Physics-Based Sentiment Forecasts - US Stocks | Apr 4 2025



RSP | Invesco® S&P 500® Equal Weight ETF
Three-week Horizon
Jeffrey Hansen
www.cpminvesting.com

This three-week forecast of investor sentiment is an example of our sentiment forecasts.

Request a subscription to our six-week forecast: contact@cpminvesting.com

Three-Week Forecasts (periods between shifts)			
Physics- Based	Long-Term Sentiment (qtrs):	4 (1-4 scale, 4=Most Optimistic)	Figure 1
	Short-Term Sentiment (wks):	Optimistic mid-April, then pessimistic	Figure 1
	Major Flash Sentiment:	Begin week ending April 25	Figure 1
	Minor Flash Sentiment:	Varied over the forecast horizon	Figure 1
	Market Price Momentum:	Higher the week ending April 11, then lower	Figure 3
Implied Economics-Based Sentiment:		Meaningfully Negative	Figure 3

Video version: https://youtu.be/h5CUqJL0W5U

Summary (data as of Apr 04 2025): Market reaction to the administration's tariff announcement has been severe. Of course, the timing of the announcements is unrelated to physics-based sentiment shifts. However, physics-based drivers can indicate how the market is likely to respond to the announcement and upcoming related economic concerns. The extreme magnitude of the recent reaction aligns with last week's Pessimistic reading of the Short-Term Driver and the Meaningfully Negative reading for Implied Economics-Based Sentiment.

The MRI in Figure 1 are good indicators of the near-term direction of the market. The Micro MRI is now trending lower, indicating a negative near-term price outlook. As of last Friday, it stood at 30 on a 0 to 100 scale, suggesting prices may fall further. Historically, it has been best to buy when the Micro MRI enters the upleg of its cycle. The Macro MRI remains moderately high in its normal range and is trending negatively – another unfavorable condition for the market.

Regarding a price recovery being aided by physics-induced optimism, the outlook is mixed. The Long-Term Driver has a reading of Most Optimistic, which may mean that widespread investor panic is unlikely. Under similar historical conditions, market losses rarely exceeded 30%. The Short-Term Driver is expected to be more optimistic this week and next but shifts to a Pessimistic stance the week ending April 25.

Perhaps the most important upcoming shift is a Major Flash that is expected to begin the week ending April 25. We expect what we call an M-Flash because of its shape. An M-Flash typically lasts 8 to 10 weeks and involves seemingly erratic price moves. A series of M-Flashes are shown as the yellow line on Figure 2. One will soon enter the forecast horizon of this report. Historically, these flashes tend to overwhelm the Long-Term and Short-Term Drivers on a short-term basis, so it is worth paying attention to this Flash. The most pessimistic week – the low point represented by the middle of the "M" – is expected the week ending May 9, which may represent a good time to buy stocks. See this link for more information on the M-Flash: https://cpminvesting.com/m-flash

Notes:

Introductory video: https://youtu.be/Czl67Md1s1w
Web page for written notes: https://cpminvesting.com/notes

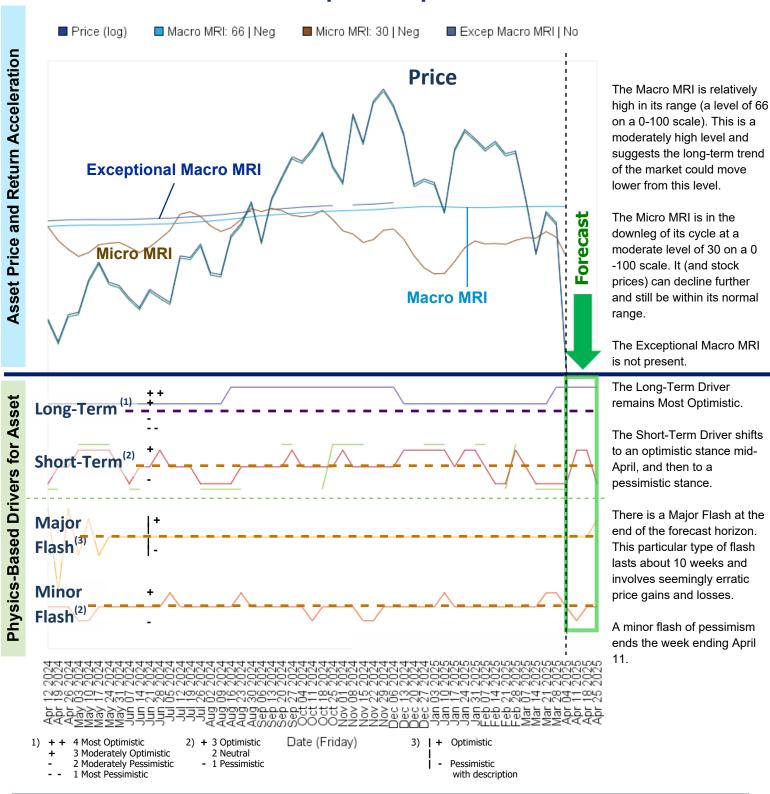


MRI and Sentiment Drivers

Fig. 1

Explanatory Video: https://youtu.be/YOpocz C8is

Physics-Based Sentiment Forecasts
ETF "RSP" | S&P 500® Equal Weighted Index as of Apr 04 2025
MRI and Their Drivers: Apr 5 2024 - Apr 25 2025

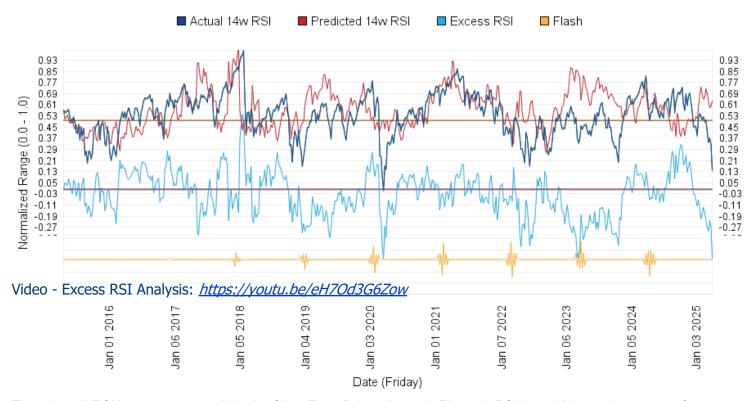




RSI Analysis - Excess RSI Over 10-Year Horizon

Fig. 2

RSP | Invesco® S&P 500® Equal Weight ETF 14-Week RSI - Actual and Predicted: Apr 17 2015 - Apr 4 2025



The 14-week RSI is a component within the Short-Term Driver shown in Figure 1. RSI is a widely used measure of asset price momentum. Our predicted RSI explains much of the weekly volatility in the actual RSI over the last several decades. | The upper portion of Figure 2 displays the predicted and actual 14-week RSI for an asset price (not shown) over the past 10 years. The light blue line in the middle of the figure, labeled "Excess RSI," represents the difference between the two series. High values of "Excess RSI" indicate stronger-than-expected price momentum, which may be caused by positive economic or market conditions. Conversely, low values suggest weaker-than-expected momentum, likely reflect negative conditions. Excess RSI reflects investor sentiment related to a range of factors including investor views of stock valuations, inflation, interest rates, and economic growth. | The Flash Driver is included for reference.

Comments (data as of Apr 04 2025): On the far right of Figure 2, the light blue line indicates that the 'Excess RSI' remains below the center line. This condition indicates that recent price momentum is well below what is expected based on physics-induced sentiment alone. It suggests that investors have a pessimistic outlook on economic, market, and other conditions. Excess RSI is now at an extremely low level compared to the 10-year period shown. The current level is comparable to lows during the COVID crash in 2020, and also in early 2023. While price momentum rebounded quickly after COVID, it didn't in 2023.



RSI Analysis - Predicted RSI, Implied Econ Sentiment

RSP | Invesco® S&P 500® Equal Weight ETF Index Price, Predicted 14-Week RSI: Apr 5 2024 - Apr 25 2025



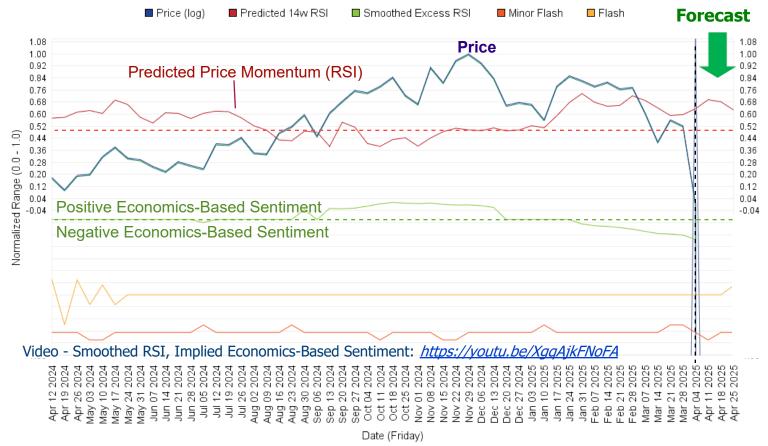


Figure 3 shows the asset price (upper panel, heavy blue line) and the predicted price momentum, measured as the 14-week Relative Strength Index (RSI, red line). The "Smoothed Excess RSI" is displayed as the light green line, which deviates from its neutral level (represented by the dashed light green line) when the actual 14-week RSI of the market (not shown) remains meaningfully higher or lower than the expected level over several weeks. | Smoothed Excess RSI represents the "Implied Economics-Based Sentiment" and can signal unusually strong or weak sentiment related to economic and market conditions. It can identify when investors have a negative view of economic conditions even when the stock market moves higher. | Smoothed Excess RSI is calculated as the exponential moving average (EMA) of the difference between the actual 14-week RSI and the predicted 14-week RSI (labeled "Excess RSI" on the prior page). To emphasize meaningful deviations, only z-score values exceeding ±0.5 are shown. A horizontal line indicates that the actual 14-week RSI is not meaningfully different from what is expected due to natural sentiment shifts.

Comments (data as of Apr 04 2025): The solid red line shows the predicted price momentum moving higher through April 11 and then moving lower.

Our Implied Economics-Based Sentiment measure is below the neutral level, shown as the dashed green line, indicating meaningfully negative sentiment related to real economic and market factors. This condition began at the end of January 2025 and is likely to continue over the next few weeks, even if the stock market moves higher. Should this condition continue, it will amplify price declines and dampen price recoveries.



Physics-Based Sentiment Forecasts - US Stocks | Apr 4 2025

Additional Notes

Links

Please contact us with questions: contact@cpminvesting.com

See additional notes: www.cpminvesting.com/notes
General information: www.cpminvesting.com/notes

Join our Discord Server: https://discord.gg/3c6327VwbW

Citations

RSP is an ETF issued by Invesco that seeks to track the performance of the S&P 500® Equal Weighted Index, providing equal exposure to each of the 500 largest publicly traded U.S. companies.

For more information, visit: https://www.invesco.com

Other ETFs: iShares® Russell 2000 ETF (IWM), Invesco® QQQ Trust (QQQ), Invesco® S&P 500® Equal Weight ETF (RSP), and iShares® S&P GSCI® Commodity-Indexed Trust (GSG) are registered trademarks of their respective fund sponsors. The Nasdaq-100 Index® and S&P 500® are registered trademarks of Nasdaq, Inc. and S&P Dow Jones Indices LLC, respectively. These ETFs seek to track the performance of their respective indexes but are not sponsored, endorsed, or promoted by the index providers.

Background

Sentiment shifts occur periodically and are described as changes between:

Optimism|Pessimism Risk-on|Risk-off Resilience|Vulnerability Euphoria|Panic Aspirational thinking|Critical thinking

Total sentiment reflects economic forces and the naturally occurring forces that directly affect human behavior:

- > Economic forces
 - Investor views on economic conditions
 - Investor views on market fundamentals
 - Investor behavior (e.g., trend following, mean reverting, calendar effects, response to current events)
- > Natural forces Our focus is here
- Naturally Occurring Shifts Have a Big Impact: Naturally occurring sentiment shifts have a bigger impact than many investors realize, and typically explain over 70% of the weekly variability of widely used index price momentum measures such as the 14-week Relative Strength Index (RSI). In addition, systematically predicting the future strength of the natural forces can be done more easily and reliably than predicting the future strength of economic forces.
- We can Infer Impact of Economic Forces: When total sentiment deviates meaningfully from the natural shifts, we can infer that economic forces have a higher impact. If we take the actual RSI, for example, which reflects both economic and natural forces, and subtract the effect of the natural forces (represented by the predicted series), the difference is a reasonable gauge of the impact of the economic forces.
- **Early Indicators of Market Declines:** Key early indicators of an impending market correction are a) when Excess RSI (EMA) moves to negative levels, and b) when actual sentiment metrics, such as one of our Market Resilience Indexes or the 14-week RSI, converges with a negatively trending predicted metric. See Note #4 on this page:

https://cpminvesting.com/notes

Two types of Physics-Based Sentiment Drivers: We maintain over three dozen physics-based drivers. There are two general types:

> Cyclic Drivers - sentiment changes gradually over time. The Long- and Short-Term drivers are cyclic.



Physics-Based Sentiment Forecasts - US Stocks | Apr 4 2025

> Episodic Drivers - sentiment changes abruptly. The Flash and Minor Flash drivers are episodic. Our forecasts of Episodic Drivers tend to be more accurate than those for the Cyclic Drivers.

For descriptions of each driver, see Note #2 on this page (https://cpminvesting.com/notes).

Two Sentiment-Related Metrics: We use two different metrics in our forecasts of sentiment. We forecast the 14-week Relative Strength Index (RSI) to measure price momentum for a market index. Upward sloping RSI indicates positive sentiment:

https://en.wikipedia.org/wiki/Relative strength index

We also forecast our own Market Resilience Index® (MRI) series. The MRI measure return acceleration. Upward sloping MRI indicate positive sentiment. MRI indicate short- and long-term shifts in market resilience for each market index:

- > Micro MRI short-term trends lasting several weeks
- > Macro MRI long-term trends lasting several quarters

The RSI and MRI have different features.

RSI (Relative Strength Index)

- Widely used in investment industry
- Effective in identifying market bottoms
- Less effective in identifying market tops. RSI can peak several months before the index price peaks.

MRI (Market Resilience Index)

- Designed to identify accurately both market tops and bottoms

For descriptions of each driver, see Note #1 on this page (https://cpminvesting.com/notes).

Legal Disclaimer:

The S&P 500® and the S&P 500 Equal Weight Index® are registered trademarks of S&P Dow Jones Indices LLC, a division of S&P Global. Dow Jones Industrial Average®, DJIA®, and Dow Jones® are trademarks of Dow Jones Trademark Holdings LLC.

