

Risk Minds 2020

Non-traditional risk-
drivers for sustainable
economic capital
generation

– a holistic ‘climate
change’ approach

9.12.2020 | Tessa Kuijl MSc, CEFA



ORTEC
FINANCE

Welcome



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Head of Research



Expert provider of investment decision technology and solutions



**Founded in 1981
300 employees**



Independent – 100% owned by employees



**Global and long-standing
clients manage over \$3 trn in AuM**



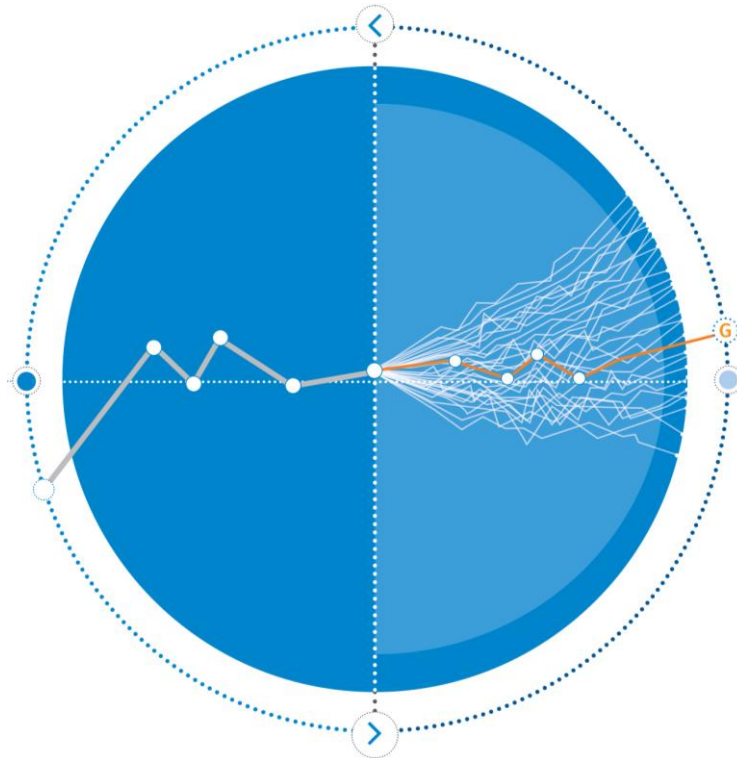
**Innovative, strong ties
with academic world**



Global provider of technology & solutions for risk and return management

Performance Measurement & Attribution

PEARL



ALM and Enterprise Risk Management
Investment Strategy
Real World economic scenarios

GLASS and DSG

- ✓ For Pension, Insurance companies and Asset Managers
- ✓ Software incl. SaaS

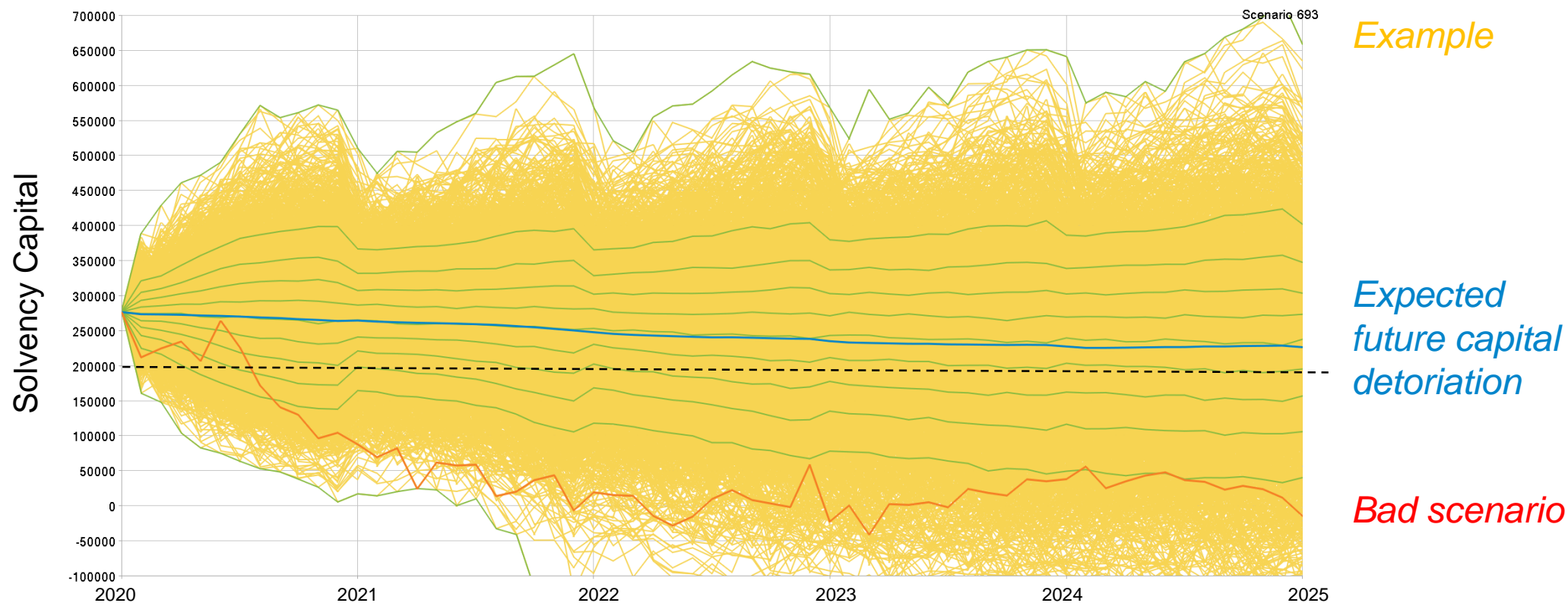


The challenge

Sustainable economic capital generation in times of COVID-19 and a changing climate



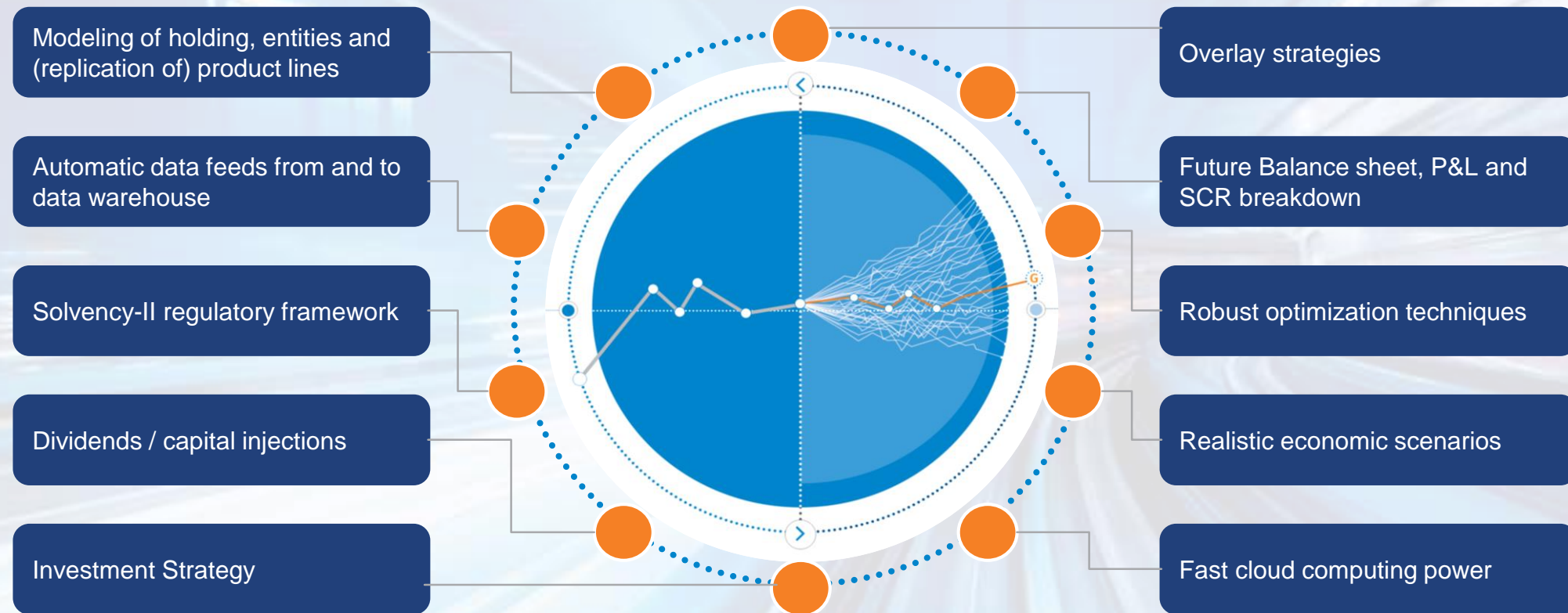
Insight in realistic economic capital projections



- ✓ What are the main drivers of future Sustainable (free) Capital Generation?
- ✓ How to utilize that information to improve your business strategy?

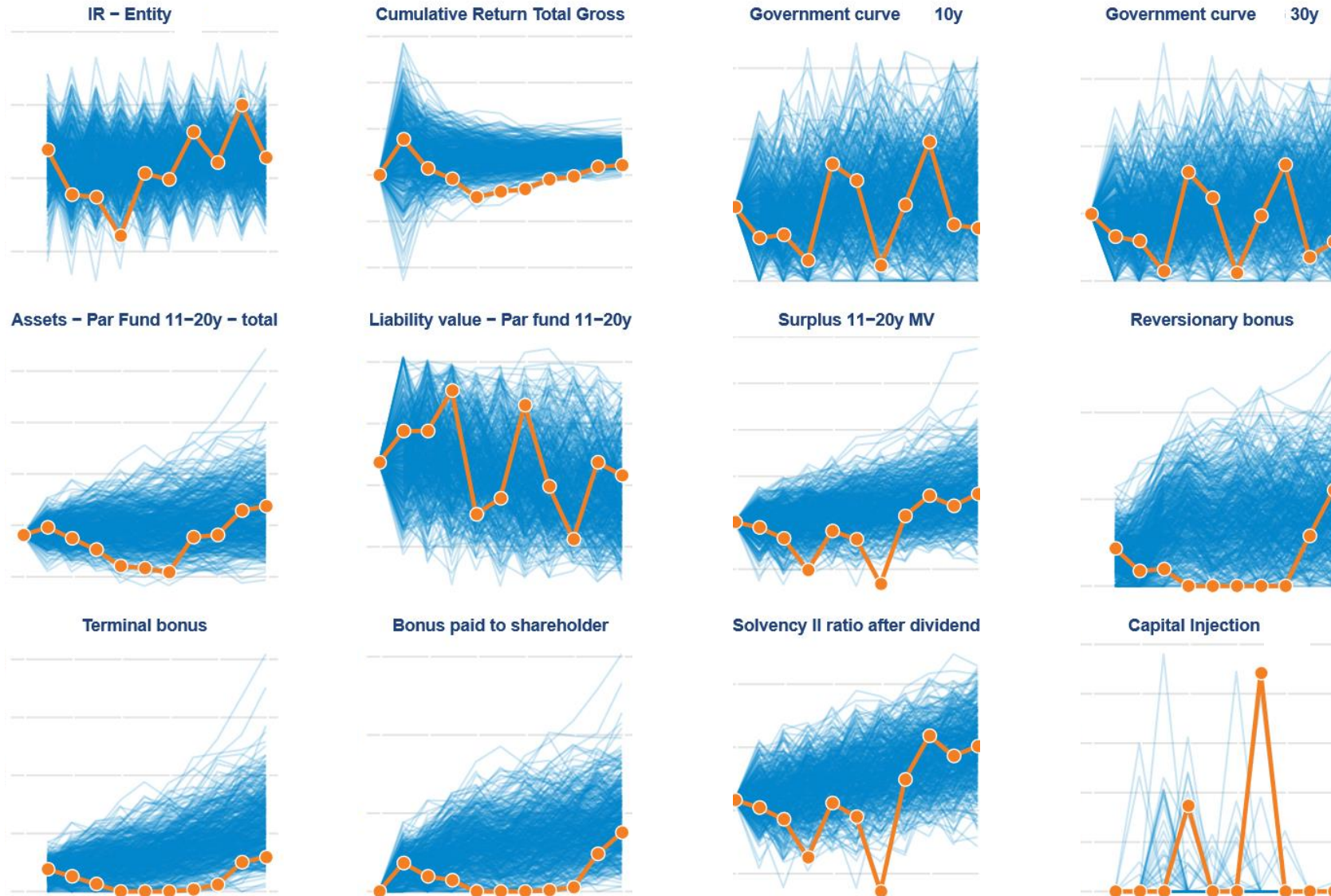


The basics



Fast and robust Holistic Balance Sheet Modeling

Attribute ex-ante expected capital developments



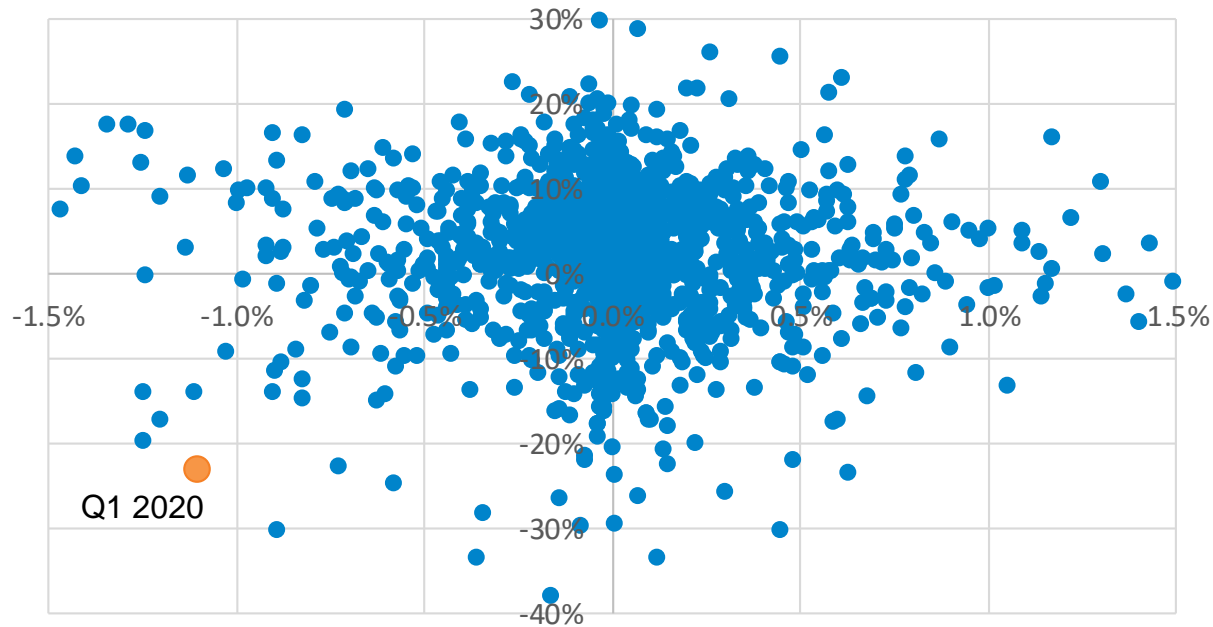


1. Traditional
financial risk drivers

2. Non-traditional risk
drivers

Q1 Short-term market developments extreme

US 1900-2019



Quarterly changes 10Y US government bond yield

US Dec19 scenarios

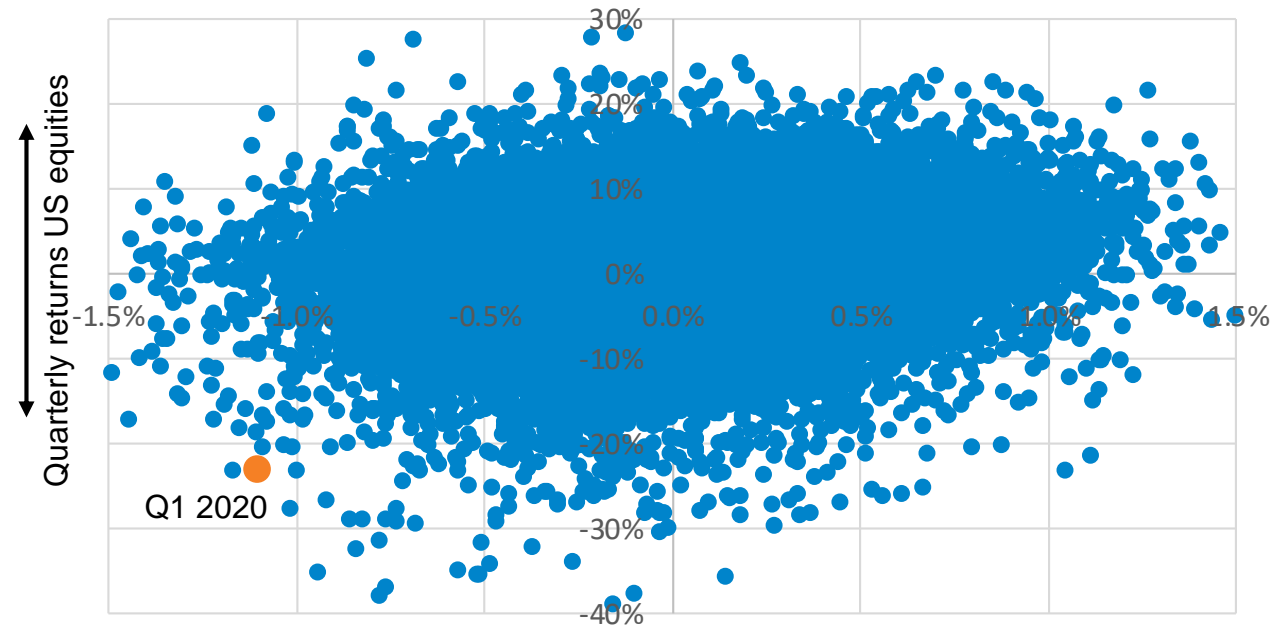
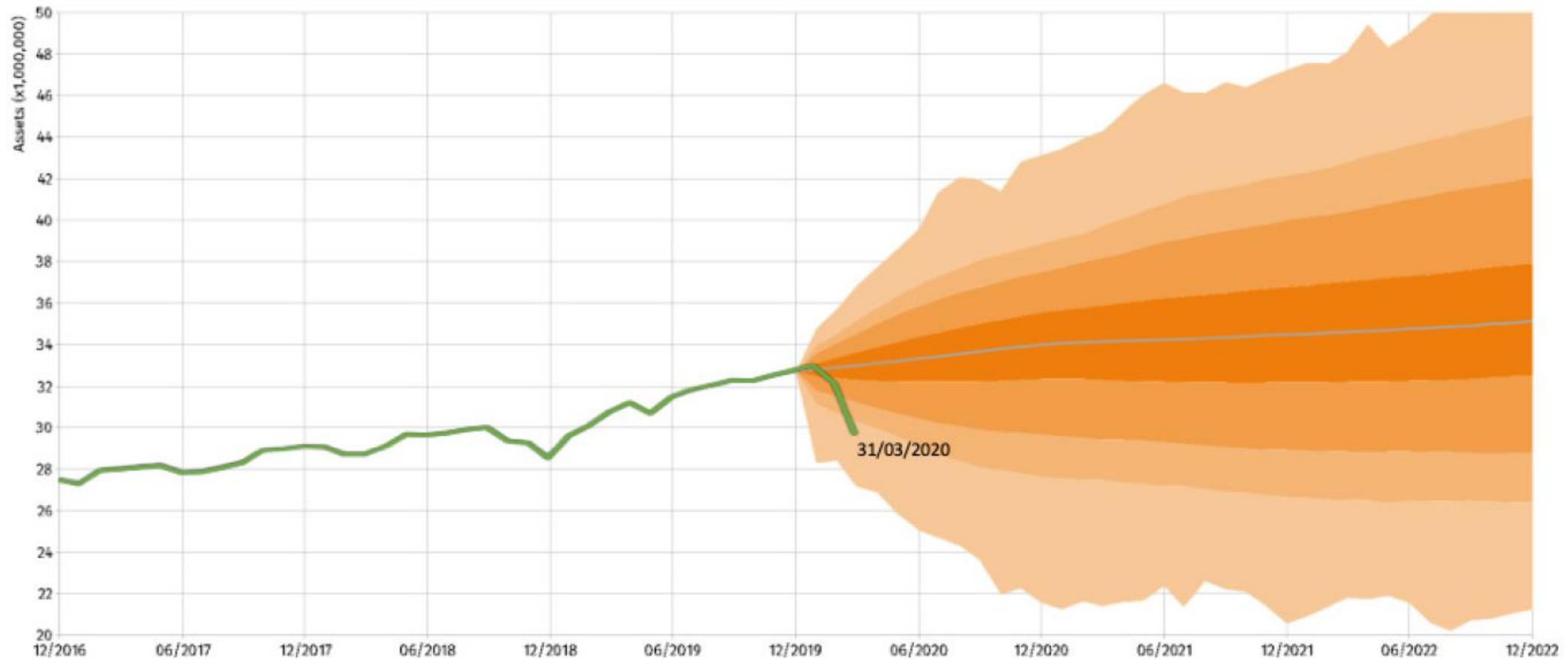


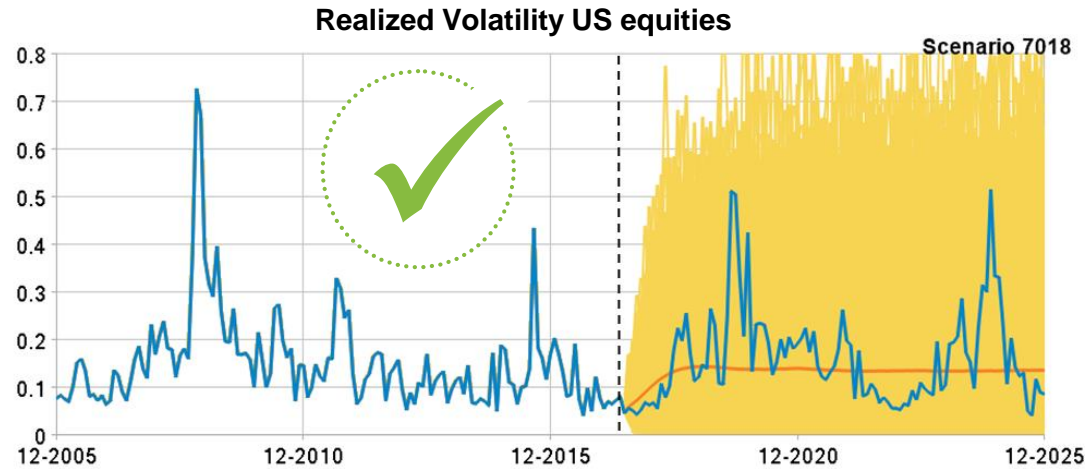
Figure 1: Monthly portfolio value and risk according to a typical investment strategy of a European fund based on the December 2019 Ortec Finance scenario outlook





Important scenario features

Time varying volatility



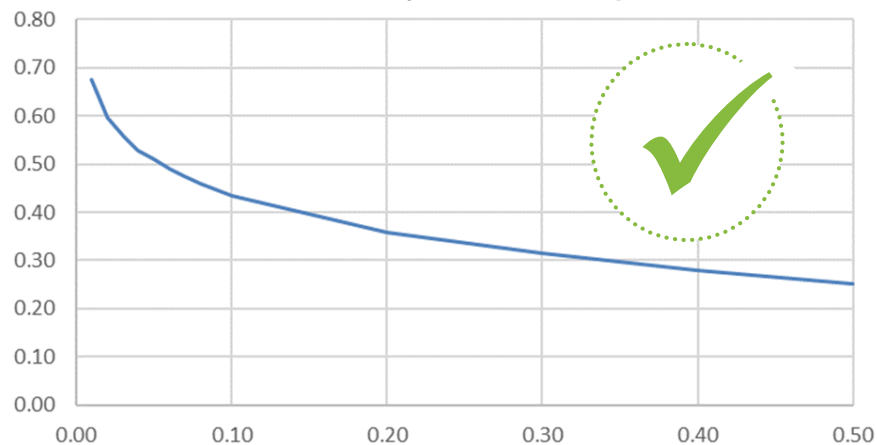
Views and expert opinion

- Monetary policy
- Brexit
- Coronavirus outbreak

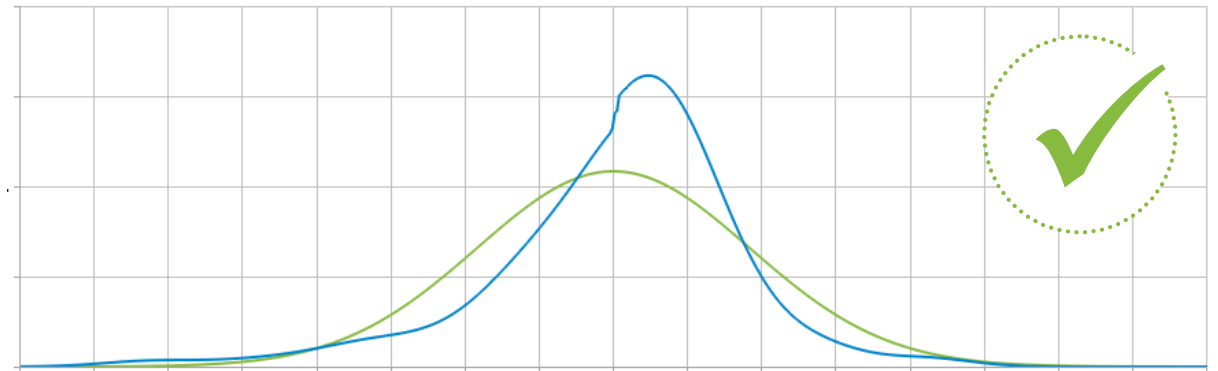


Non-normal distributions

Tail correlations monthly returns US equities – HY credits

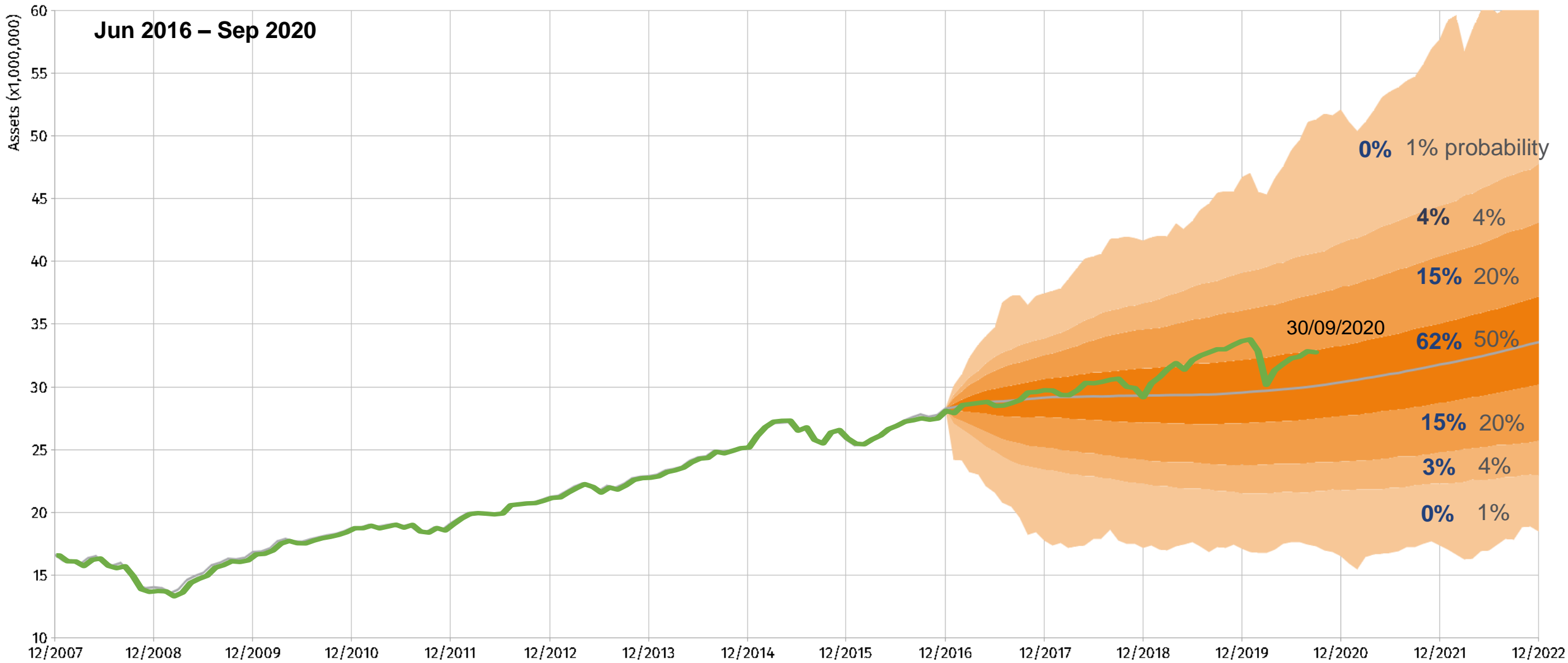


Monthly equity return distributions



Tail risk

Monthly asset value and risk for a typical investment strategy of a European Asset Owner as of 2016





1. Traditional
financial risk drivers

2. Non-traditional risk
drivers



Climate change: impact on the economy

1

Climate-related risks are **systemic** and therefore **unhedgeable**.

2

Investors face both **Transitional and Physical risks** related to climate change

3

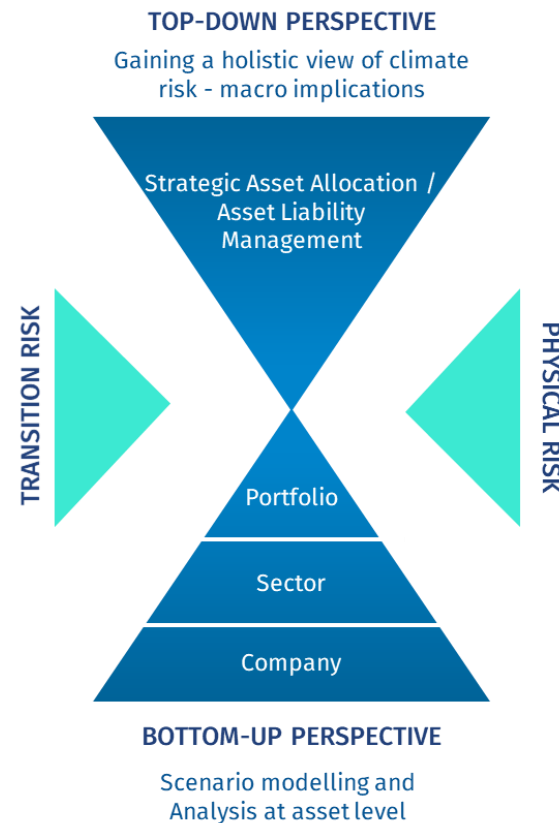
Climate change will fundamentally impact how the **economy performs** as a whole.

4

'**Stock-picking**' is **insufficient** to manage systemic risk.

5

Therefore, taking climate change into account as a **risk driver** in your **strategic investment decision-making** is crucial.





HOME

EIOPA consults on the supervision of the use of climate change scenarios in ORSA

NEWS | DATE: 05 Oct 2020



Today, the European Insurance and Occupational Pensions Authority (EIOPA) published a consultation on the use of climate change risk scenarios in the Own Risk and Solvency Assessment (ORSA) in the form of a draft supervisory Opinion.

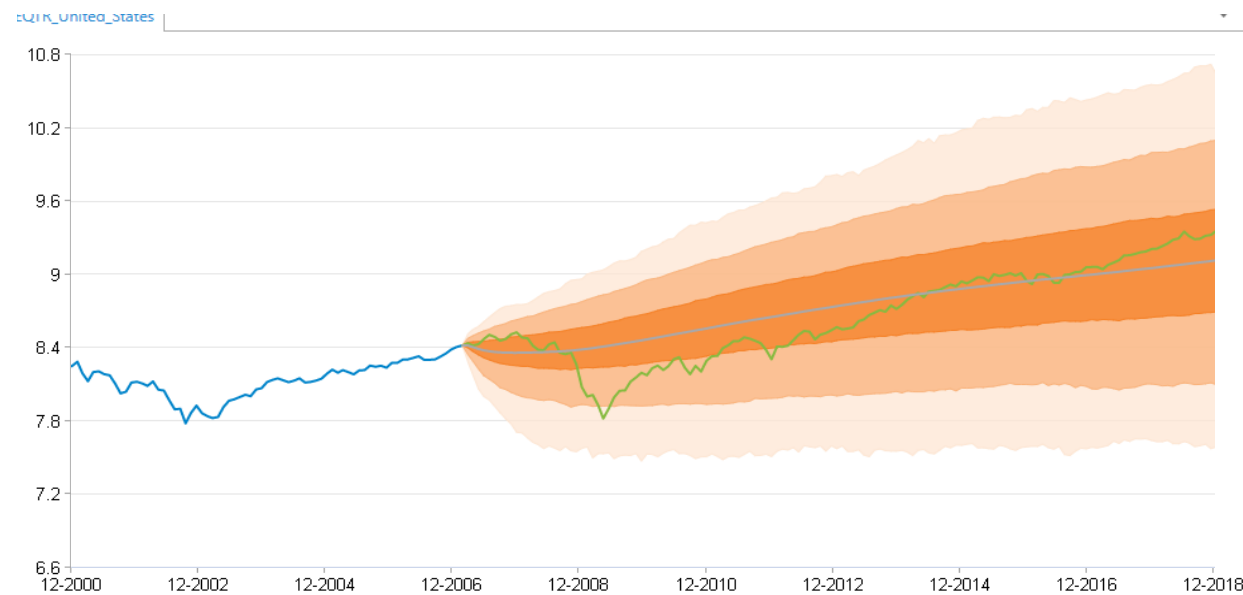
In EIOPA's view, it is essential to foster a forward-looking management of climate change-related

https://www.eiopa.europa.eu/content/eiopa-consults-supervision-use-climate-change-scenarios-orsa_en

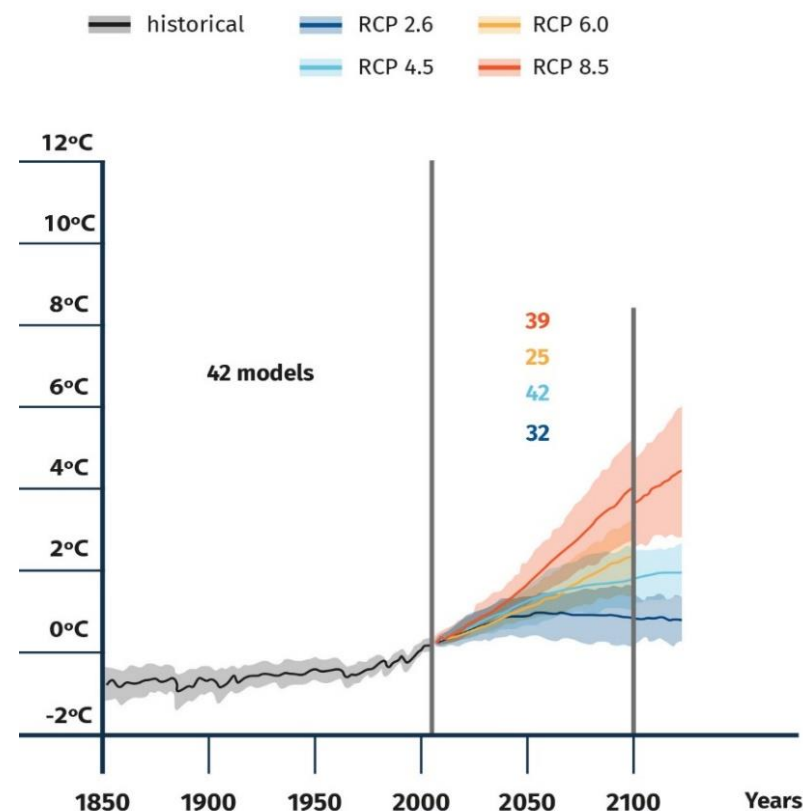


Modeling the systemic economic impact of climate change

Traditional Real World Economic and Financial Scenarios

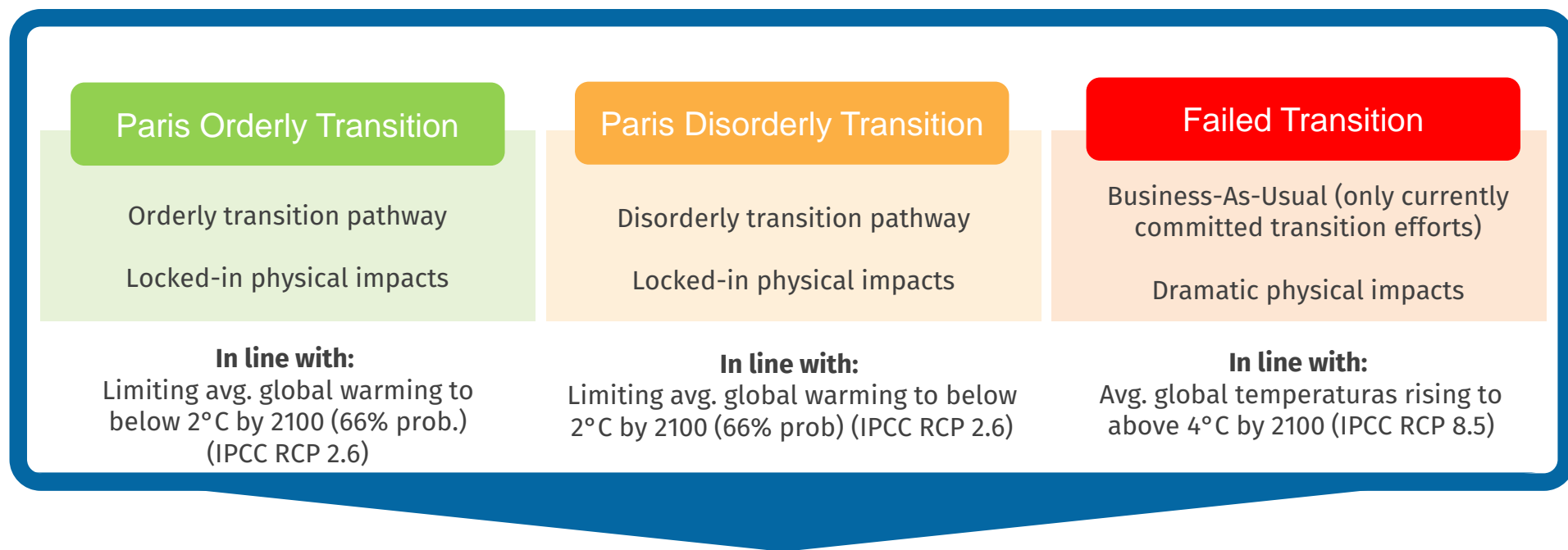


Scientific climate scenarios





Global warming pathways

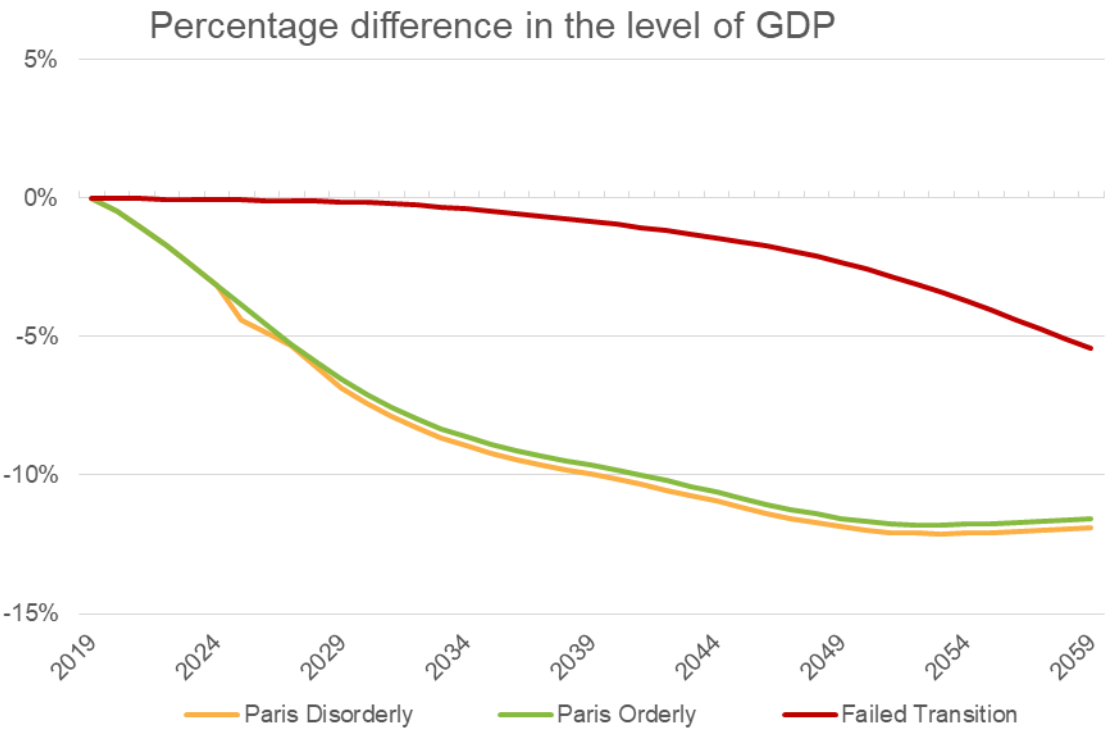




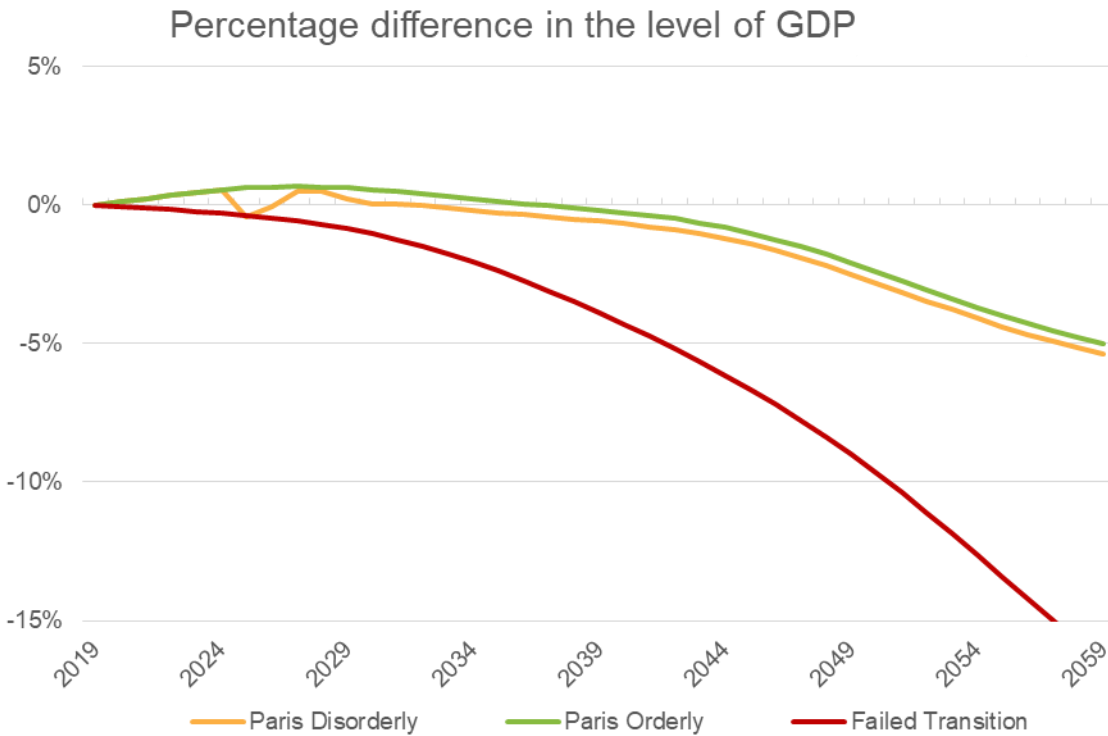
Systemic Climate Risk Scenarios

Climate-adjusted GDP growth
(cumulative difference to climate-uninformed baseline)

Region A



Region B





Systemic Climate Risk Scenarios

Systemic Climate Risk – Aware Scenarios Sets

1.5°C

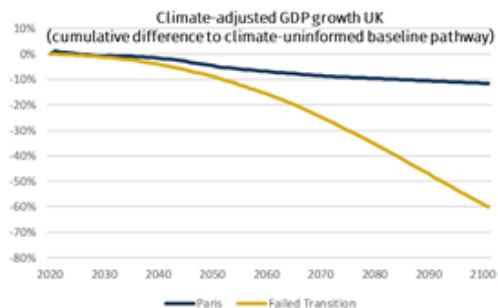
2°C

4+°C

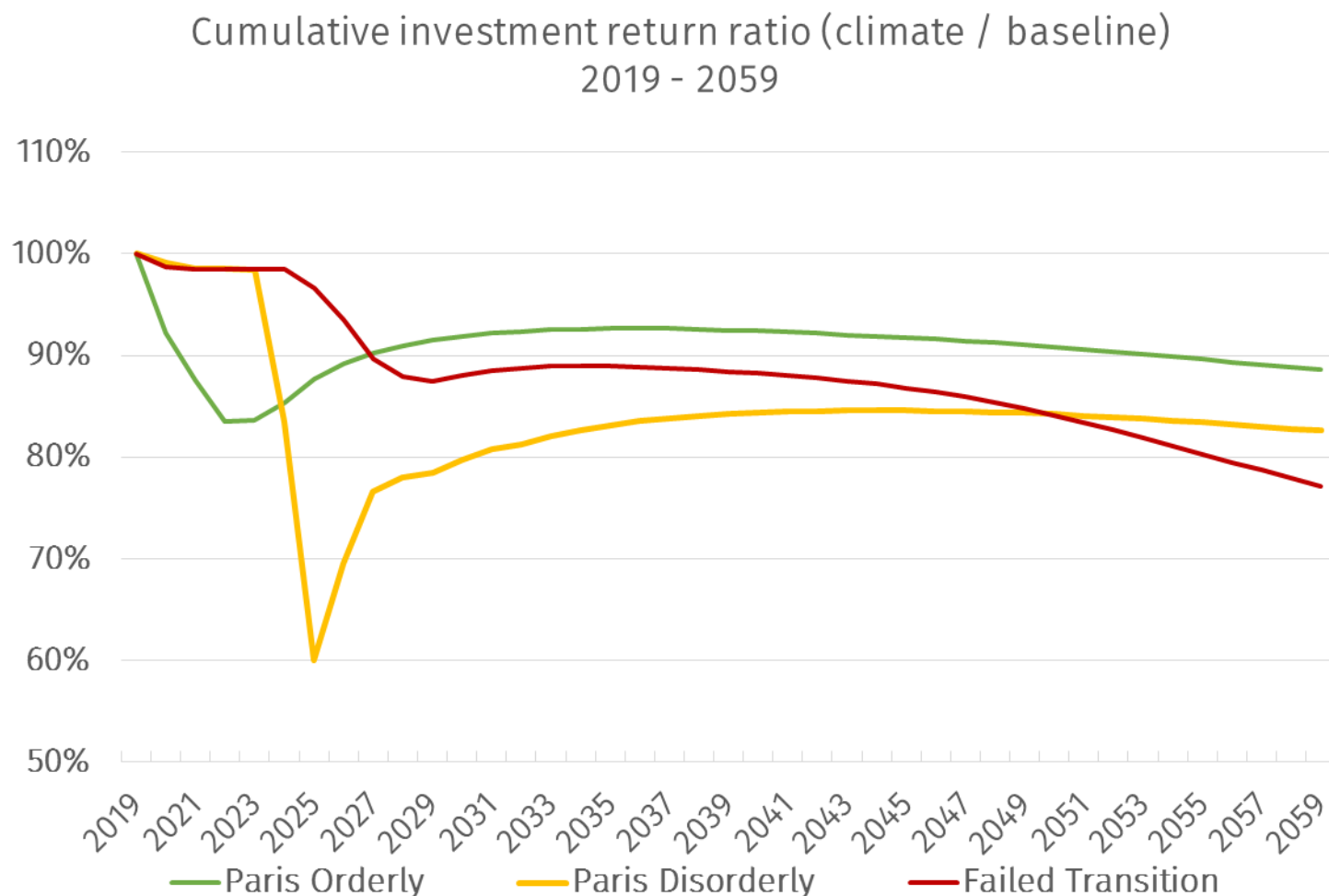
Model OUTPUT = climate-adjusted growth expectations & pricing-in dynamics up to 2060 (annual timesteps) for ...

1. Economic variables

- ✓ GDP
- ✓ Inflation
- ✓ Interest Rates



The impact of on the expected return of your investment portfolio or balance sheet





Key applications for insurance companies

Climate-aware risk management for SAA & ALM:

exploring impacts on strategic asset allocation from a holistic balance sheet framework

Climate-aware risk management for ORSA:

Assessing financial impact and materiality of climate change on different asset classes within portfolio

Fulfilling forward-looking scenario-based analysis in line with disclosure recommendations, such as **TCFD, UN PRI, EU Sustainable Finance Action Plan**

Strategic governance framework for climate action based on climate-aware ALM/SAA



Are you ready?

**Sustainable economic capital generation in
times of COVID-19 and a changing climate**



Thank you

Our clients

- Over 500 clients in Northern Europe, North America, UK, Southeast Asia and Australia
 - Pension funds and providers
 - Insurance companies
 - Sovereign Wealth Funds
 - Banks and Financial Advisors
 - Asset managers
 - Housing associations and municipalities (NL)
- 96% retention rate
- 3 trillion euro total assets managed by our clients

North America



Asia/Pacific



Our core values

Long-term relationships

We strive for and invest in **long-term relationships** with our clients. This not only helps us to retain our knowledge and experience within the company, but also to work with our clients in a sustainable way to reach their objectives.

Personal initiative and helping each other

We encourage our staff to show **personal initiative** and **help each other** to be successful in their endeavours.

Belief in models

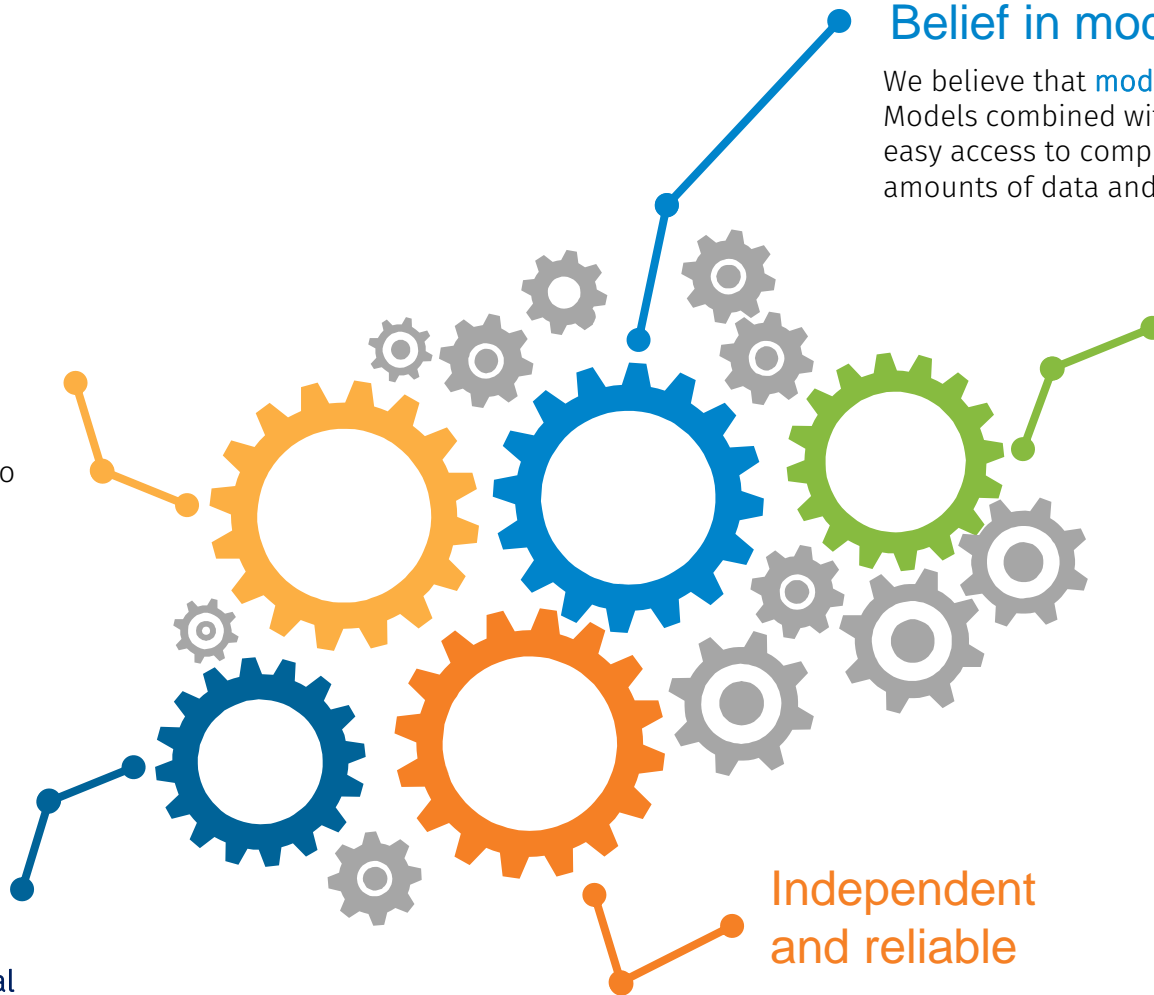
We believe that **models** improve decision-making. Models combined with software technology provide easy access to complex knowledge, based on vast amounts of data and experiences.

Continuous innovation

No matter what we have achieved, we always strive to do better. We **continuously improve our models**, our solutions and our way of working.

Independent and reliable

We are an **independent** and **reliable partner** for our clients. We avoid conflicts of interest, deliver what we promise, supported by the integrity which serves as our guiding compass in everything we do.

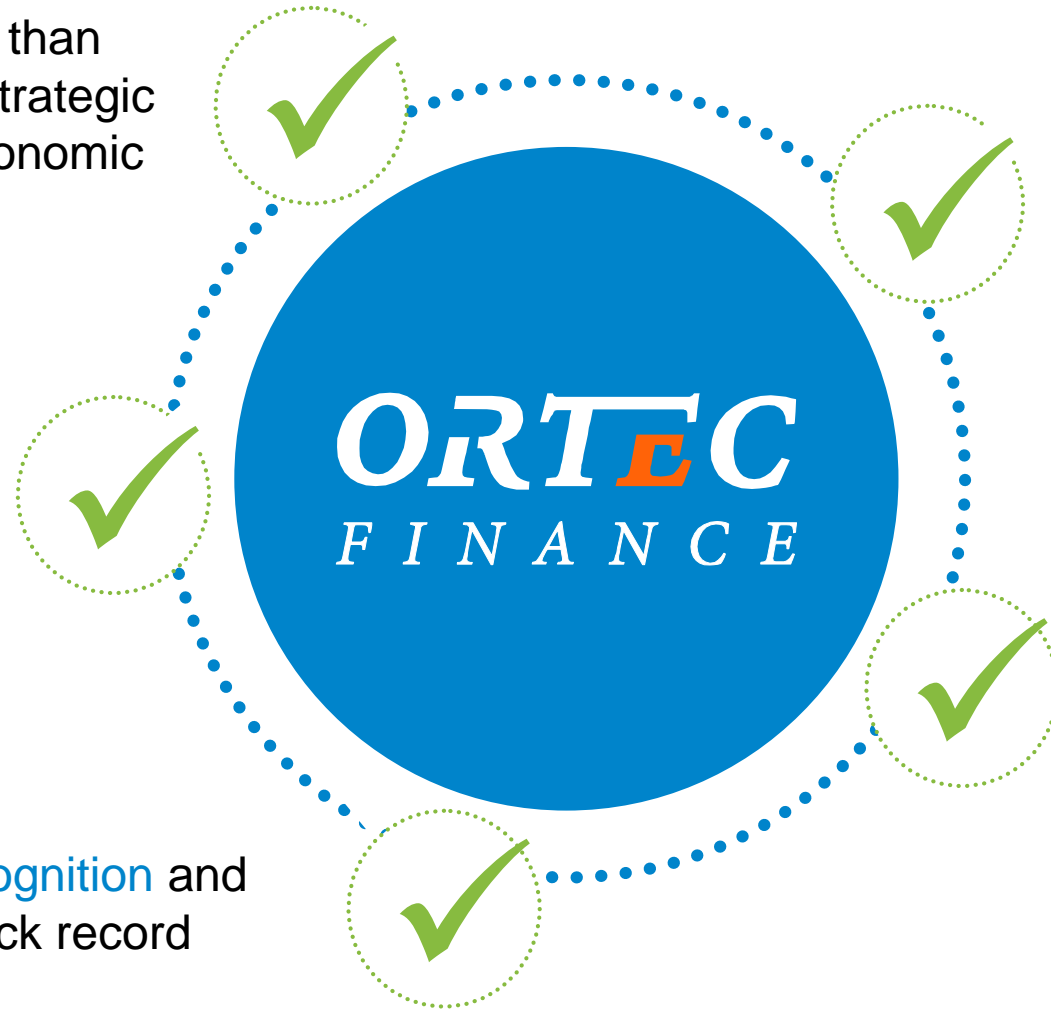


Why Ortec Finance?

Solutions based on more than
35 years of expertise in strategic
risk management and economic
scenario generation

Dedicated team of
300 business specialists
guarantees practical
solutions and client centric
approach

Industry recognition and
excellent track record



Our own research center and
strong ties with the academic
community, regulators and
practitioners ensure **we lead
in innovation**

Our **global client base**
guarantees we are engaged
in latest developments

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