



US GROWTH EQUITY

FACTOR-BASED MODEL PORTFOLIO STRATEGY



2020/11

WHAT



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Summary

Key Points in a Nutshell

1

We are proud to introduce the Factor-Based US Growth Equity Model Portfolio Strategy with institutional level of liquidity and low portfolio turnover.

2

The portfolio gained an annualized return of 16.4% since Inception. It has proven to outperform on a relative basis against the S&P 500 TR.

3

The portfolio returns are achieved by strategically selecting 20 quality at a reasonable price (QARP) companies generating wealth for its shareholders.





Objectives

Setting a Way to Achieve Success

The portfolio is designed for potential investors with high risk tolerance seeking exposure to US Growth Equities by following a rigorous bottom-up factor based quantitative approach. The investment objectives of the portfolio are to:

1

Target long term capital appreciation among US Growth Equities.

2

Consistently deliver performance over the S&P 500 Total Return Index.

3

Maximize tax efficiency by having a low portfolio turnover ratio.

Characteristics

Comparison of Smart Beta Strategies



QARP stands for Quality At Reasonable Price. We are finding companies of quality trading at attractive multiples that consistently generate wealth for its shareholders.

	Market Cap Weighted Index	Factor-Based US Growth Equity
Risk management goals	None	None
Systematic rebalancing	Quarterly	Quarterly
Human input required	No	Supervised
Use of Leverage	None	None
Systematic Risk	Medium	Medium
Portfolio turnover	Low	Low
Investment process	None	Bottom-Up
Investment style	None	QARP
Market behavior	Trend Following	Relative return

Methodology

Quantitative Modeling

HOW IT WORKS



A quantitative model systematically identifies mispriced stocks and attempts to deliver absolute and relative performance. Briefly, a ranking system sorts stocks from a universe based on pre-selected factors and the portfolio periodically buys the best ones and sells the ones in which conditions have deteriorated over time following various rules.

WHY IT WORKS

By rigorously adhering to this stock selection framework based on a thoroughly tested ranking system, we are able to remove the emotional element of the investment process. 80% of portfolio managers cannot beat their benchmark because 1) it is difficult to do so and 2) they unconsciously let fear and greed emotions affect their investment decisions.

A high-contrast, black and white photograph showing a close-up of several interlocking metal gears. The gears are made of a polished metal, likely steel, and their teeth are sharp and well-defined. The lighting creates strong highlights and shadows, emphasizing the mechanical texture and the circular forms of the gears. In the upper left corner, there is a solid blue rectangular overlay containing the word "HOW" in white, bold, sans-serif capital letters.

HOW

Philosophy

Factor-Based (FB)

1. QARP (Quality At Reasonable Price)

The end goal is to invest in quality companies trading at attractive multiples that consistently generate wealth for their shareholders.

2. Undexing

Our goal is to beat the market over the long run. We believe the best way to do it is to create a portfolio that looks very different from it.

3. Concentration

We are striving to achieve a balance between diversifying to remove specific risk yet not too much to avoid ending up mimicking the index.

4. Low Turnover

Excessive portfolio churning increases trading costs for an investor. It also means a lack of confidence, decisiveness and tax awareness.

Overview

Our Investment Process

6. Monitoring

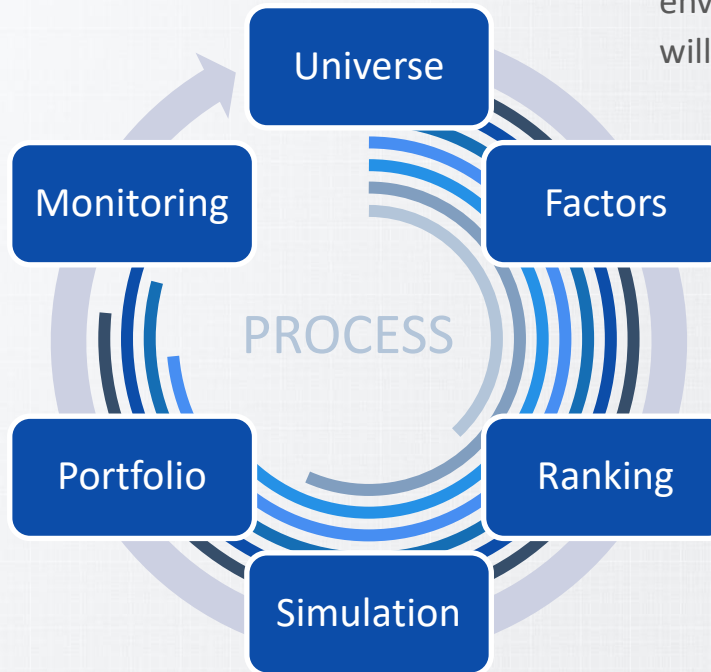
Monitor the portfolio, rebalance and carry out performance attribution.

5. Portfolio

Build the live portfolio by investing real money in the defined strategy.

4. Simulation

Form a strategy resulting from a mix of set rules and filters applied to the ranking system.



1. Universe

Define the investment environment in which we will pick our companies.

2. Factors

Design factors based on academic literature and innovative concepts.

3. Ranking

Create a composite of factors to rank companies from our defined universe.

Universe

Our Investment Environment

6.5

\$billion of market cap minimum.
This is the minimum market cap requirement for a company to be consider a large cap stock.

65

\$million of average daily liquidity for the past month expressed as price x volume.



270

Stocks coming from the 10% highest Nasdaq market caps, an exchange known to have some of the most innovative US Growth companies.

20

Stocks in our portfolio, are chosen from the best ranking decile.

Factor

Our Selection Method

We backtested in our universe hundreds of factors individually to find the ones generating the most alpha over the last two investment cycles. We then select the best factors using four criteria shown below:



Ranking

Based on Our Factor Selection

Q_{uality}

(1st part)

Return on Equity (ROE%)



This ratio is calculated as the Income Before Extraordinary Items for the period divided by the Average Common Equity and is expressed as a percentage.

What: Is the company generating strong returns for its contributors?

Why: The interpretation of this ratio is that higher is always better.

Gross Profit / Total Asset (GPTA)



This ratio is calculated as the Gross Profits (Revenues minus COGS) to its Total Assets.

What: How much gross profit per unit of asset is the company making?

Why: The interpretation of this ratio is that higher is always better.

Assets Turnover (ASTU)



This ratio is calculated as the Total Revenues divided by Total Assets for the same period.

What: How efficient is the company at using its asset to create a return?

Why: The interpretation of this ratio is that higher is always better.

Ranking

Based on Our Factor Selection

Q_{uality}

(2nd part)

Long Term Beta (LVOL) ↓

This ratio measures the systematic risk of a security in comparison to the whole market.

What: How volatile are the shares of a company relative to the market?

Why: The interpretation of this ratio is that lower is always better.

V_{alue}

EBITDA-CAPEX+R&D / EV (REVS) ↑

For most growth companies, R&D is considered an investment and not an expense. The factor calculates the ratio for the sector the company is in and compares it to the other sectors.

What: How much EBITDA per unit of EV is the sector making relative to other sectors?

Why: The interpretation of this ratio is that higher is always better.

EBITDA-CAPEX+R&D / EV (REVU) ↑

For most growth companies, R&D is considered an investment and not an expense. The factor calculates the ratio for the company and compares it to all the other companies of the universe.

What: How much EBITDA per unit of EV is the sector making relative to other sectors?

Why: The interpretation of this ratio is that higher is always better.



Ranking

Based on Our Factor Selection

Momentum (1st part)

Short Interest Ratio (SIRA) ↑

Number of days it would take to cover the Short Interest if trading continued at the average daily volume for the month. It is calculated as the Short Interest divided by the Average Daily Volume.

- What: Is the company's price trading in a medium-term uptrend?
- Why: The interpretation of this ratio is that higher is always better.

Rate of Change Adjusted To Risk (ROCR) ↑

This is the rate of change in price over the last six months of the company's industry divided by the industry beta compared to the same calculation of other industries for the same period.

- What: Is the company's industry performance higher than other industries?
- Why: The interpretation of this ratio is that higher is always better.



Ranking

Based on Our Factor Selection

Momentum (2nd part)

Trend (TREN) ↑

This ratio is calculated as 63-Day VMA divided by the 252-Day VMA and measures the price slope. VMA stands for Volume Weighted Moving Average, a trend following indicator.

- What: Is the company's price trading in a medium-term uptrend?
- Why: The interpretation of this ratio is that higher is always better.

Normalized Average True Range (NATR) ↓

Normalized Average True Range is a measure of volatility. Because it is normalized across the period, it can be more useful than Average True Range when comparing across various price levels.

- What: Is the company's experiencing unusual short-term volatility?
- Why: The interpretation of this ratio is that lower is always better.

Simulation

Our Portfolio Rules and Filters

G

General Rules

- The portfolio is long only and without any leverage whatsoever.
- Approximately 20 stocks are held with 50% max weight deviation:
Avg W: 5.0% | Min W: 2.5% | Max W: 7.5%
- Transactions are recorded at the average high | low of trade day.
- Rebalancing frequency is quarterly and sent before market open.
- Variable slippage (average daily \$ traded) is taken into account.

B

Buy Rules

- The maximum weight in a GICS Level 1 Sector is capped at 40%.
- The correlation between the new candidates and existing holdings must be less than 0.80.
- All company's financial data is publicly available either from press releases or SEC filings.
- No penny stocks are allowed. In other words, no stocks below \$1.00 are part of the simulation.

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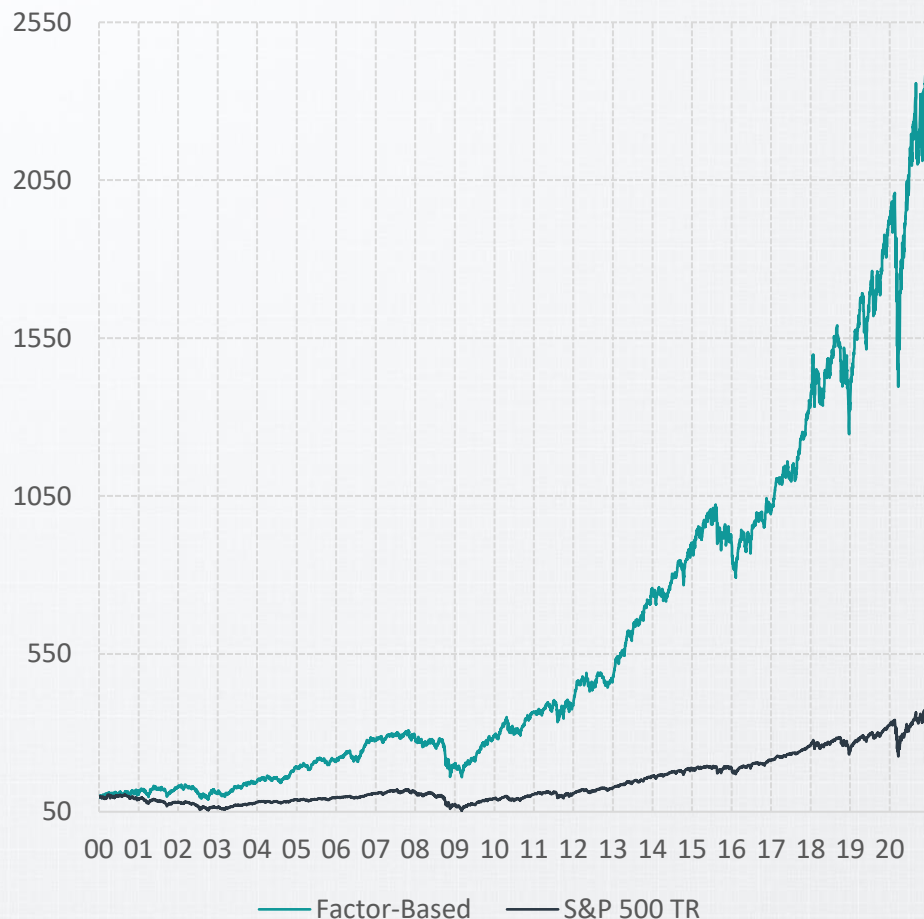
Sell Rules

- Sell stocks when its ranking falls below 85%.
- Trim stocks weights back to 10% and below if their individual weights in the portfolio goes above 10%.
- We force positions in the universe if they are replaced inside our defined universe.
- Sell stocks with corporate actions such as mergers and acquisitions that limit the upside potential.

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Portfolio

Historical Performance



Key Portfolio Statistics

Annualized Return (%)
(S&P 500 TR = 6.4) 16.4

Maximum Drawdown (%)
(S&P 500 TR = -55.2) -48.0

Portfolio Turnover (%)
(S&P 500 TR = 4.2) 53.5

Index Correlation
(S&P 500 TR = 1.00) 0.86

Sharpe Ratio
(S&P 500 TR = 0.38) 0.82

Since Inception (January 1st, 2000)

WHY



Statistics

Calendar Performance

Yearly

Returns (%)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Factor-Based	11.9	13.0	-15.0	34.8	34.0	7.1	32.2	5.7	-32.6	46.4
S&P 500 TR	-9.1	-11.9	-22.1	28.7	10.9	4.9	15.8	5.5	-37.0	26.5
Difference	21.0	24.9	7.1	6.2	23.1	2.2	16.4	0.2	4.4	19.9

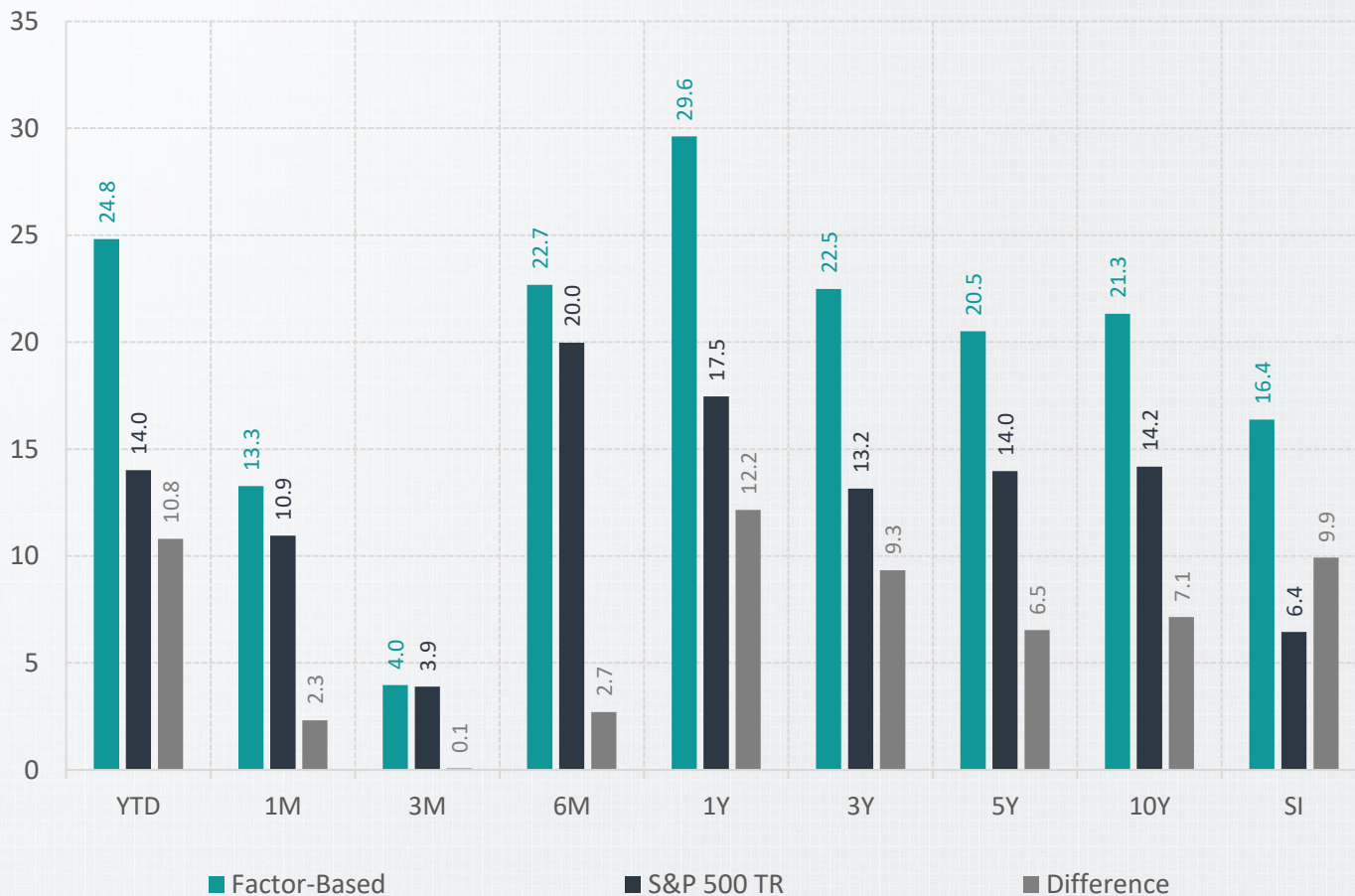
Returns (%)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Factor-Based	26.9	6.3	20.9	62.2	17.6	2.3	8.8	34.1	0.9	42.8	24.8
S&P 500 TR	15.1	2.1	16.0	32.4	13.7	1.4	12.0	21.8	-4.4	31.5	14.0
Difference	11.8	4.1	4.9	29.8	3.9	0.9	-3.1	12.2	5.2	11.3	10.8

Monthly

Returns (%)	12/19	01/20	02/20	03/20	04/20	05/20	06/20	07/20	08/20	09/20	10/20	11/20
Factor-Based	3.8	-1.6	-5.9	-10.6	15.5	6.5	5.6	5.9	5.5	-5.3	-3.1	13.3
S&P 500 TR	3.0	0.0	-8.2	-12.4	12.8	4.8	2.0	5.6	7.2	-3.8	-2.7	10.9
Difference	0.8	-1.6	2.3	1.8	2.7	1.7	3.6	0.2	-1.7	-1.5	-0.4	2.3

Statistics

Trailing Performance



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Statistics

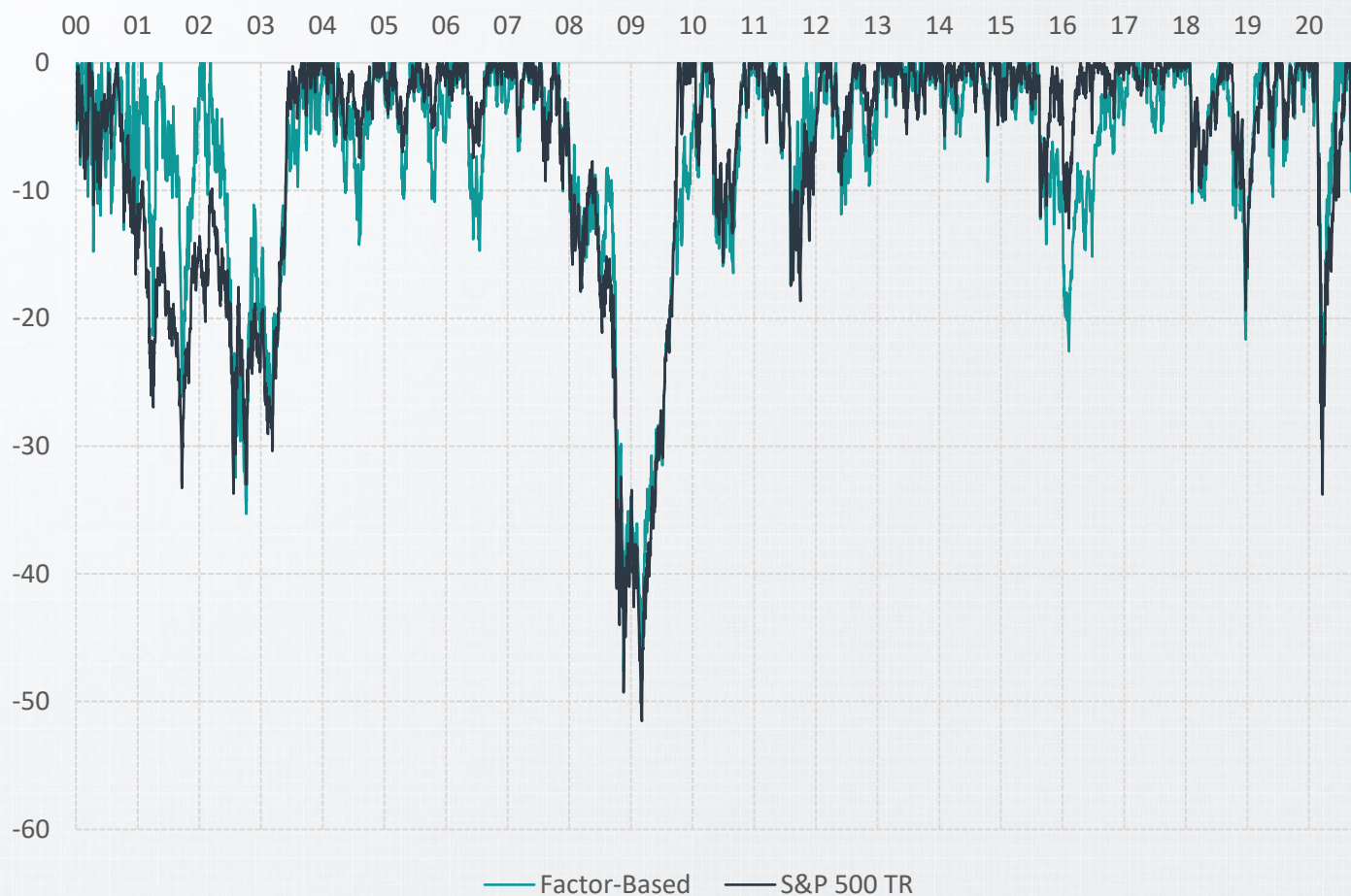
Return & Risk Measurements

Trailing 3 Year	Factor-Based	S&P 500 TR	Difference
Annualized Return (%)	22.5	13.2	9.3
Standard Deviation (%)	21.0	18.4	2.6
Max Drawdown (%)	-30.5	-33.7	3.2
Portfolio Turnover	53.5	4.2	49.3
Sharpe Ratio	1.06	0.72	0.34
Sortino Ratio	1.53	0.97	0.56
Index Correlation	0.96	1.00	-0.04
R-Squared	0.92	1.00	-0.08
Beta	1.10	1.00	0.10
Alpha (%) (Annualized)	9.34	0.00	9.34

Since Inception	Factor-Based	S&P 500 TR	Difference
Annualized Return (%)	16.4	6.4	9.9
Standard Deviation (%)	18.7	15.1	3.6
Max Drawdown (%)	-48.0	-55.2	7.2
Portfolio Turnover	53.5	4.2	49.3
Sharpe Ratio	0.82	0.38	0.44
Sortino Ratio	1.14	0.50	0.63
Index Correlation	0.86	1.00	-0.14
R-Squared	0.74	1.00	-0.26
Beta	1.06	1.00	0.06
Alpha (%) (Annualized)	9.93	0.00	9.93

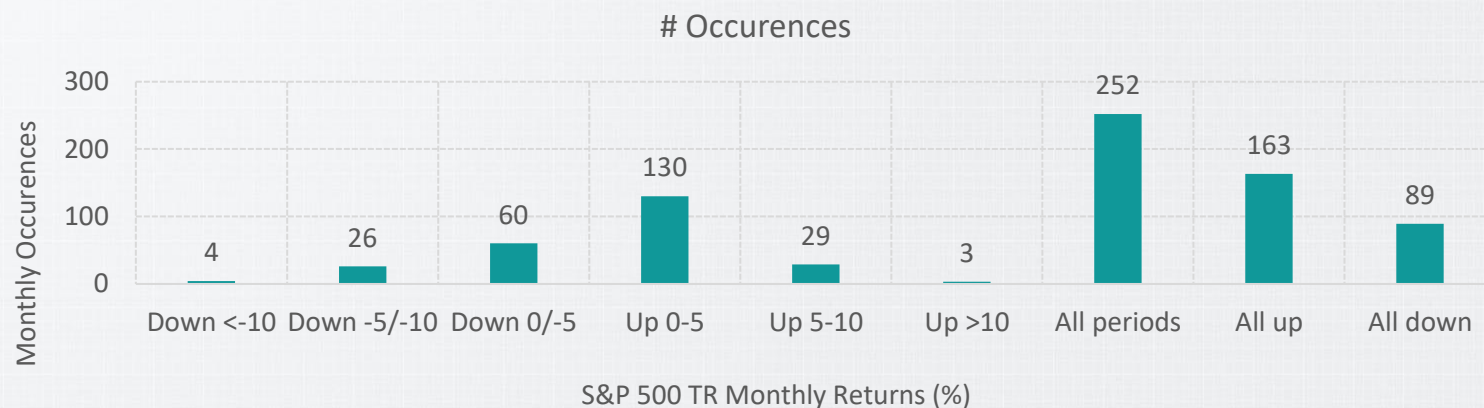
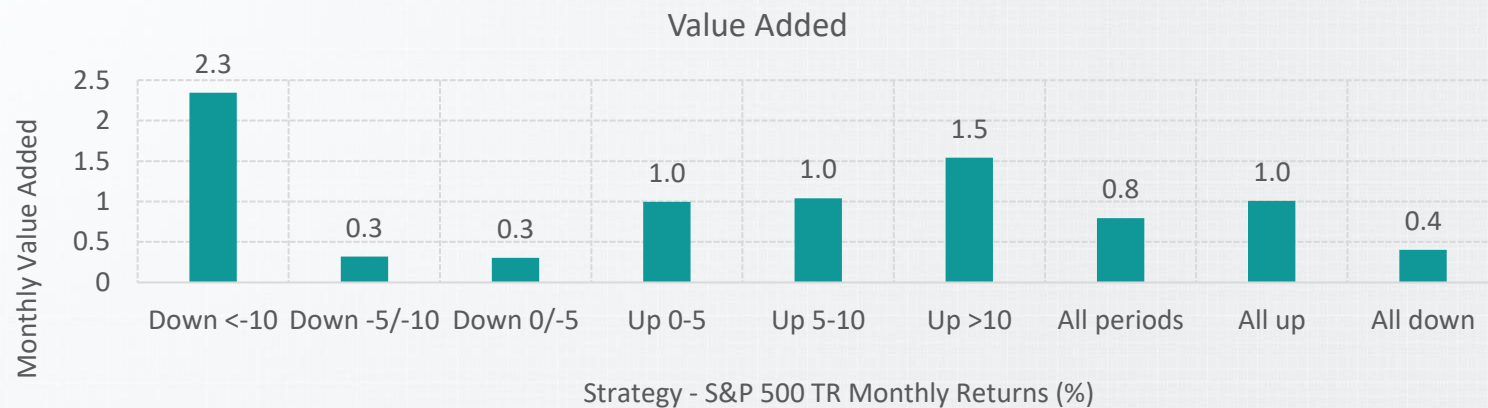
Statistics

Rolling Maximum Drawdown



Statistics

Outperformance in Different Market Conditions



Characteristics

Top Ten Holdings & Fundamentals

Ticker	Weight (%)	Sector
KLAC	8.0	Info Tech
AAPL	8.0	Info Tech
COST	7.9	Staples
AMAT	7.7	Info Tech
QCOM	6.8	Info Tech
FB	5.8	Telecom
AMZN	5.8	Discretionary
EA	5.6	Telecom
ZBRA	5.5	Info Tech
ORLY	5.2	Discretionary

Median	Factor-Based	S&P 500 TR
Market Cap (\$B)	410.1	18.4
Price / Earnings	19.6	27.4
Price / Book	7.9	7.7
Price / Sales	4.7	7.0
Price / Cash Flow	22.9	25.2
Return on Equity	34.6	12.9
Dividend Yield	0.9	0.0
5Y EPS Growth	21.0	15.0
Debt / Equity	0.8	0.6
5Y Beta	0.94	1.00

Allocation

Sector Weights & Benchmark Deviations

Weights	Factor-Based	S&P 500 TR	Deviations	
Info Tech	42.8	27.6	15.2	
Discretionary	23.1	11.3	11.7	
Telecom	16.2	11.0	5.2	
Staples	7.9	6.8	1.1	
Energy	0.0	2.3		-2.3
Materials	0.0	2.7		-2.7
Utilities	0.0	2.9		-2.9
Health Care	9.8	13.7		-3.9
Industrials	0.0	8.7		-8.7
Financials	0.0	12.9		-12.9

WHO



Who We Are

Factor-Based (FB)



IN A NUTSHELL...

Factor-Based (FB) is a financial research firm that specializes in equities and bonds for investment advisors and institutional clients. We are dedicated to produce exceptional risk adjusted returns for our investors by strictly adhering to factor-based investing methods.

Disclosures

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