## Physics-Based Sentiment Forecasts - US Stocks | Feb 28 2025



RSP | Invesco® S&P 500® Equal Weight ETF
Three-week Horizon
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This three-week forecast of investor sentiment is an example of our perspective on stock market corrections and recoveries.

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Three-Week Forecasts (periods between shifts)			
	Long-Term Sentiment (qtrs):	3 (1-4 scale, 4=Most Optimistic)	Figure 1
Physics-	Short-Term Sentiment (wks):	Shifting toward pessimism	Figure 1
Based	Flash Sentiment:	None	Figure 1
	<b>Market Price Momentum:</b>	Trending lower in March	Figure 3
Implied Economics-Based Sentiment:		Meaningfully Negative	Figure 3

Video version: <a href="https://youtu.be/Qaonttn1rSU">https://youtu.be/Qaonttn1rSU</a>

**Summary (data as of Feb 28 2025):** Three conditions contribute to the stock market's vulnerability in early March. First, the Short-Term Driver will have a pessimistic stance, as described in Figure 1. Second, Implied Economic-Based sentiment continues to be negative, meaning that investors hold a negative view of economic and market factors. This condition represents an economic need for a stock market price decline and is described in Figure 3. The least important condition is that the recent market trends measured by the MRI indicate the market has ample latitude to move lower from current levels, as shown in Figure 1.

**Figure 1:** The Short-Term Driver shown in Figure 1 indicates naturally occurring pessimism in early March. If a price decline is indeed needed for economic reasons, we are coming to a multi-week period in which declines are likely to take place.

Recent stock market return acceleration measures—the Macro and Micro Market Resilience Indexes shown in Figure 1—do not yet indicate strong negative trends. Despite their positive recent slopes, both have trended horizontally in recent weeks, which is highlighted by the yellow box in Figure 1. The Macro MRI is at a relatively high level of 68 and the Micro MRI is at a moderate level of 42 on a scale of 0-100. Both can move meaningfully lower from these levels and still be within their normal ranges. The condition of the Short-Term Driver and the MRI underscore the need for caution over the next two to three weeks.

An important mitigating condition is that Long-Term sentiment remains Moderately Optimistic, a sentiment level that historically has had few losses greater than 30%. An absence of bad economic news over the next two to three weeks may enable the market to move through this period with only minor losses at worst.

### Notes:

Introductory video: https://youtu.be/CzI67Md1s1w

Web page for written notes: <a href="https://cpminvesting.com/notes">https://cpminvesting.com/notes</a>

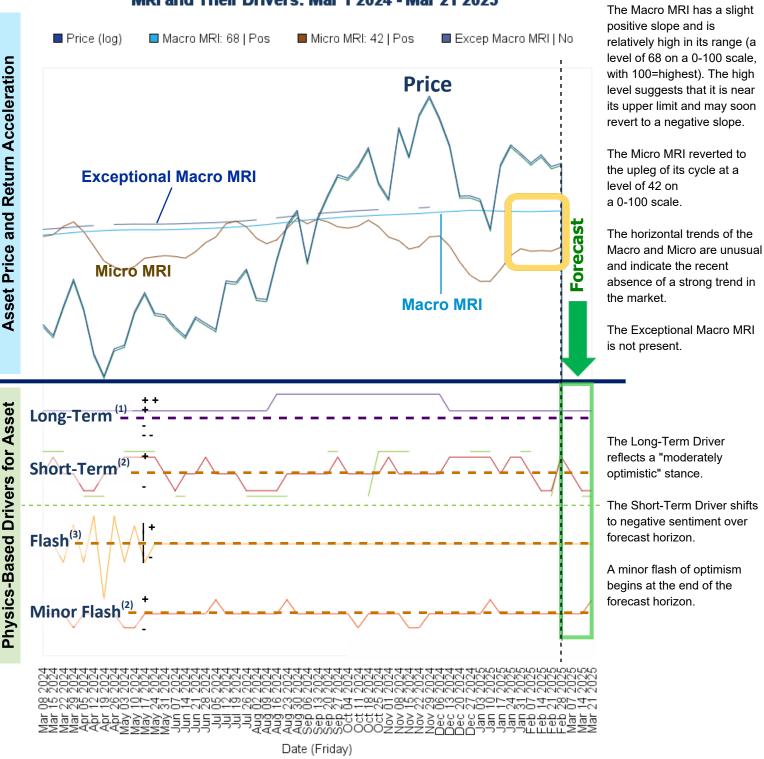


## **MRI** and Sentiment Drivers

Fig. 1

Video - Indicator Descriptions: https://youtu.be/YOpocz C8is

Physics-Based Sentiment Forecasts
ETF "RSP" | S&P 500® Equal Weighted Index as of Feb 28 2025
MRI and Their Drivers: Mar 1 2024 - Mar 21 2025





4 Strongly Optimistic

3 Moderately Optimistic

2 Moderately Pessimistic

Optimistic

Pessimistic

+ 3 Optimistic

2 Neutral

1 Pessimistic

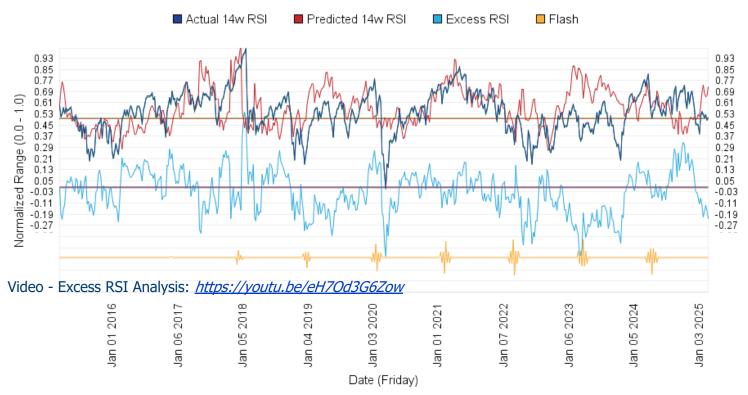
- 1 Strongly Pessimistic

with description

# RSI Analysis - Excess RSI Over 10-Year Horizon

Fig. 2

RSP | Invesco® S&P 500® Equal Weight ETF 14-Week RSI - Actual and Predicted: Mar 13 2015 - Feb 28 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 Feb 28 2025):** [No Change From Last Week] On the far right of Figure 2, the light blue line indicates that the 'Excess RSI' remains below the center line. This condition marks a departure from the economics-based optimism observed in the last half of 2024, suggesting that investors have now adopted a more pessimistic outlook on economic, market, and other real-world conditions.



# RSI Analysis - Predicted RSI, Implied Econ Sentiment

RSP | Invesco® S&P 500® Equal Weight ETF Index Price, Predicted 14-Week RSI: Mar 1 2024 - Mar 21 2025

Fig. 3

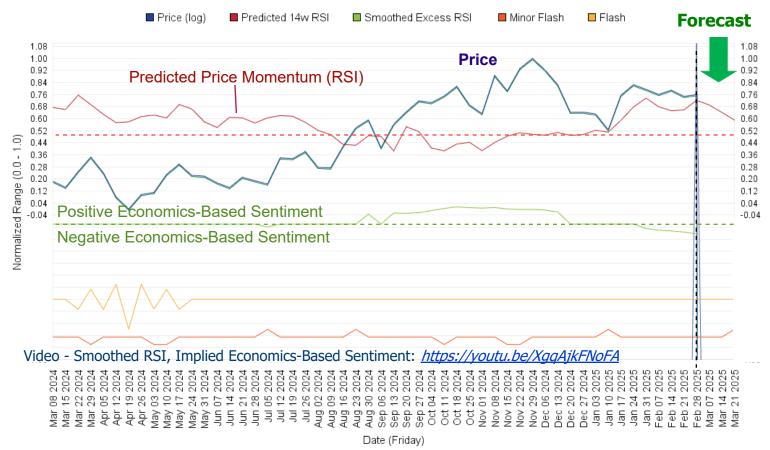


Figure 3 shows the asset price (upper panel, heavy blue line) and the predicted price momentum, measured as the 14-week Relative Strength Index (RSI, red line). The "Smoothed Excess RSI" is displayed as the light green line, which deviates from its neutral level (represented by the dashed light green 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 economic conditions. It can also 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 Feb 28 2025):** The solid red line shows the predicted price momentum moving lower over the forecast horizon.

Implied Economics-Based Sentiment is currently below the neutral level, shown as the dashed green line, indicating meaningfully negative sentiment related to economic and market factors. This condition began at the end of Jan 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 when they do occur.



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## **Additional Notes**

#### Links

Please contact us with questions: <a href="mailto:contact@cpminvesting.com">contact@cpminvesting.com</a>

See additional notes: <a href="https://www.cpminvesting.com/notes">www.cpminvesting.com/notes</a>

General information: www.cpminvesting.com

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 Weight Index, providing equal exposure to each of the 500 largest publicly traded U.S. companies.

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

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### **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 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 and Market Conditions: 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 two dozen physics-based drivers. There are two general types:

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



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> 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).

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