



## The X-Degree Compatibility (“XDC”) for Financial Market Actors

# 2.7°C

Direct Emissions (Scope 1): 2.2°C  
 Indirect Emissions Energy Input (Scope 2): 1.9°C  
 Indirect Emissions Value Chain (Scope 3): 3.0°C

How many degrees would the earth warm up to, if every capital investment kept emitting at current levels, provided the same economic output?

The XDC supports your ESG experts in portfolio management, credit approval and product development processes to detect climate-related opportunities and risks of your financial products, in order to manage them in a future-oriented manner and report them in line with TCFD recommendations.

### The XDC Model

right. based on science has developed a model that creates science-based climate metrics under a range of scenarios. These metrics assist financial market actors in strategy, risk management, reporting and communication matters.

$$\text{XDC} = \frac{\text{Emissions}}{\text{Gross Value Added}} \times \text{Climate Performance}$$

#### Model Parameters

The model’s variable input parameters are a capital investment’s e.g. a company’s (i) emissions and (ii) gross value added “GVA”: What quantity of emissions entails a company’s generation of 1 million € GVA?

#### Science Based

The XDC Model calculates a capital investment’s climate impact based on scientific input by the IPCC and other accredited institutions. In addition, scientific information about the climate serves to validate the model’s results.

### Applications

The XDC can be calculated as a **Standard XDC** or as a **Scenario Based XDC**. For the Standard XDC, sector specific assumptions are made. A Scenario Based XDC is calculated based on a scenario that you have created or chosen (e.g. IEA 2DS).

#### Credit Approval

The XDC Model calculates your borrower’s XDC and helps you differentiate which companies are well and which are less well prepared for transitioning to a <2°C-world. The findings can be integrated into existing models for determining credit default risks. The XDC Model can help you calibrate credit risk computation results for individual borrowers based on your regular customer dialogue.

#### Portfoliomangement

The XDC Model calculates your capital investment’s XDC and aggregates the values in your portfolio to the portfolio’s XDC. XDCs of an individual capital investment are easy to communicate and are a good basis for engagement strategies and portfolio construction purposes. You can compare the XDC values of your capital investments with the XDC values of relevant sectors and take into account the 2°C-compatible emission reduction requirements for your capital investments in strategic decision-making.

#### Product Development

The XDC Model calculates the extent, in which a measure supports the emission reduction requirements of a capital investment / a borrower to reach the 2°C compatibility benchmark. You can use this for developing products that explicitly and transparently reduce a capital investment’s or a borrower’s exposure to climate-related risks.

Capital Investment	Weighting Factor	Standard XDC	Sector XDC	2°C-compatible emission reduction*	Scenario Based XDC: IEA 2DS
Company 1	20%	2.6°C	2.8°C	35%	3.3°C
Company 2	10%	3.1°C	2.2°C	49%	2.7°C
Company 3	30%	3.7°C	3.9°C	54%	4.5°C
Company 4	20%	1.3°C	1.7°C	34%	1.7°C
Company 5	20%	1.7°C	1.5°C	28%	2.2°C

Standard Portfolio XDC 2.9°C

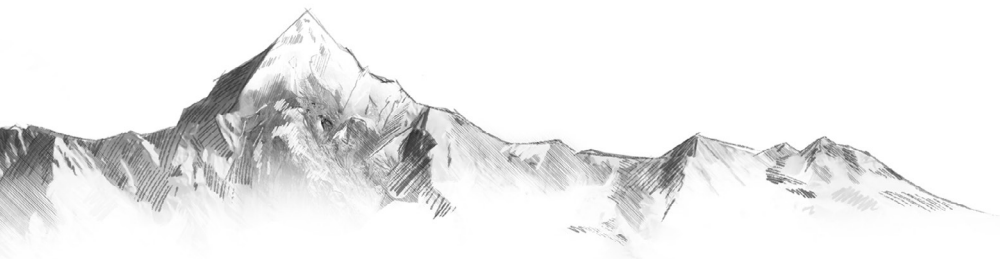
Scenario Based Portfolio XDC 3.5°C

#### TCFD\* and Legal Compliance

The XDC Model is not based on a specific scenario. The XDC can be (i) calculated under several scenarios and (ii) based on scenarios that might allow for a better understanding of climate-related risks of a given capital investment or a specific borrower. A thorough application of the model provides information on climate-related risks, which for instance allows you to fulfill the requirements established in the EU Shareholder’s Rights Directive.

Scheme of a portfolio assessment with the XDC Model. \*The fair contribution of a company to the 2°C-Target is not to be equated with an XDC of 2.0°C.

\* Task Force on Climate-related Financial Disclosures



## Database and Quality

### Emissions

We obtain a capital investment's / borrower's emission data and that from their respective sectors from a list of outstanding data suppliers. As a user of the XDC Model, you can choose which data base you want the XDC to be calculated upon.

We obtain country emission data exclusively from public sources. Through the European Space Agency Business Incubation Centre Darmstadt (ESA BIC), we also have access to satellite data, which we use for country specific XDC calculations.

### Gross Value Added

We gather data on an investment's / a borrower's GVA from FactSet Research Systems.

### Scenario Assumptions

The Standard XDC is generated according to 3.2% growth of the global GVA until 2050 (Source: WEO and IMF). The company's growth is mapped along sector-specific lines according to accredited sources. The relationship between emissions and GVA remains fix in a business-as-usual scenario until 2050. In order to avoid double counting, Scope 1 emissions account for 100%, while Scope 2 and 3 emissions each account for 50%.

All the estimations for a company can be plausibly varied to calculate a Scenario Based XDC. By this, climate targets, ambitious growth plans, expansion strategies and the effect of low-emission technologies on supply chains can be incorporated into individual scenarios.

## Our Services: XDC Model and its Application



### Standard XDC

*What is the XDC of a capital investment / a borrower compared to that of others in the same sector?*

Introducing science-based climate metrics into your ESG assessment



### Scenario Based XDC

*What is the XDC of an investment / a borrower under different future scenarios?*

Analysis of climate-related opportunities and risks based on specific scenarios for a capital investment / a borrower



### Consulting

*What opportunities does working with the XDC Model offer your institution?*

Portfoliomangement; Engagement; Credit risk; Reporting and communication; Climate targets

**“right.’s XDC Model is in sync with the spirit of the time.“**

Dr.-Ing. Frank Zimmermann, CEO of cesah; responsible for ESA BIC

## right. based on science – about us

right. based on science is an information and consulting company founded in August 2016, which measures a single economic entity's contribution, be that of e.g. a company or a lending project, to manmade climate change. With a team of experts with backgrounds in law, science, economics, psychology and mathematics, right. is devoted to the development of the XDC Model, which calculates science-based climate metrics on the basis of latest climate research and regulatory requirements, in order to deduct an entity's XDC. right. provides consultation services on how to use the XDC Model for its clients within the real economy as well as for clients in the finance, real estate and public sector.

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