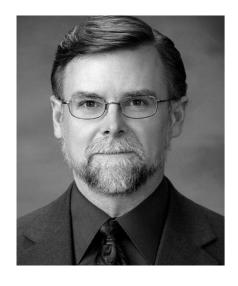
JULEXCAPITAL

Unhappy with or skeptical of TAA?

Rob Brown, PhD, CFA

Julex Capital Advisory Board Member, Website www.robbrownonline.com



40 Grove Street, Suite 140, Wellesley, MA 02482
Phone 781-489-5398
Email info@julexcapital.com
Web www.julexcapital.com



• TAA has a larger percentage of consistent detractors than most other strategies

• Why?

- Two primary reasons
- Failure to first set . . . and then maintain . . . appropriate expectations
- Blackbox approaches . . . and those who make it sound more complex than it really is

Sources of unhappiness or skepticism



Expectations

- Taxes
- Optics
- Tracking
- Destination versus journey
- Measuring success
- Exaggeration

Blackboxes or complexity



Expectations - Taxes

Terribly tax inefficient

TAA is tax inefficient



- TAA is all about generating short-term capital gains instead of long-term capital gains
- If TAA generates a long-term capital gain, then something is wrong with the strategy

Set and maintain appropriate expectations

• But, don't . . . mistakenly jump to the incorrect conclusion that TAA should not be used in taxable accounts



Expectations - Optics

The average experience over time . . . versus an instant in time

Two aspects to the optics challenge



- There two separate and distinct issues here
- Visibility versus invisibility
- Inappropriate asset mix

• Both . . . are optical problems and <u>NOT</u> investment problems

Visibility versus invisibility



- For some clients, seeing what they are holding with too much specificity, can be disturbing
- Often generating emotional reactions
- For example
 - I don't want to hold China
 - Everyone knows long bonds are dangerous
 - Technology is too dangerous for me to hold
 - Everyone knows that small cap should be part of every prudent portfolio
 - I don't want to hold so much outside the U.S.
 - Everyone knows that real estate is a bad exposure to hold right now
 - I don't want to hold energy, they pollute
 - Everyone knows that the portfolio should be 30% to 50% bonds



- An inappropriate asset mix results from . . . exposing oneself to too high a probability of significant failure
- This results from holding too LARGE of a bet for too LONG a period of time
- At any instant in time, a TAA portfolio will reflect significant tilts or bets
- But, on average over the long span of time . . . a TAA portfolio's average asset mix will be no different from a passive ultra-diversified portfolio
- The very short time period with which TAA portfolios expose themselves to specific bets . . . means that over suitably long time periods, TAA portfolios are no more risky (and are probably less risky) than more traditional ultra-diversified solutions



Expectations - Tracking

It won't track a benchmark . . . and this makes life really difficult

Lack of tracking



- This is one of the two biggest sources of disappointment with TAA
- Essentially . . . the S&P 500 is up and my TAA portfolio is down

Consider a specific example



• A simple generic example of TAA that I discussed during prior Friday discussions

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



Step 5 - Identifying the data set and quantitative rule, continued

Mois



Quantitative rule

• Once each month select the 7 assets that are trending the most strongly and equal weight them

	rior Friday	discussion		Simple quan	titative rule
slide from	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%

Step 5 - Identifying the data set and quantitative rule, continued

nois



Quantitative rule

• Once each month select the 7 assets that are trending the most strongly and equal weight them

		Eriday	discussion		Simple quan	titative rule
slide fr	om'	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
		7½ 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%



• 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



Expectations - Destination versus Journey

The investment industry's greatest dysfunction

The investment industry delivers "Journey Portfolios"



- Their motivation is commercial . . . and therefore practical and logical
- It is easier to sell "journey product"
- Since it is all about assembling short-term relative performance track records
 - 1-year
 - 3-years
 - 5-years
 - 7-years
- Just incubate a whole bunch of these
- Then sell the heck out of the few that worked
- Keep developing more in the backroom, to replace the ones you went live with that failed



Benefit

Experience a smoother, more pleasing Journey



. . . instead of



Cost

Unfortunately, your Journey portfolio might lead you to this Destination





Benefit

Reach a more favorable Destination



. . . instead of



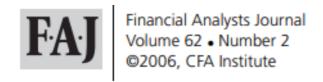
Cost

Unfortunately, your Destination portfolio might take you on this type of Journey





NO!



PERSPECTIVES

The Myth of the Absolute-Return Investor

M. Barton Waring and Laurence B. Siegel

n meetings with clients and colleagues in the past few years, we have noticed that many otherwise hardheaded and clear-eyed investors are excited about "absolute return" investing. The notion is spreading like wildfire. Many institutional investors have already added, or are planning to add, an absolute-return "asset class" to their policy mix. At a time when pension funds, foundations, and endowments are under

both sensible and true to the sense of the term eluded us. That experience further piqued our interest in the idea.

So, let us explore the term a bit. It is widely used, and because words are chosen to a purpose, one can find some of that purpose by observing the context in which a term is used.

One important bit of context is that the word pair "absolute return" has been used most by those



- NO!
- TAA portfolios have no ability, and make no attempt to generate a positive return all of the time
- Instead . . . their objective is that of a "Destination Portfolio"
- To maximize the probability of earning at least X% at some future date Y-years in the future

Step 5 - Identifying the data set and quantitative rule, continued

nois



Quantitative rule

• Once each month select the 7 assets that are trending the most strongly and equal weight them

		Eriday	discussion		Simple quan	titative rule
slide fr	om'	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
		7½ 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%

TAA vs S&P 500 - giving it the time it needs to mature



	1 mc	onth	3 mc	onths	6 mc	nths	1 y	ear	2 ye	ears	3 y	ears	5 years		7 1/2	years
	TAA	S&P	TAA	S&P	TAA	S&P	TAA	S&P	TAA	S&P	TAA	S&P	TAA	S&P	TAA	S&P
99% chance of earning MORE than this return	-6.2	-13.9	-9.9	-25.2	-10.4	-34.0	-13.7	-43.4	-6.7	-33.6	-3.6	-28.9	2.7	-13.6	4.8	-3.8
10% chance of earning LESS than this return	-2.1	-5.0	-2.9	-7.6	-2.7	-9.6	-1.6	-12.4	1.5	-7.1	4.5	-4.6	5.7	-1.0	8.4	2.0

TAA vs S&P 500 - giving it the time it needs to mature



	1 mc			onths		nonths		ear		-	ears		years		ears			2 years
	TAA	S&P	TAA	S&P	TAA	S&P	TAA	S&P	•	TAA	S&P	TAA	S&P	T/	AA	S&P	TAA	S&P
99% chance of earning MORE than this return	-6.2	-13.9	-9.9	-25.2	-10.4	-34.0	-13.7	-43.4		-6.7	-33.6	-3.6	-28.9	2	.7	-13.6	4.8	-3.8
10% chance of earning LESS than this return	-2.1	-5.0	-2.9	-7.6	-2.7	-9.6	-1.6	-12.4		1.5	-7.1	4.5	-4.6	5	.7	-1.0	8.4	2.0

TAA vs a 25/75 stock/bond benchmark



	1 m	onth	3 mc	onths	6 ma	onths	1 y	ear	2 y	ears		3 ye	ears	5 years			7 1/2	years
	TAA	25/75	TAA	25/75	TAA	25/75	TAA	25/75	TAA	25/75		TAA	25/75	TAA	25/75		TAA	25/75
99% chance of earning MORE than this return	-6.2	-4.5	-9.9	-8.9	-10.4	-12.8	-13.7	-18.6	-6.7	-11.1		-3.6	-5.8	2.7	-2.0		4.8	0.3
10% chance of]]		
earning LESS than this return	-2.1	-1.3	-2.9	-2.0	-2.7	-1.7	-1.6	-1.7	1.5	-0.1		4.5	0.3	5.7	1.4		8.4	2.5

TAA vs a 25/75 stock/bond benchmark



	1 m	onth 25/75	3 mo	onths 25/75	6 m TAA	onths 25/75	1 y TAA	ear 25/75		2 yea	irs 25/75	3 y TAA	ears 25/75	5 yea		7 : TA	./2 years A 25/7
99% chance of earning MORE than this return	-6.2	-4.5	-9.9	-8.9	-10.4	-12.8	-13.7	-18.6	-6		-11.1	-3.6	-5.8	2.7	-2.0	4.8	
10% chance of earning LESS than this return	-2.1	-1.3	-2.9	-2.0	-2.7	-1.7	-1.6	-1.7	1.	5	-0.1	4.5	0.3	5.7	1.4	8.4	2.5

All successful investments are "destination portfolios"



- Successful investments are like agricultural crops
- Plant
- Sprout
- Grow
- Mature
- Ripen
- Harvest
- If you harvest before the crop's destination . . . you end up with disappointment
- Example . . . think of venture capital, or LBOs, or the new Opportunity Zone Funds



Successful investments are like agricultural crops

- Plant
- Sprout
- Grow
- Mature
- Ripen
- Harvest

The journey

- If you harvest before the crop's destination . . . you end up with disappointment
- Example . . . think of venture capital, or LBOs, or the new Opportunity Zone Funds



- Successful investments are like agricultural crops
- Plant
- Sprout
- Grow
- Mature
- Ripen
- Harvest The destination
- If you harvest before the crop's destination . . . you end up with disappointment
- Example . . . think of venture capital, or LBOs, or the new Opportunity Zone Funds

TAA vs a 25/75 stock/bond benchmark



	1 m	onth 25/75	3 mo	onths 25/75	6 m TAA	onths 25/75	1 y TAA	ear 25/75		2 yea	irs 25/75	3 y TAA	ears 25/75	5 yea		7 : TA	./2 years A 25/7
99% chance of earning MORE than this return	-6.2	-4.5	-9.9	-8.9	-10.4	-12.8	-13.7	-18.6	-6		-11.1	-3.6	-5.8	2.7	-2.0	4.8	
10% chance of earning LESS than this return	-2.1	-1.3	-2.9	-2.0	-2.7	-1.7	-1.6	-1.7	1.	5	-0.1	4.5	0.3	5.7	1.4	8.4	2.5

TAA vs a 25/75 stock/bond benchmark



	1 m	onth	3 m	onths	6 mc	onths		1 ye	ar	2 ye	ears	3 y	ears	5	i years		7 1/2	years
	TAA	25/75	TAA	25/75	TAA	25/75	T.	AA	25/75	TAA	25/75	TAA	25/75		TAA	25/75	TAA	25/75
99% chance of earning MORE than this return	-6.2	-4.5	-9.9	-8.9	-10.4	-12.8	-1	13.7	-18.6	-6.7	-11.1	-3.6	-5.8		2.7	-2.0	4.8	0.3
10% chance of earning LESS than this return	-2.1	-1.3	-2.9	-2.0	-2.7	-1.7	-:	1.6	-1.7	1.5	-0.1	4.5	0.3		5.7	1.4	8.4	2.5



Expectations - Measuring success

How do I know that I remain on track . . . how do I know it's working?



	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
	1 month	3 months	6 months	1 year	3 years	5 years

Conclusion



You cannot benchmark to any published index benchmark

• None . . . absolutely none

• This is incredibly unsatisfying . . . but remains true



Partial solutions

Set reasonable expectations

• If you're using a TAA portfolio with a 7 ½ year destination, then don't expect it to deliver as high a return as 100% equities . . . over the long-run

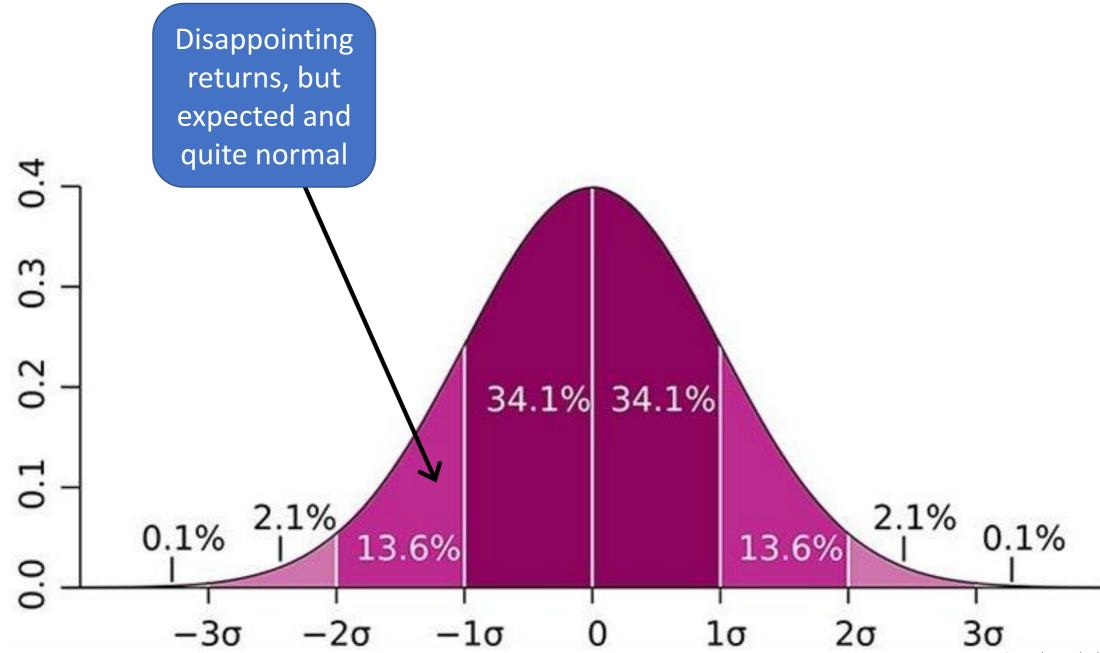
Compare to a universe of other TAA managers

• Challenging . . . your universe must be very carefully constructed

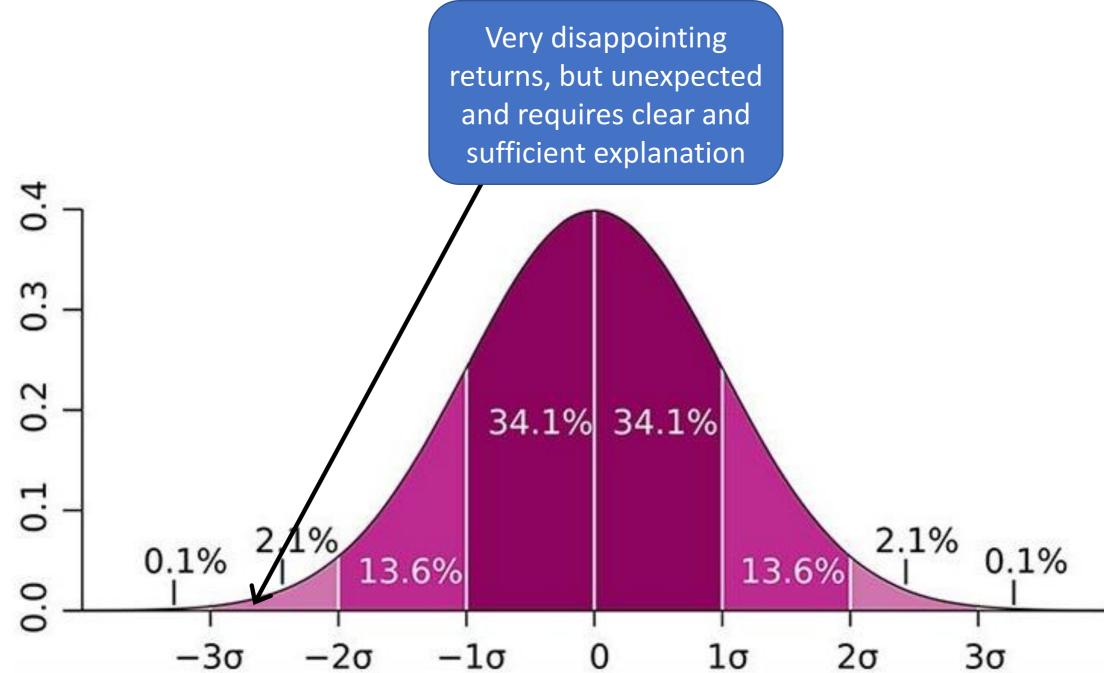
Two-step process

- First, confirm that the TAA manager is following their process and has not changed or over-ridden the process
- Second, confirm that recent performance is solidly within the probability distribution of returns for this strategy











Expectations - Exaggeration

Overpromising and underdelivering

One of the two most frequent sources of advisor disappointment



- All too often, TAA is delivered with
 - An overpromise
 - And inevitable resulting disappointment
- The overpromise often goes something like
 - "We participate on the upside and protect on the downside"
 - "Protection and participation"
 - But what the advisor or client might hear is "When the S&P is going up, I'm well in the game, participating handsomely . . . and when the S&P falls, I'm well protected from loss"

How does this unfold?



- February 19th through and March 23rd of this year
- The S&P 500 collapsed
- Those who heard and listened to the overpromises . . . wondered why their TAA strategy didn't protect them
- This is an unreasonable and unfounded expectation



Blackboxes or complexity

In truth . . . there really aren't any "investment secrets"



- You should expect and demand 100% transparency
- If the investment manager refuses to provide any and every level of granular detail . . . then just run the other way

- The sole exception to this rule . . . resides in the hedge fund arena when managers are harvesting a transitory/temporary finite pricing discrepancy
- Here, they need to keep the opportunity hidden until after they've brought in the harvest

Step 2 - Is the logic supported by voluminous independent research





VOLUME 44, NUMBER 1

www.iijpm.com

FALL 2017

A Century of Evidence on Trend-Following Investing

BRIAN HURST, YAO HUA OOI, AND LASSE HEJE PEDERSEN

slide from prior Friday discussion



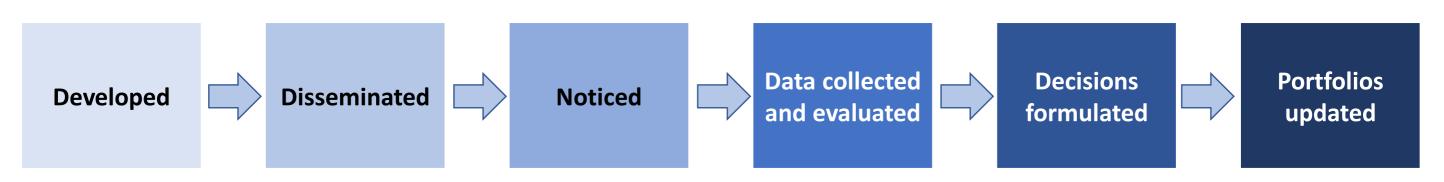


Trend-following investing has performed well in prior Friday discussion each decade for more than a century, as far back is we can get reliable return data for several markets. Our analysis provides significant out-of-sample and account of the contract o across markets and asset classes beyond the substantial

FALL 2017



- Why markets trend winners keep winning and losers keep losing
- Investment markets trend because it takes time for new information to first • The length of time for this entire process varies considerably from the investor to the next and is therefore spread over many months or more





But it's worth it

The juice is well worth the squeeze

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





Average returns

Benchmark Quant rule

Geometric mean return over the entire 101.1 years

Median (for investment periods of 7.5 years)

Mean (for investment periods of 7.5 years)

5.9%

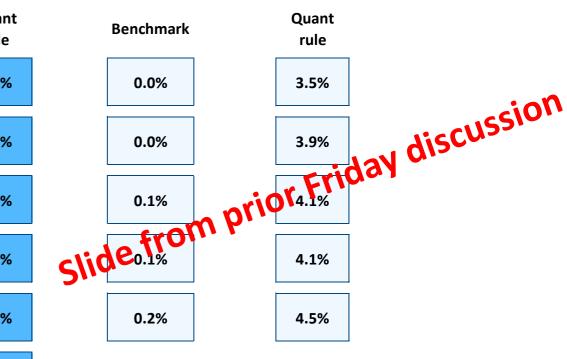
12.7%

Performance during 7.5-year investment time windows by percentile outcome

Quant

Percentile	Benchmark	Quant rule
99 th	0.3%	4.8%
98 th	0.4%	5.6%
97 th	0.7%	6.1%
96 th	0.8%	6.6%
95 th	0.9%	7.0%
94 th	1.4%	7.5%
93 rd	1.6%	7.8%
92 nd	2.0%	8.0%
91 st	2.3%	8.2%
90 th	2.5%	8.4%

Five worst 7.5-year investment periods ever experienced (out of the last 101.1 years)





Average returns Quant **Benchmark** rule **Geometric mean return** 12.2% 5.6% over the entire 101.1 years **Median (for investment** 5.5% 12.7% periods of 7.5 years) Mean (for investment 5.9% 13.0% periods of 7.5 years)

Performance during 7.5-year investment time windows by percentile outcome

Percentile	Benchmark	Quant rule
99 th	0.3%	4.8%
98 th	0.4%	5.6%
97 th	0.7%	6.1%
96 th	0.8%	6.6%
95 th	0.9%	7.0%
94 th	1.4%	7.5%
93 rd	1.6%	7.8%
92 nd	2.0%	8.0%
91 st	2.3%	8.2%
90 th	2.5%	8.4%

Five worst 7.5-year investment periods ever experienced (out of the last 101.1 years)

Benchmark	Quant rule
0.0%	3.5%
0.0%	3.9%
0.1%	4.1%
0.1%	4.1%
0.2%	4.5%



Average returns

BenchmarkQuant ruleGeometric mean return over the entire 101.1 years5.6%12.2%Median (for investment periods of 7.5 years)5.5%12.7%Mean (for investment periods of 7.5 years)5.9%13.0%

Performance during 7.5-year investment time windows by percentile outcome

Percentile	Benchmark	Quant rule
99 th	0.3%	4.8%
98 th	0.4%	5.6%
97 th	0.7%	6.1%
96 th	0.8%	6.6%
95 th	0.9%	7.0%
94 th	1.4%	7.5%
93 rd	1.6%	7.8%
92 nd	2.0%	8.0%
91 st	2.3%	8.2%
90 th	2.5%	8.4%

Five worst 7.5-year investment periods ever experienced (out of the last 101.1 years)

Benchmark	Quant rule
0.0%	3.5%
0.0%	3.9%
0.1%	4.1%
0.1%	4.1%
0.2%	4.5%



	Benchmark	Quant rule
Geometric mean return over the entire 101.1 years	5.6%	12.2%
Median (for investment periods of 7.5 years)	5.5%	12.7%
Mean (for investment periods of 7.5 years)	5.9%	13.0%

Performance during 7.5-year investment time windows by percentile outcome

Quant

Percentile	Benchmark	rule
99 th	0.3%	4.8%
98 th	0.4%	5.6%
97 th	0.7%	6.1%
96 th	0.8%	6.6%
95 th	0.9%	7.0%
94 th	1.4%	7.5%
93 rd	1.6%	7.8%
92 nd	2.0%	8.0%
91 st	2.3%	8.2%
90 th	2.5%	8.4%

Five worst 7.5-year investment periods ever experienced (out of the last 101.1 years)

Benchmark

O.0%

O.0%

O.1%

O.1%

O.1%

O.1%

O.1%

O.1%

O.1%

4.5%

0.2%









Jeff Megar, CFA Email jeff.megar@julexcapital.com Office 781-772-1378

Brian Phelan Email brian.phelan@julexcapital.com Cell 508-527-1431

Bob Peatman
Email bob.peatman@julexcapital.com
Cell 617-875-9316

Important Disclosures



This information in this presentation is for the purpose of information exchange. This is not a solicitation or offer to buy or sell any security. You must do your own due diligence and consult a professional investment advisor before making any investment decisions. The use of a proprietary technique, model or algorithm does not guarantee any specific or profitable results. Past performance is not indicative of future returns. The performance data presented are gross returns, unless otherwise noted.

The risk of loss in trading securities can be substantial. You should therefore carefully consider whether such trading is suitable for you in light of your financial condition. All information posted is believed to come from reliable sources. We do not warrant the accuracy or completeness of information made available and therefore will not be liable for any losses incurred.

Some part of the investment performance shown is HYPOTHETICAL. It is based on the back tests of historical data. Hypothetical performance results have many inherent limitations, some of which are described below. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown. In fact, there are frequently sharp differences between hypothetical performance results and the actual results subsequently achieved by any particular trading program.

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.

No representation or warranty is made to the reasonableness of the assumptions made or that all assumptions used to construct the performance provided have been stated or fully considered.