



WEBINAR: APRIL 28TH - 12 PM (CET)

Beating the benchmarks in returns & ESG



Agenda

- This is **InvestSuite**
- Explain how **iVaR**, a fourth generation measure of risk, addresses the shortcomings of traditional risk measures.
- Elaborate on the importance of ESG for investment managers and how InvestSuite can help in constructing **customised ESG scores**.
- Demonstrate how **Portfolio Optimizer** can create portfolios with improved ESG metrics and at the same time optimise portfolio performance, all while maintaining your investment strategy.
- Provide **evidence of the approach** via a live demo and different backtests.

InvestSuite

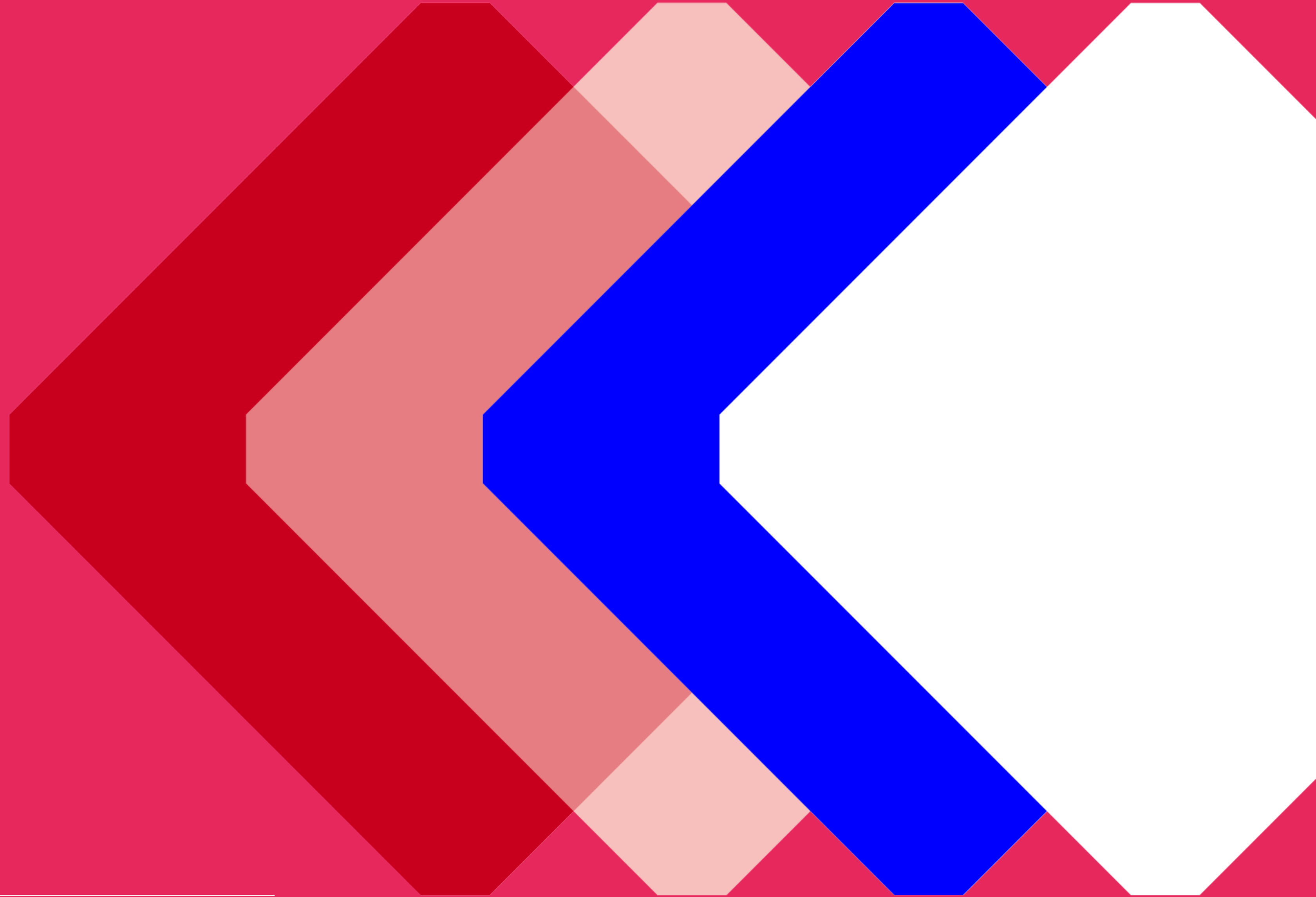
INVESTTECH-AS-A-SERVICE

A PURE B2B PLAYER

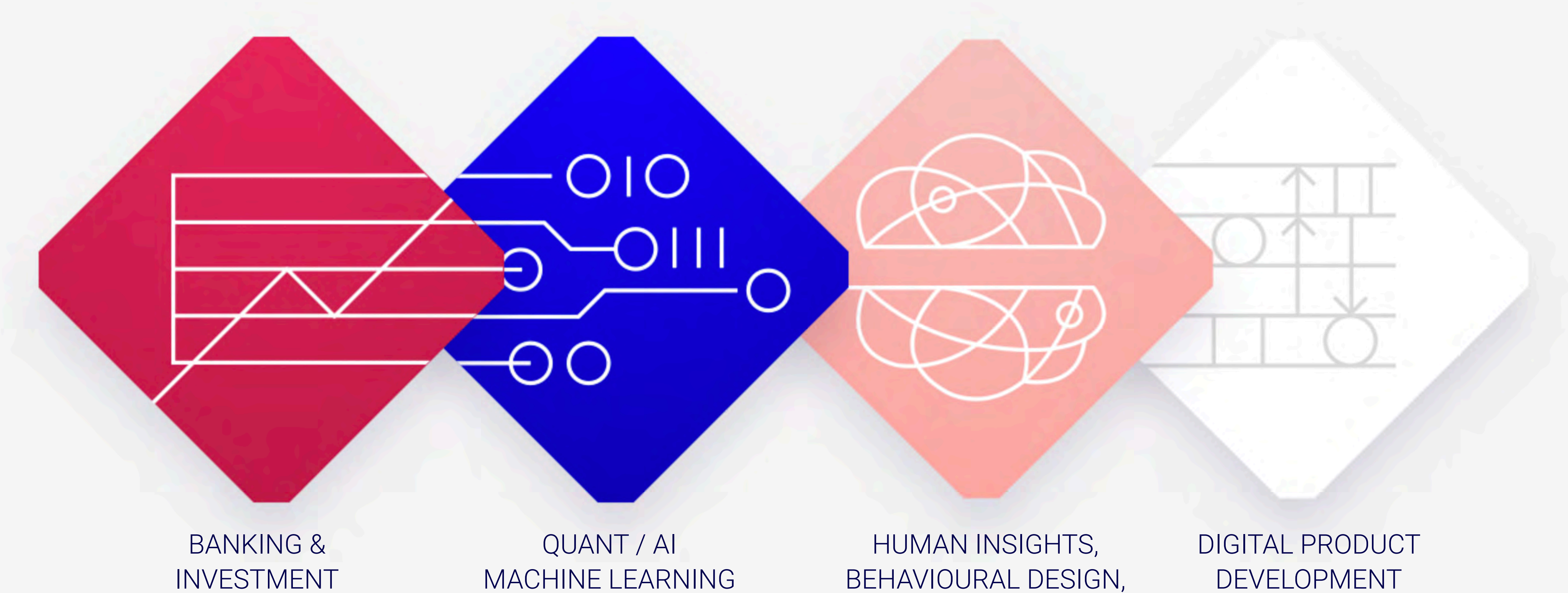


JOYCE CHOU
WEALTHTECH SPECIALIST

April 28th 2021



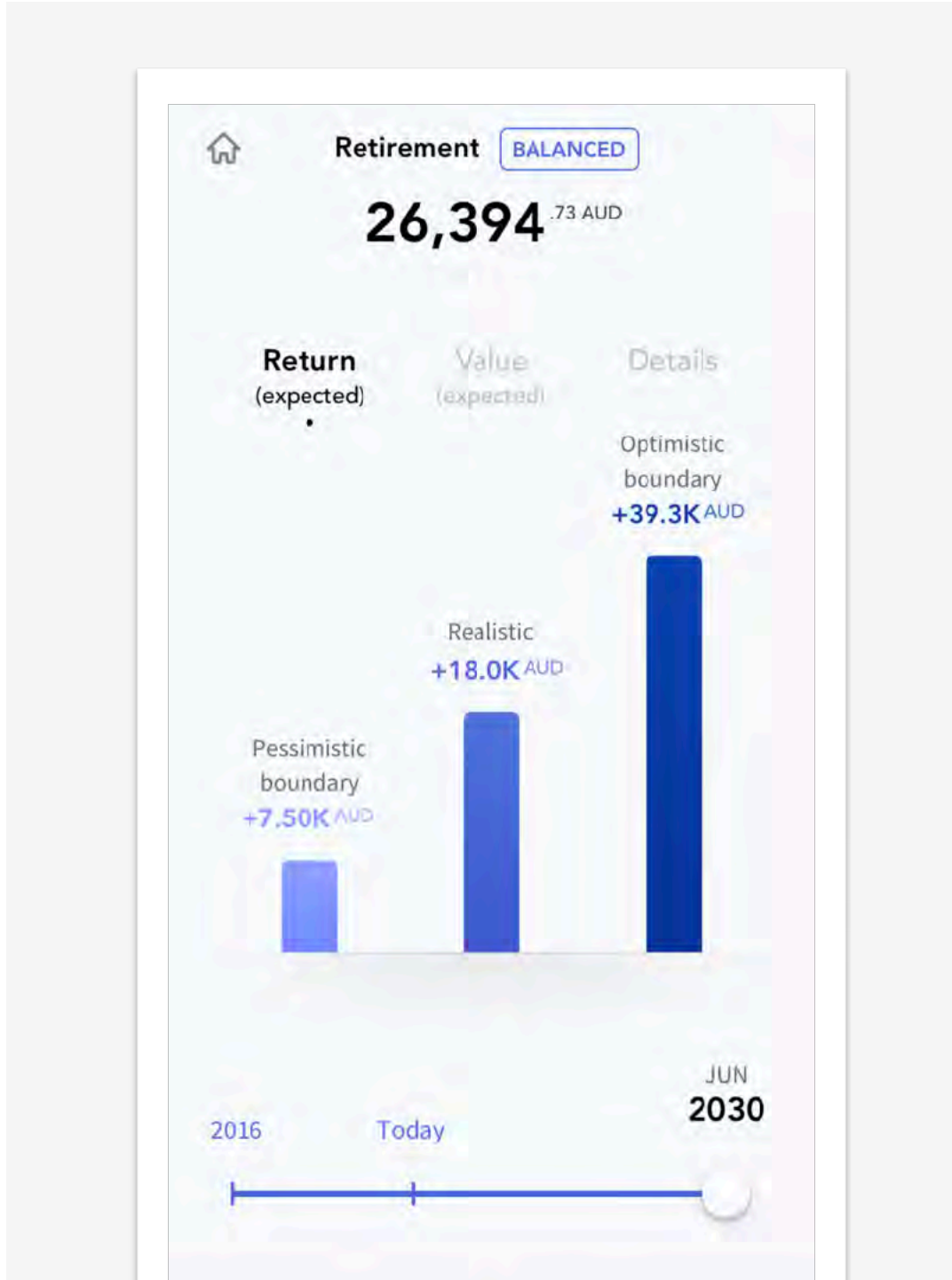
WE COMBINE EXTREME LEFT / RIGHT BRAIN SKILL SETS



Our Mission

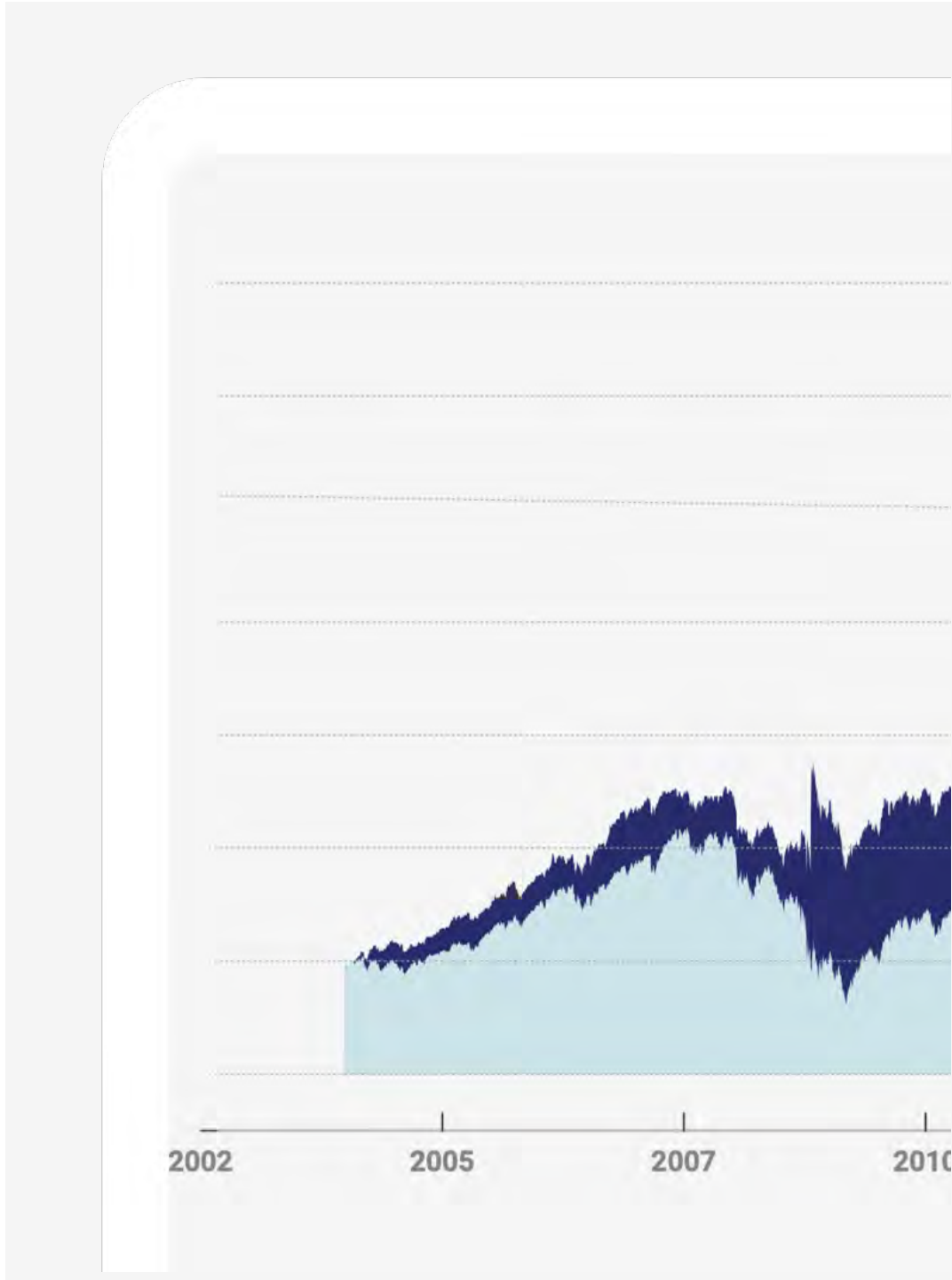
**To help financial institutions realise their
digital wealth transformation journeys**

OUR PRODUCT SUITE



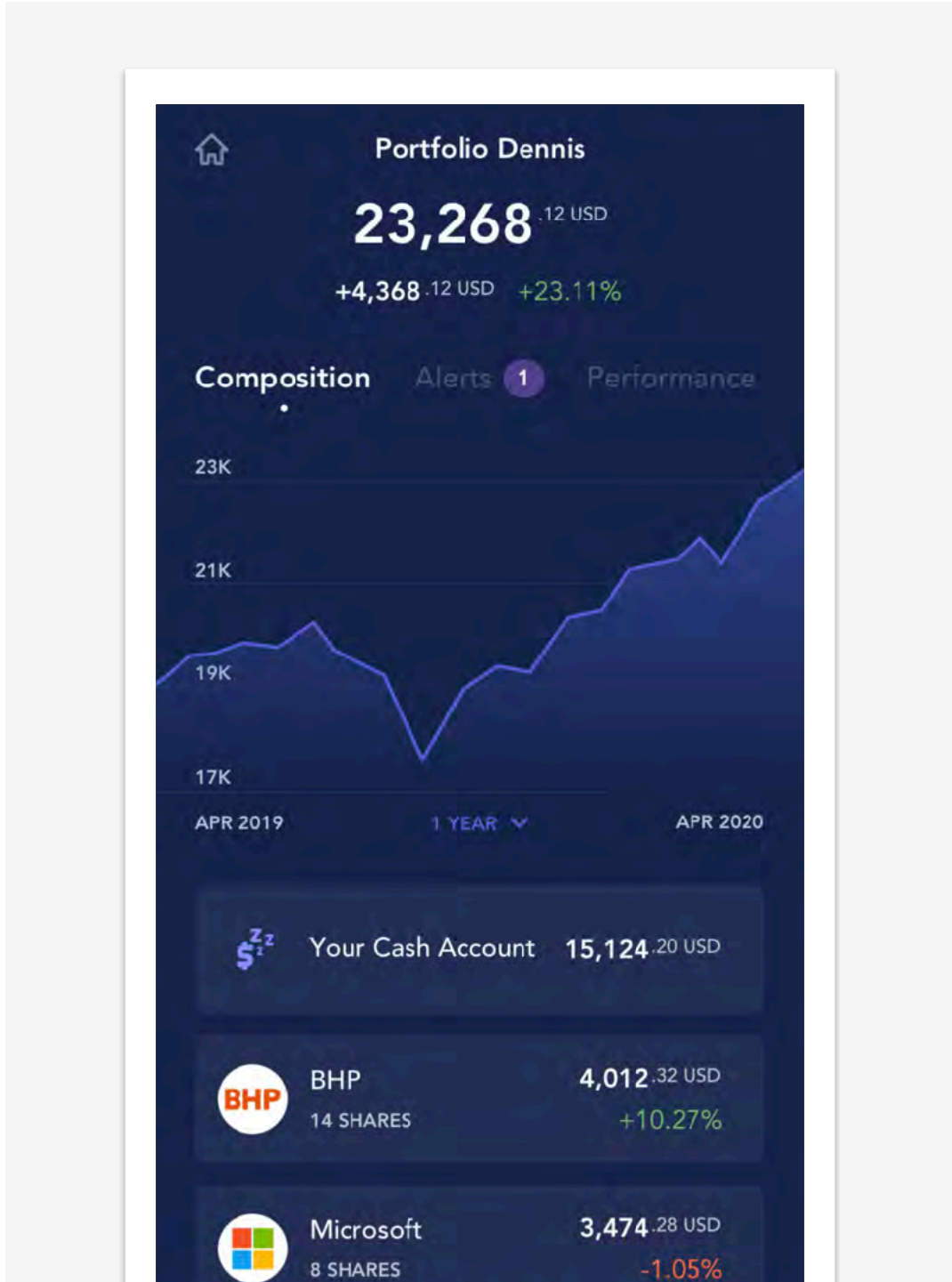
Robo Advisor

A low-cost, customisable digital wealth management tool that delivers hyper-personalised portfolios for goal-based investing.



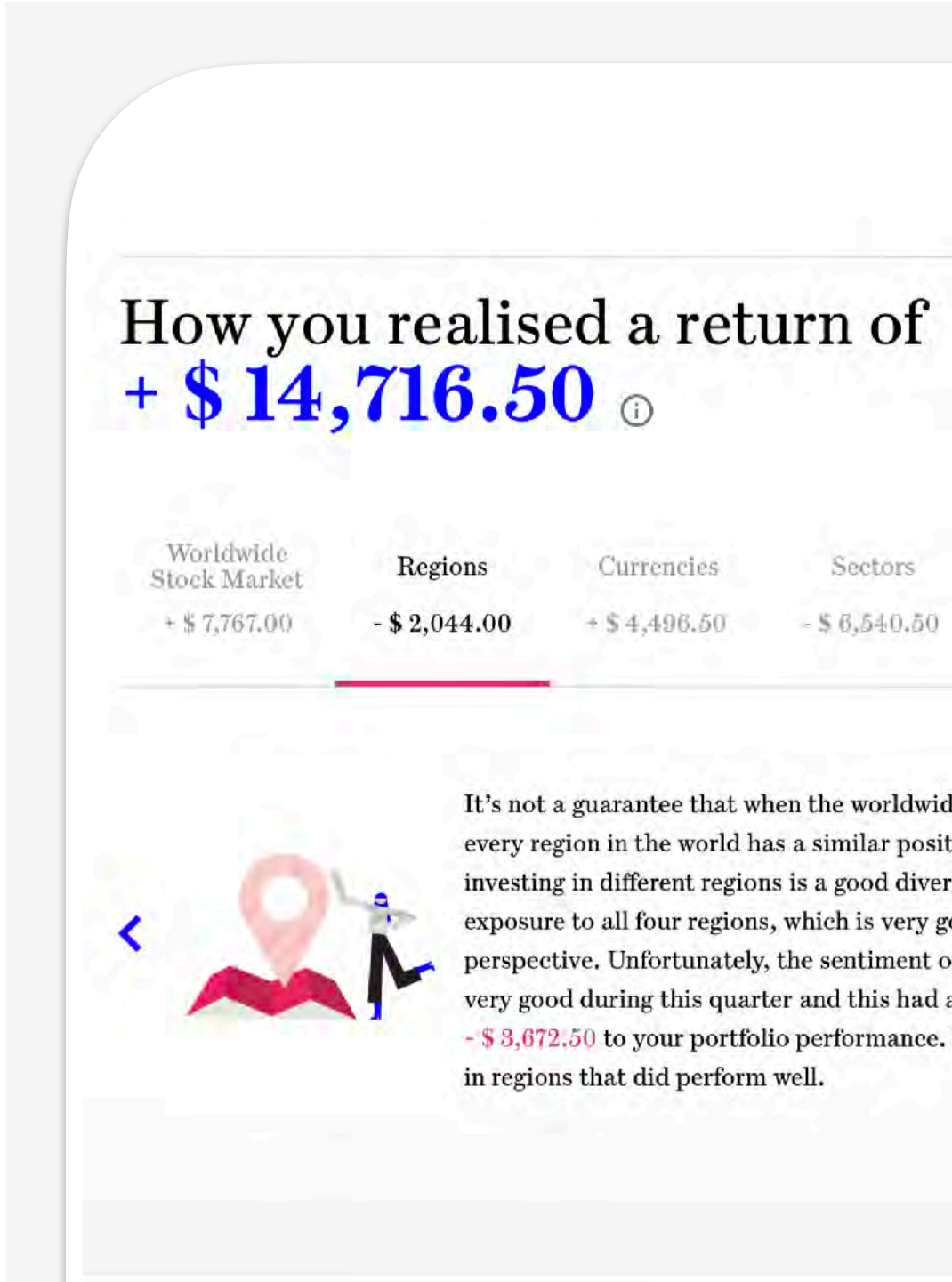
Portfolio Optimizer

Next-generation quant tools that provide cost-effective solutions for more efficient portfolio management



Self Investor

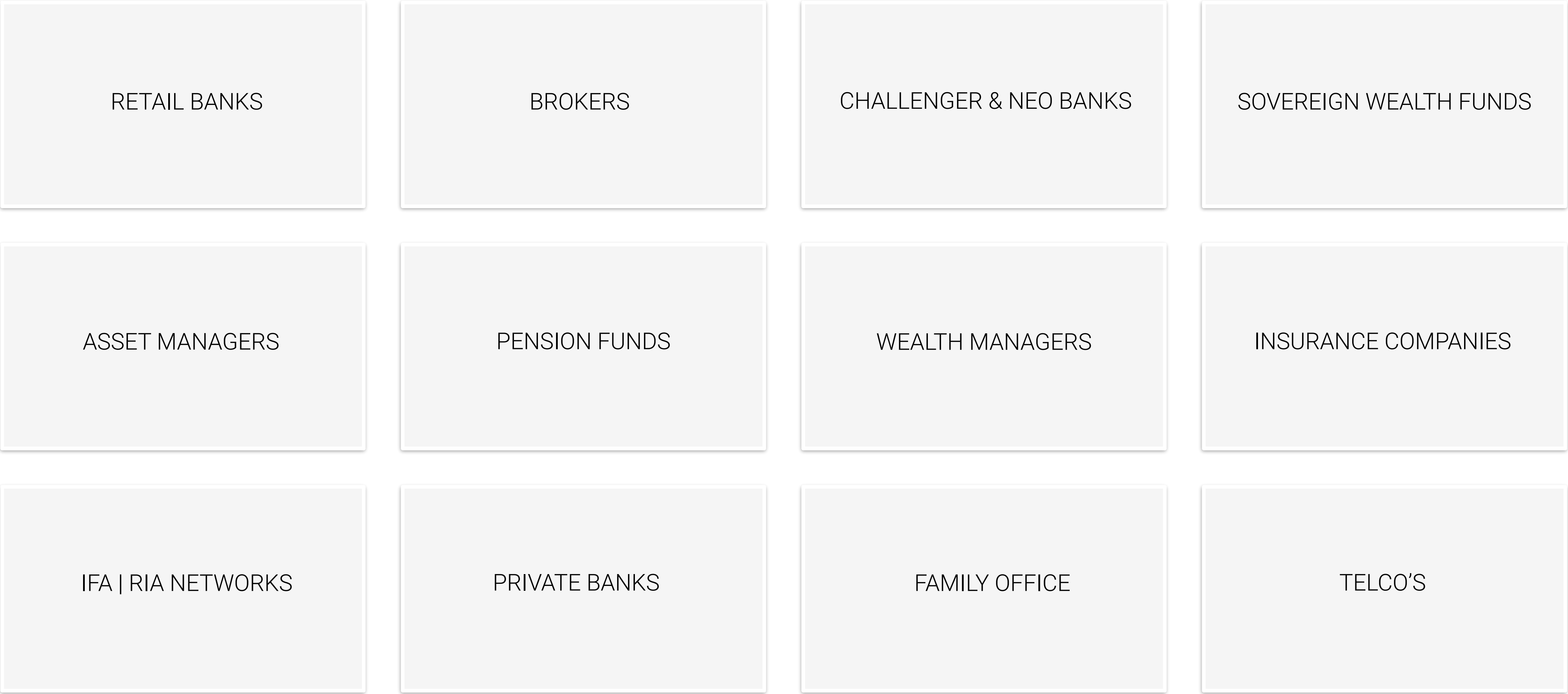
A best-in-class powerful white-label execution-only platform for easy investing.



StoryTeller

A worldwide first new way to tell the story of portfolio performance

CLIENTS



InvestSuite

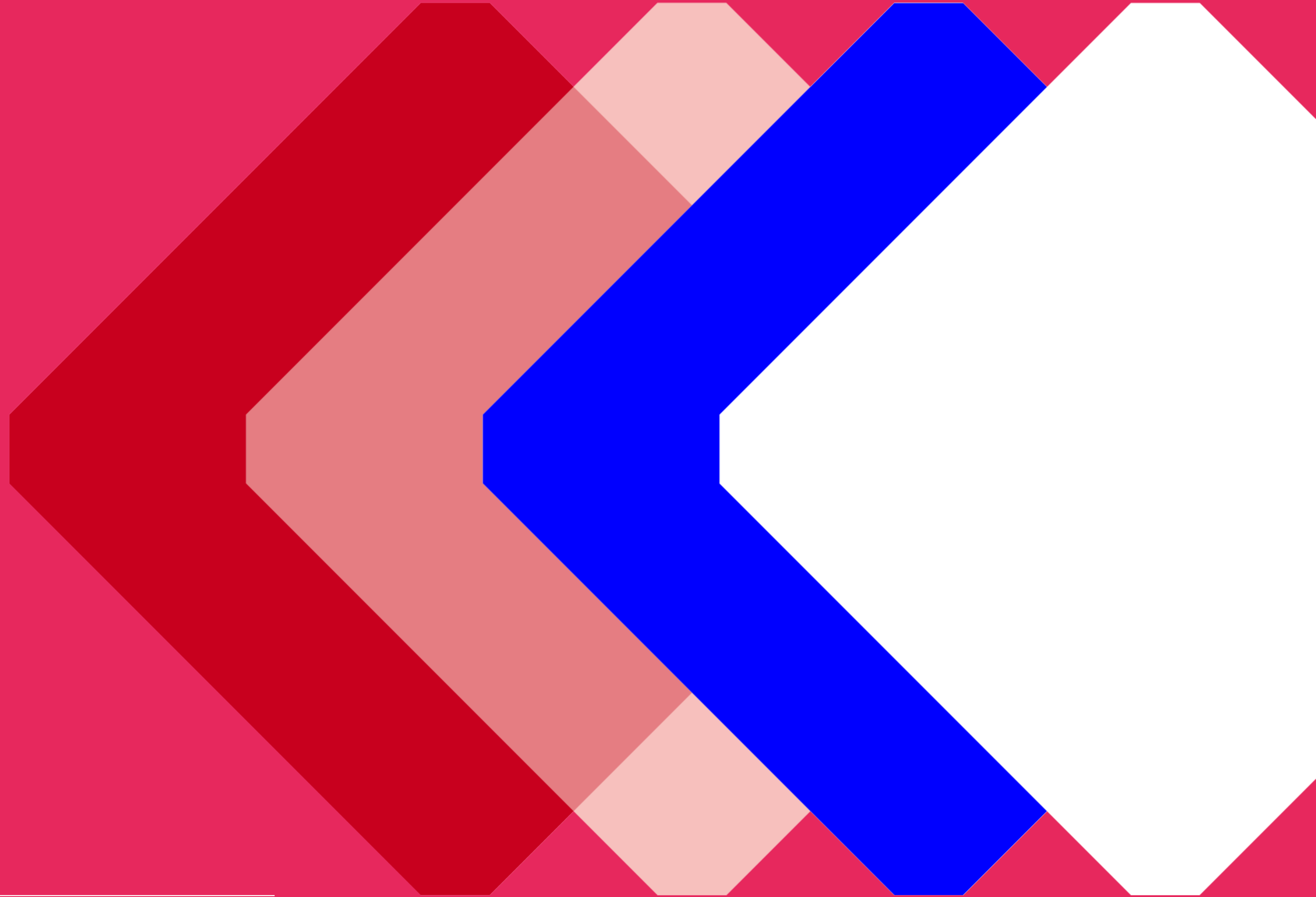
iVaR & ESG

EMBRACING THE HUMAN
PERCEPTION OF RISK & ESG



EMMANUEL WILDIERS
HEAD OF R&D

April 28th 2021



RISK MEASURES IN INVESTMENT MANAGEMENT



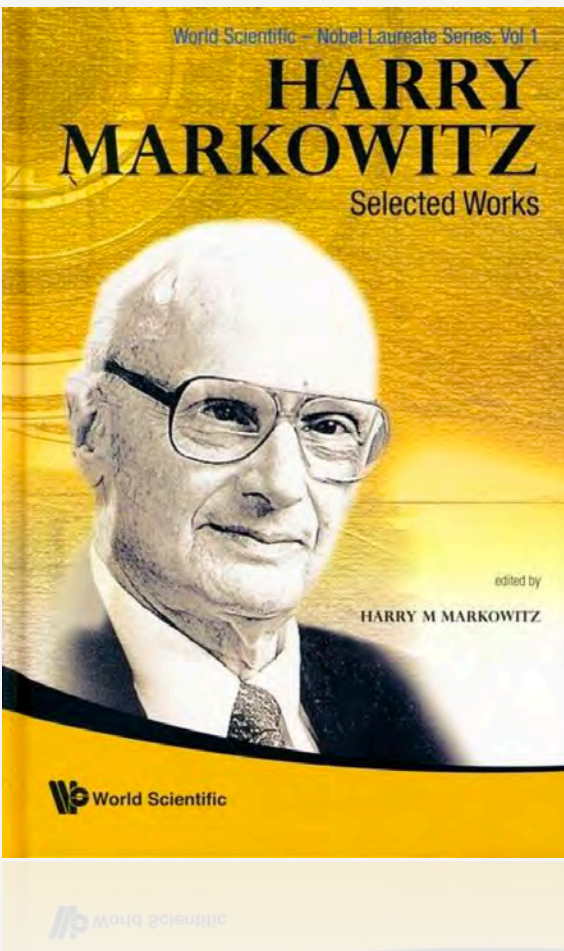
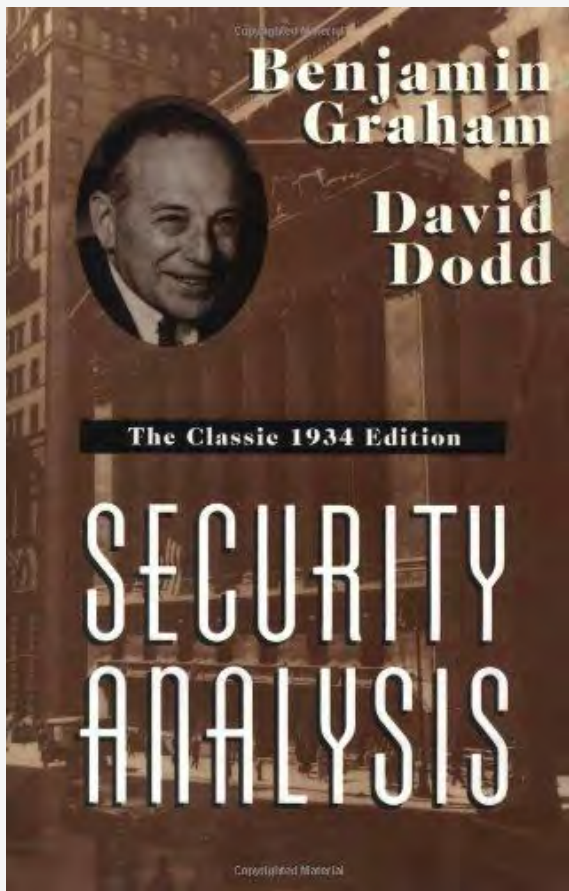
Head of Research & Development

- ▶ Senior Quantitative Equity Portfolio Manager at Schroders
- ▶ Vice President at Northern Trust Asset Management
- ▶ Head of Portfolio Construction and Head of Quantitative Equity Strategies at KBC Asset Management
- ▶ MSc Electrotechnical Engineering, KU Leuven
- ▶ CFA Charterholder; CAIA Charterholder

AGENDA

- How investment objectives evolved over time
- Portfolio Risk
 - From standard deviation of returns to a human-centric loss measure
- ESG Integration
 - From inconsistent scores to a fully tailored approach

A SHORT HISTORY OF INVESTMENT PHILOSOPHY



FIRST SCIENTIFIC FRAMEWORK
FOR INVESTMENT ANALYSIS

FIRST SCIENTIFIC FRAMEWORK
FOR PORTFOLIO RISK AND DIVERSIFICATION

FIRST LARGE-SCALE FRAMEWORK FOR
ESG INVESTING



Next-generation, hyper-personalised and human-centric approach



PORTFOLIO RISK MEASURES - VOLATILITY

Advantages

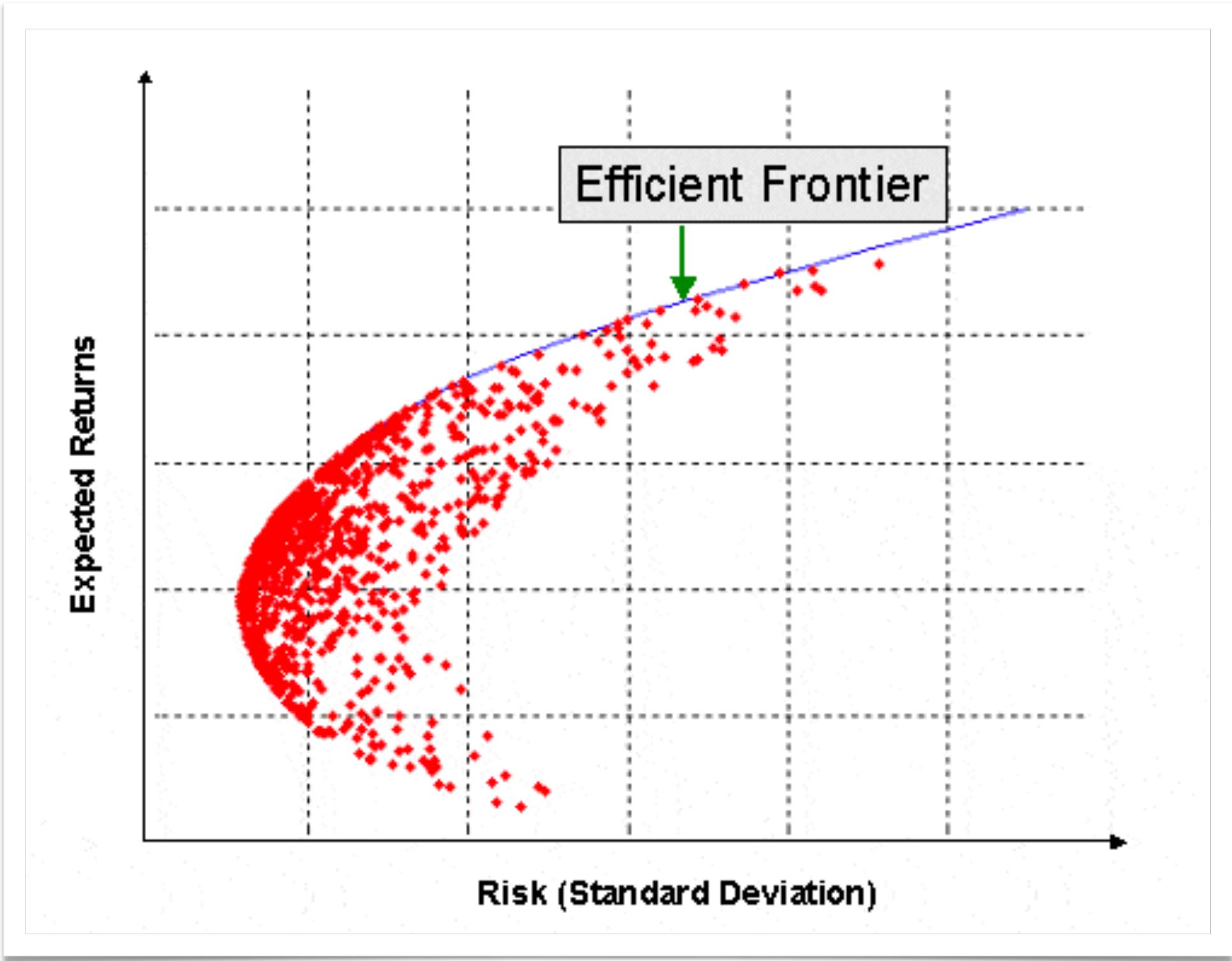
- Results in closed form equations
- Markowitz had an efficient quadratic solver

Disadvantages

- Doesn't match how investors perceive risk
- Doesn't match how asset prices actually behave

	STRATEGY 1	STRATEGY 2	STRATEGY 3
Year 1	-10%	10%	10%
Year 2	-10%	10%	10%
Year 3	-10%	15%	250%
Volatility	0%	3%	139%

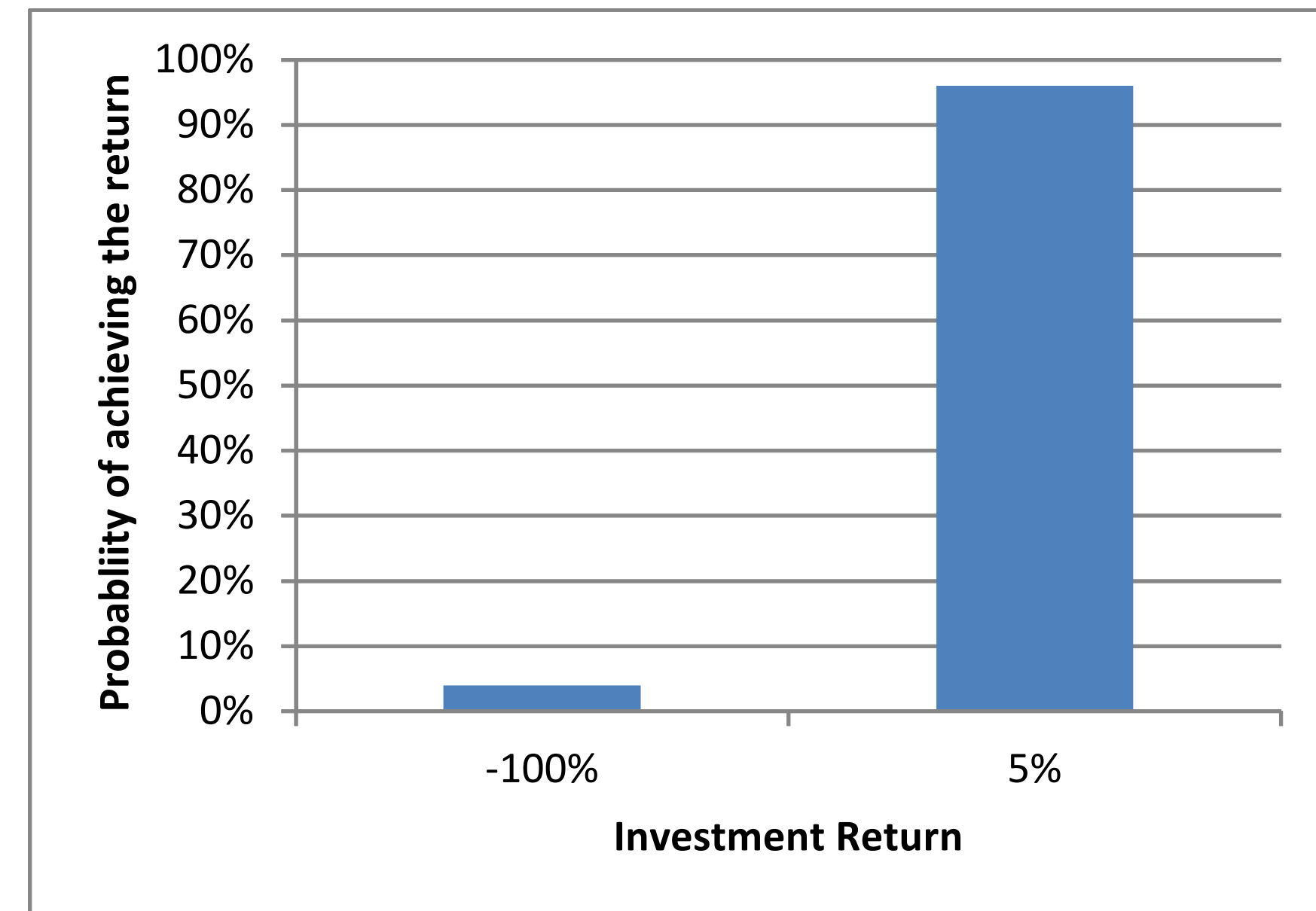
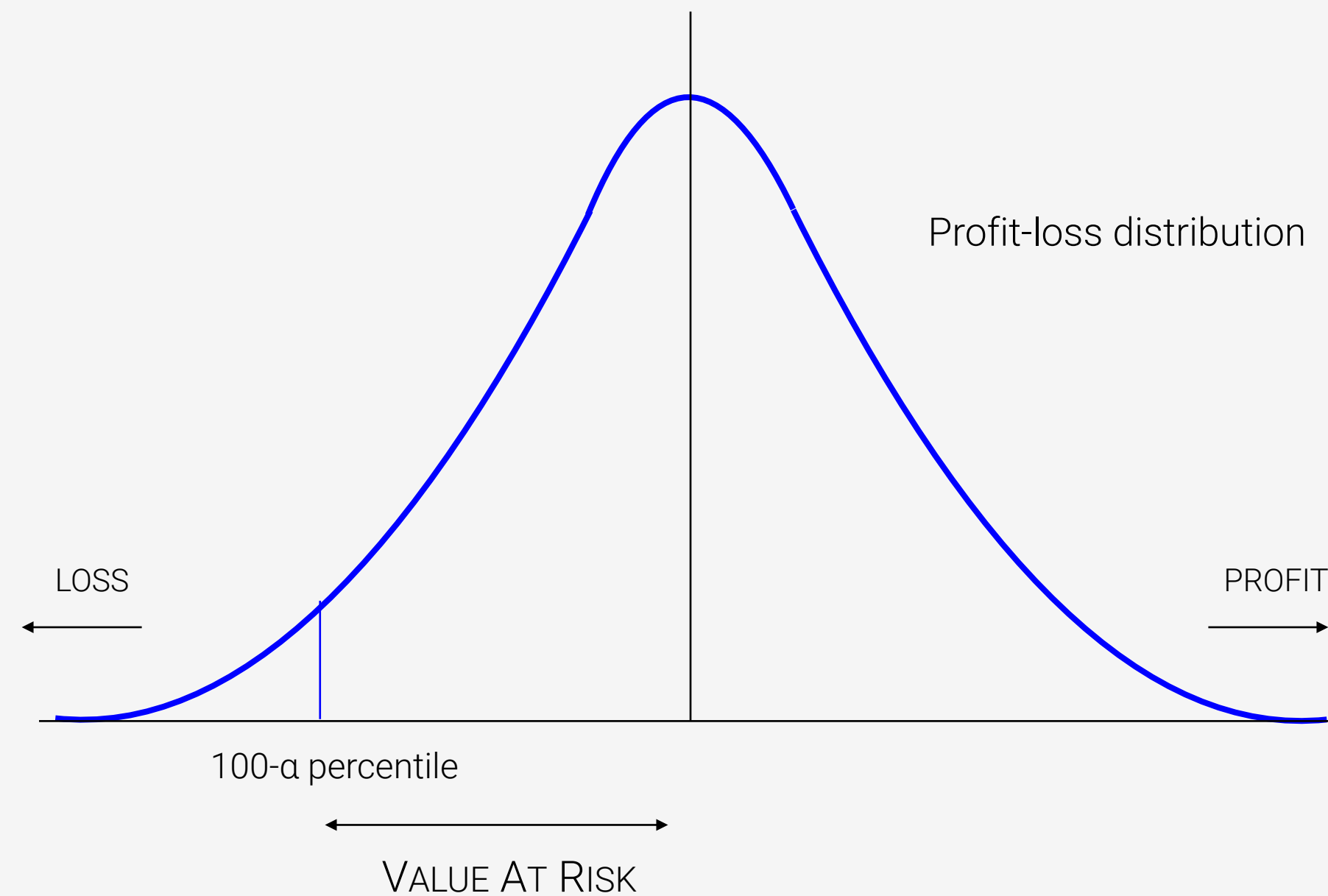
Modern Portfolio Theory



PORTFOLIO RISK MEASURES - VALUE AT RISK

Value at Risk = loss (over a certain period) that will be exceeded only with a probability of $\alpha\%$

= "least bad of the bad scenarios"



Portfolio of 1 bond with 5% coupon and 4% default probability

$$\text{VAR}_{95\%} = 0$$

Portfolio of 2 such uncorrelated bonds

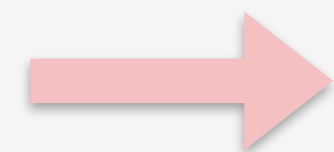
$$\text{VAR}_{95\%} = -50\%$$

PORTFOLIO RISK MEASURES - COHERENT RISK MEASURES

Framework that defines properties of good risk measure

MONOTONICITY

If portfolio A has better returns than portfolio B under all circumstances, its risk should be lower.



Volatility violates this
as it penalises large positive returns

SUBADDITIVITY

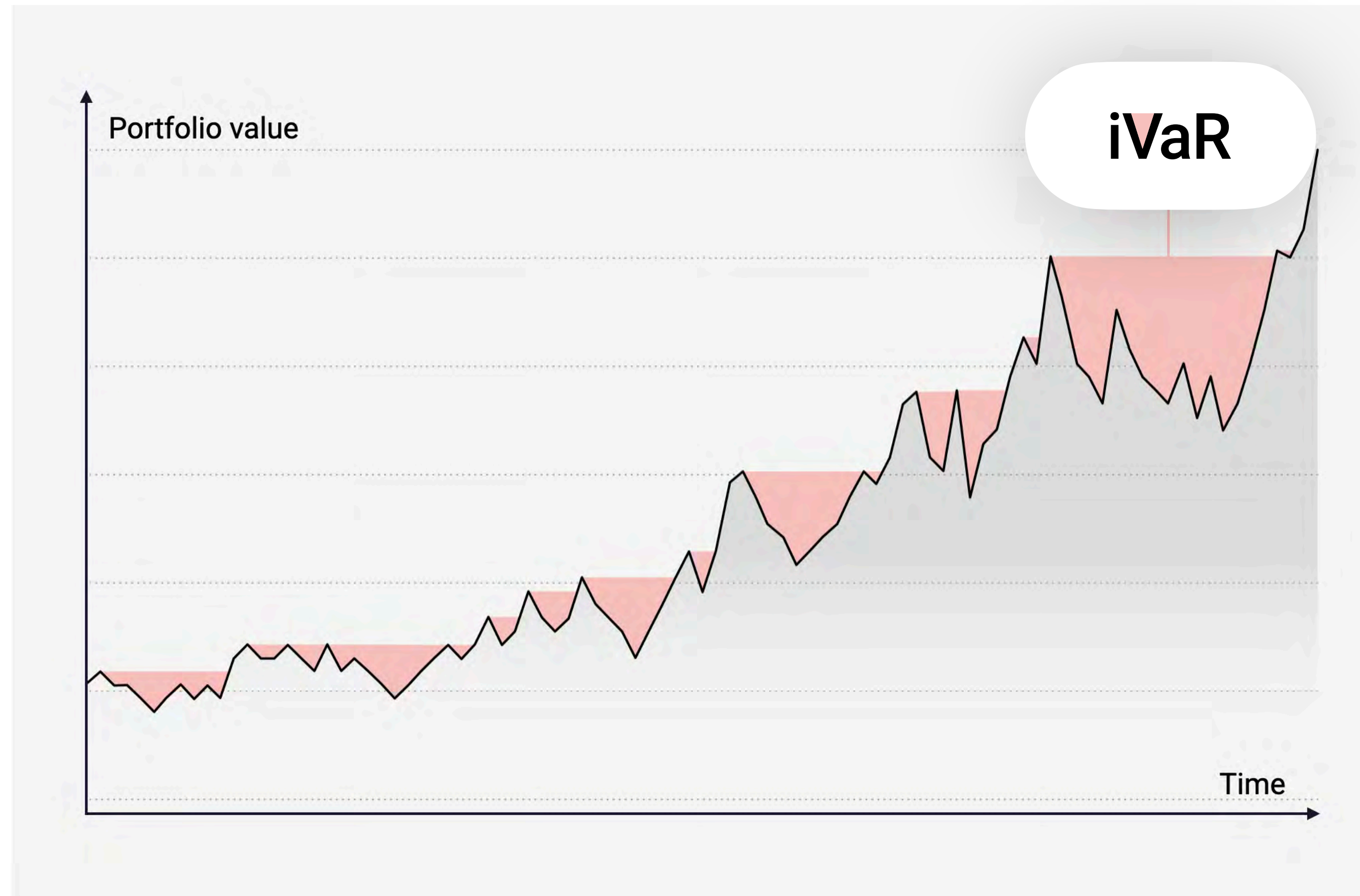
Risk of a diversified portfolio should always be lower than or equal to the weighted average of the standalone risks of its assets



Value at Risk violates this (see previous slide)

Artzner, Ph., F. Delbaen, J.-M. Eber, and D. Heath (1997), Thinking Coherently, RISK 10, November, 68–71.

PORTFOLIO RISK MEASURES - INVESTSUITE VALUE AT RISK (IVAR)



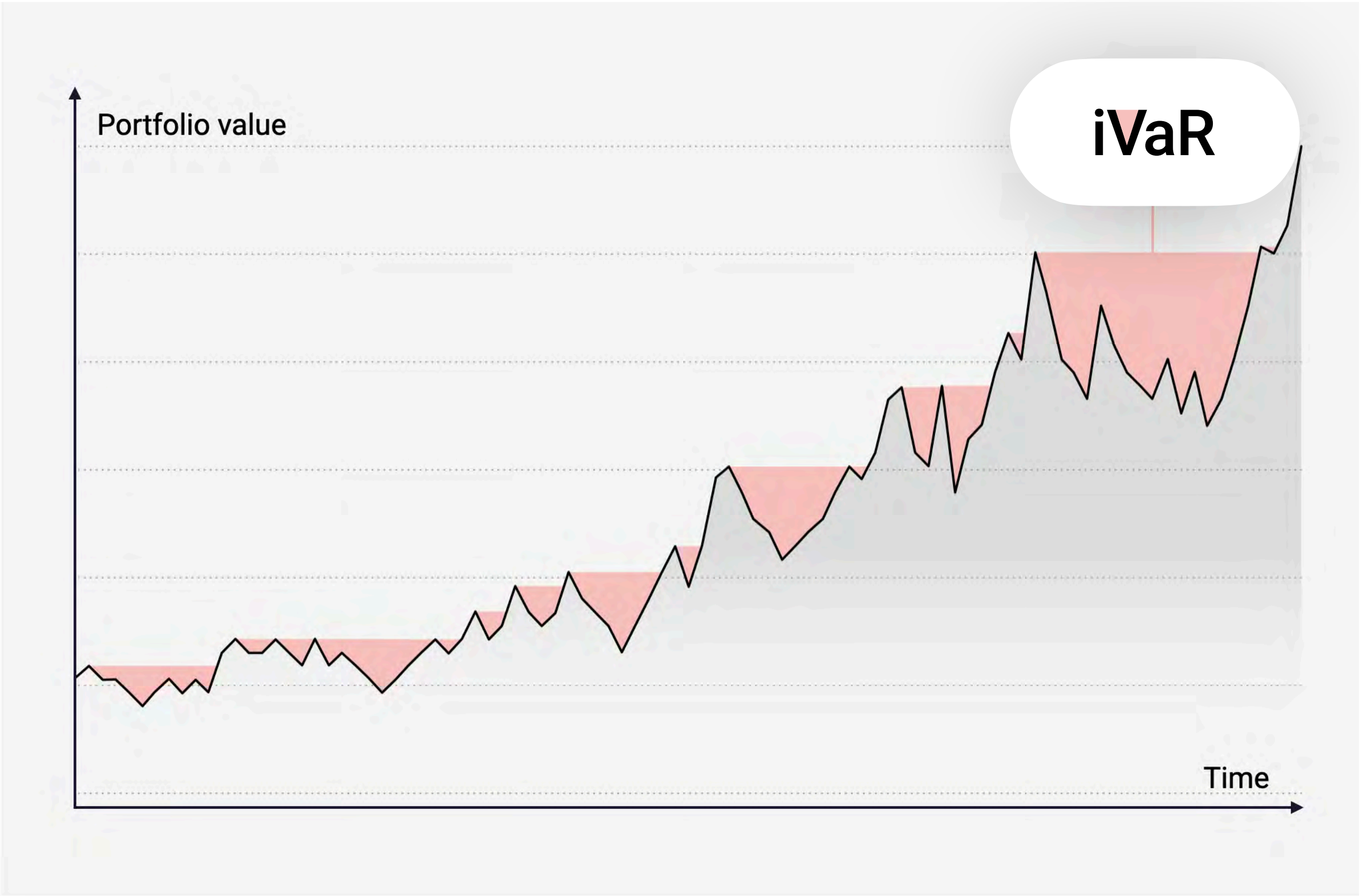
A coherent risk measure that combines 3 drawdown properties:

Frequency: how often drawdowns occur

Depth: maximum loss

Width: time to recovery

PORTFOLIO RISK MEASURES - INVESTSUITE VALUE AT RISK (IVAR)



Matches what investors intuitively perceive as risk

Deviation from "riskless" savings account behaviour

Deviation defined as integral between curves

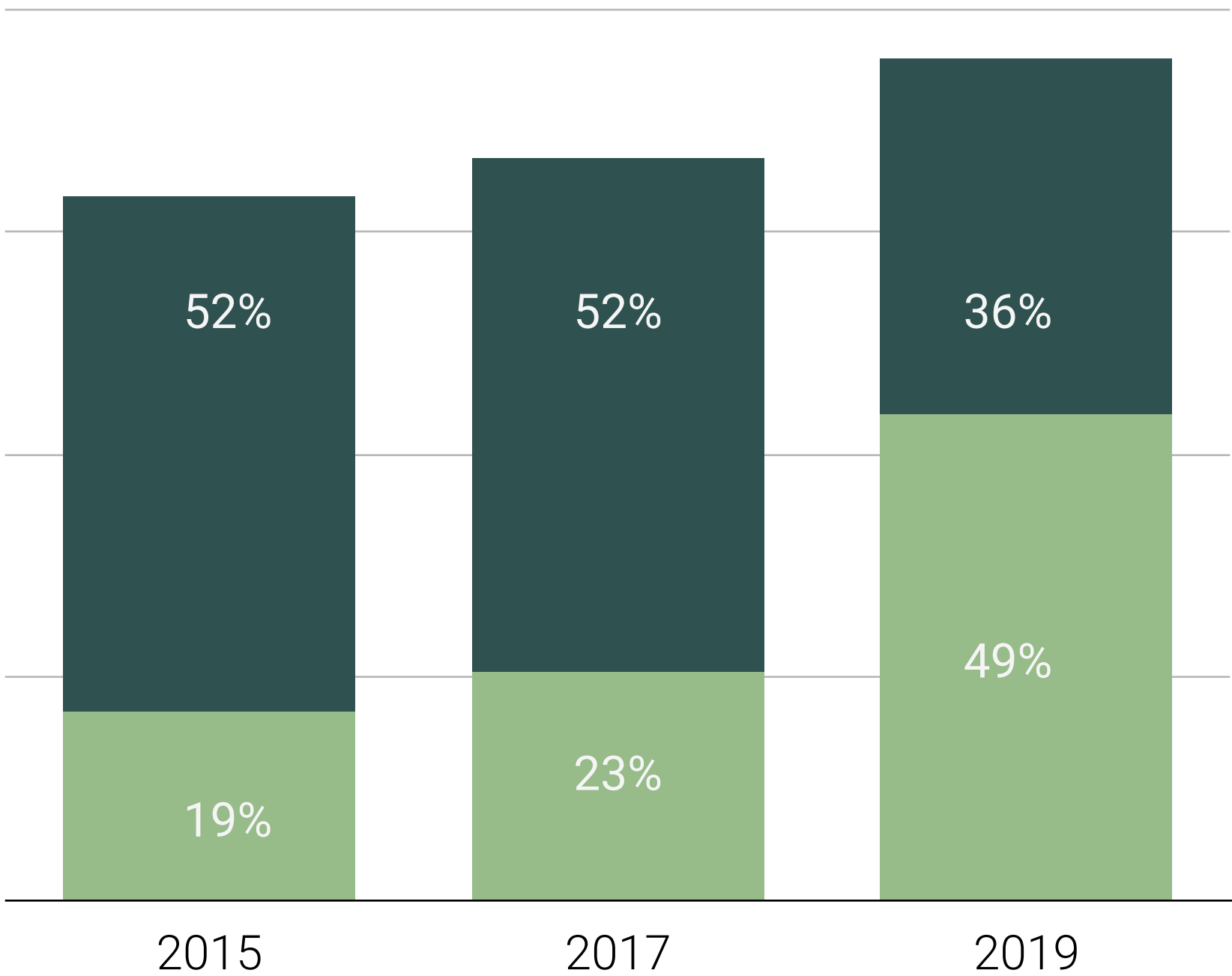
ESG: SHORT INTRODUCTION



Source: <https://www.ecoadvisors.eu/what-is-esg/>



According to a Morgan Stanley poll, **85%** of investors expressed an interest in sustainable investing — **up from 71% in 2015***



Very Interested
Somewhat Interested

Source: Morgan Stanley. Data as of November 2019

ESG - RATING CONSISTENCY



Correlation of ESG ratings between rating providers is surprisingly low

	SUSTAINALYTICS	REFINITIV
MSCI	43%	46%
SUSTAINALYTICS		23%

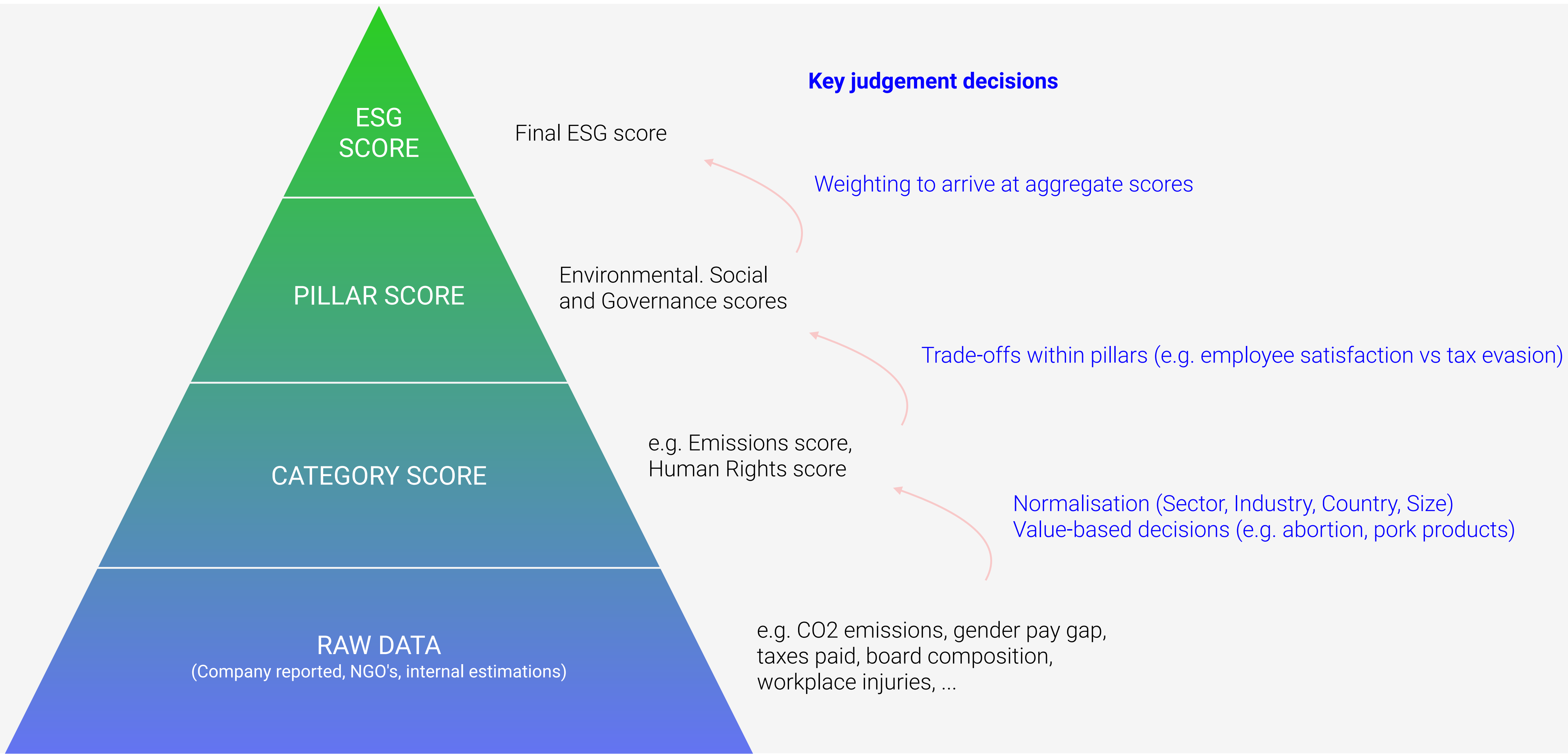
Large rating differences*, even on well-known companies

	MSCI	SUSTAINALYTICS	REFINITIV
NETFLIX	1.9	8.1	1.0
TESLA	7.9	2.8	4.4

*Final ESG ratings, re-ranked by InvestSuite to a uniform 0-10 scale (higher = better) within MSCI ACWI universe to make the numbers comparable

<https://www.refinitiv.com/en/sustainable-finance/esg-scores>
<https://www.sustainalytics.com/esg-ratings/>
<https://www.msci.com/our-solutions/esg-investing/esg-ratings/esg-ratings-corporate-search-tool>

ESG - GENERIC RATING PROVIDER METHODOLOGY



ESG - RATING CONSISTENCY

Large rating differences*, even on well-known companies

	MSCI	SUSTAINALYTICS	REFINITIV
NETFLIX	1.9	8.1	1.0
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NETFLIX

- Effect of peer comparison within Environmental pillar and weight of Environmental in overall score
- Trade-off of positive (e.g. employee satisfaction) vs negative (e.g. tax evasion) social aspects

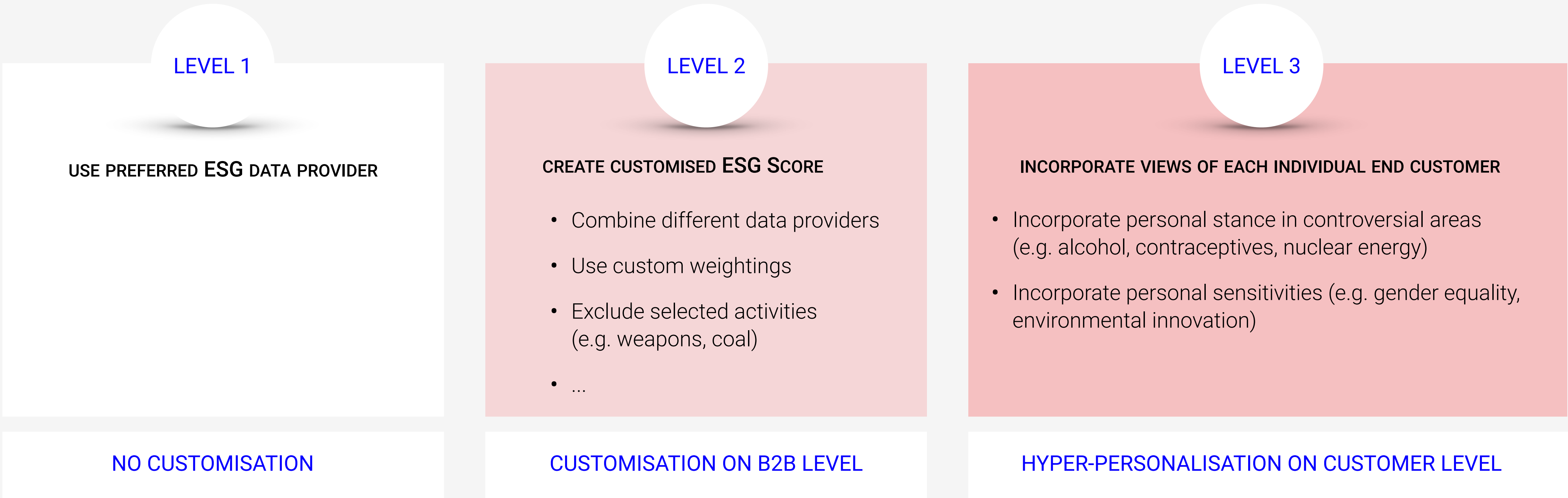
TESLA

- Leader in environmental innovation
- Controversial relationships with workers and management of supply chain
- Corporate Governance controversies (SolarCity deal, Musk's tweets and option-like pay package, board independence)

*Final ESG ratings, re-ranked by InvestSuite to a uniform 0-10 scale (higher = better) within MSCI ACWI universe to make the numbers comparable

ESG - INVESTSUITE FRAMEWORK

At InvestSuite, we developed a **fully configurable framework** that can propose portfolios that are **aligned with specific ESG preferences and values** while still providing a **diversified, broad equity market exposure**



InvestSuite

PORTFOLIO OPTIMISER

THE HUMAN-CENTRED QUANTITATIVE
APPROACH TO CONSTRUCTING PORTFOLIOS



MAARTEN WYNS

PRODUCT MANAGER PORTFOLIO OPTIMISER

April 28th 2021

RISK MEASURES IN INVESTMENT MANAGEMENT



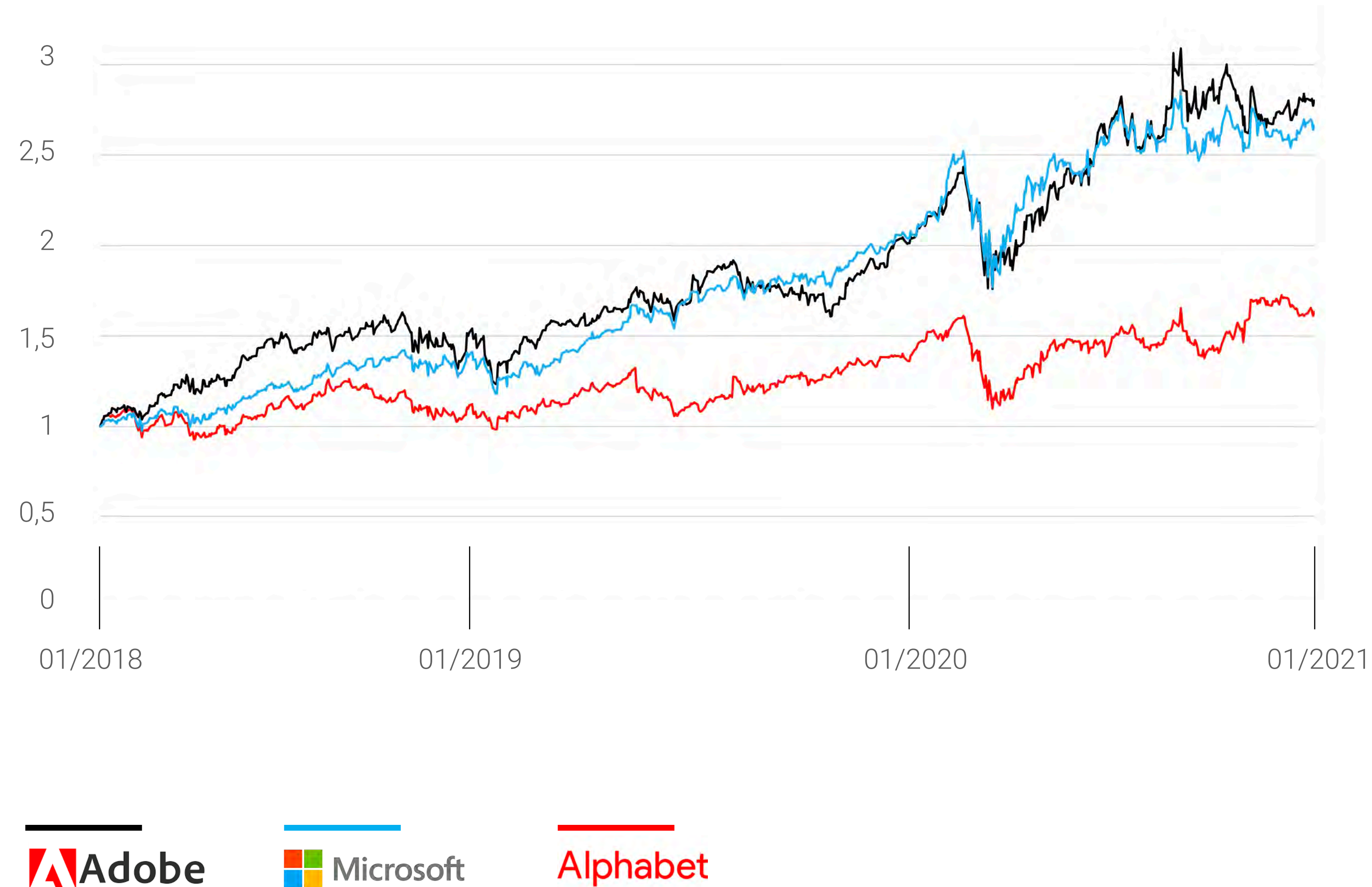
Product Manager

- ▶ Senior Quantitative Financial Risk Manager at KBC Asset Management
- ▶ Financial Engineer at MathFinance AG
- ▶ PhD in Financial Mathematics, Master in Financial Mathematics

AGENDA

- iVaR versus relative iVar
- How to use Portfolio Optimizer: (ESG) performance
- Hyper-personalisation
- Scientific validation

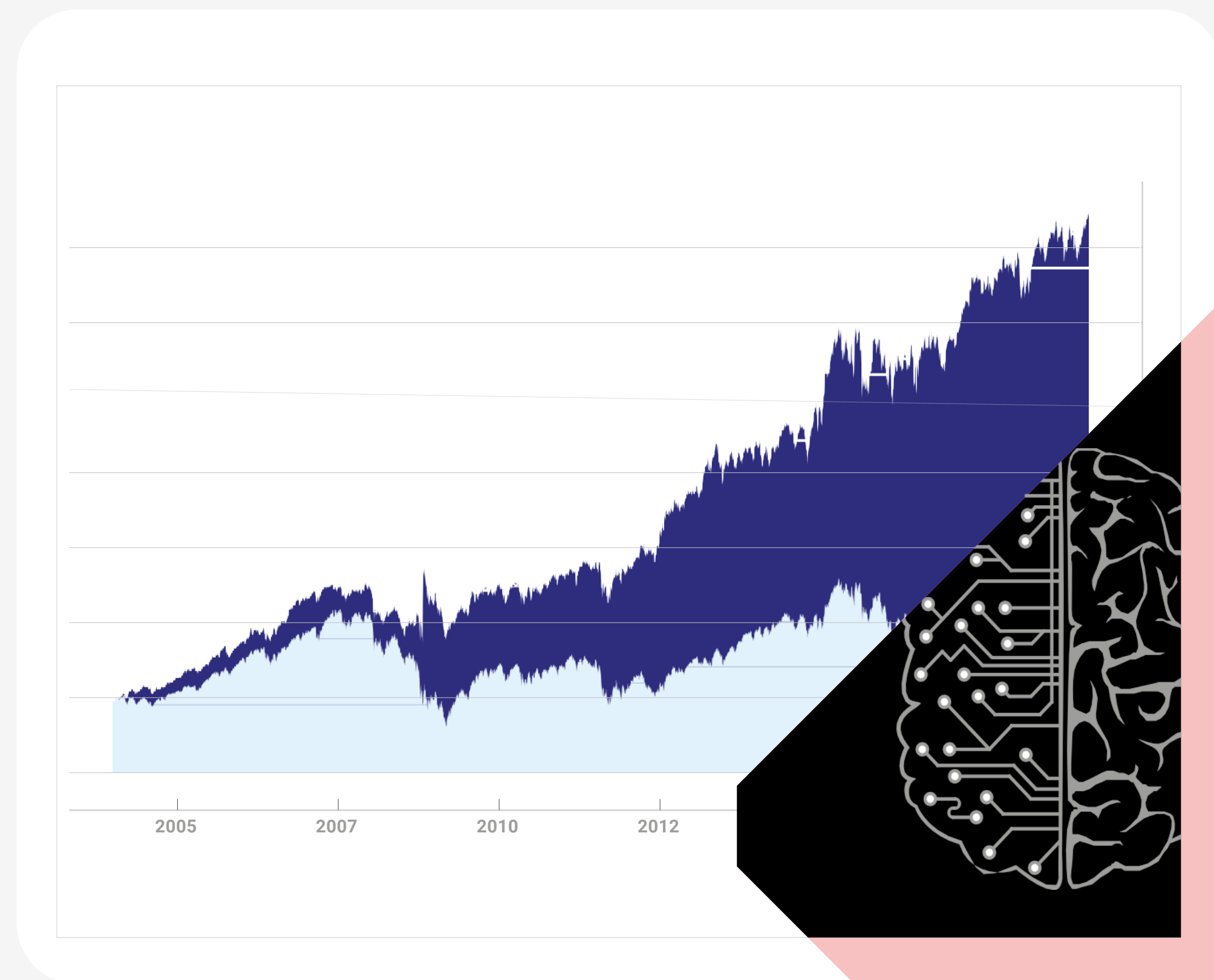
INVESTSUITE RELATIVE IVAR VERSUS TRACKING ERROR



- **Adobe:** 19.7% tracking error vs **Microsoft**
- **Alphabet:** 19.6% tracking error vs **Microsoft**
- Large difference in performance
- Large difference in relative iVaR

**The next-generation
quant tools that
provide cost-effective
solutions for more efficient
portfolio management.**

_PORTFOLIO OPTIMIZER

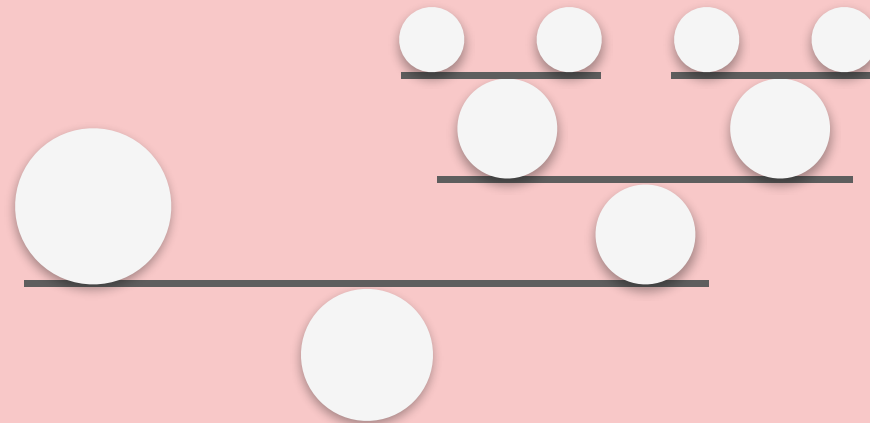


BROAD RANGE OF APPLICABLE USE CASES

1.
Hyper personalised portfolio construction and rebalancing engine for a **Robo advisor**



2.
Determine security weights for a self-defined investment universe



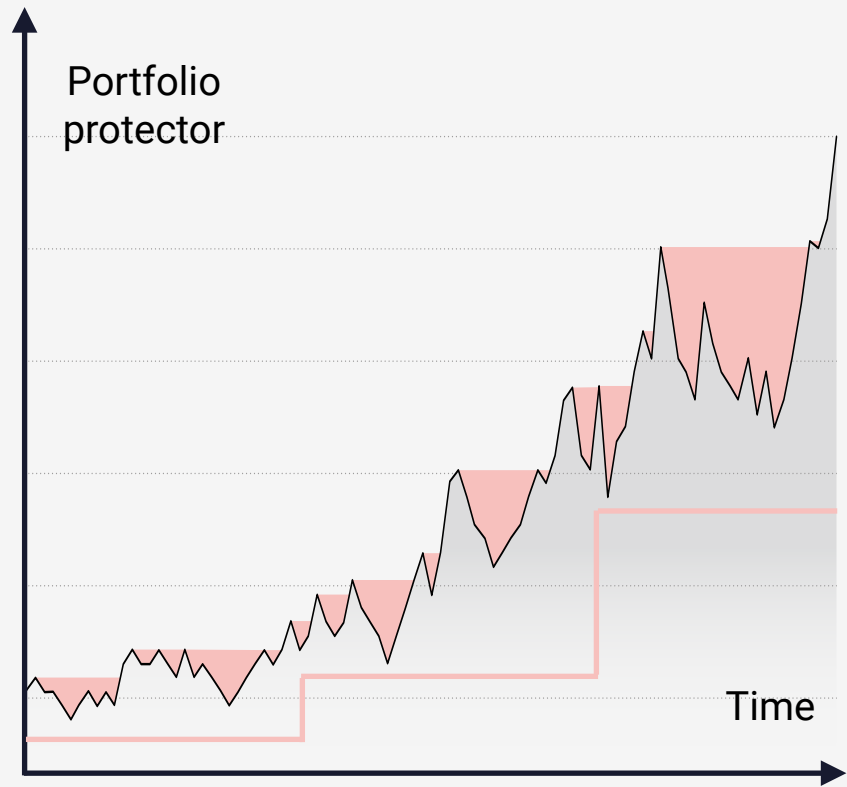
3.
Construct (sub)portfolios that complement your core investment strategy. E.g. emerging markets



4.
Index **tracking** / direct indexing



Protect your floor



Boost **ESG** performance





CBD

investr

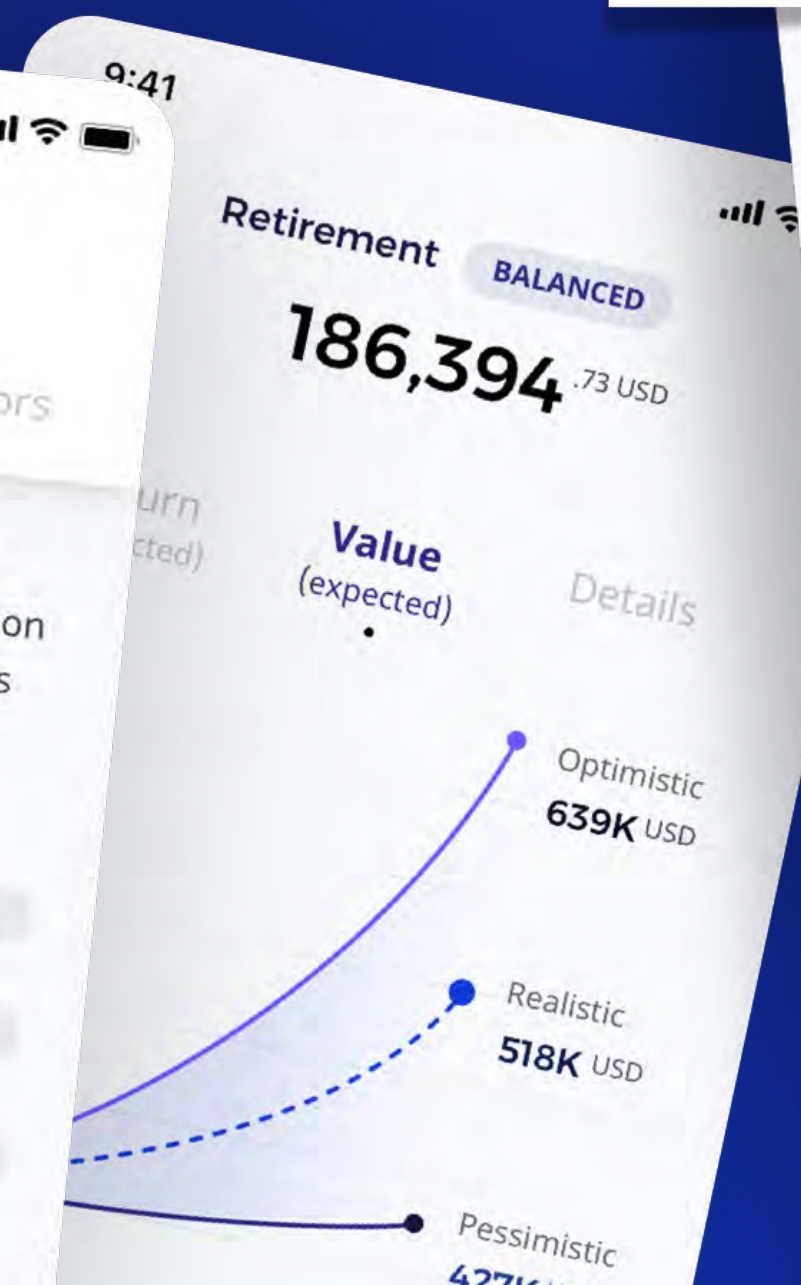
بنك دبي التجاري
Commercial Bank of Dubai



For immediate release

Commercial Bank of Dubai – the first bank in the region to launch a Robo-Advisory Investment App – CBD Investr

Dubai, 26 April 2021: Commercial Bank of Dubai, one of the leading banks in the UAE, announced the launch of “CBD Investr app”, becoming the first bank in the region to offer a robo-advisory investment solution. Developed in partnership with InvestSuite, a leading wealthtech company based in Belgium, this innovative investment app is powered by smart algorithms that actively manage investment portfolios to deliver optimal risk-adjusted performance.



Welcome Sunil

Market value

210,215.75 USD

+ Add portfolio

Property

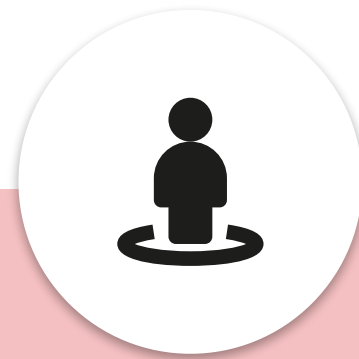
23,821.02 USD

Retirement

WHAT MAKES OUR FRAMEWORK DIFFERENT



An empirical investment approach that is based on how financial markets actually behave.



A 4th generation human-centric methodology of quantifying investment risk.



A fully personalised investment experience that offers a wide range of parametrisation options.

iVaR

HOW IVAR CAN BE IMPLEMENTED



BUILT TO ALLOW CUSTOMISATION AT SCALE



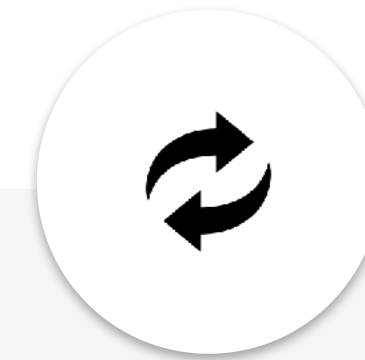
FAST SETUP

- API Based
- B2B Web interface
- Direct integration with broker/custodian



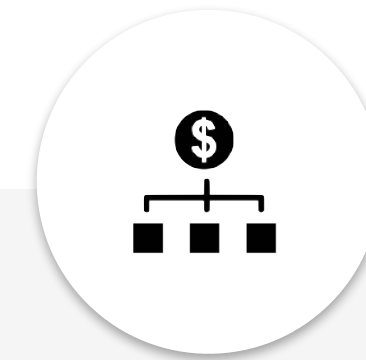
YOUR UNIVERSE

- ETFs
- Mutual Funds
- Stocks
- Bonds
- Crypto currencies
- Configurable base currency



YOUR POLICIES

- Rebalancing frequency
- Rebalancing triggers
- Turnover
- Transaction costs
- Position limits



YOUR STRATEGY

- Asset allocation
- Regional allocation
- Sector allocation
- Bond type allocation
- Expected returns

USING IVAR TO BOOST THE ESG PERFORMANCE OF YOUR PORTFOLIO



ESG PERFORMANCE

- Customised ESG scores
- Replace stocks that have the largest negative influence on the selected ESG score of your portfolio
- Positive + negative selection based on the selected ESG scores
- Data provider agnostic

FINANCIAL PERFORMANCE

- Minimise iVaR
 - > Aim for monotonic growth of your portfolio
- Minimise relative iVaR
 - > Aim for similar risk/return profile as the original portfolio

WHAT MAKES OUR FRAMEWORK DIFFERENT

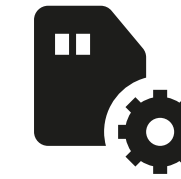


An empirical investment approach that is based on how financial markets actually behave.



A 4th generation human-centric methodology of quantifying investment risk.

iVaR



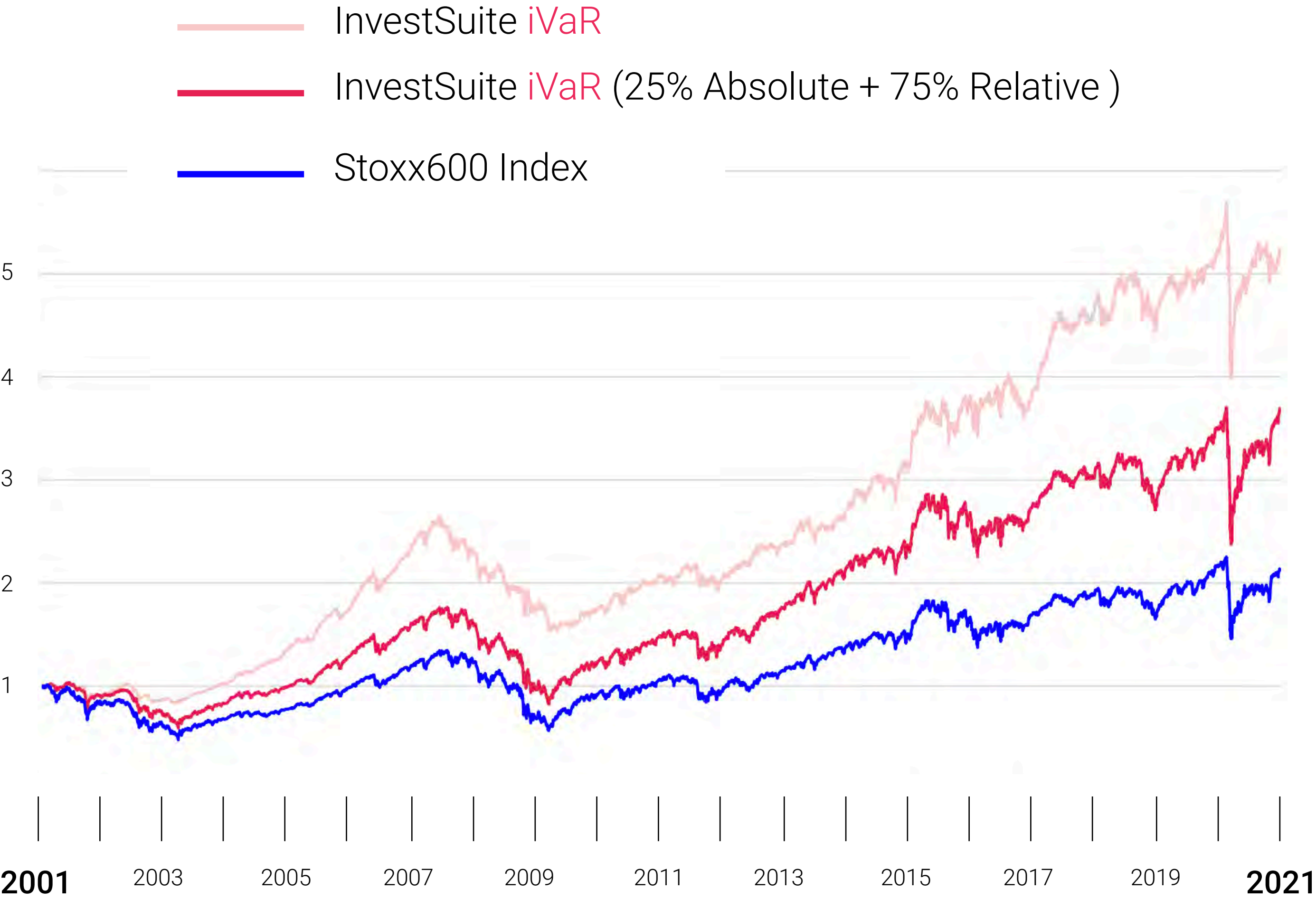
A fully personalised investment experience that offers a wide range of parametrisation options.



A scientific approach to validating our investment strategy.

**Our backtesting
applied to the
Stoxx 600
Universe.**

TIMESERIES



COMMENTS

- Stoxx600 (Point in Time) Investment Universe
- From 31/12/2000 up until 31/12/2020
- Percentage REL denotes the weight of relative drawdowns versus the benchmark in the objective

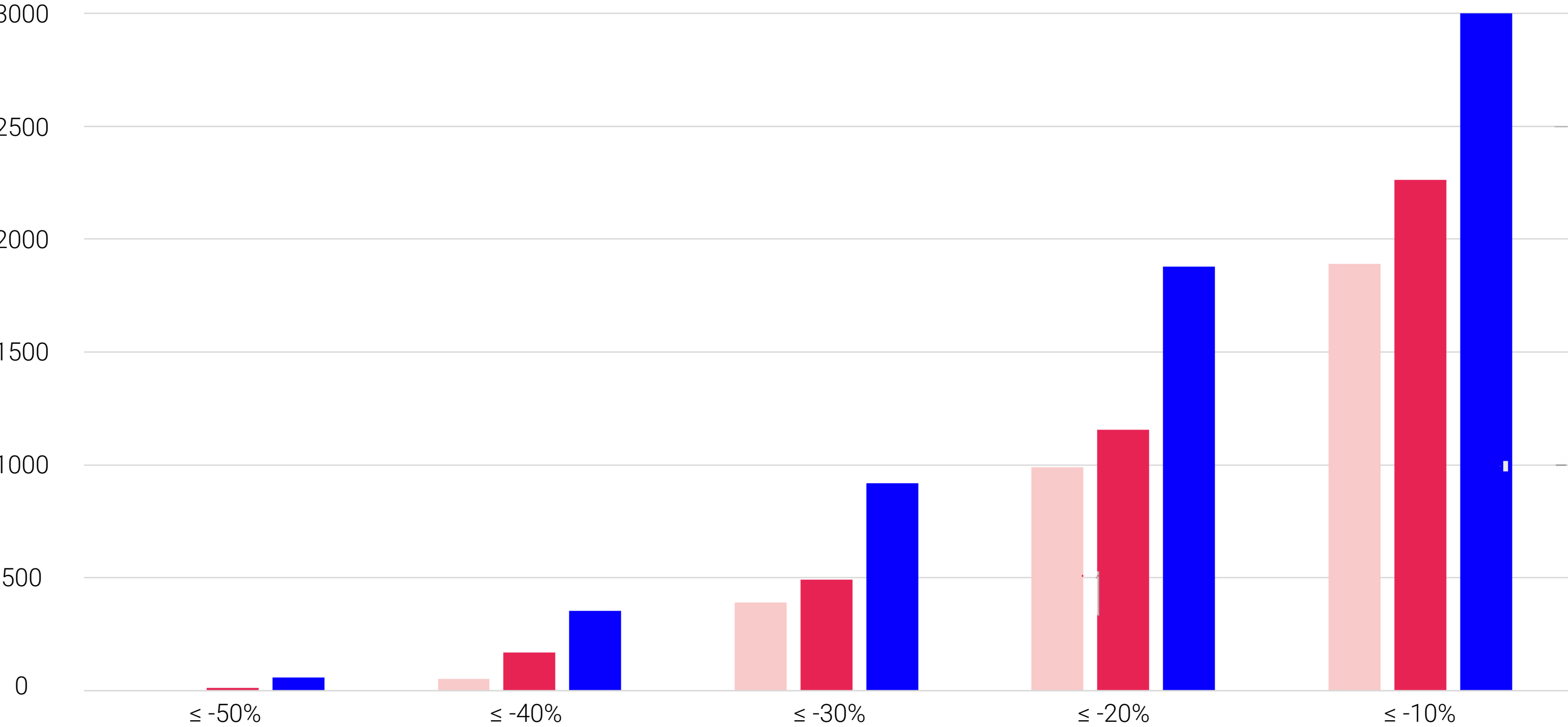
ANNUAL RESULTS



COMMENTS

The figure plots the annual returns for the iVaR-based portfolios and the index.

DRAWDOWNS



- InvestSuite iVaR
- InvestSuite iVaR (25% Absolute + 75% Relative)
- Stoxx600 Index

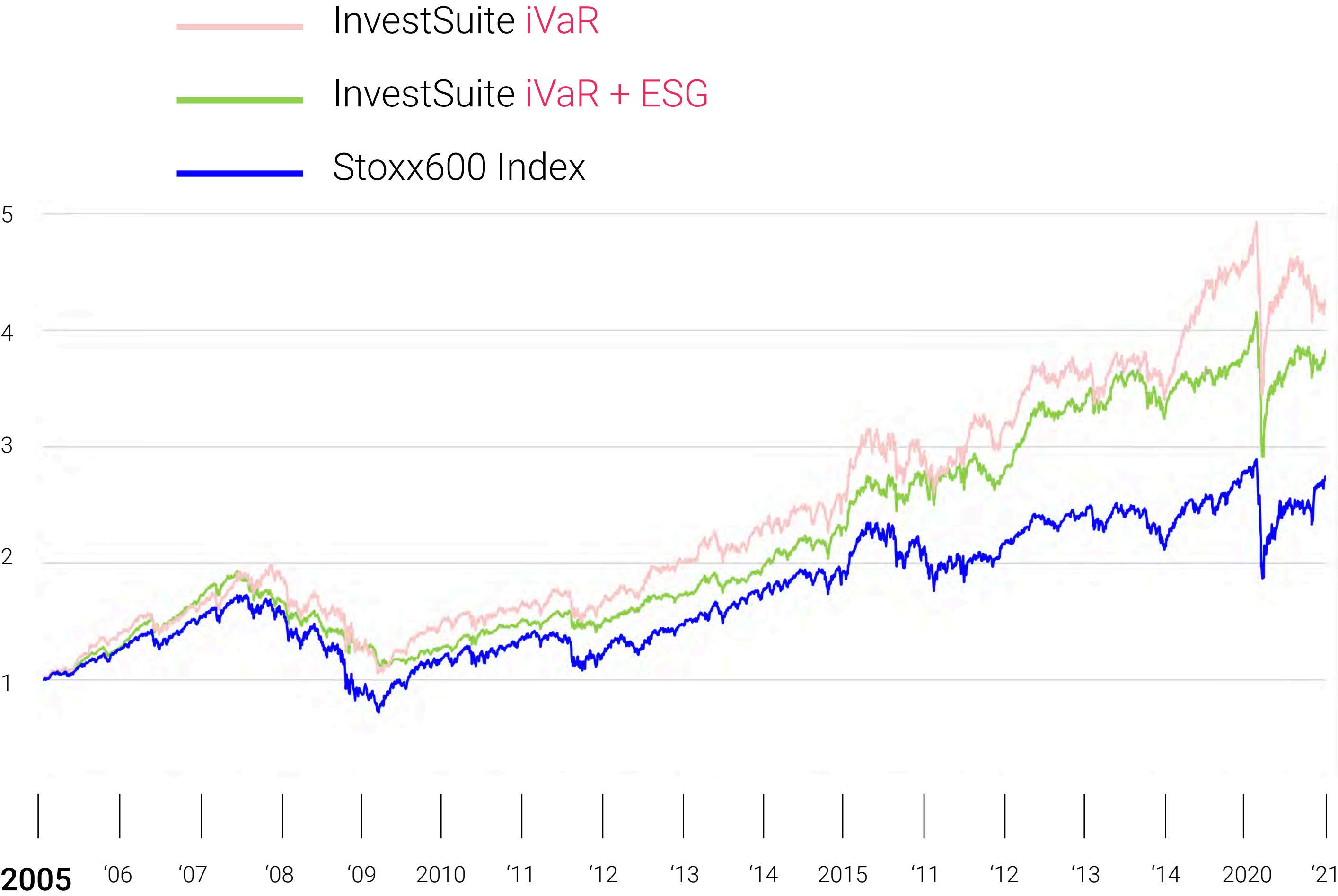
COMMENTS

The figure plots the number of days a drawdown of a certain magnitude (%) was present in the portfolio, for both the iVaR-based portfolios and the index.

- e.g. 50 days of a 10% drawdown means that over the whole period, there were 50 days where the portfolio value was 10% below the previous peak in portfolio value (running maximum).

Our backtesting applied to the Stoxx 600 Universe: ESG flavour.

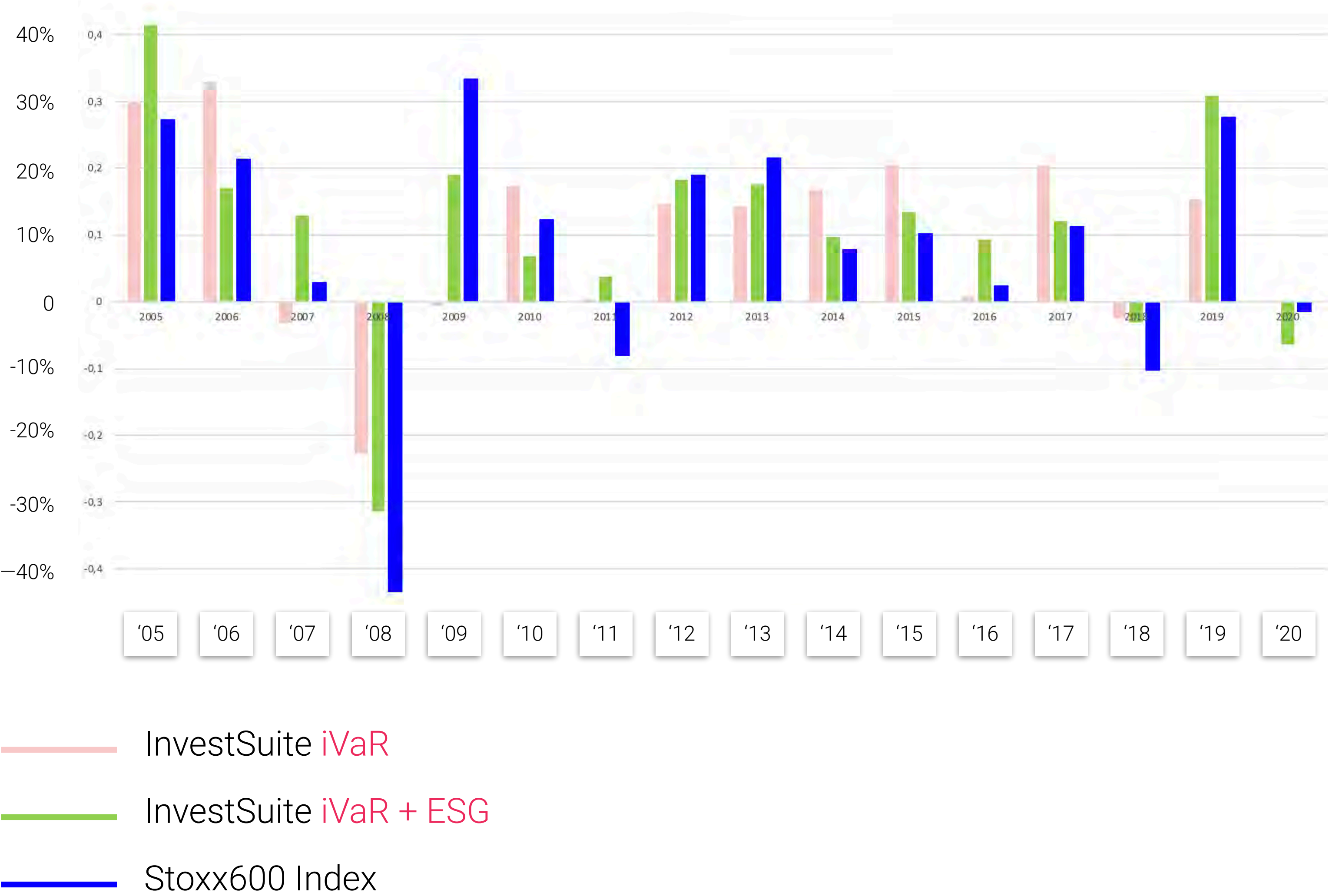
TIMESERIES



COMMENTS

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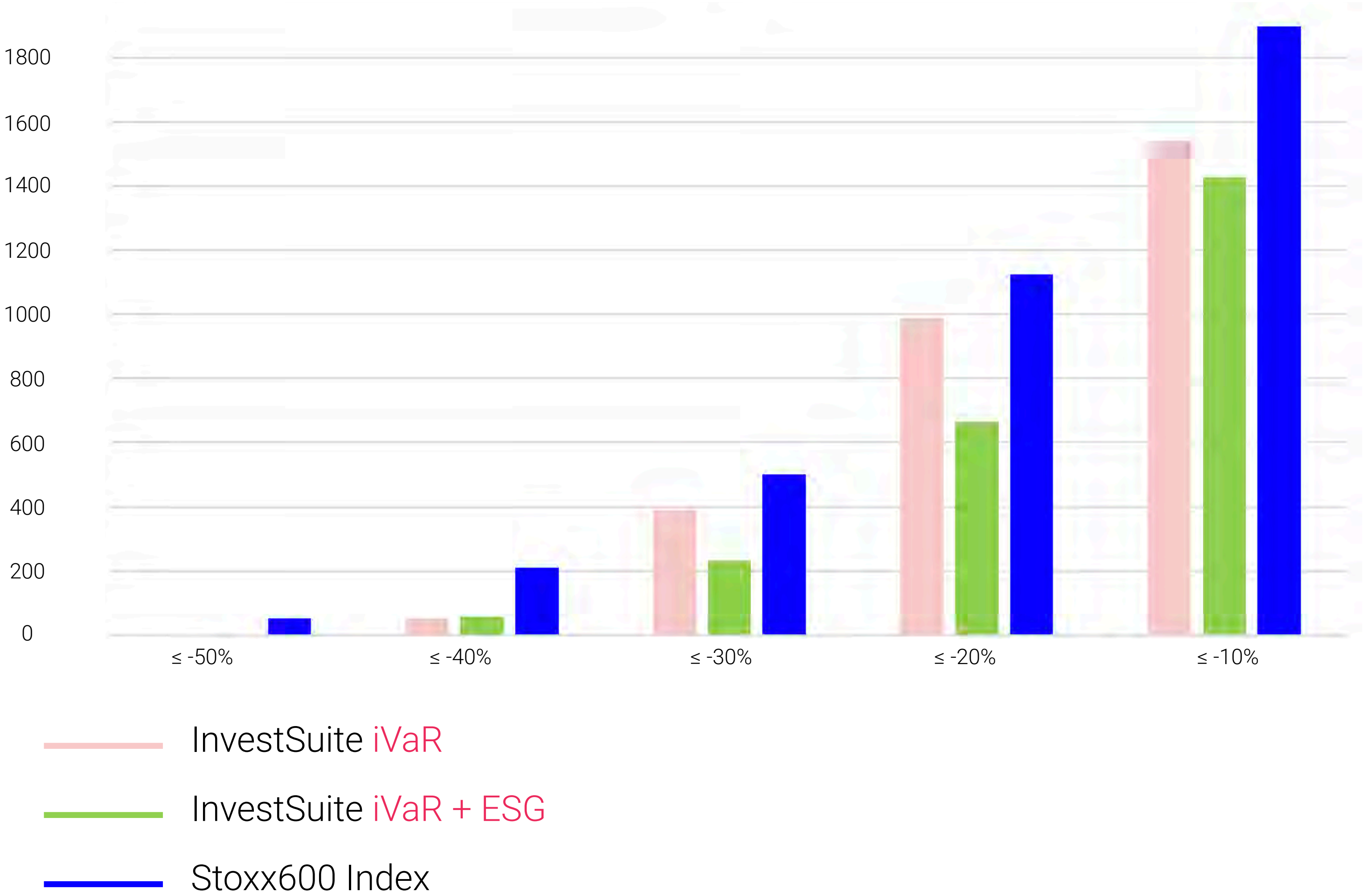
ANNUAL RESULTS



COMMENTS

The figure plots the annual returns for the iVaR-based portfolios and the index.

DRAWDOWNS



COMMENTS

The figure plots the number of days a drawdown of a certain magnitude (%) was present in the portfolio, for both the iVaR-based portfolios and the index.

- e.g. 50 days of a 10% drawdown means that over the whole period, there were 50 days where the portfolio value was 10% below the previous peak in portfolio value (running maximum).

ESG TIMESERIES



COMMENTS

- Stoxx600 (Point in Time) Investment Universe
- From 31/12/2000 up until 31/12/2020
- Figure shows the weighted average ESG score of the portfolio
- For the normal iVaR backtest and Stoxx 600 index, instruments without ESG score at point of evaluation are ignored.

Our backtesting of relative iVaR applied to the S&P500 Universe.

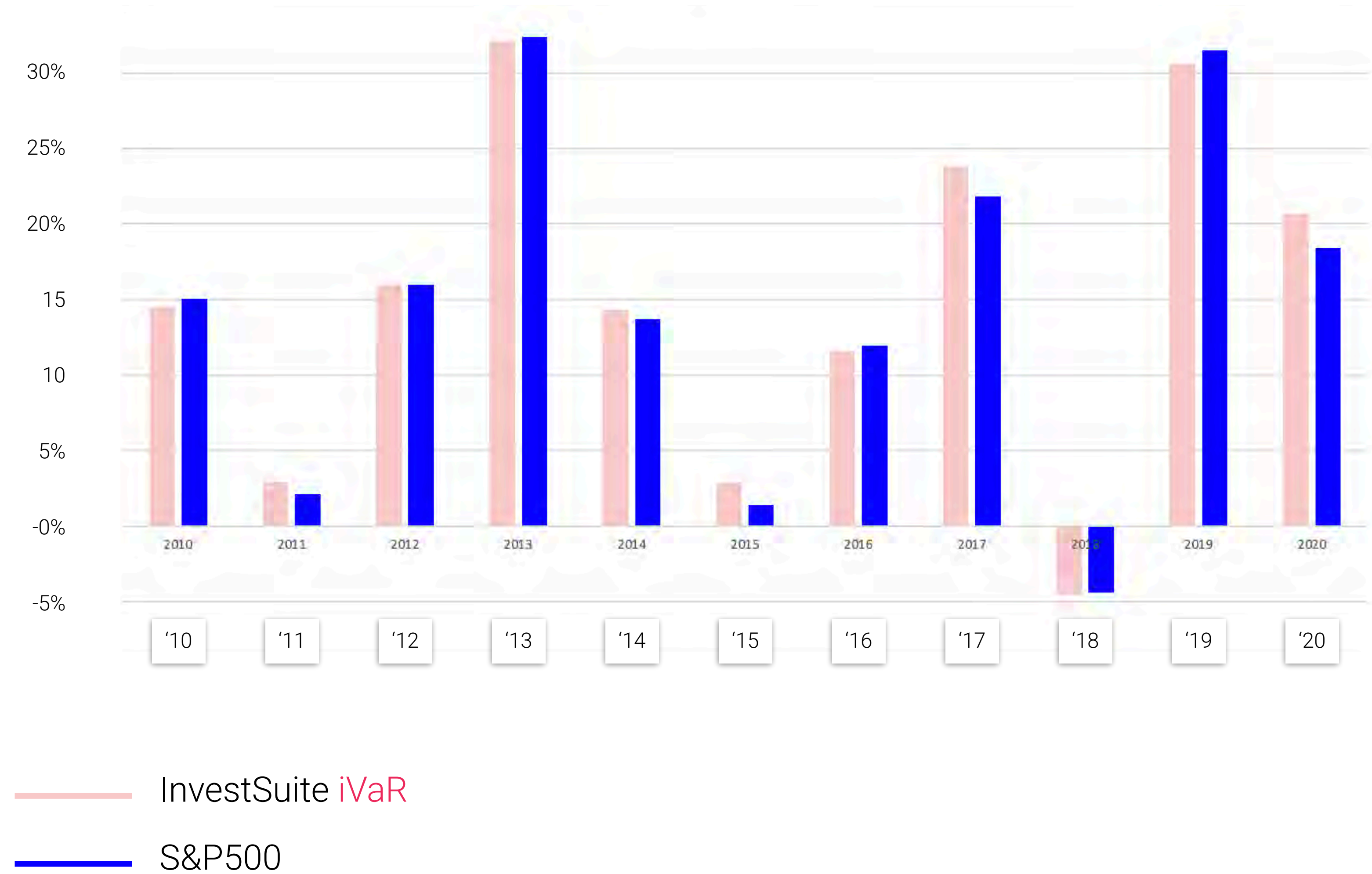
TIMESERIES



COMMENTS

- S&P500 (Point in Time) Investment Universe
- Relative iVaR with max 100 instruments
- No tobacco stocks
- Monthly rebalance
- Benchmark is S&P500 total return index
- From 2010 up until 31 December 2020

ANNUAL RESULTS



COMMENTS

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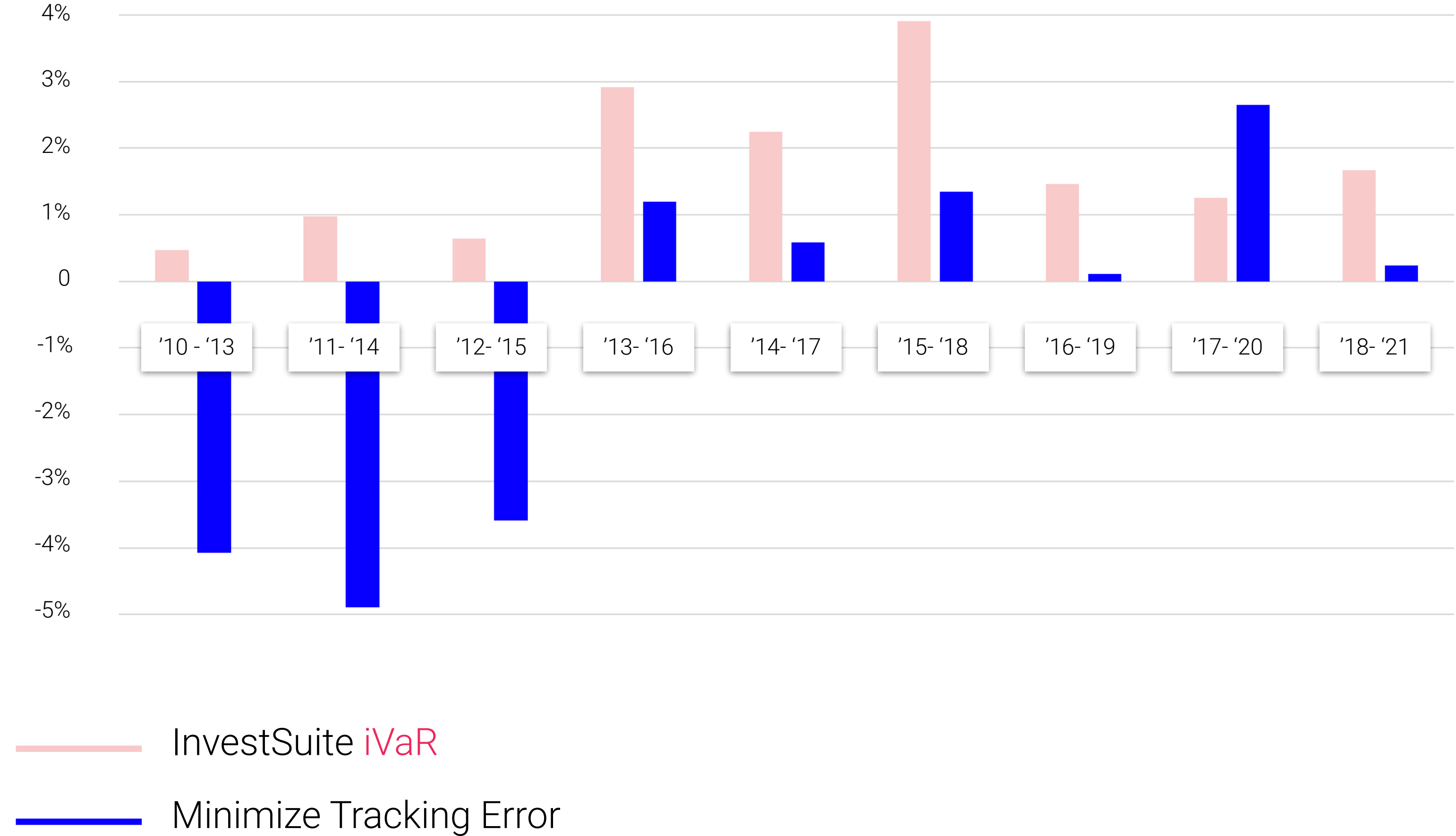
RELATIVE TIMESERIES - RELATIVE IVAR: UNDER/OUTPERFORMANCE OF THE BENCHMARK



COMMENTS

- S&P500 (Point in Time) Investment Universe
- Relative iVaR with max 100 instruments
- No tobacco stocks
- Monthly rebalance
- Benchmark is S&P500 total return index
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RELATIVE TIMESERIES - RELATIVE IVAR: 3 YEAR ROLLING RELATIVE RETURN VS THE BENCHMARK



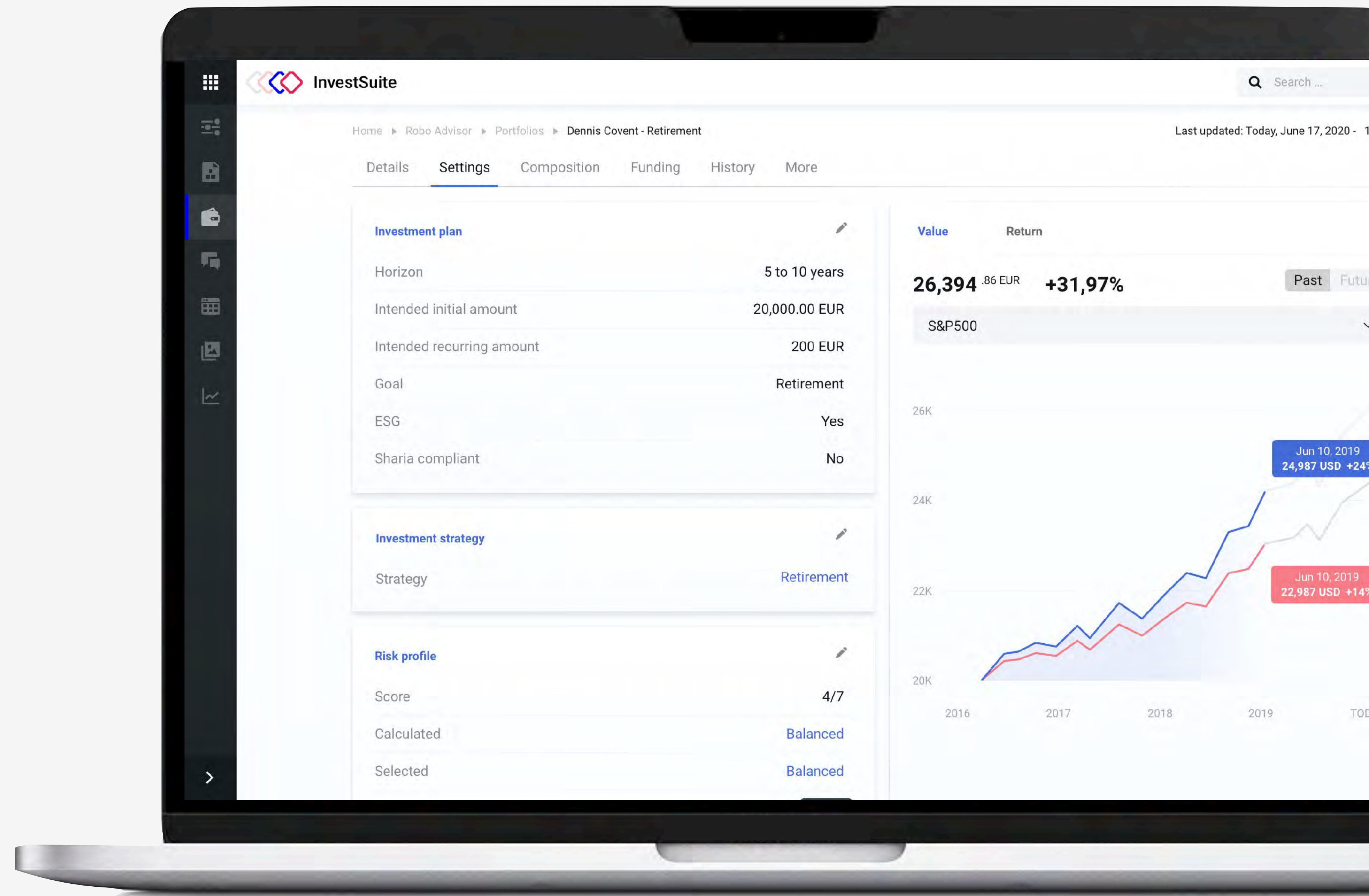
COMMENTS

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PORTFOLIO OPTIMIZER

Questions?

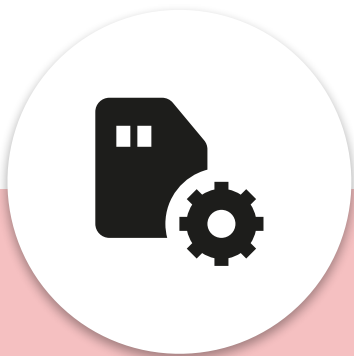


IN SUMMARY



IVAR

A 4th generation human-centric methodology of quantifying investment risk.



PORTFOLIO OPTIMIZER

A quantitative approach to constructing portfolios

- *RoboAdvisor engine*
- Constructor
- Protector
- Index tracking
- ESG booster



BACKTEST & LIVE PORTFOLIOS

- Less drawdowns
- Faster recovery
- Smooth ride
- ESG proof



INVESTSUITE

- *Portfolio Optimizer*
- RoboAdvisor
- SelfInvestor
- **StoryTeller**

Thank you

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