As of January 31, 2023

### **COMMENTARY**

- We remain in a poly-narrative environment; that is, we believe that dovish, hawkish, stagflationary and deflationary recession fears are *all* represented in ample quantities in the narrative landscape of early 2023, as they were for most of 2022.
- January was different from most of 2022, however, in that the dominant story *mostly* remained the same. That story was that continued price stabilization and ongoing global recessionary pressures would necessitate the long-discussed dovish pivot.
- Toward the end of January and in early February, we observed the event-based emergence of employment-related language. In these models, that isn't necessarily indicative of fear—it can equally reference optimism that unemployment fears are easing. What is important to us is that analysts and participants are now increasingly framing central bank decisions and market risk appetites around recessionary / employment indicators.
- Does that mean the dovish pivot narrative is dead in early Feb? Does it mean that inflation prints will no longer matter to how markets process and predict central bank action? No and no! We do think it means, however, that the sensitivity of the market to new information has probably tilted a bit more toward the economy. And our models (and we) think we're still in "bad news is good news" mode.

### SIGNAL VALUES AS OF JANUARY 31, 2023

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

As of January 31, 2023

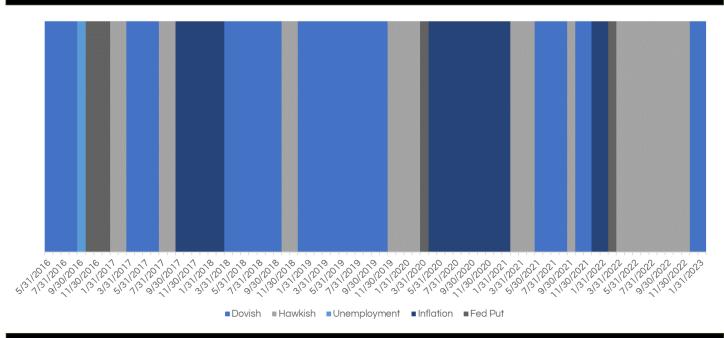
### SIGNAL REFERENCE—CENTRAL BANK POLICY

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** 

Dovish (Bullish)

### HISTORICAL SIGNAL TRIGGER PERIODS







As of January 31, 2023

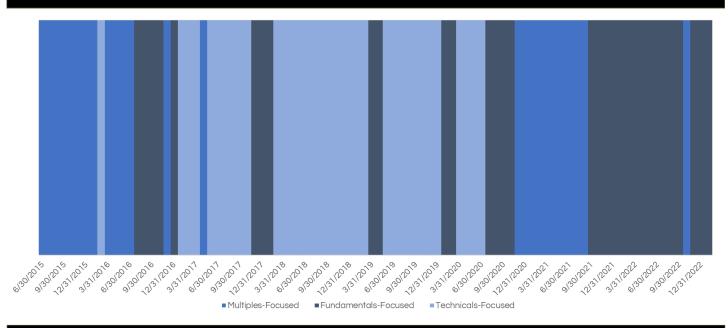
### SIGNAL REFERENCE—STOCK STORY TYPES

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



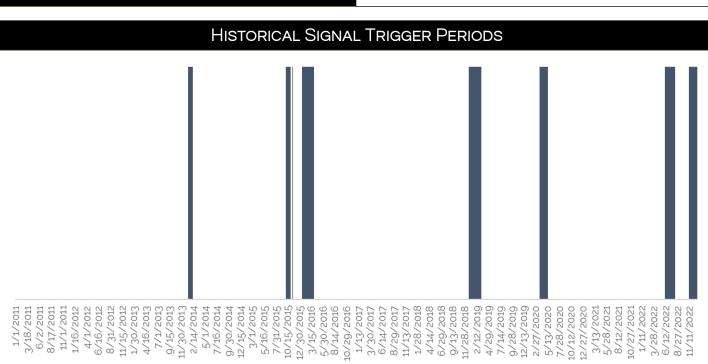


As of January 31, 2023

### 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 LONG S&P 500 exposure on an extreme value.

CURRENT STATE	EXTREME CHEAP (BULLISH)
HIST. DAILY S&P RETURN WHEN ACTIVE	0.28%



Most Recent >30 Day Triggers	ACTIVE PERIOD S&P RETURN	ANN. ACTIVE PERIOD S&P RETURN
11/10/2022—Present	8.02%	40.39%
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%

As of January 31, 2023

### 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	
11 12 13 13 13 13 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	17 17 18 18 18 19 19 19 19 20 20 20 20 20 20 20 20 20 20 20 20 20	
1/1/2011 3/18/2011 6/2/2011 11/1/2011 1/16/2012 6/16/2012 6/16/2012 1/30/2013 1/30/2013 1/30/2013 2/14/2014 5/16/2014 5/16/2014 5/16/2014 5/16/2014 5/16/2014 5/16/2014 5/16/2014 12/30/2015 12/30/2015 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016 12/30/2016	3,30,201, 8,12,201, 1,13,201, 1,28,201, 1,28,201, 4,14,201, 6,29,201, 9,13,201, 2,12,201, 1,14,201, 9,28,201, 1,14,201, 1,14,201, 1,14,201, 1,14,201, 1,14,201, 1,14,201, 1,13,202, 1,14,201, 1,14,201, 1,14,201, 1,14,201, 1,14,201, 1,14,201, 1,14,201, 1,14,201, 1,14,202,	

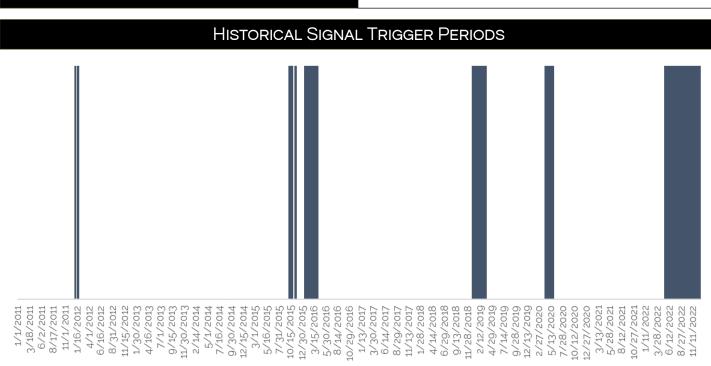
Most Recent Triggers	ACTIVE PERIOD S&P RETURN	Ann. Active Period S&P Return
09/04/2020—11/04/2020	-0.13%	-0.75%
02/25/2020—03/20/2020	-28.42%	N/A
03/14/2018—04/02/2018	-6.56%	-71.01%
10/12/2016—11/07/2016	-0.14%	-1.85%

As of January 31, 2023

### SIGNAL REFERENCE—CHEAP VS. EXPENSIVE

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	EMERGING CHEAP (BULLISH)
HIST. DAILY SOP RETURN WHEN ACTIVE	0.16%



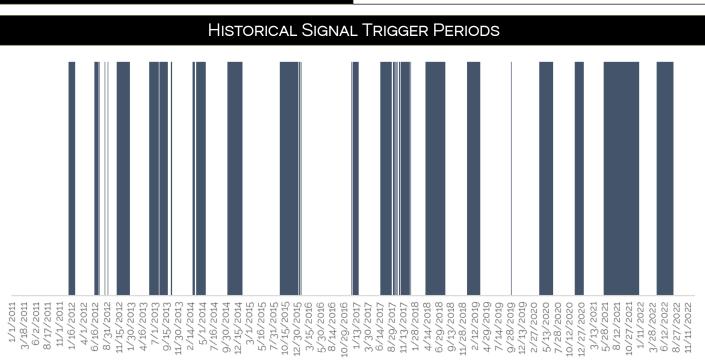
Most Recent >30 Day Triggers	ACTIVE PERIOD S&P RETURN	Ann. Active Period S&P Return
05/13/2022—Present	2.90%	4.04%
04/08/2020—06/05/2020	20.53%	217.34%
12/26/2018—03/29/2019	21.23%	111.15%
01/19/2016—04/13/2016	11.38%	58.01%

As of January 31, 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%



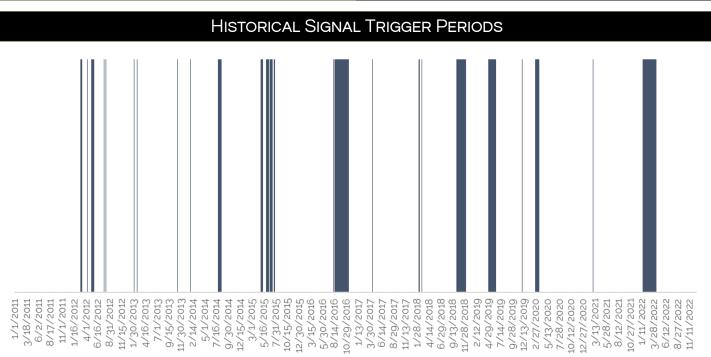
Most Recent >30 Day Triggers	ACTIVE PERIOD S&P RETURN	Ann. Active Period S&P Return
04/27/2022—8/11/2022	1.18%	4.07%
05/24/2021—01/04/2022	16.38%	27.91%
11/20/2020—01/14/2021	6.22%	48.16%
04/06/2020—06/29/2020	23.24%	145.33%

As of January 31, 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 SEP RETURN WHEN ACTIVE	-0.04%



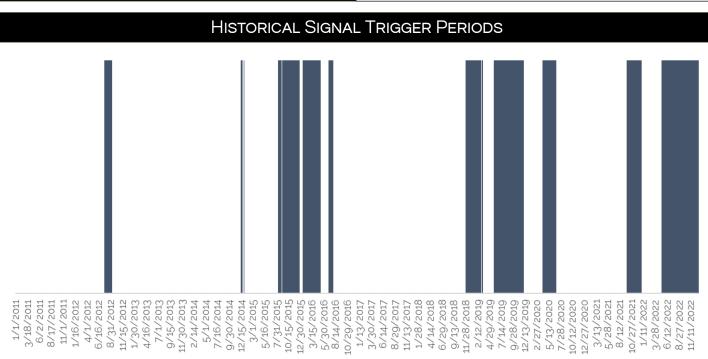
Most Recent >30 Day Triggers	ACTIVE PERIOD S&P RETURN	Ann. Active Period S&P Return
01/18/2022—4/13/2022	-3.77%	-15.06%
02/26/2020—03/20/2020	-26.19%	N/A
05/02/2019—06/18/2019	0.14%	1.08%
10/09/2018—12/08/2018	-8.36%	-41.21%

As of January 31, 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	SATURATED BEARISH (BULLISH)
HIST. DAILY S&P RETURN WHEN ACTIVE	0.11%



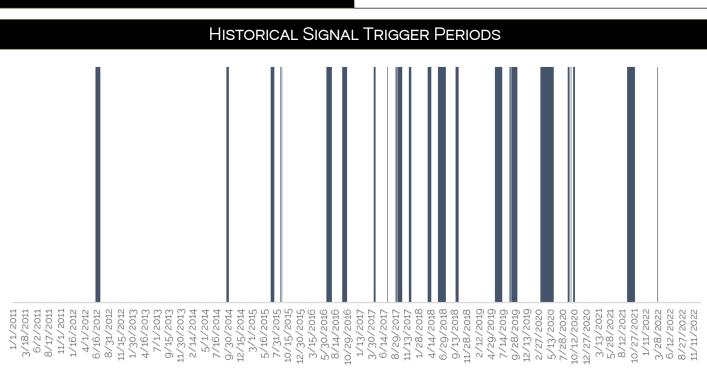
Most Recent >30 Day Triggers	ACTIVE PERIOD S&P RETURN	Ann. Active Period S&P Return
05/10/2022—Present	1.40%	1.92%
09/27/2021- 12/29/2021	7.96%	34.62%
04/06/2020—07/02/2020	26.38%	164.11%
05/29/2019—12/06/2019	12.74%	25.61%

As of January 31, 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%



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%