US DIRECTIONAL EQUITY DASHBOARD

As of June 30, 2023

COMMENTARY

- We noted last month that Bearish, Bullish, Expensive and Cheap narrative archetypes all seemed to be fading from the extreme levels that drove more exaggerated positioning over various points in the last 18 months.

- This tendency continued—and grew! - in the month of June.

- On the other hand, our macronarrative models based on stock story language and central bank policy moved toward agreement on bearishness about stocks for July.

- **The result has been the most bearish posture the models have had in nearly a year.**

- The hawkish view on rates has been accompanied within our micro-narrative sector models by a bearish view on more yield– and inflation-sensitive sectors, and a more relatively bullish view on consumer-driven or growth sectors.

- Bear in mind that we remain in a poly-narrative environment, wherein Dovish, Inflationary and Recession-conscious narratives for central banks have only fallen somewhat behind the dominant Hawkish archetype.

SIGNAL VALUES AS OF JUNE 30, 2023

SIGNAL CATEGORY	SIGNAL STATE	DIRECTION
Central Bank Policy	Hawkish	Bearish (New)
Stock Story Types	Fundamentals-Focused	Bearish
Cheap Narrative	Neutral	Neutral
Expensive Narrative	Neutral	Neutral
Cheap vs. Expensive	Neutral	Neutral
Fading Expensive Narrative	Neutral	Neutral (New)
Rising Expensive Narrative	Neutral	Neutral
Bullish Narrative	Neutral	Neutral
Bearish vs. Bullish	Neutral	Neutral
Aggregate View		Bearish

US Directional Equity Dashboard
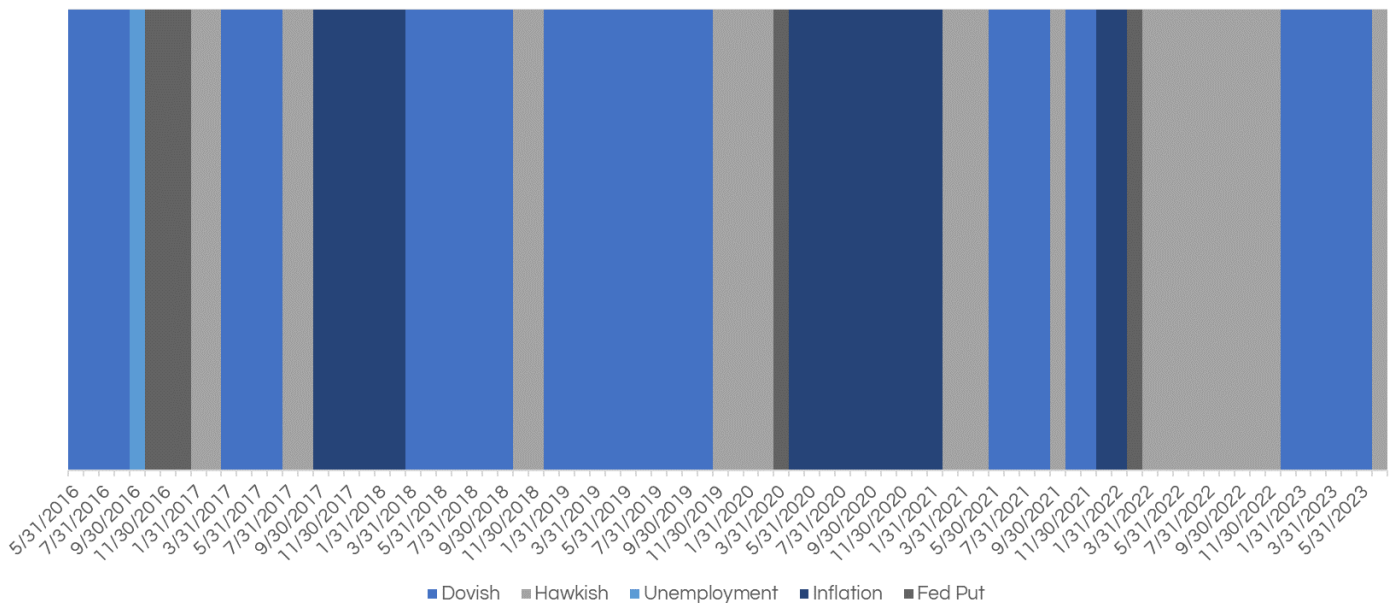
As of June 30, 2023

Signal Reference—Central Bank Policy

This model examines the Density and Narrative Strength / Attention of certain archetypal narratives relating to Central Bank Policy. We classify the dominant narrative among five such archetypes, which we believe reflect different states of common knowledge that both respond to and influence investor behavior. Present archetypes include Dovish, Hawkish, Inflation-Focused, Unemployment-Focused and Fed Put. Historical subsequent period results for directional S&P 500 exposure and historical states for the model are presented below.
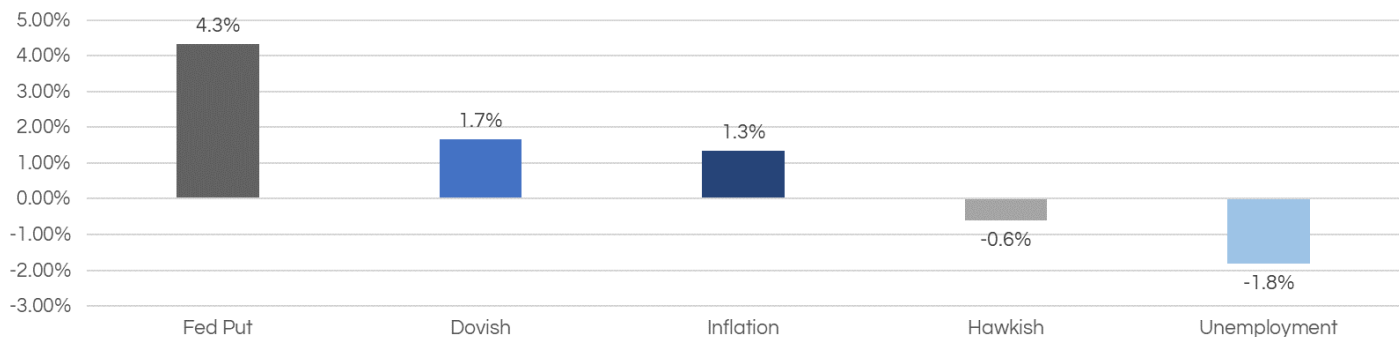
Current State	Hawkish (Bearish)

Historical Signal Trigger Periods

Legend: ■ Dovish ■ Hawkish ■ Unemployment ■ Inflation ■ Fed Put

Historical Monthly S&P Returns by State

State	Return
Fed Put	4.3%
Dovish	1.7%
Inflation	1.3%
Hawkish	-0.6%
Unemployment	-1.8%

Important Disclosures: *These signals are provided for research purposes only and have not been customized to the specific circumstances of any client. There can be no guarantee that any investment strategy based on these signals would be successful, or that their success in the past would be indicative of similar success in the future. Investors should consider a wide range of factors specific to their portfolio and circumstances before making any investment decisions. The S&P 500 is a market cap-weighted index of approximately US large capitalization stocks. These signals and triggers are historical simulations. They did not exist in the periods examined. While efforts to examine economically intuitive relationships are core to our process, knowledge about the past inevitably skews the creation of such models. You should examine their results with skepticism and care. Past performance is NOT a guarantee of future results.*

US Directional Equity Dashboard
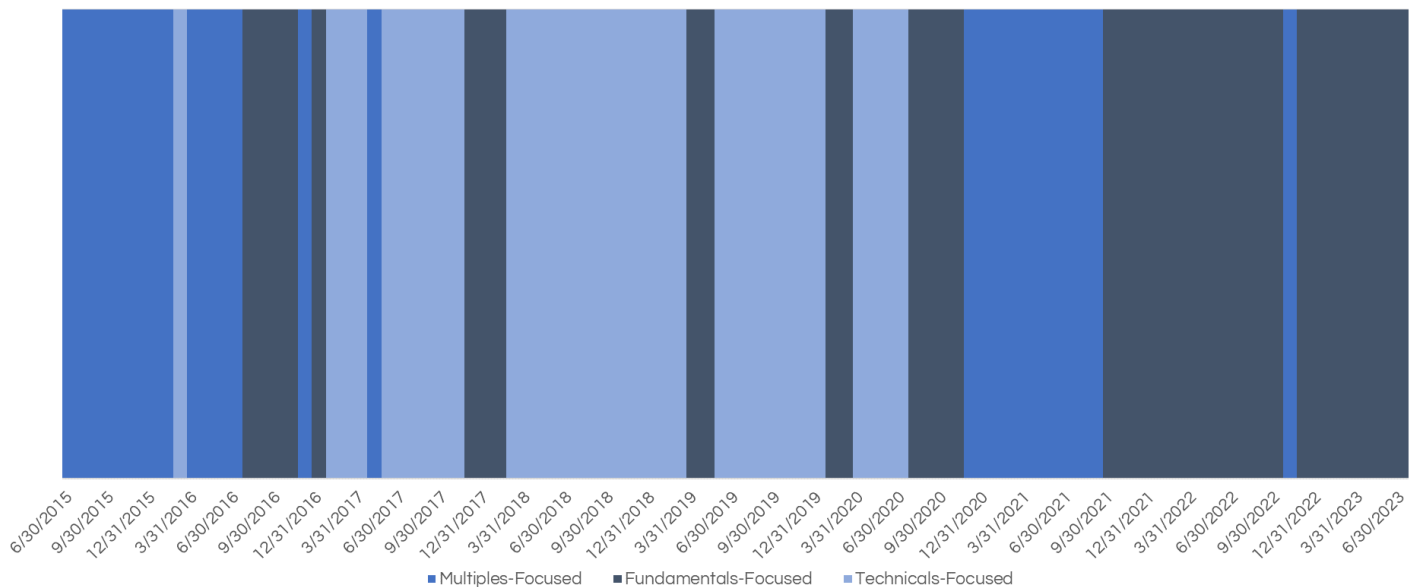
As of June 30, 2023

SIGNAL REFERENCE—STOCK STORY TYPES

This model examines the Density and Narrative Strength / Attention of certain linguistic archetypes of investment theses promoted in financial media and by sell side research houses. We think there are three such archetypes: multiples-focused, technicals-focused or fundamentals-focused. That is, analysts and commentators tend to describe why investments are attractive or unattractive using one or more of those linguistic sets. We think the market's varying tendency to frame investment outcomes in terms of each of these archetypes is indicative of risk appetites.
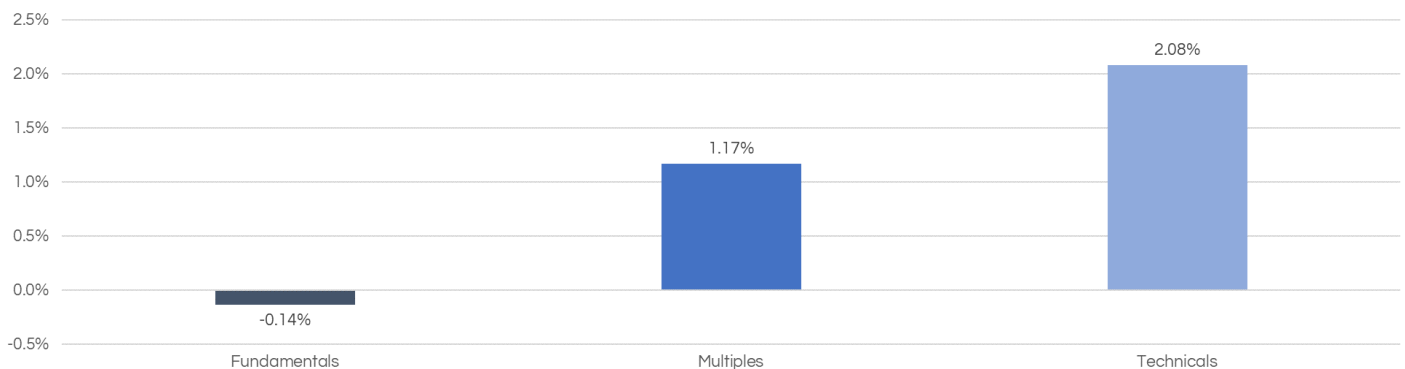
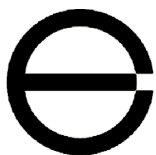| CURRENT STATE	FUNDAMENTALS-FOCUSED (BEARISH)

HISTORICAL SIGNAL TRIGGER PERIODS

Legend: Multiples-Focused, Fundamentals-Focused, Technicals-Focused

HISTORICAL MONTHLY S&P RETURNS BY STATE

- Fundamentals: -0.14%
- Multiples: 1.17%
- Technicals: 2.08%

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US Directional Equity Dashboard

As of June 30, 2023

Signal Reference—Extreme Cheap Narrative

This model examines the Density and Narrative Strength / Attention of narratives describing the stock market in general as being inexpensive, cheap or a "good value." We believe that extreme values for these language patterns may be predictive of marginal investor buying behaviors and above average forward-looking excess returns for equity markets, sectors and individual securities. **The signal indicates <u>LONG</u> S&P 500 exposure on an extreme value.**
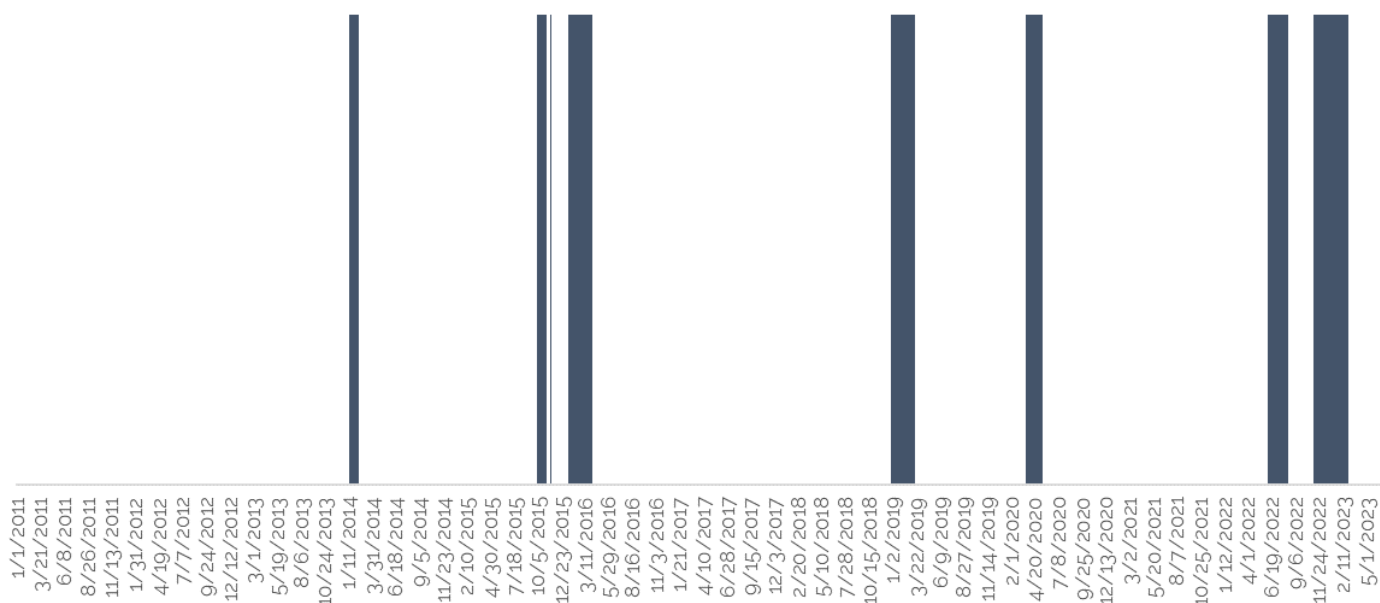
Current State	Neutral
Hist. Daily S&P Return When Active	0.28%

Historical Signal Trigger Periods

Most Recent >30 Day Triggers	Active Period S&P Return	Ann. Active Period S&P Return
11/10/2022—2/28/2023	5.00%	17.39%
06/10/2022—8/12/2022	6.64%	44.32%
03/24/2020—05/14/2020	27.83%	460.27%
12/28/2018—03/14/2019	13.40%	81.46%

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Signal Reference—Extreme Expensive Narrative

This model examines the Density and Narrative Strength / Attention of narratives describing the stock market in general as being expensive or overpriced. We believe that extreme values for these language patterns may be predictive of marginal investor selling behaviors and below average forward-looking excess returns for equity markets, sectors and individual securities. **The signal indicates SHORT or REDUCED S&P 500 exposure on an extreme value.**

Current State	Neutral
Hist. Daily S&P Return When Active	0.00%

Historical Signal Trigger Periods
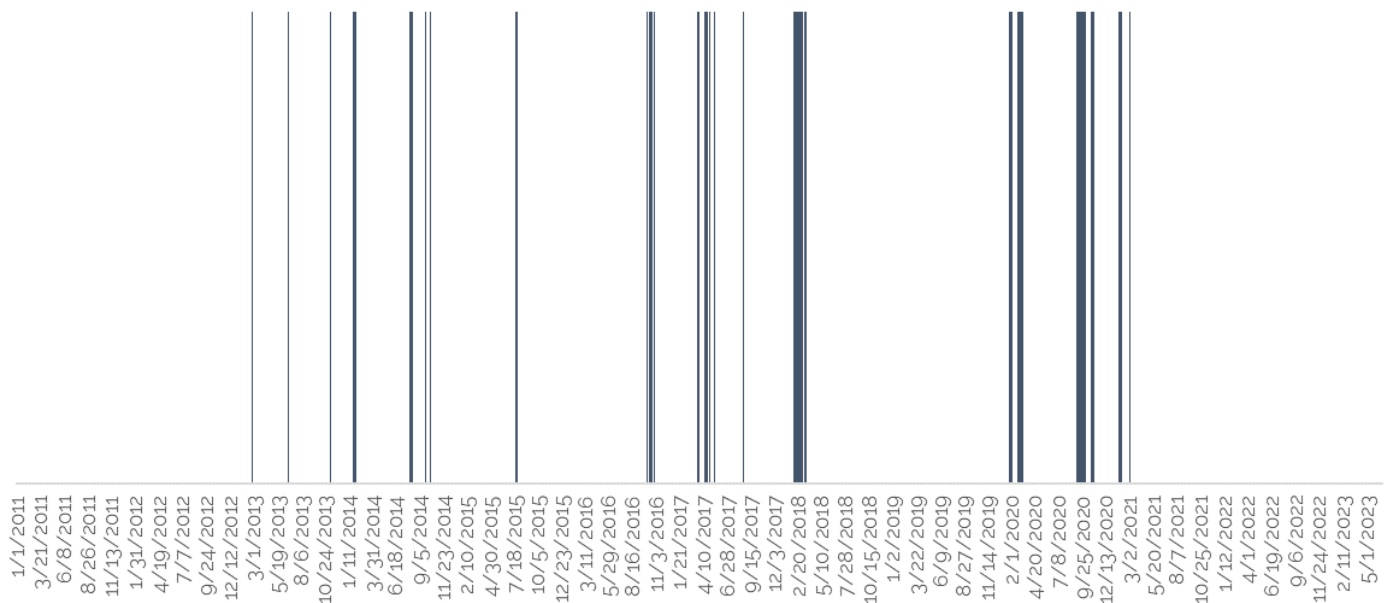
Most Recent Triggers	Active Period S&P Return	Ann. Active Period S&P Return
09/04/2020—11/04/2020	-0.13%	-0.75%
02/25/2020—03/20/2020	-28.42%	N/A
03/14/2018—04/02/2018	-6.56%	-71.01%
10/12/2016—11/07/2016	-0.14%	-1.85%

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US DIRECTIONAL EQUITY DASHBOARD

As of June 30, 2023

This model examines the relative deviation of the Density and Narrative Strength / Attention of narratives describing the stock market as being cheap and expensive, respectively, relative to their historical norms. In short, we believe that the *relative dominance* of cheap archetypal language over expensive archetypal language may be predictive of investor risk-taking behaviors above and beyond the raw value of the density and influence of cheap language itself. **The signal indicates LONG or INCREASED S&P 500 exposure on an extreme value differential in favor of Cheap language.**

CURRENT STATE	NEUTRAL
HIST. DAILY S&P RETURN WHEN ACTIVE	0.16%

HISTORICAL SIGNAL TRIGGER PERIODS
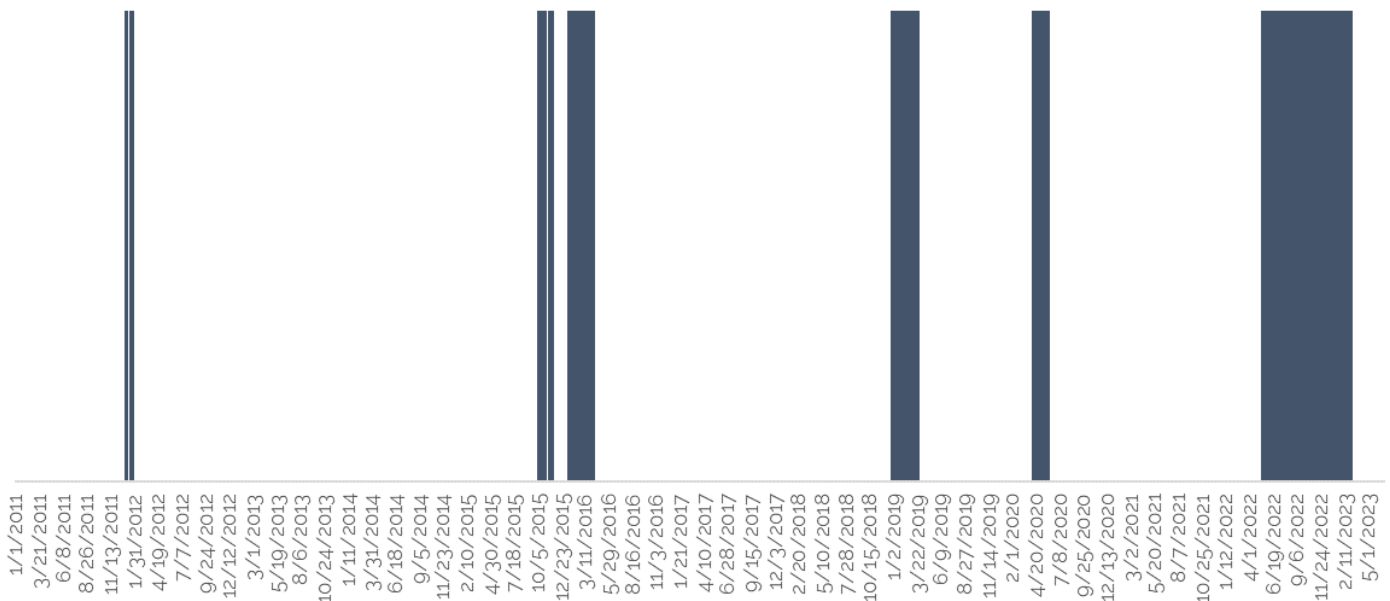
MOST RECENT >30 DAY TRIGGERS	ACTIVE PERIOD S&P RETURN	ANN. ACTIVE PERIOD S&P RETURN
05/13/2022—03/08/2023	0.45%	0.54%
04/08/2020—06/05/2020	20.53%	217.34%
12/26/2018—03/29/2019	21.23%	111.15%
01/19/2016—04/13/2016	11.38%	58.01%

US Directional Equity Dashboard

As of June 30, 2023

Signal Reference— Fading Expensive Narrative

This model examines the rate of change of the Density and Narrative Strength / Attention of narratives describing the stock market as being expensive. In short, we believe that sharp rates of change in the use of archetypal language in favor of cheapness may be predictive of investor risk-taking behaviors above and beyond the raw value of the density and influence of cheap language itself. **The signal indicates INCREASED S&P 500 exposure on a rapid shift away from Expensive archetypal language.**

Current State	Neutral
Hist. Daily S&P Return When Active	0.11%

Historical Signal Trigger Periods
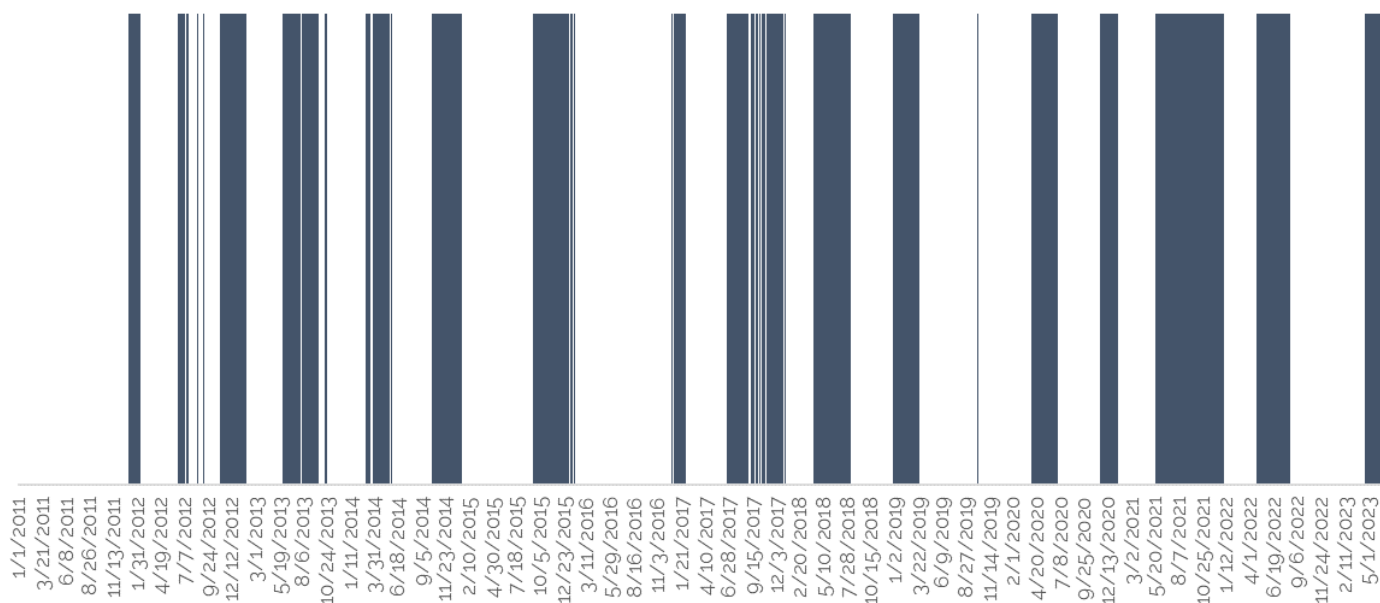
Most Recent >30 Day Triggers	Active Period S&P Return	Ann. Active Period S&P Return
04/24/2023—06/14/2023	5.36%	44.26%
04/27/2022—8/11/2022	1.18%	4.07%
05/24/2021—01/04/2022	16.38%	27.91%
11/20/2020—01/14/2021	6.22%	48.16%

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US Directional Equity Dashboard

As of June 30, 2023

Signal Reference— Rising Expensive Narrative

This model examines the rate of change of the Density and Narrative Strength / Attention of narratives describing the stock market as being expensive. In short, we believe that sharp rates of change in the use of archetypal language in favor of cheapness may be predictive of investor risk-taking behaviors above and beyond the raw value of the density and influence of cheap language itself. **The signal indicates REDUCED S&P 500 exposure on a rapid shift toward Expensive archetypal language.**
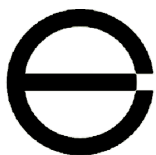
Current State	Neutral

Hist. Daily S&P Return When Active	0.06%

Historical Signal Trigger Periods
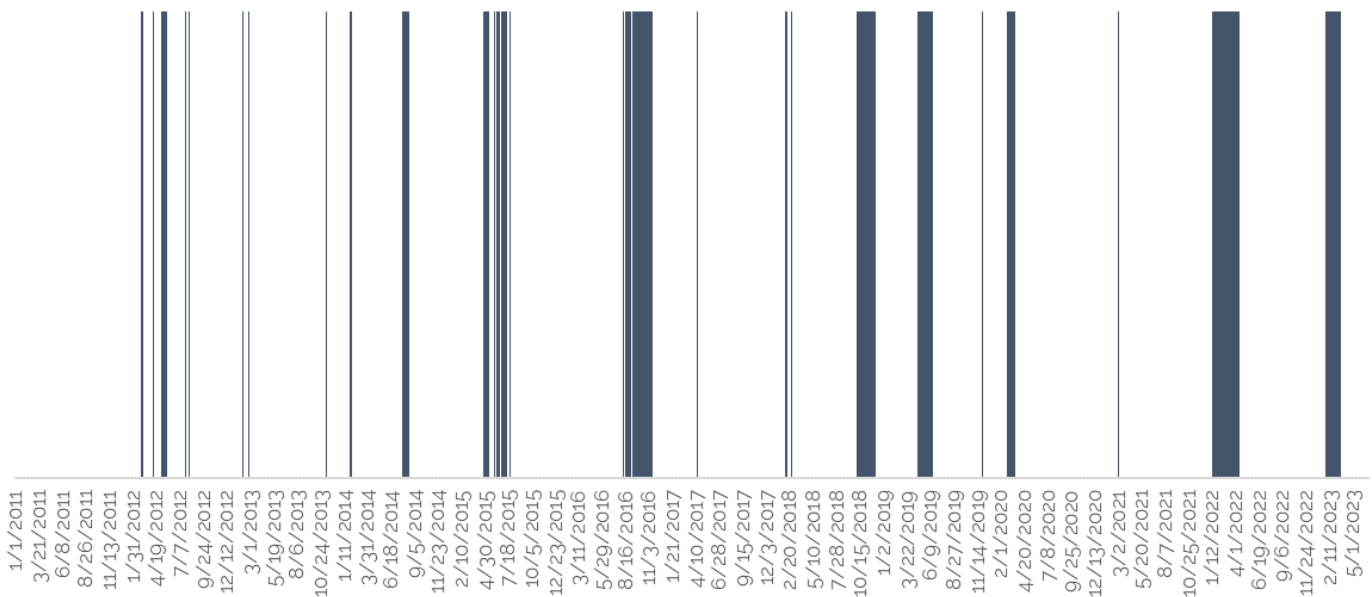
Most Recent >30 Day Triggers	Active Period S&P Return	Ann. Active Period S&P Return
02/03/2023– 03/24/2023	5.24%	45.22%
01/18/2022—04/13/2022	-3.77%	-15.06%
02/26/2020—03/20/2020	-26.19%	N/A
05/02/2019—06/18/2019	0.14%	1.08%

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US Directional Equity Dashboard

As of June 30, 2023

Signal Reference— Bearish vs. Bullish

This model examines the relative deviation of the Density and Narrative Strength / Attention of narratives describing using the tropes and linguistic patterns of bullish and bearish archetypes, respectively, relative to their historical norms. We believe that the *relative dominance* of bearish over bullish archetypes may be indicative of a narrative structure saturated by pessimism in ways that create upside asymmetry to individual assets and risky assets more broadly. **The signal indicates LONG or INCREASED S&P 500 exposure on an extreme value differential in favor of Bearish language.**

Current State	Neutral
Hist. Daily S&P Return When Active	0.11%

Historical Signal Trigger Periods
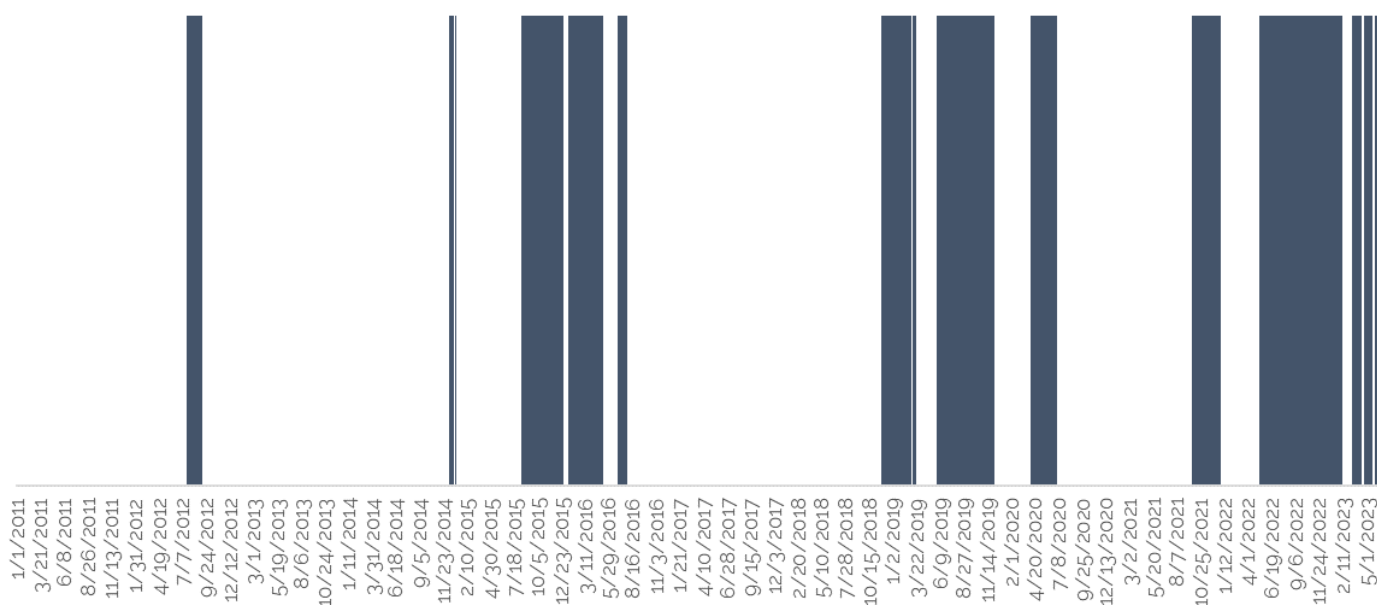
Most Recent >30 Day Triggers	Active Period S&P Return	Ann. Active Period S&P Return
05/10/2022—02/09/2023	0.40%	0.53%
09/27/2021– 12/29/2021	7.96%	34.62%
04/06/2020—07/02/2020	26.38%	164.11%
05/29/2019—12/06/2019	12.74%	25.61%

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US Directional Equity Dashboard

As of June 30, 2023

Signal Reference— Bullish Narrative

This model examines the rate of change of the Density and Narrative Strength / Attention of narratives describing bull cases for individual assets or the market in general. We believe that bull case language tends to gain influence after the case has been demonstrated in market performance—thus, it is the relative absence of bull case narratives that we expect to be moderately predictive of above average returns. **The signal indicates INCREASED S&P 500 exposure on a low density/influence of Bullish archetypal language.**

Current State	Neutral

Hist. Daily S&P Return When Active	0.16%

Historical Signal Trigger Periods
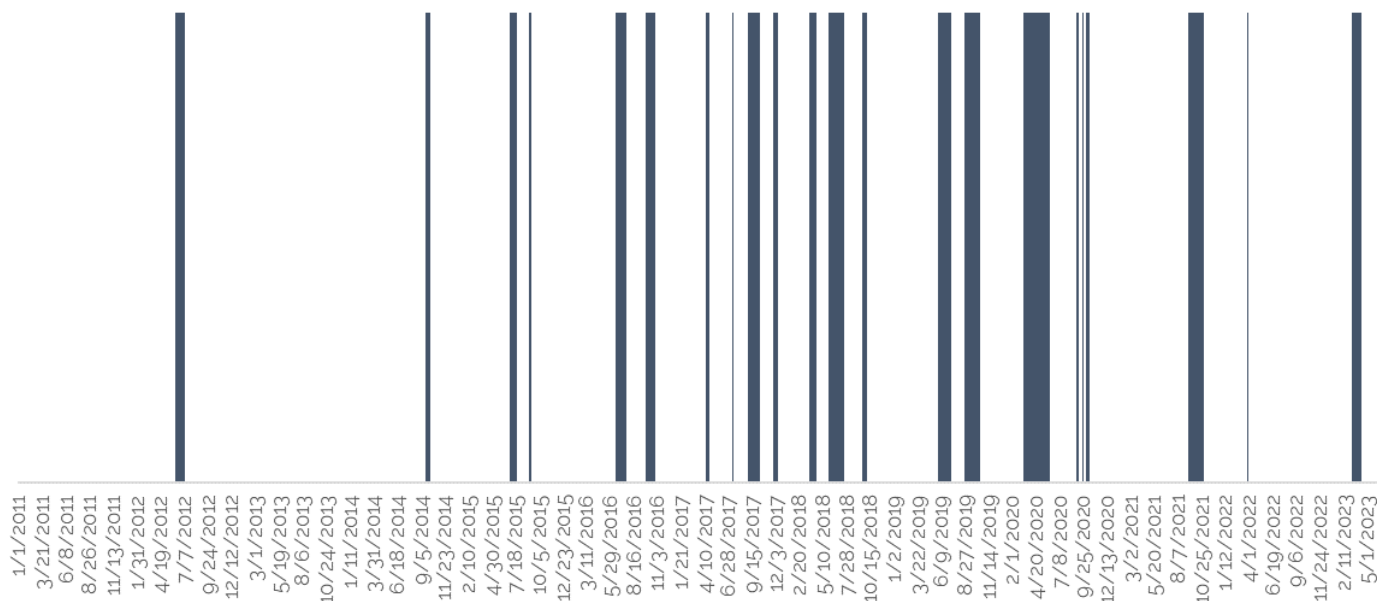
Most Recent >30 Day Triggers	Active Period S&P Return	Ann. Active Period S&P Return
09/15/2021—11/03/2021	4.36%	39.25%
03/13/2020—06/05/2020	29.39%	202.32%
08/30/2019—10/15/2019	2.58%	21.87%
05/31/2019—07/12/2019	8.33%	97.22%

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