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

Introductory video: www.cpminvesting.com/sentiment-forecasts

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

Summary (data as of Dec 20 2024): See video link above | Recent market dynamics have been generally consistent with our forecasts. Over the coming weeks, the Market Resilience Indexes (MRI, Figure 1) and the Excess RSI (EMA) analysis (Figure 3) both indicate a resilient stock market. The stock market is not likely to experience a dramatic decline (i.e., a loss greater than 30%) over the coming weeks. In what may prove to be an important change (Figure 3), price momentum is no longer more positive than what could be explained by the physics-based drivers, suggesting investors hold a relatively more pessimistic view of real-world conditions. Further decreases would be a negative sign for the stock market.

Recent Market Dynamics - The large stock market price decline of last week coincided with both the expected shift toward a less optimistic stance in the Long-Term Driver and the Fed's comment that inflation is still an important focus of its efforts. We believe that the reduced investor optimism related to the shift of the Long-Term Driver magnified the market's reaction to the Fed's comment. Had the same news been announced a few weeks earlier the market reaction would not have been as negative as it was.

Outlook - The Long-Term Driver (lower panel Figure 1) indicates "moderate optimism" over the next several weeks. While the upcoming period of moderate optimism may result in a less dramatic price ascent over the coming weeks, the positive trend of the stock market is likely to continue. The Short-Term Driver has a more optimistic stance, and we expect a Minor flash of optimism in early January.

The Excess RSI (EMA) analysis (Figure 3) indicates an important shift to a neutral level of price momentum related to economic and market factors. A further reduction in Excess RSI (EMA) over the coming weeks would be a negative sign for the stock market.

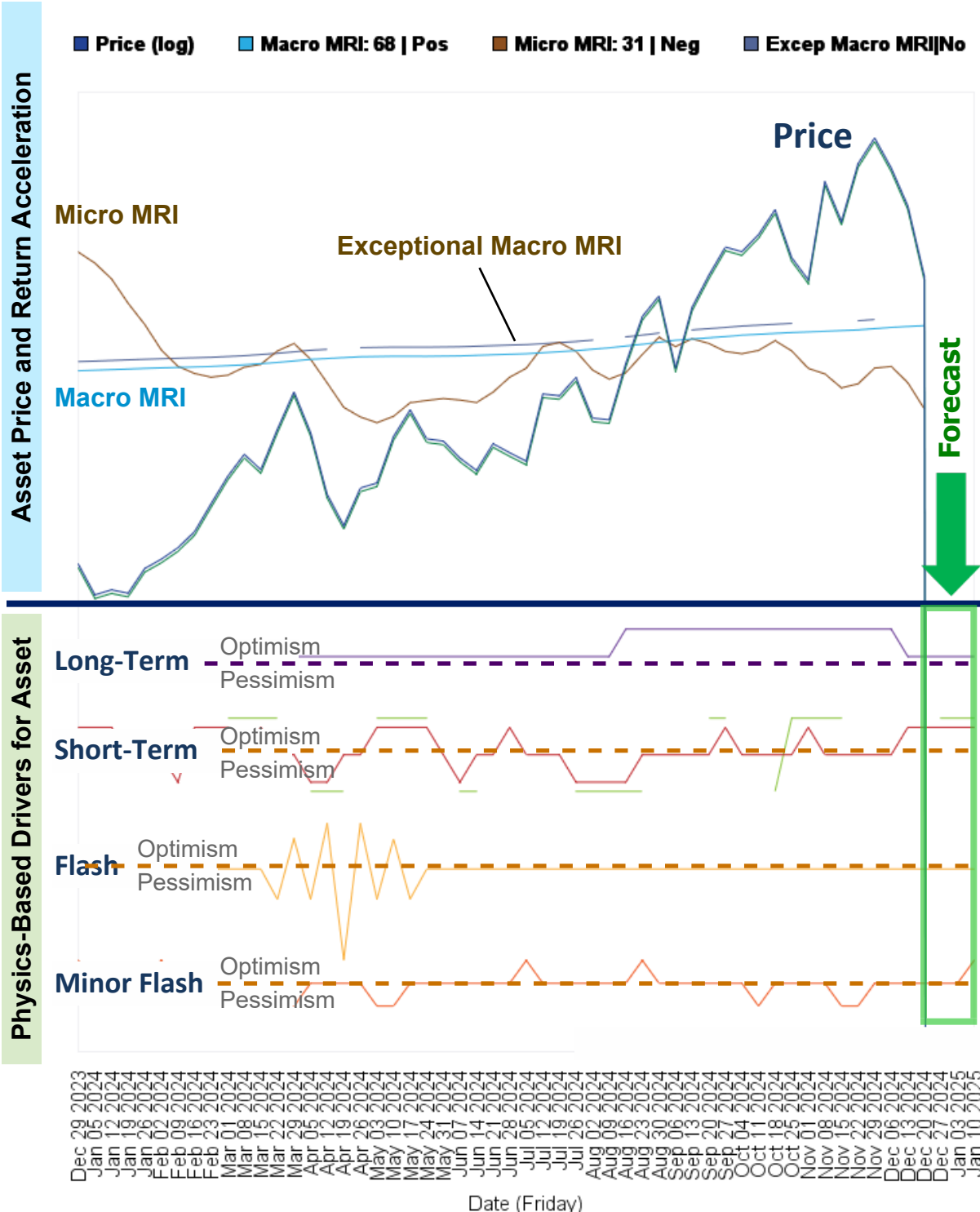
Figure 1 (following page): Notes linked here: <https://cpminvesting.com/notes> and the Additional Notes of this report are useful background for this report. Figure 1 on the following page contains two panels. The upper panel displays the asset price and our Market Resilience Index® series. The MRI are derived solely from the asset price and measure its return acceleration over different time frames, from a few weeks (Micro MRI) to several quarters (Macro MRI). These MRI are shown with their current levels (ranging from 0 to 100) and their recent slope/trend (Pos=Positive, Neg=Negative) indicated in the legend. The Exceptional Macro MRI is shown as a line above the Macro MRI and is indicated as being present (Yes) or not (No) in the legend. See note #1 on <https://cpminvesting.com/notes> for background on the MRI. The lower panel on Figure 1 shows the physics-based drivers of investor sentiment, which have been calibrated to show naturally occurring shifts affecting the MRI. The predicted status of each driver is shown in the light green vertical box on the right. See #2 on <https://cpminvesting.com/notes> for background on the physics-based drivers and note #4 regarding these indicators converging on a negative trend.



MRI and Sentiment Drivers

Fig. 1

Physics-Based Sentiment Forecasts ETF "RSP" | S&P 500® Equal Weighted Index as of Dec 20 2024 MRI and Their Drivers: Dec 22 2023 - Jan 10 2025



The positive trend in the Macro MRI indicates that the stock market's long-term price trend continues to be positive. The Exceptional Macro MRI is not present, a further indication of less aggressive price appreciation. The Micro MRI is in the downleg of its cycle but at a low level in its historical range and is poised for a shift to the upleg of its cycle and a price rally.

The Long-Term Driver indicates a moderately optimistic stance. The Short-Term Driver indicates an optimistic stance. These naturally occurring shifts may neutralize each other resulting in a stock market with overall moderately positive sentiment.

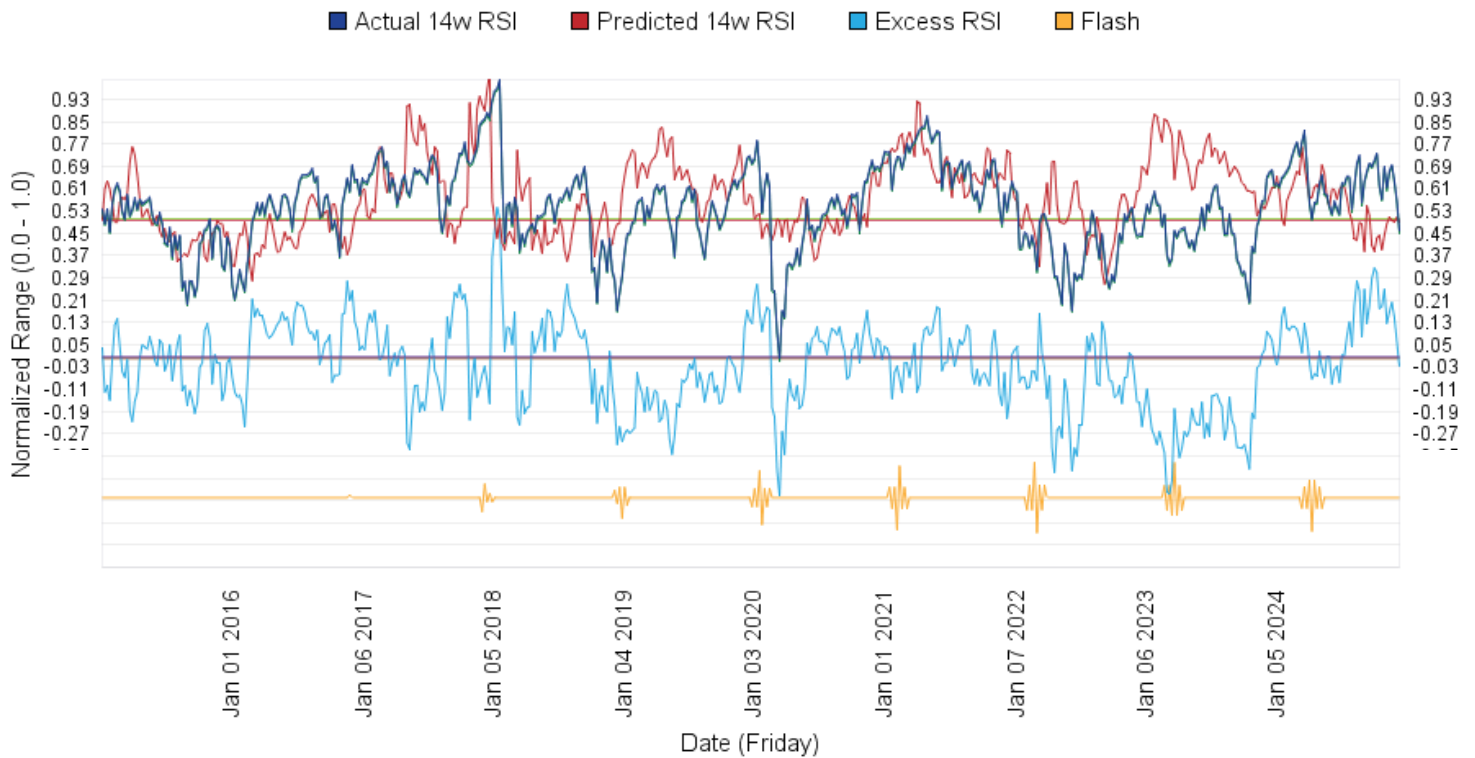
<https://cpminvesting.com/sentiment-forecasts>



RSI Analysis - 10-Year

Fig. 2

ETF "RSP" | S&P 500® Equal Weighted Index
 14-Week RSI - Actual and Predicted: Jan 2 2015 - Dec 20 2024



The 14-week RSI is an important component within the Short-Term Driver shown in Figure 1. RSI is a widely used measure of asset price momentum and our RSI forecasts explain most of the weekly volatility of the actual RSI. | The upper portion of Figure 2 displays the predicted and actual 14-week RSI for the 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, often driven by positive economic or market conditions. Conversely, low values suggest weaker-than-expected momentum, likely reflecting negative conditions. | The Flash Driver is shown for reference.

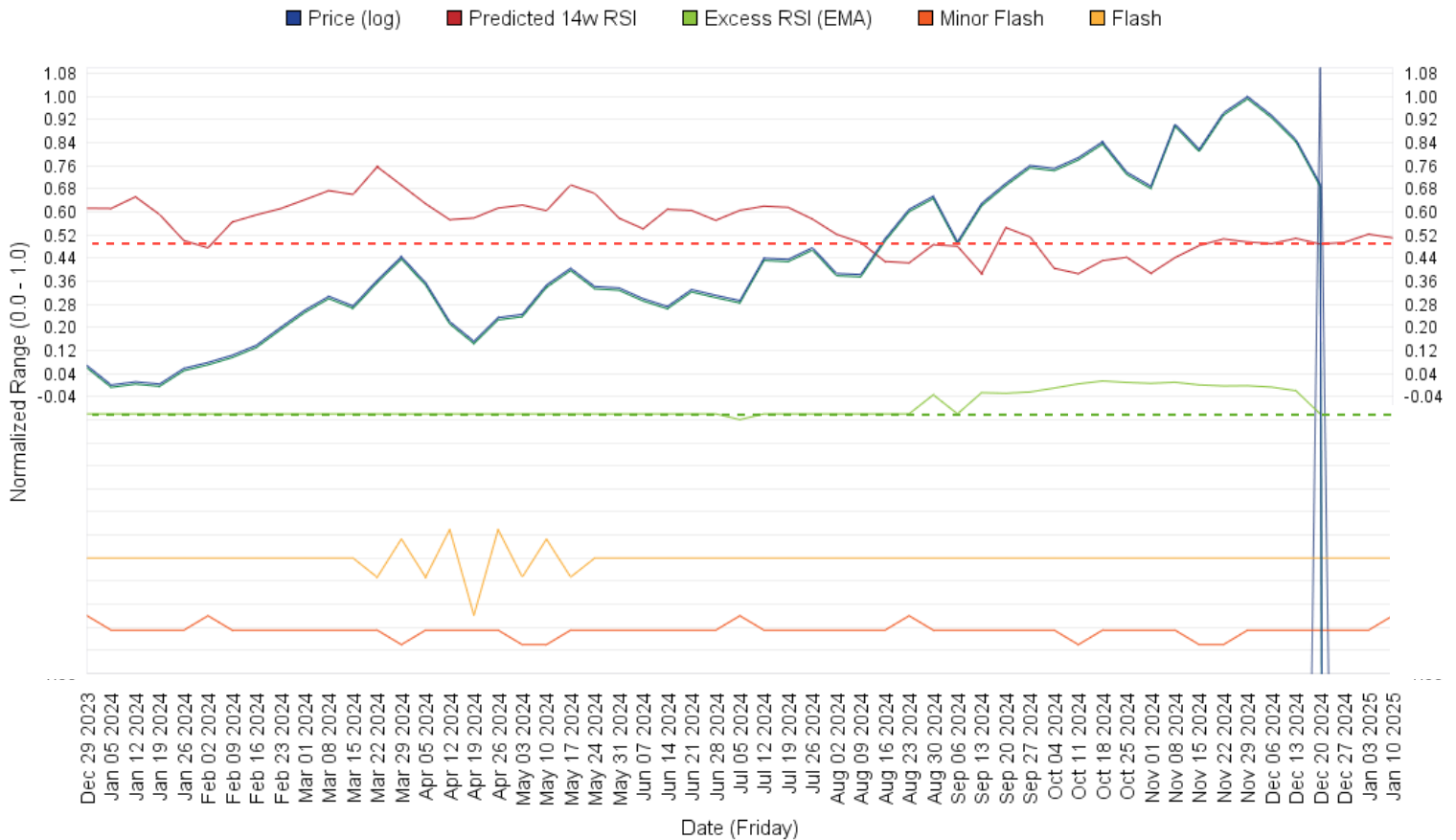
Comments (data as of Dec 20 2024): On the far right of Figure 2, the light blue line shows that the Excess RSI has shifted to a neutral level. This means that the index's price momentum is beginning to track the naturally occurring shifts in sentiment. Compared to the readings of the last several weeks, this status suggests that investors hold a more neutral outlook on economic, market, and other real-world conditions.



RSI Analysis - 1-year with EMA

Fig. 3

ETF "RSP" | S&P 500® Equal Weighted Index
 Index Price, Predicted 14-Week RSI: Dec 22 2023 - Jan 10 2025



The asset price (heavy blue line) and predicted price momentum measured as the 14w RSI (red) are shown in the upper panel of Figure 3. "Excess RSI (EMA)" is shown as the light green line. Conceptually, this line deviates from its neutral stance, indicated by the dashed light green line, when the actual 14w RSI of the market (not shown) is meaningfully higher or lower than what can be expected from the natural shifts in sentiment as embodied in the predicted RSI. This line can call attention to economic conditions that are unusually strong or weak based on the sustained deviation of the actual RSI relative to the predicted RSI. Excess RSI (EMA) is calculated as the exponential moving average (EMA) of the actual 14w RSI less the predicted 14w RSI (labeled "Excess RSI" on the prior page). Only z-score values in excess of +/-0.5 are shown in order to highlight meaningful deviations. When the line is horizontal, the actual 14w RSI is not meaningfully different than what we expect from the natural shifts in sentiment.

Comments (data as of Dec 20 2024): The Excess RSI (EMA) has shifted to a neutral status from a positive status. The positive Excess RSI suggests that investor sentiment about real-world conditions is now neutral. If it stays neutral and the market's actual RSI tracks the predicted RSI, the actual RSI will be positive over the next three weeks - the solid red line indicate that the predicted RSI will move slightly higher over the forecast horizon. A further negative shift would be a negative sign for the stock market.



Additional Notes

Links

Please contact us with questions: contact@cpminvesting.com

See additional notes: www.cpminvesting.com/notes

General information: www.cpminvesting.com

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>

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.

> 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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