

**JULEX** CAPITAL

# Understanding whipsaw in TAA portfolios

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- Whipsaw
- It feels appropriate that we are discussing this topic . . . on **Friday the 13<sup>th</sup>**
- Cambridge English Dictionary
  - *“to move, or to make something move, quickly between two directions”*
  - *“to defeat or affect someone badly, especially in two ways at the same time”*

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FALL 2017

## A Century of Evidence on Trend-Following Investing

BRIAN HURST, YAO HUA OOI, AND LASSE HEJE PEDERSEN

**Slide from prior Friday discussion**

### CONCLUSION

Trend-following investing has performed well in each decade for more than a century, as far back as we can get reliable return data for several markets. Our analysis provides significant out-of-sample evidence across markets and asset classes beyond the substantial

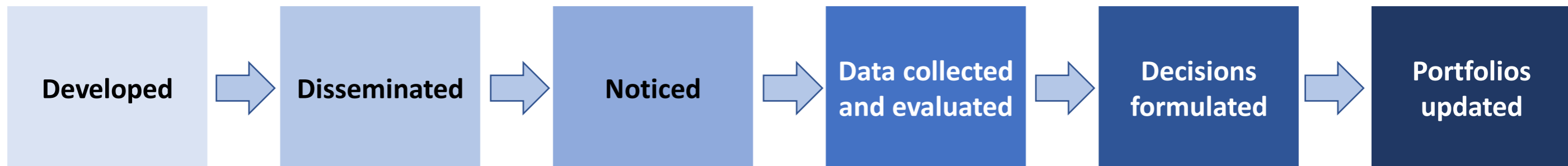
*Slide from prior Friday discussion*

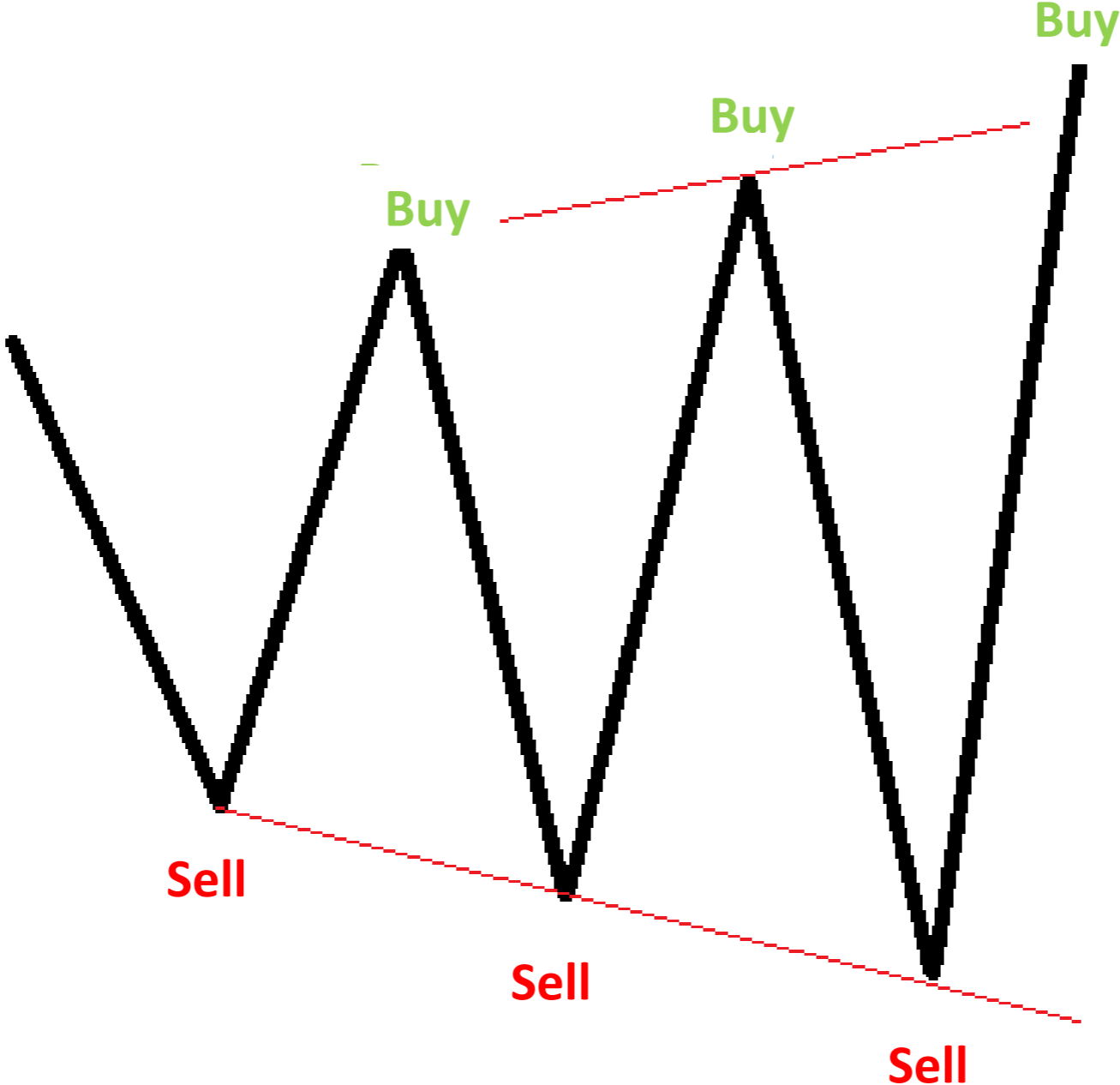
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## Step 3 - Why do markets trend

- Why markets trend - winners keep winning and losers keep losing
- Investment markets trend because it takes time for new information to first develop, next be disseminated and analyzed, and finally acted upon and consequently, reflected in market prices
- The length of time for this entire process varies considerably from one investor to the next and is therefore spread over many months or more

*Slide from prior Friday discussion*





## Let's backup for a moment

- Whipsaw often misunderstood or mischaracterized
- Unhelpful
  - Comparison to the wrong benchmark
  - Underperformance
- Helpful
  - Full recognition for the reality of whipsaw when using TAA strategies
  - There might be NO appropriate benchmark
  - Poor performance during “sawtooth” market
  - Poor performance during hyper-short bear market
  - Proper TAA strategy design
    - Reduces exposure to whipsaw
    - Reduces severity of underperformance during hyper-short bear markets

- Monthly
- Two bites of apple . . . at different points during the month
  - But still just “monthly”
- Macroeconomic overlay



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## Step 5 - Identifying the data set and quantitative rule

- Monthly returns spanning the time period Jan 1919 through Feb 2020
- **29 asset categories**
  - 7 - U.S. stocks
  - 9 - international stocks
  - 6 - U.S. Treasuries (maturities from 90-days to 30-years)
  - 2 - U.S. investment grade corporate bonds
  - 1 - International government bonds
  - 1 - broad-based diversified commodities
  - 3 - precious metals
- **Quantitative rule**
  - Once each month select the 7 assets that are trending the most strongly and equal weight them

**Slide from prior Friday discussion**

- Quantitative rule

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*Slide from prior Friday discussion*

Simple quantitative rule				
Alternative investment time periods	Intended to serve client needs located this far in the future	Comparative performance benchmark	Intermediate-term, investment grade, U.S. corporate bonds	The 7 asset classes that are trending most strongly, equal-weighted
7 ½ years	5 to 10 years	25%/75% stocks/bonds	30%	70%
12 ½ years	10 to 15 years	50%/50% stocks/bonds	20%	80%
17 ½ years	15 to 20 years	75%/25% stocks/bonds	10%	90%
22 ½ years	21 years and greater	100% stocks	0%	100%

- Quantitative rule

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# Correlations between TAA and S&P 500

- These correlations mean that it is extremely likely that the S&P 500 will be **up** and your TAA portfolio will be **down**

	1 month	3 months	6 months	1 year	3 years	5 years
Correlation between the S&P 500 and the TAA portfolio	0.59	0.61	0.61	0.57	0.54	0.48

## The wrong way to define whipsaw

- It's just plain wrong to define whipsaw as underperforming the S&P 500

- Quantitative rule

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**Simple quantitative rule**

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	<b>1 month</b>	<b>3 months</b>	<b>6 months</b>	<b>1 year</b>	<b>3 years</b>	<b>5 years</b>
Correlation between the 25/75 stock/bond benchmark and the TAA portfolio	0.63	0.60	0.59	0.62	0.50	0.39



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# Simple “underperformance”

- 45 month investment time window
- **Period ending Nov 30, 2015**
  - S&P +14.3% annualized
  - TAA (7 ½) +4.3% annualized
- **Period ending Jul 31, 1999**
  - S&P +26.9% annualized
  - TAA (7 ½) +15.6% annualized

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- Over rolling time windows
  - Not so bad
- During hyper-short bear market declines
  - Rare
  - But pretty much universally problematic

- 1919 to the present
- Whipsaw must be defined
  - Relative to a specific index . . . . here we use the S&P 500
  - Over a specific time window . . . . here we use 45 months
- Two episodes of whipsaw (out of the last 101 years)
  - First period
    - Sep 30, 1923
    - S&P +2.92% annualized
    - TAA -0.72% annualized
  - Second period
    - Oct 31, 1949
    - S&P +1.49% annualized
    - TAA -0.12% annualized

- Two periods to focus on
- One true bear market
- A second, which is very difficult to define as a “bear” . . . but let’s consider it anyway
- **Bear market of 1987**
  - Aug 31, 1987 - Nov 30, 1987
  - Technically, it only last 2 ½ months
- **“Decline” of 2020**
  - Feb 19, 2020 - Mar 23, 2020
  - Not really a bear market by any reasonable definition

## Bear market of 1987

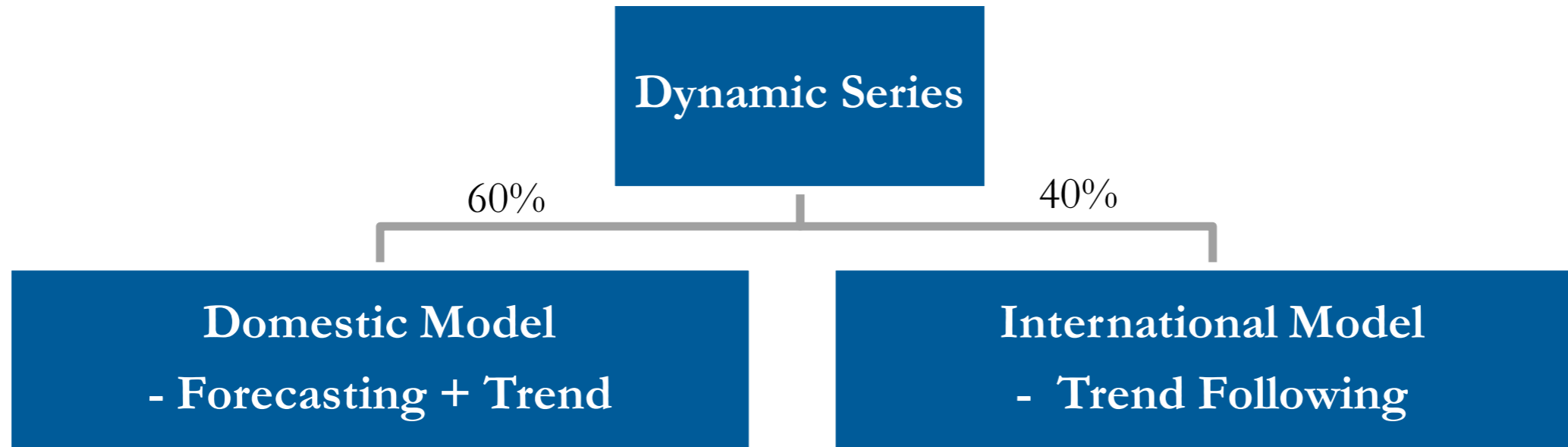
- Three months
- Aug 31, 1987 - Nov 30, 1987
- S&P -30%
- Simple TAA model -12%
  
- There does not exist a TAA strategy that could successfully navigate such a hyper-short downturn
- Except by non-repeatable dumb-luck

## Decline of 2020 - The “non-bear” bear

- 33 days
- Feb 19, 2020 - Mar 23, 2020
  
- 33-day hyper-short decline of 2020
  - S&P -34%
  - Julex Dynamic Years 6-10 Portfolio -25%
  
- There does not exist a TAA strategy that could successfully navigate such a hyper-short downturn
- Except by non-repeatable dumb-luck



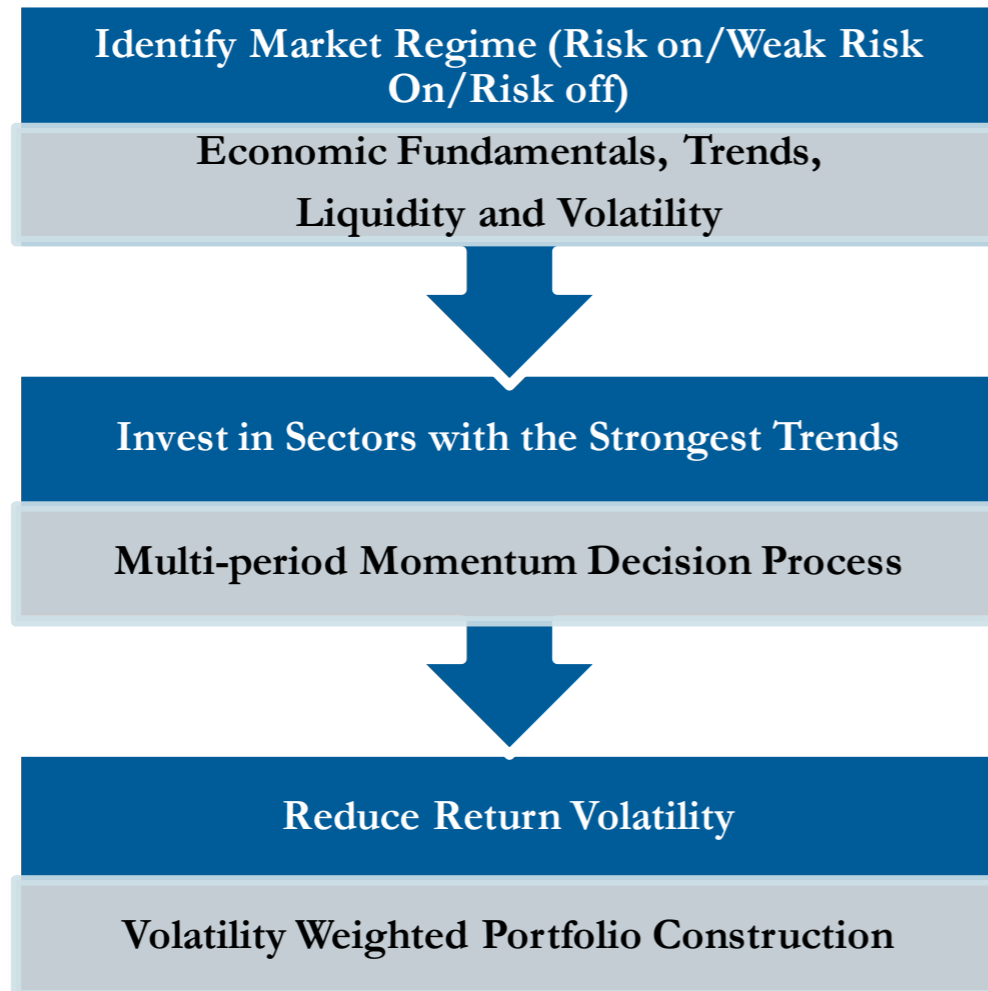
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- Macroeconomic overlay
- The investment team



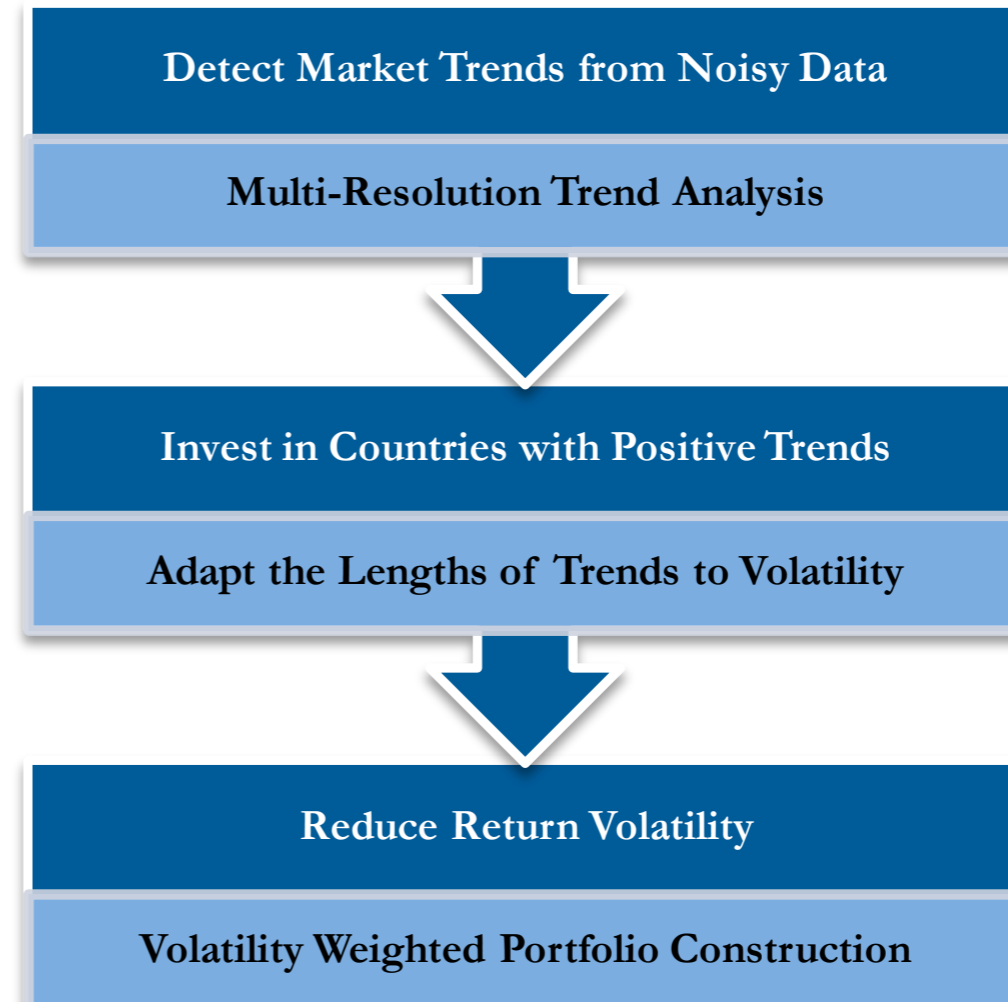
**Benefits of Multi Strategies:**

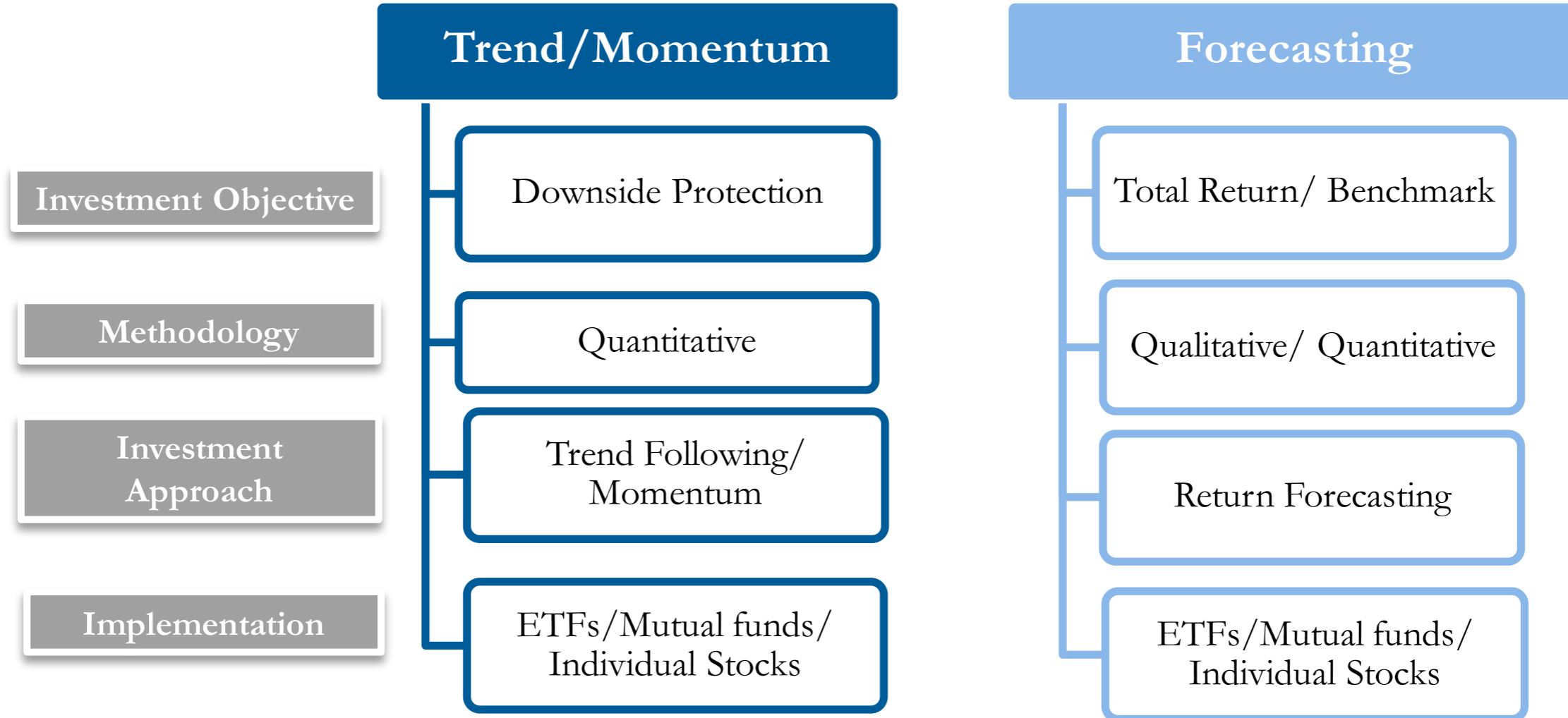
- Better risk-adjusted return
- Model risk mitigation

## Domestic Model

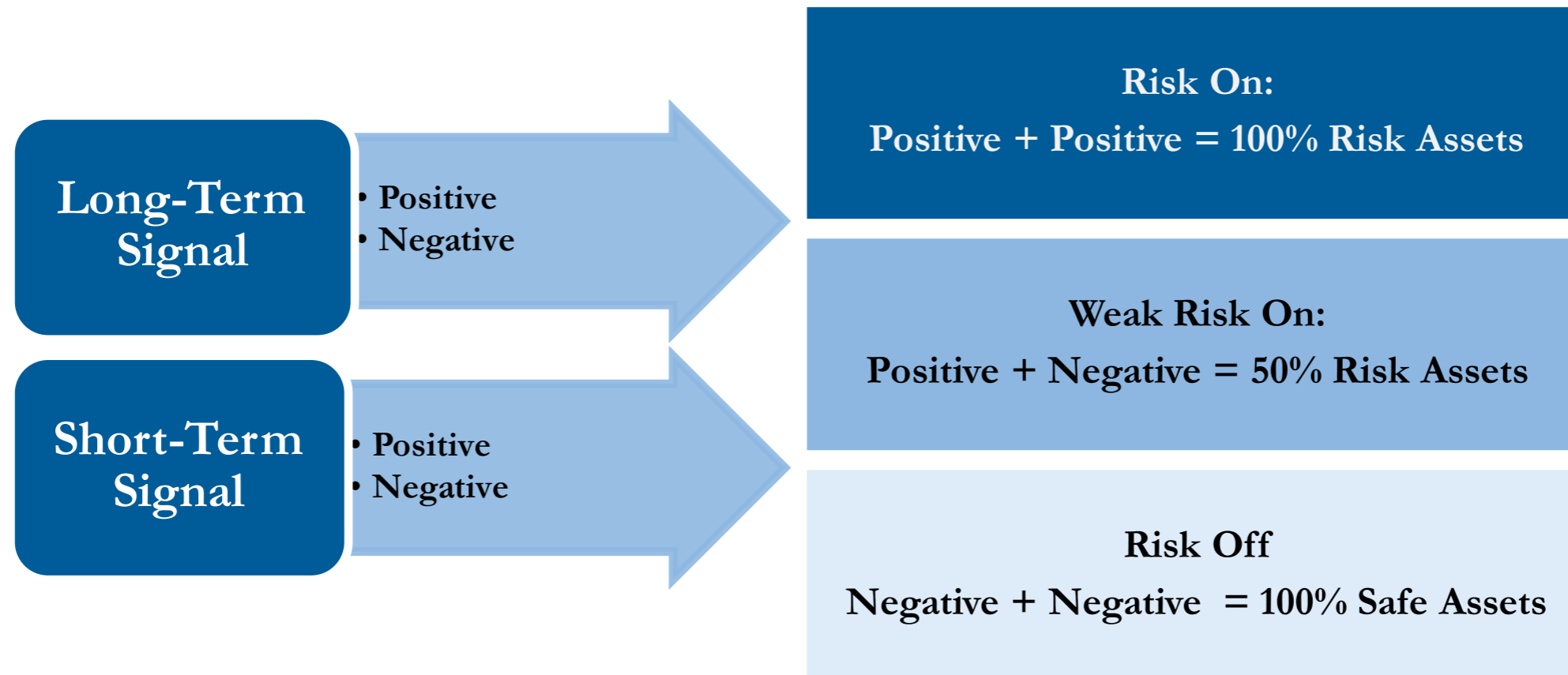


## International Model





- Combining long-term trend with short-term forecasts
- Economic, valuation and technical factors are considered in the model



## Firm Overview

- Employee-owned, established 2012
- Quantitative, rules-based investment process
- Strategy Focus:
  - Tactical strategies – limit loss
  - Quantitative equity strategies - generate alpha
- Experienced Team
  - Institutional investment experience
  - Portfolio management team includes 3 Ph.D.'s
- GIPS compliance verified by ACA Performance Services

# Julex - the investment professional team

Team	Role	Experience	Education
Henry Ma Ph.D., CFA	President Chief Investment Officer	Geode Capital – Hedge Fund Manager Loomis Sayles – Director of Quantitative Research Fortis Investments - Director of Quantitative Research Sun Life Financial– Portfolio Manager	Ph.D. Economics – Boston University BA, MA – Peking University
George Xiang Ph.D., CFA	Portfolio Manager Research	State Street Global Advisors (SSGA) – Head of Quantitative Research Loomis Sayles – Senior Quantitative Analyst Conseco Capital – Quantitative Research Manager	Ph.D., Mathematics – Purdue University BA – Nankai University
Frank Zhuang Ph.D.	Portfolio Manager Research	Ericsson – Senior Engineer Nortel, Alcatel/Lucent - Senior Research Scientist	Ph.D. Electric Engineering – University of Maryland MS – West Virginia University
Jeffrey Megar CFA	Investment Committee Member	F-Squared Investments – Senior Vice President State Street Global Advisors – Senior Portfolio Manager Fortis Investments – Senior Portfolio Manager Cypress Tree Investment Management	MBA – Northeastern University BA – Framingham State University
Liam Flaherty	Research	MFS Investments - Independent Contractor MassMutual - Internship	BA – Babson College
Bo Wang	Research		Ph.D. Candidate, Economics – Boston College BA – Renmin University of China

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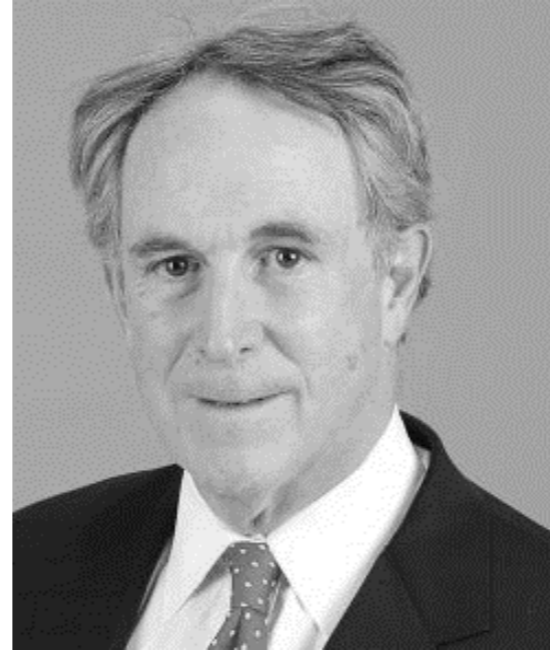
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# TAA why right now and for the next several years

Fri, Nov 20, 2020 11:00 AM - 11:45 AM (EST)

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One of the limitations of hypothetical performance results is that they are generally prepared with the benefit of hindsight. In addition, hypothetical trading does not involve financial risk, and no hypothetical trading record can completely account for the impact of financial risk in actual trading. For example, the ability to withstand losses or adhere to a particular trading program in spite of trading losses are material points which can also adversely affect actual trading results. There are numerous other factors related to the markets in general or to the implementation of any specific trading program which cannot be fully accounted for in the presentation of hypothetical performance results and all of which can adversely affect actual trading results.

The composition of a benchmark index may not reflect the manner in which a Julex portfolio is constructed in relation to expected or achieved returns, investment holdings, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility, or tracking error targets, all of which are subject to change over time.

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