and filtered on financial criteria (liquidity, capitalisation...) before integrating the index.

Data provider

Sustainalytics

Sectors weighting

No constraints on sectors weighting, avoids an exclusive focus on sectors with low carbon stakes.

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