QFAI AI RISK SIGNAL

Leveraging 7 years of live delivery

SEPTEMBER 2025

CRITICAL KNOW-HOW & ALPHA-SEEKING DRIVE…

QueensField AI Technologies

Dr. Arnaud de Servigny

- Ex Global CIO and head PM at Deutsche Bank Wealth Management & DWS Multi-Asset (125 bn Euros AUM).

- Adjunct Professor at Imperial College London since 2005. Creator of the master of Risk Management and Financial Engineering and in charge of the course 'Machine Learning in Finance'.

7 YEARS: A STEADY MATURATION PROCESS...

Taking the time to ramp-up and really polish a suite of services, signals and strategies.

2005:
Dr. Arnaud de Servigny co-launches the master of Risk Management and Financial Engineering at Imperial College London.

2010:
Robot to trade horseraces on Betfair relying on AI Random-Forest.

2015:
Start of Company

2018:
Launch of the EquityEdge-Tech AI Regime Signals.

2020:
Launch of the Single Stock US / Europe EquityEdge-Tech platform, delivering forward-looking AI performance ratings on each stock.

2021:
Agreement with Citigroup to partner in the US Fixed Index Annuity insurance business, delivery of Long-only strategies on US Large Caps and delivery of Long-only strategies on US Large Caps.

2022:
Official Launch of a first index targeting SP500+500bps with Merqube.

2023:
Official Launch of the largest suite of AI indices, with Merqube in the US and Market Neutral Long-Short daily Paper-Trading.

2024:
Launch of Market-Neutral AI Multi-Strategy real track.

Pre-2018

Post-2018

3

QF.AI
QueensField AI Technologies

INTUITION

A FOCUS ON INVESTOR PREFERENCES…

QueensField AI Technologies

ASSET PRICE

=

CASHFLOWS
Fundamentals

Company Specific

⊗

DISCOUNT FACTOR
Investor Preferences

Company Comparative

A CLEAR VISION...

01 Assessing Market Risk means capturing the Dynamics of the Risk Appetite of Investors.

02 Market Risk detection is the result of TOP-DOWN (index level) and BOTTOM-UP (single stock level) analyses.

03 **Understanding the Dynamics of Investor Preferences has been a blind spot.**

QF.AI QueensField AI Technologies

A BROAD & ADVANCED AI TOOLKIT…

QUEENSFIELD AI TECHNOLOGIES

Data Transformation

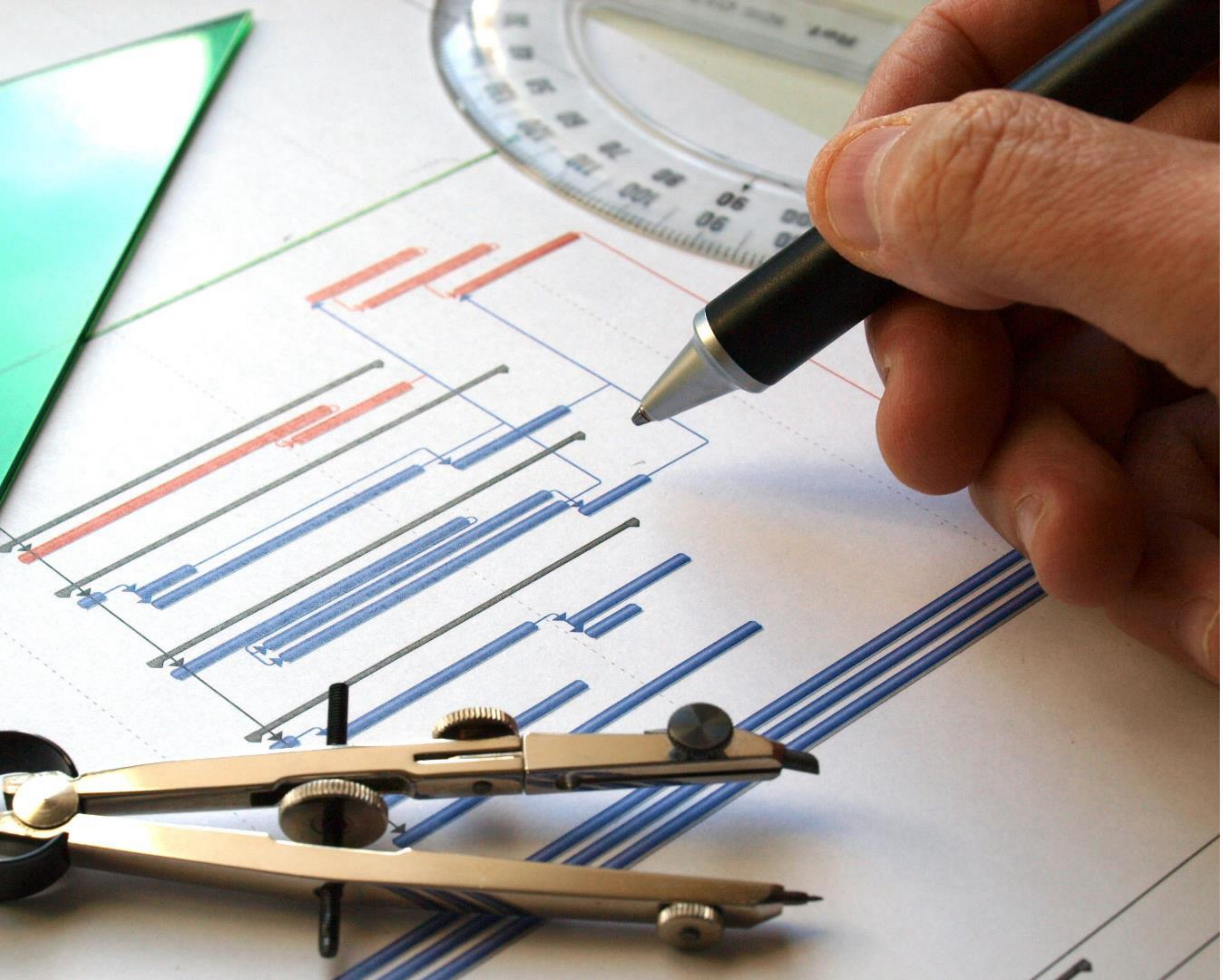
- Wavelets
- Variational Auto-encodeur
- Spectral Decomposition

Bayesian Approaches

- Naïve Bayes
- Bayesian Graphical models
- HMM

Deep Learning Approaches

- LSTM Preprocessing
- Attention models
- Transformers



QueensField AI Technologies

THE APPROACH

COMBINING THREE DIFFERENT PERSPECTIVES...

QUEENSFIELD AI TECHNOLOGIES

01 — TOP-DOWN

RISKCASTING ®

- Based on options on the SP500
- Measuring the degree of consensus in the option market
- Relying on Bayesian Analysis

02 — BOTTOM-UP

LOW TURBULENCE ®

- Based on Single Stock price dynamics
- Measuring the level of stress of investors with different investment horizons
- Relying on Deep Learning (Autoencoder)

03 — REBOUND

WAVELET CROSSING

- Based on LT / ST Wavelet crossing
- Focusing on exit from crisis periods
- Signal Processing

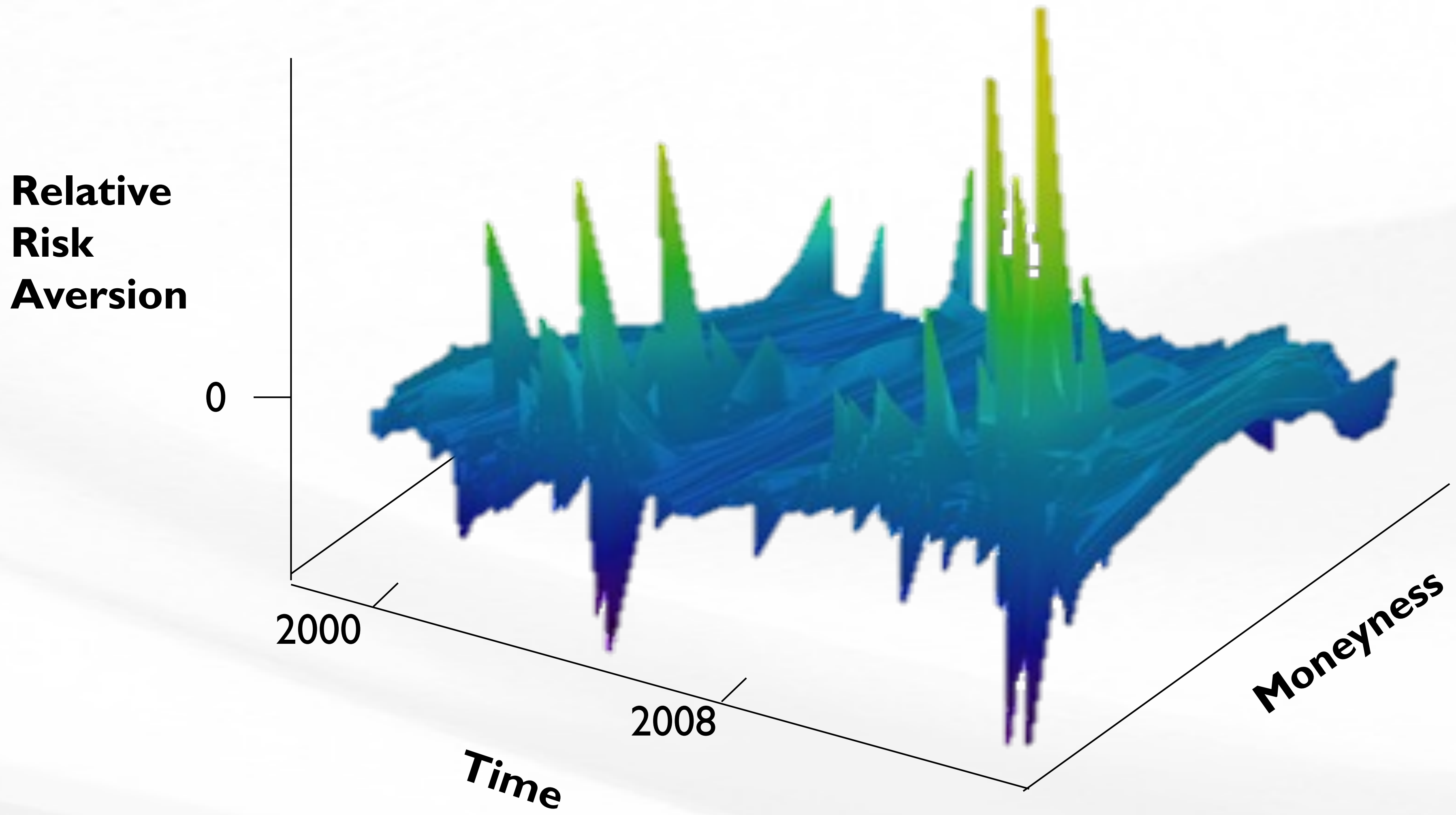
Live since 2018

...RISKCASTING ®

QF.AI QueensField AI Technologies

15000 options on the SP500 are analysed daily to understand the evolution of the degree of consensus among investors @ different levels of Moneyness and Maturity

CRISIS PERIODS CORRESPOND TO RISK AVERSION SPIKES: in this case periods associated with 2000 and 2008 display very clear signals



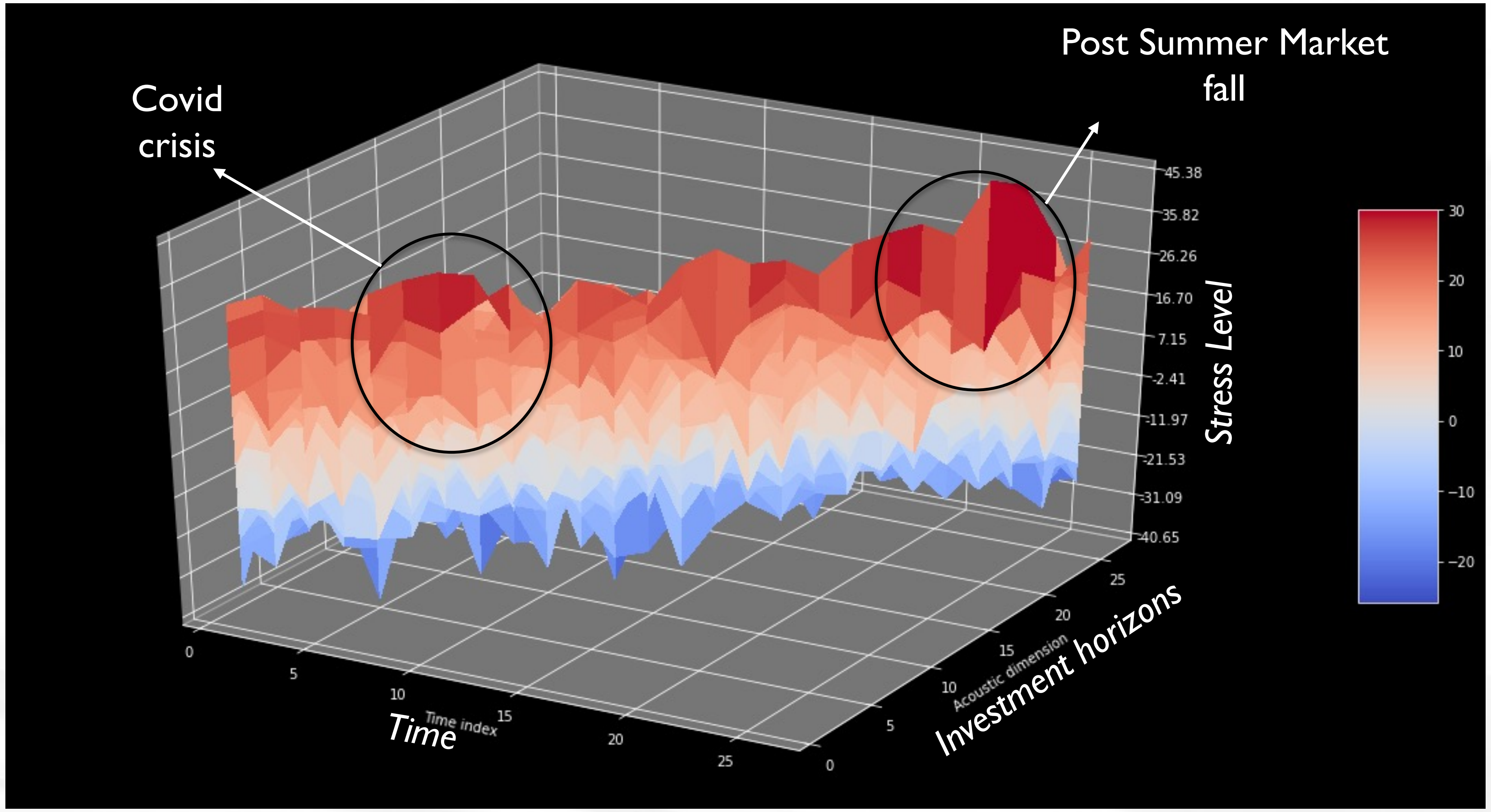
Relative risk aversion surface (maturity 30 days) on the SP500 between 2000 and 2015 : Spikes indicate crisis periods (early 2000, 2008 are highly visible)

Based on Bayesian Inference

…LOW TURBULENCE ®

An analysis of the level of stress of investors per investment horizon

CRISIS PERIODS CORRESPOND TO RED SPIKES: in this case the focus is on the Covid crisis in 2020



Each sector is screened to identify the investment appetite of investors.
A concatenation is then operated to obtain a measure of of the level of market turbulence. A high level of turbulence leads to high volatility and negative returns.

Based on a Variational Autoencodeur + Unsupervised Learning

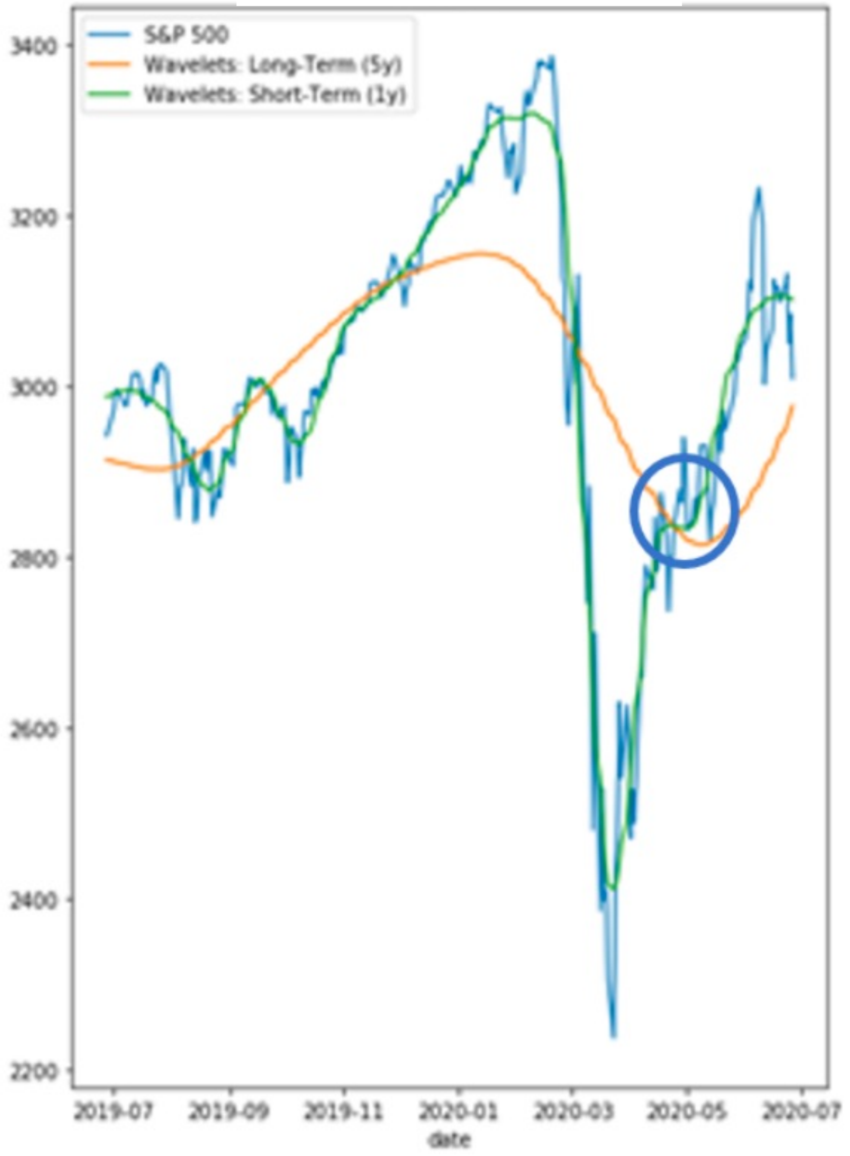
...REBOUND

QUEENSFIELD AI TECHNOLOGIES

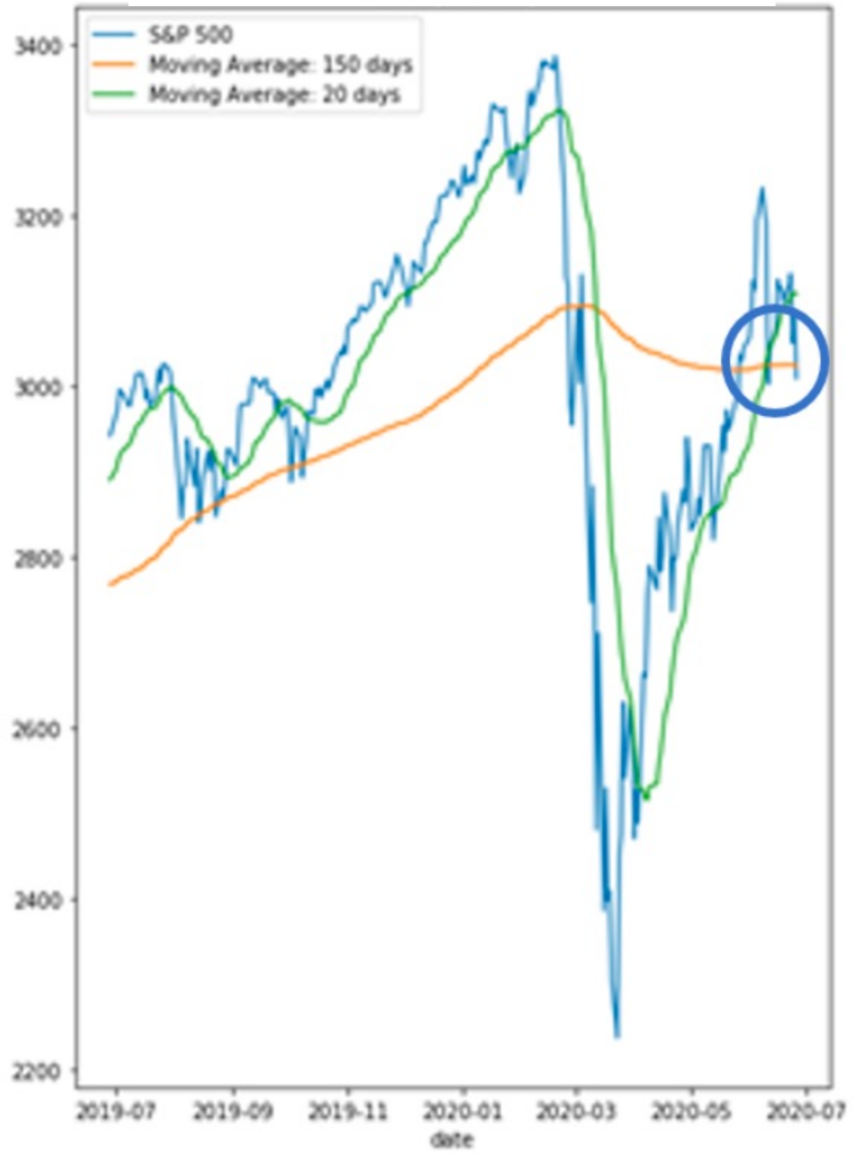
The use of Wavelet crossing instead of Moving-Average crossing enables us to capture recovery periods earlier on.

EXIT FROM THE 2020 CRISIS SIGNALLED BY WAVELET CROSSING: the blue circle signals the capture of the Rebound signal

WAVELET CROSSING



MOVING AVERAGE CROSSING



The idea is to capture the moment when the ST investors sees things the LT investors do not yet.

Based on a Wavelet decomposition of the SP500

THE BENEFIT OF COMBINING FILTERS…

QueensField AI Technologies

01

TOP-DOWN

RiskCasting ®

- GOOD to flag **entries** in crises

02

BOTTOM-UP

Low Turbulence ®

- GOOD to flag **entries** in crises
- GOOD to flag **exits** from crises

03

REBOUND

Rebound

- GOOD to flag **exits** from crises

Regime Delivery

REDUNDANCY = ROBUSTNESS

- First Benefit: confirming the concordant signals
- Second Benefit: Being prudent on discordant signals

THE RISK SIGNALS

A RISK REGIME SIGNAL BASED ON A CLEAR SET OF RULE...

QUEENSFIELD AI TECHNOLOGIES

The Risk Regime Signal may go in three directions:

Majority of forward-looking GICS sector Signals in RISK-ON: (Positive Return & Low Volatility)
OVERWEIGHT

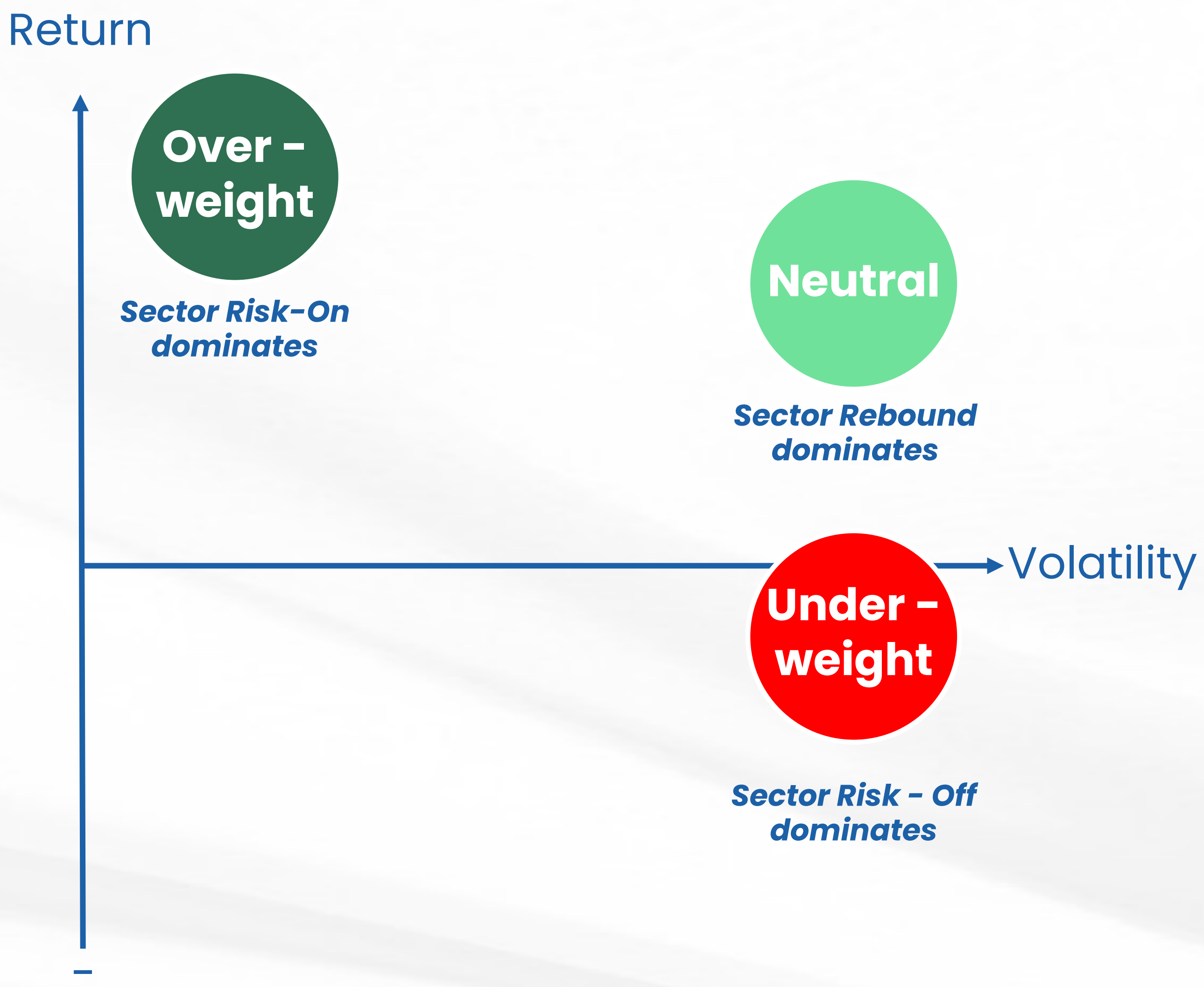
Majority of forward-looking GICS sector Signals in REBOUND: (Positive Return & High Volatility)
NEUTRAL

Majority of forward-looking GICS sector Signals in RISK-OFF: (Negative Return & High Volatility)
UNDERWEIGHT

…CORRESPONDING TO A DECISIVE SEGMENTATION

The objective is to obtain a meaningful signal.

The typical Risk / Return profile expected per Regime

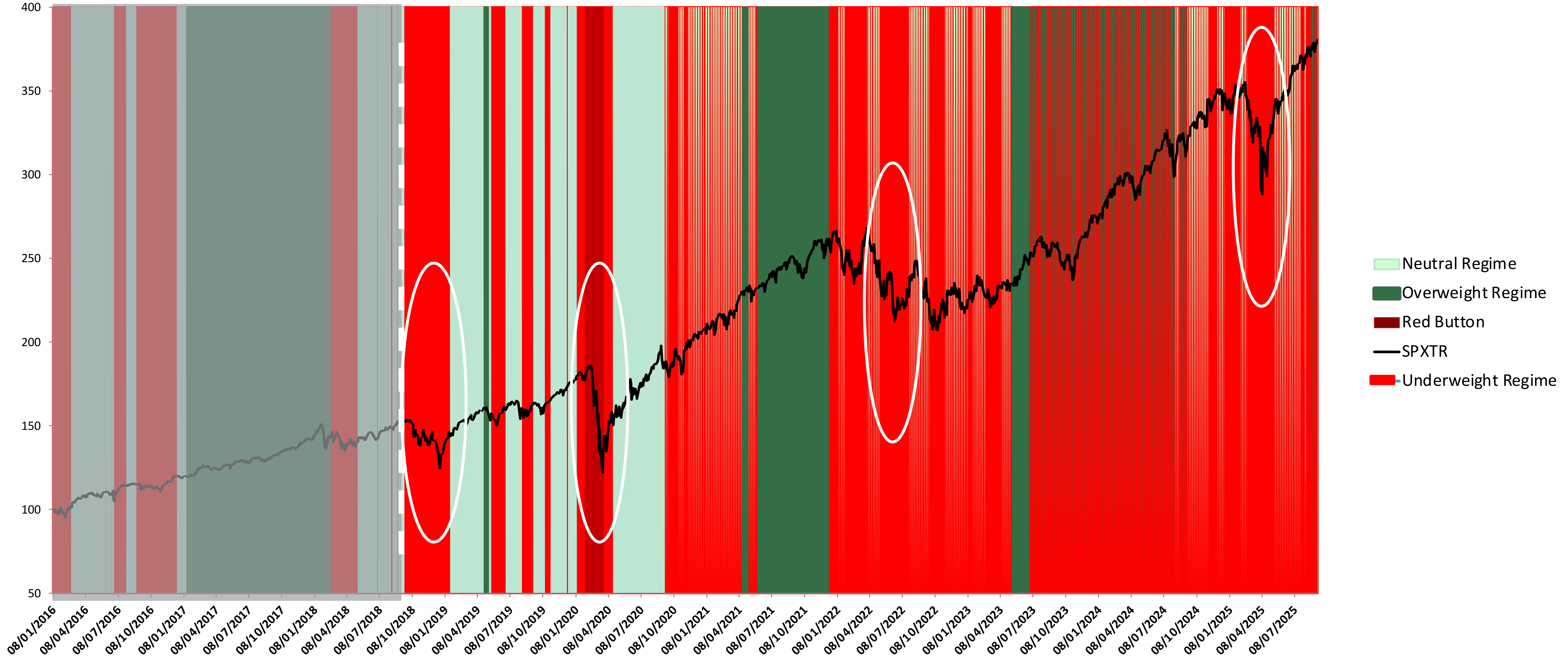


...TO OFFER AN "ACTIONABLE MESSAGE"

QUEENSFIELD AI TECHNOLOGIES

The objective is to obtain a steady signal (**live since the start of 2018. The greyed period before is fyi**).

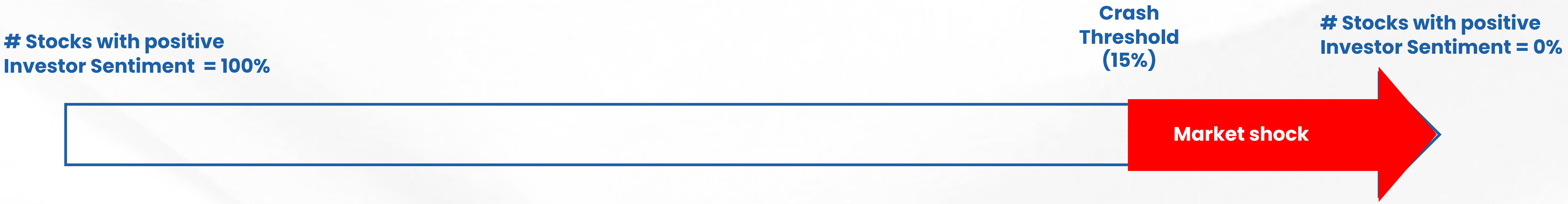
A good capture of Drawdown periods



COMPLEMENTED BY a ‘RED BUTTON’ Indicator…

QueensField AI Technologies

Counting the number of stocks obtaining real market traction



- Each stock is assessed from a Risk Appetite perspective. When there are too few of them which generate true investor interest, we are getting close to a ‘**Market Run**’, hence the necessity to press the Red Button.

- By evaluating how far we are from the Crash Threshold, we can derive a **market shock probability** indicating the level of Tail risk

Probability	Risk Level
< 10%	Low
< 40%	Medium
≥ 40%	High

...TO TARGET MARKET CRASHES

QueensField AI Technologies

A tool dedicated to extreme events.

The Covid crisis corresponded to the last time the signal was triggered. It ended on 2020/03/23

This information corresponds to signals and not investments

QueensField AI Technologies

Practical Results

THE FOUR BENEFITS OF RISK SIGNALS…

01

RISK / RETURN differentiation:

Forward-Looking Equity Regimes correspond to different profiles

- Impact on expected return & volatility
- Impact on Drawdowns
- Some real perspective as signals live since 2018

Information Granularity to make decisions along 4 differentiated states (Overweight, Neutral, Underweight, Red Button)

02

TAIL RISK management:

Dual approach to tail risk: regimes + Red Button

- Helping to size the level of Risk Management decisions to have a meaningful impact

Helping to build asymmetrical payoffs on core indices

03

ASSET ALLOCATION signal:

An equity signal telling us when to move away from equities

- It does not tell which more defensive asset classes to use but when to use them.

Challenging Investment Committees to depart from Momentum

04

STYLE rotation:

Switching from more aggressive styles and sectors to more defensive ones according to the Risk Regime Signal

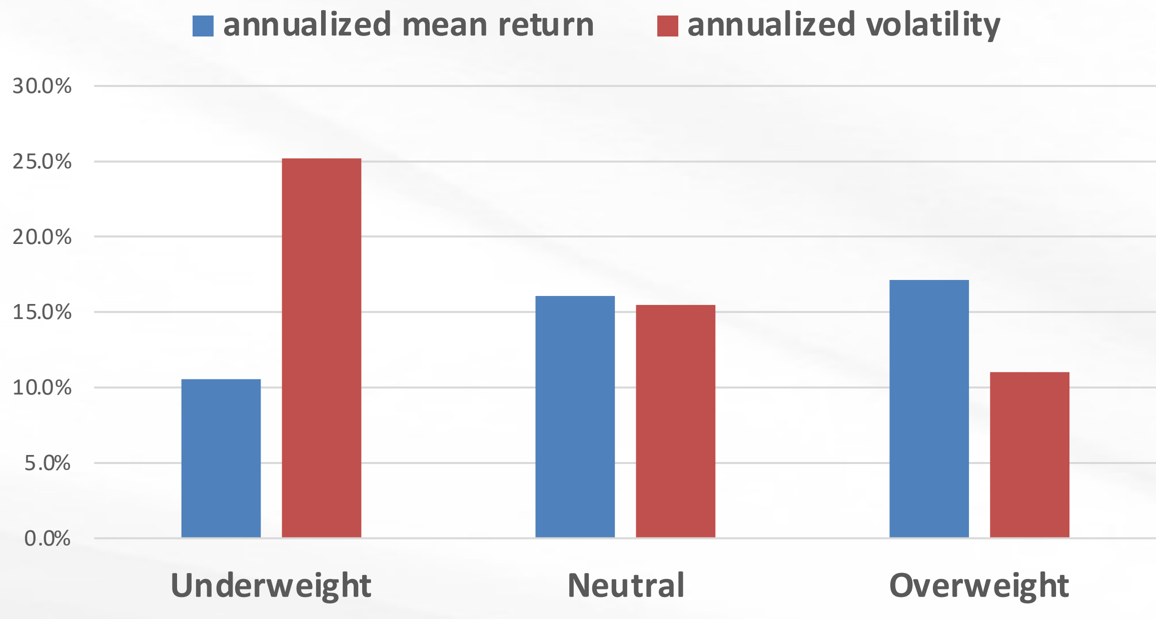
- Quality Growth is usually an interesting style, but not always

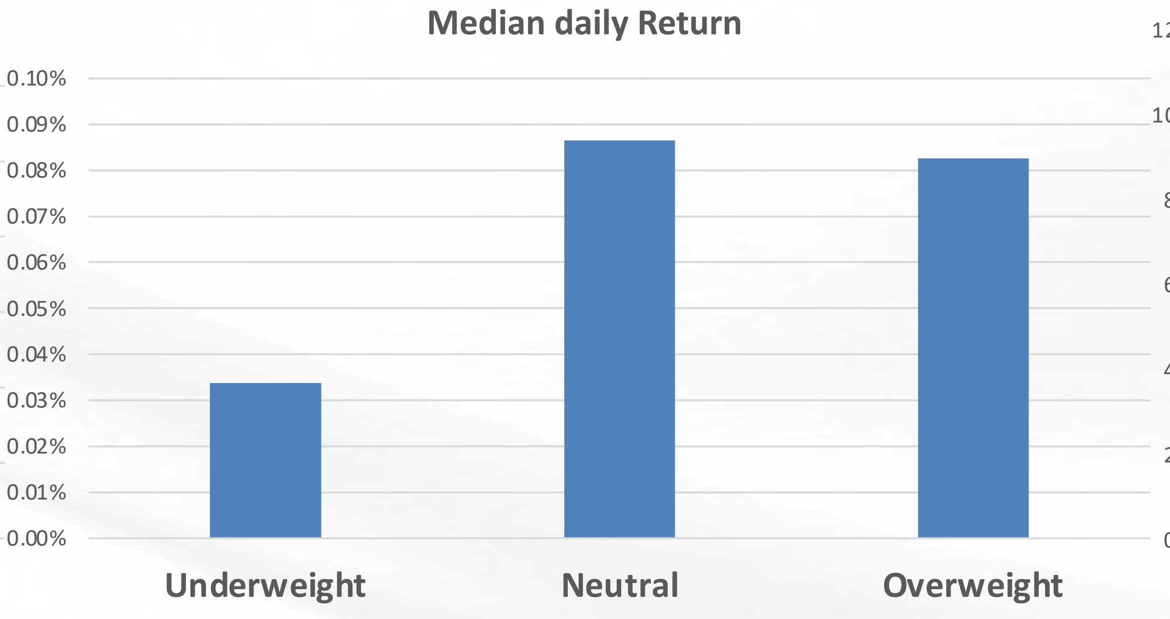
Top-Down decisions on Style / Sector allocations

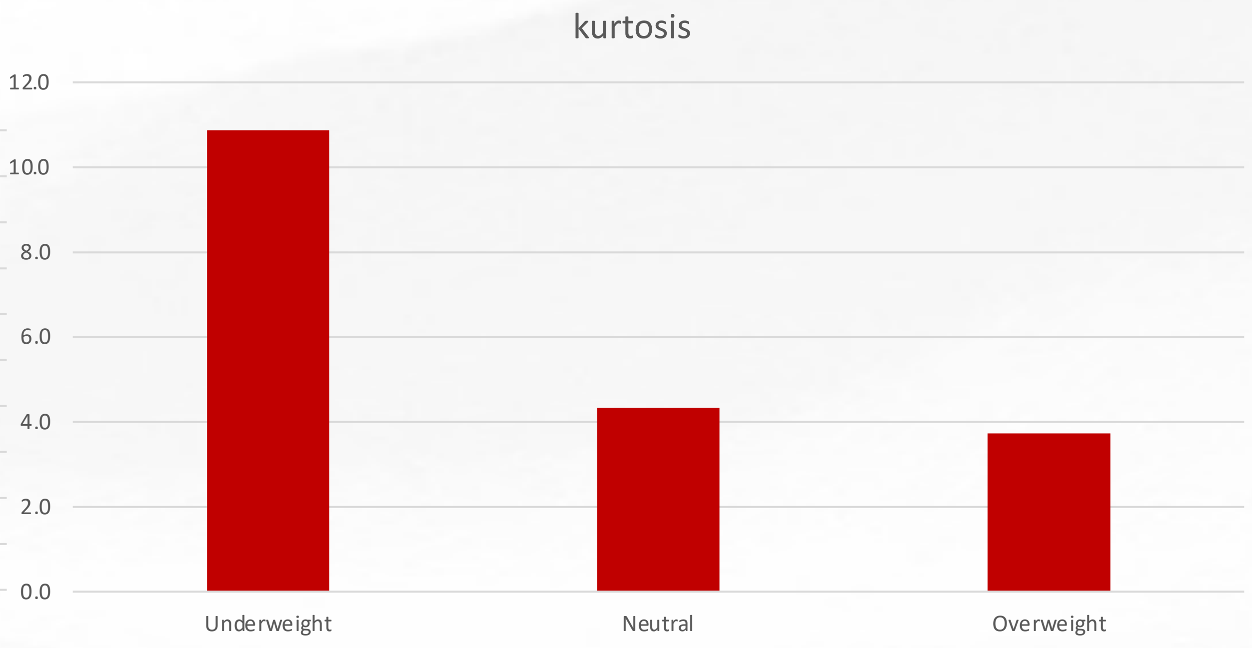
A CLEAR DIFFERENTIATION AMONG RISK REGIMES…

Looking at the Risk / Return differentiation of the Regime Signal ex post

We can observe the expected differentiation across the 3 regimes, with much higher Tail Risk (Kurtosis) in the 'Underweight' Regime .







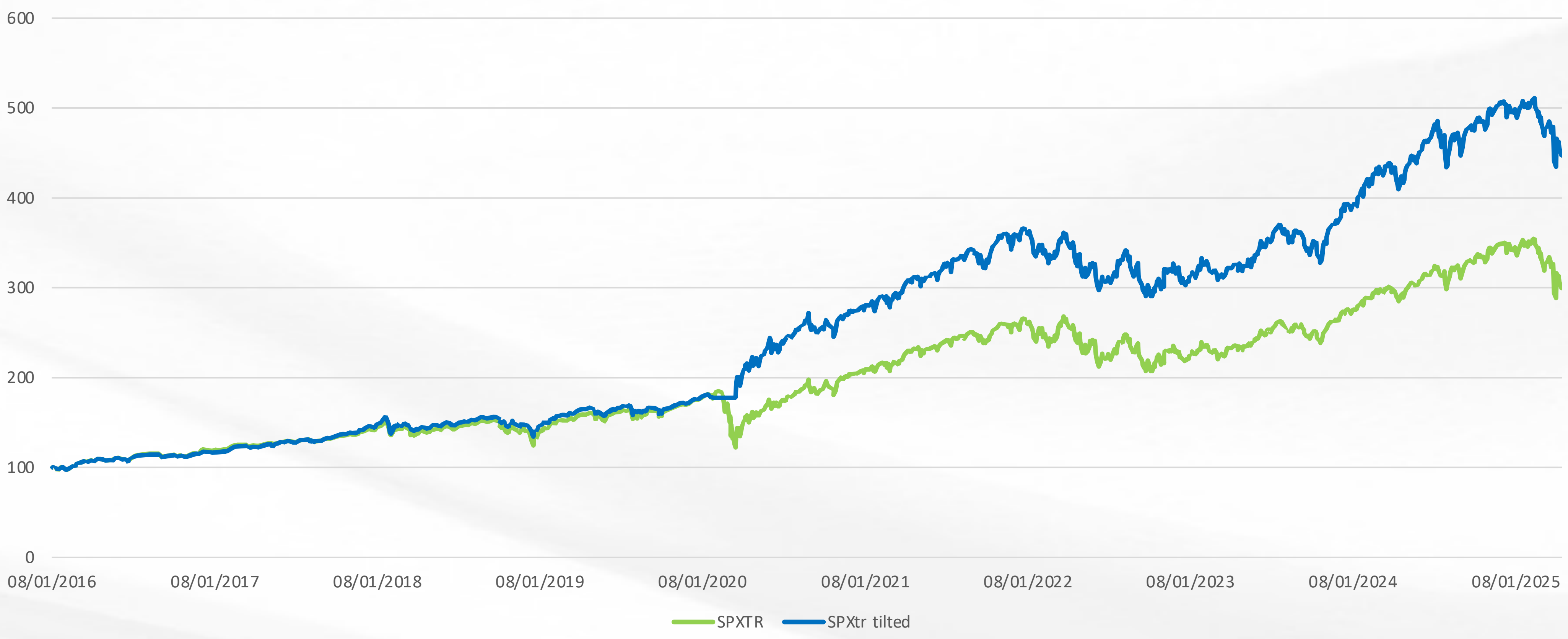
A STRONG TACTICAL ALLOCATION INSTRUMENT …

Catering for the expectation to mitigate risks

The approach consists in being exposed to 75% of the S&P500 when the signal is Underweight, 100% when it is Neutral, 125% when it is Overweight and 0% during the Red-Button periods.

	EE	SPXtr
R	17.68%	12.64%
V	15.21%	18.23%
R/V	1.16	0.69

The Impact of the EquityEdge signals on the S&P500 (Blue: SP500+Regimes ; Green: SP500)

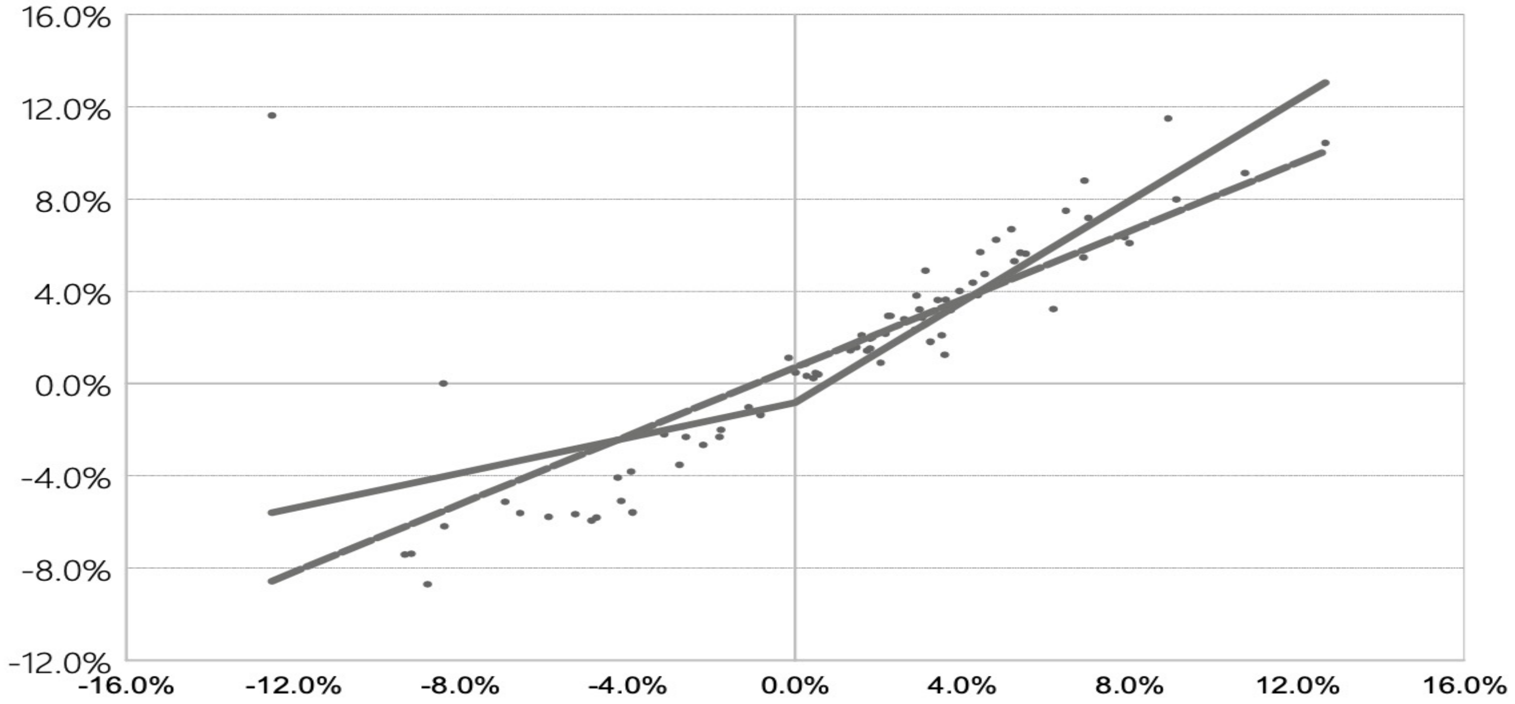


This information corresponds to signals and not investments

DELIVERING A QUASI CALL OPTION ON THE S&P500...

A beta of 38% versus the S&P500 on the negative side and 110% on the positive side

The approach consists in being exposed to 75% of the S&P500 when the signal is Underweight, 100% when it is Neutral, 125% when it is Overweight and 0% during the Red-Button periods.



Linear		**Piecewise**	
Alpha	0.70%	Alpha	-0.84%
Beta	0.74(11.8)	Bull Beta	1.10(9.3)
Annualised Alpha	8.69%	Bear Beta	0.38(3.2)
		Annualised Alpha	-9.58%

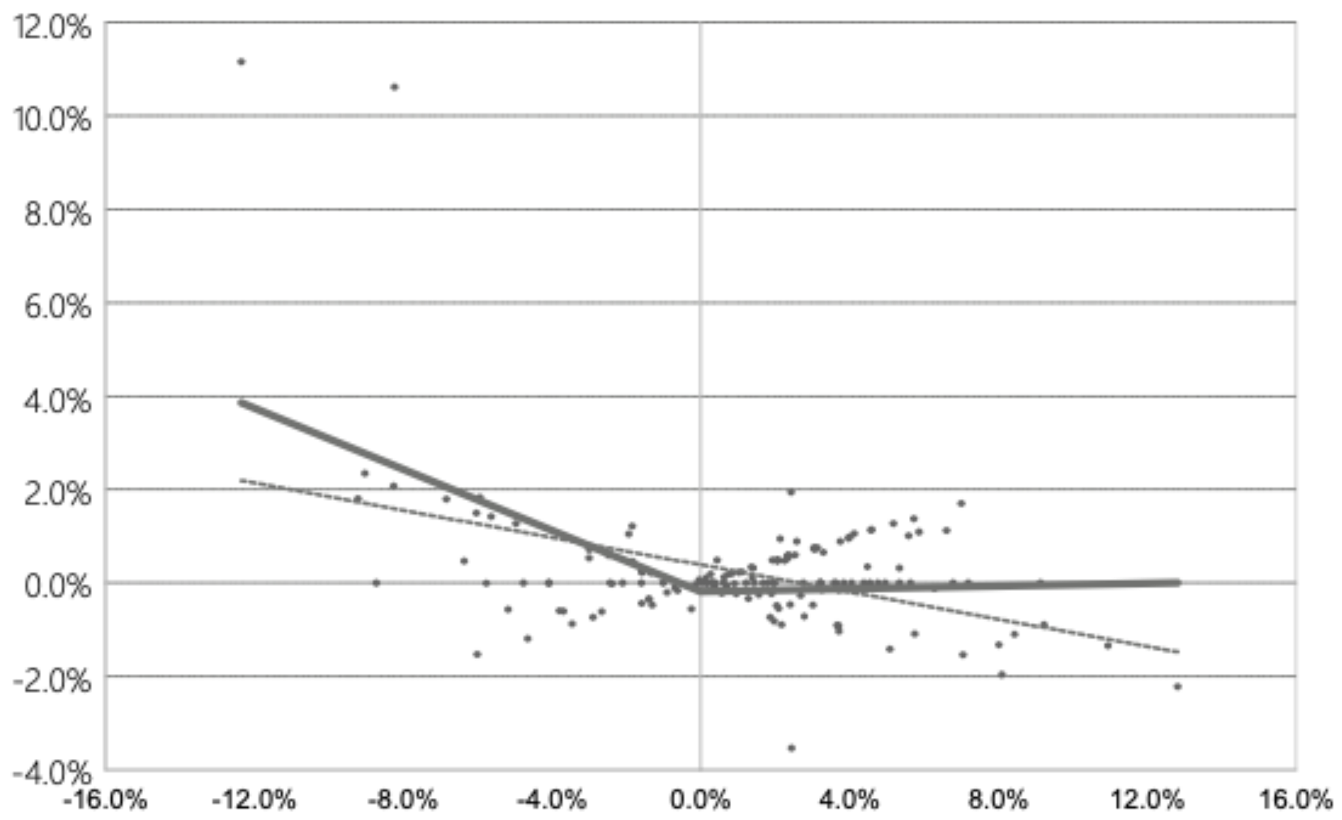
RSquare	0.65	Correlation	0.81	Tracking Error	10.65%

This information corresponds to signals and not investments

OVERLAY AS A PUT PROTECTION…

A beta of -33% versus the S&P500 on the negative side and 1% on the positive side

The approach consists in being exposed to -25% of the S&P500 when the signal is Underweight, 0% when it is Neutral, 25% when it is Overweight and -100% during the Red-Button periods.



Linear	
Alpha	0.39%
Beta	-0.15(-5.6)
Annualised Alpha	4.76%

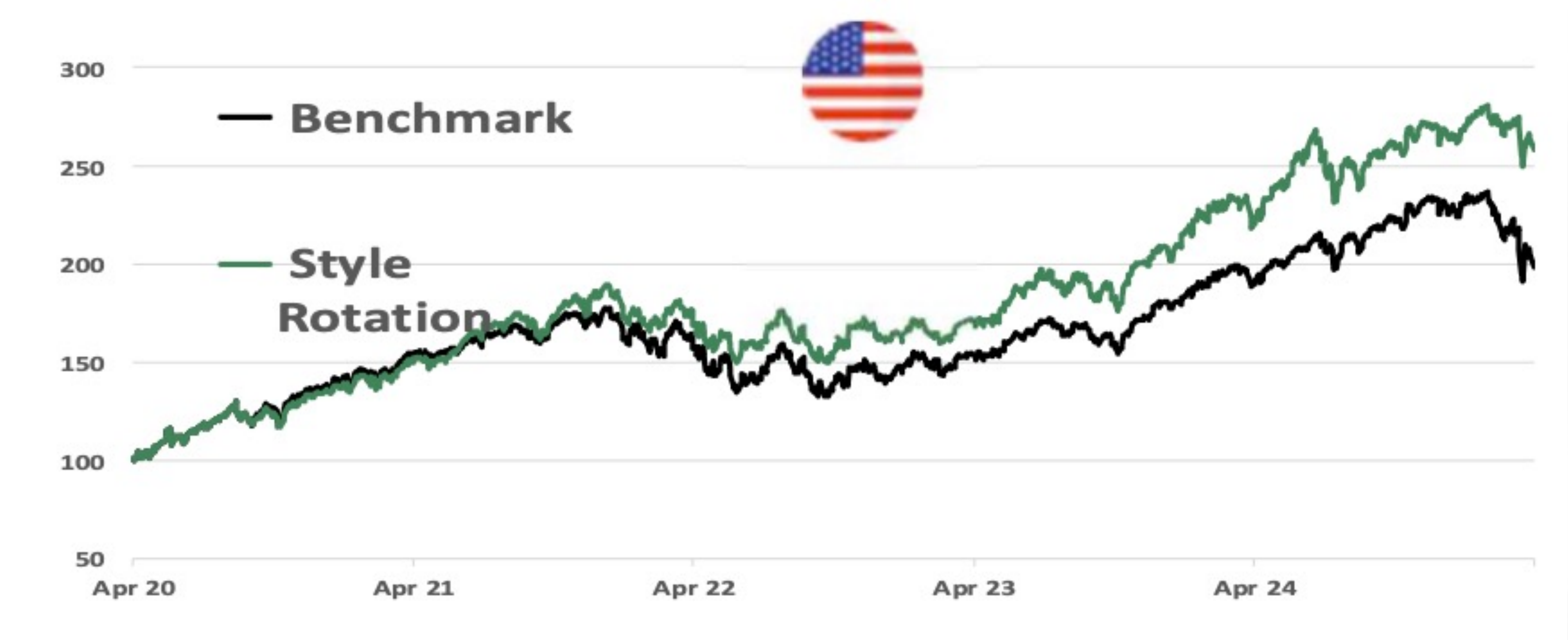
Piecewise	
Alpha	-0.18%
Bull Beta	0.01(0.3)
Bear Beta	-0.33(-6.7)
Annualised Alpha	-2.16%

This information corresponds to signals and not investments

A SIGNAL TO CONSIDER FOR STYLE ROTATION…

This Style Rotation brings 0.2 additional Sharpe Ratio over 5 years

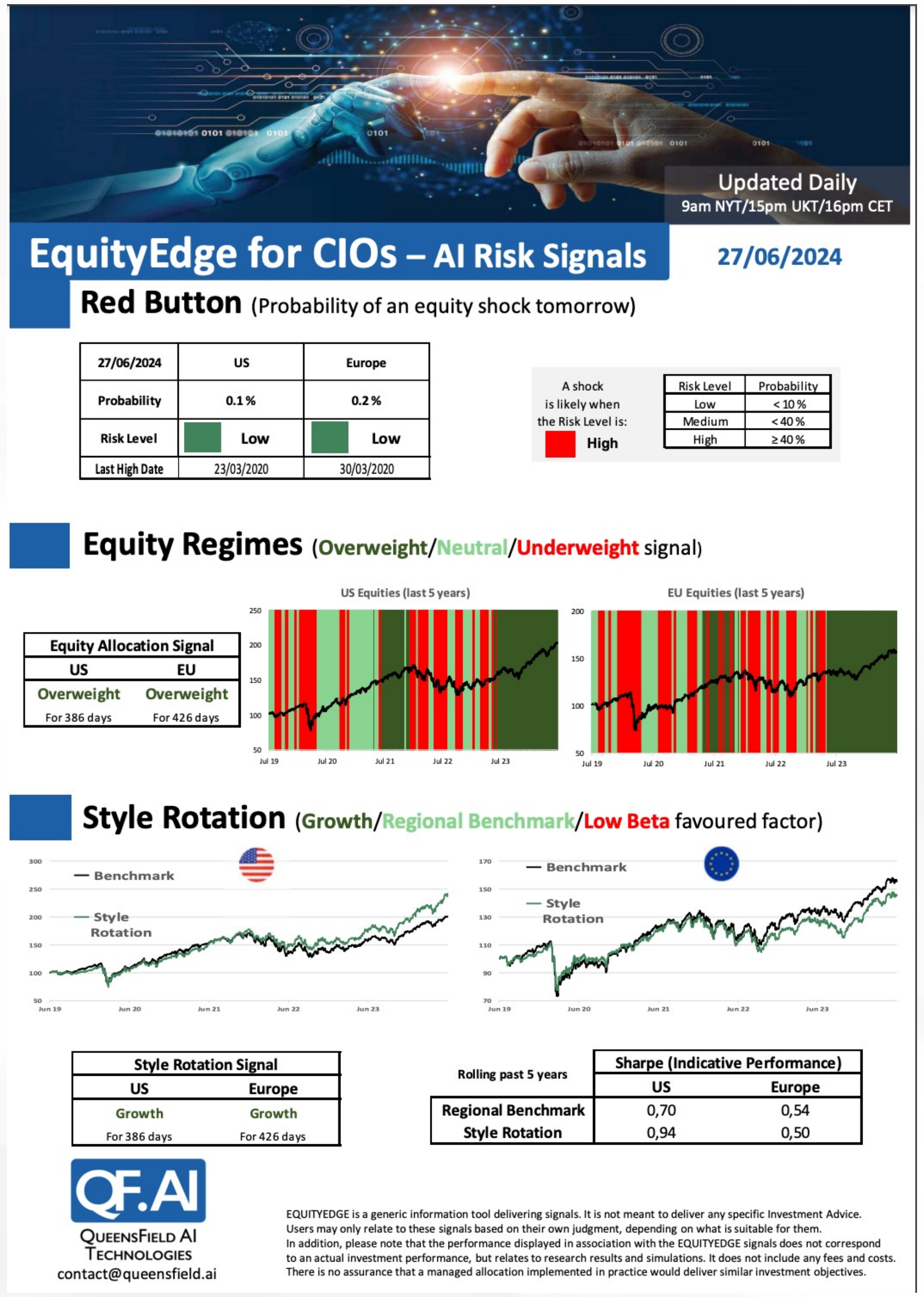
Overweight periods are invested in the Nasdaq, Neutral periods in the SP500 and Underweight period in the MSCI Low Volatility index. The benchmark is the S&P500.

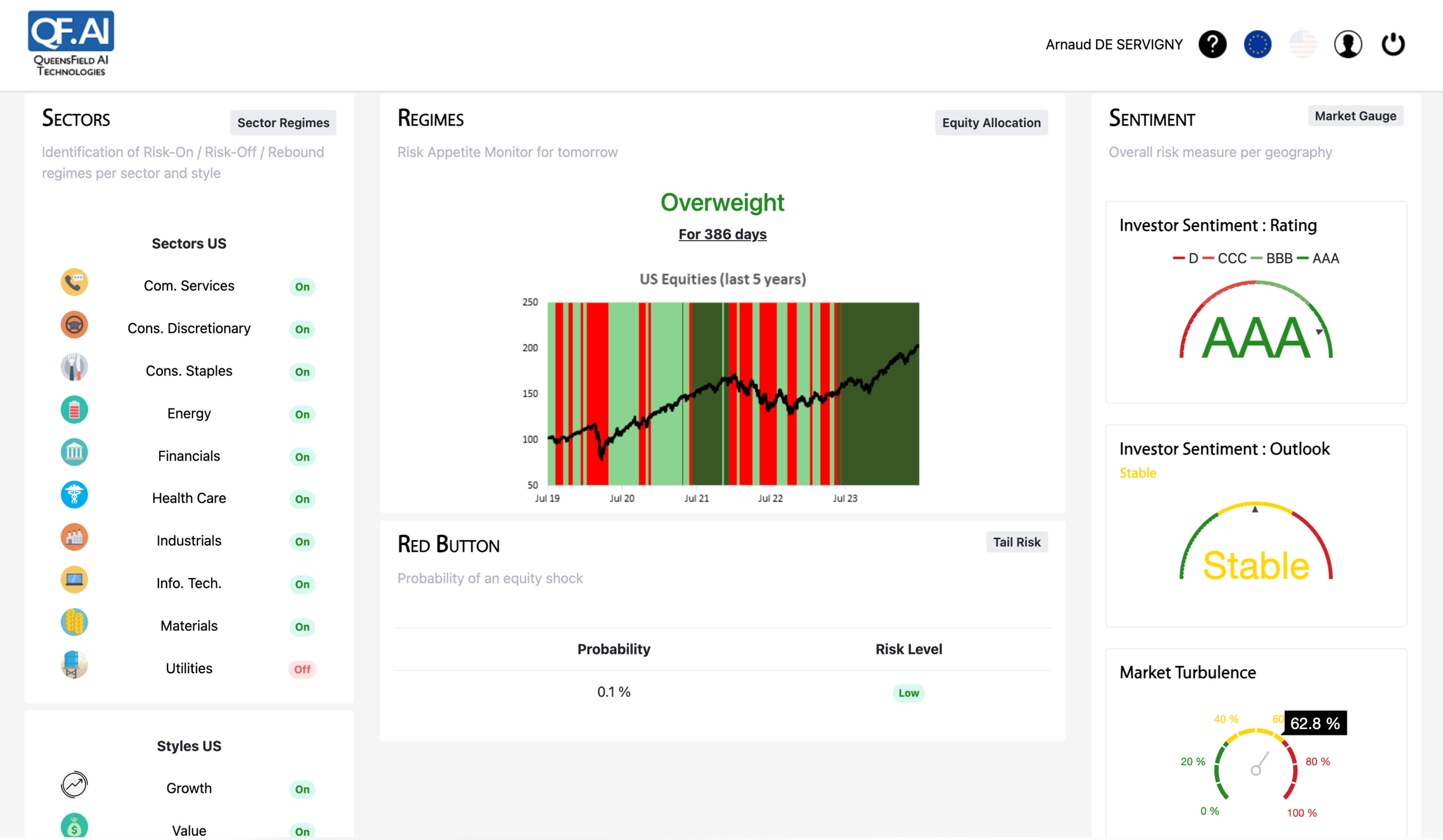


This information corresponds to signals and not investments

DELIVERY

TWO DELIVERY FORMATS…





- The daily mail sent in the afternoon and the EquityEdge-Tech platform

DISCLAIMER

Queensfield AI Technologies is a company acting as a Research & Development Lab working on the development of systematic investment strategies using advanced techniques. It has no investment capability and does not act in any manner as an investment advisor.

This document is for informational purposes only. It is not to be construed as an offer to buy or sell, or a solicitation of an offer to buy or sell, any fund, shall not be taken as any form of commitment or contract on the part of Queensfield AI Technologies sas ("QFAI") and does not create any legally binding obligation on its behalf.

Although the information herein has been obtained from sources believed to be reliable, we do not guarantee its accuracy, completeness or fairness, and it should not be relied upon as such. QFAI has no obligation to update, modify or amend this document or to otherwise notify the recipient in the event that any matter stated herein, or any opinion, projection forecast or estimate set forth herein, changes or subsequently becomes inaccurate. To the extent permitted by law, QFAI accepts no liability for loss arising either directly or indirectly from the use of the material in this document.

The indexes / strategies mentioned herein may not be suitable for all investors and, unless otherwise agreed, before entering into any transaction you should take steps to ensure, with or without the assistance of an investment advisor, that you fully understand the strategy and have made an assessment of the suitability of the strategy in the light of your own needs, objectives and financial circumstances, including the possible risks and benefits of entering into such a strategy. QFAI does not give taxation or legal advice. Investors should seek advice from their own tax advisors, lawyers and other professional advisors, in considering strategies developed by QFAI.

Please note in particular that the bases and levels of taxation may change. Nothing in this document constitutes investment, legal, accounting or tax advice, or a representation that any investment or strategy is suitable or appropriate to your individual circumstances, or otherwise constitutes a personal recommendation to you.

Strategies / Indices may not be suitable for certain investors and no assurance can be given that the instrument's investment objective will be achieved. Investors should be aware of the attendant risks.