



CPM
INVESTING

S&P 500 Equal Weighted Index

Jeffrey Hansen

www.cpminvesting.com

We provide this three-week forecast of investor sentiment as an example of our perspective on stock market corrections and recoveries and our algorithmic forecasting models.

We provide clients with multi-month forecasts and strategy sessions followed by periodic status reports. We also offer technology transfer engagements for those wanting to make physics-based sentiment forecasts in-house.

Comment (data as of Sep 20 2024): Notes linked here: (<https://cpminvesting.com/notes>) are useful background for this report. This report's three-week forecast (lower panel p2) shows the Short-Term Driver signaling increased optimism for the week ending September 27. However, this shift will be temporary, with a return to a neutral stance by October 4. The Minor Flash Driver indicates brief pessimism for the week ending October 11. These naturally occurring shifts are likely to increase market volatility. Any bad news during this period could be amplified. Importantly, the Long-Term Driver continues to show optimism, offering key support to the market and helping to avoid widespread investor panic.

As of September 20, the MRI (upper panel p2), which reflect index return acceleration, remain positive overall. The Macro MRI is trending upward and the Exceptional Macro is present, indicating sufficient market resilience to offset short-term market vulnerability indicated by the Micro MRI. As we move through the forecasted period of decreasing optimism, we should be alert to any changes in the MRI that would suggest the MRI converging with the physics-based drivers, as mentioned in section 4 of the Notes on our website (<https://cpminvesting.com/notes>).

Pages 3 and 4 present growing evidence of investor optimism about economic and market conditions.

Graphs on Following Pages: The graph on page 2 contains two panels. The upper panel displays the index price and our Market Resilience Index® series. The MRI are derived solely from the index price and measure its return acceleration over different time frames, from a few weeks (Micro MRI) to several quarters (Macro MRI). The MRI are shown with its current level (ranging from 0 to 100) and its recent slope/trend (Pos=Positive, Neg=Negative), as indicated in the legend. The Exception macro MRI is indicated as being present (Yes) or not (No). (<https://cpminvesting.com/notes>) are useful background for this report.

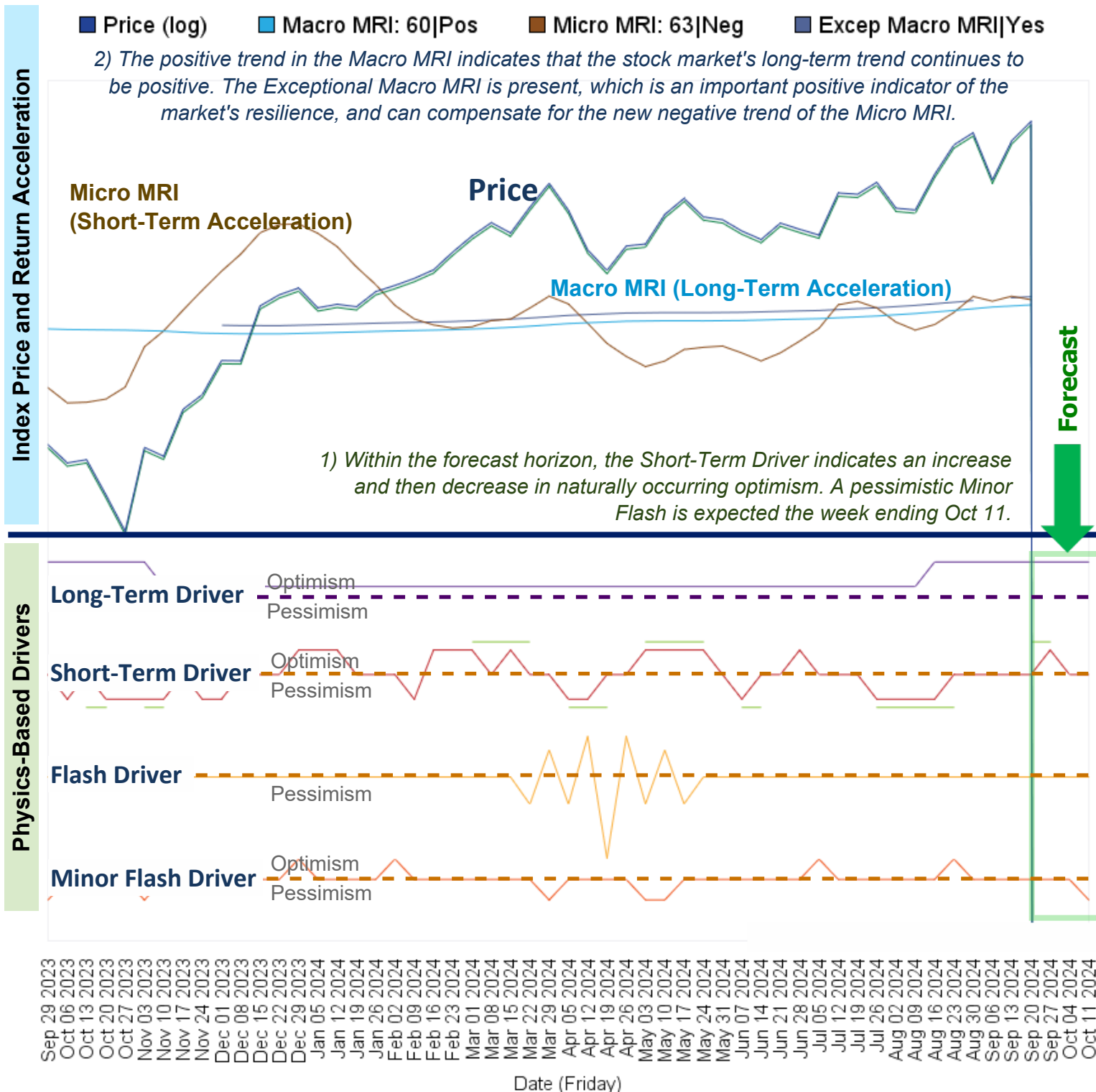
The lower panel on the following page shows the physics-based drivers of investor sentiment, that have been calibrated to show naturally occurring shifts affecting the MRI. The predicted status of each driver is shown in the light green box on the right.

Pages 3 and 4 show forecasts for price momentum as measured by the 14-week Relative Strength Index (RSI), a metric familiar to many investors. Refer to the Endnotes of this document for more information.





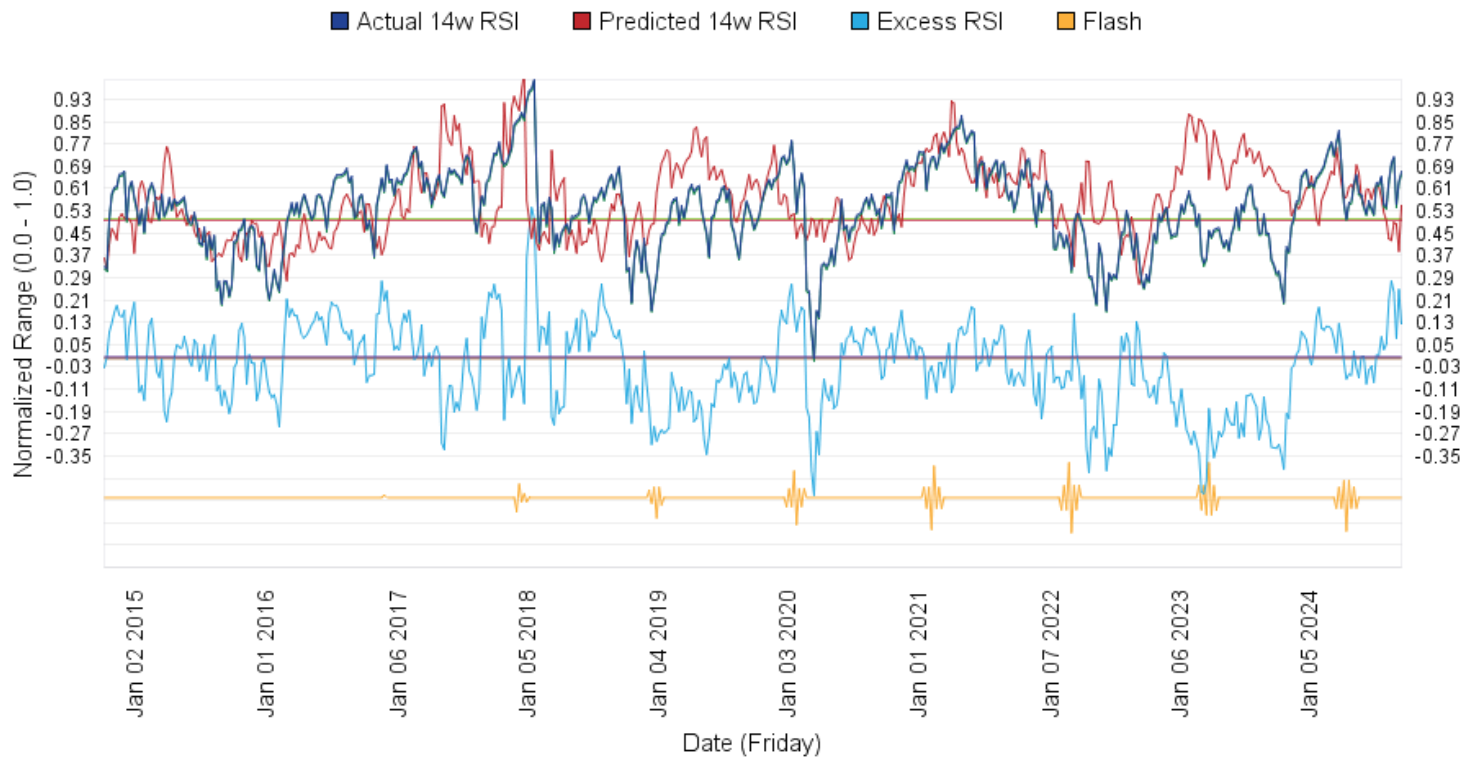
Physics-Based Sentiment Forecasts SP500 EW as of Sep 20 2024 MRI and Their Drivers: Sep 22 2023 - Oct 11 2024



For more information about the MRI and their Drivers see: <https://cpminvesting.com/notes>



S&P 500 Equal Weighted Index 14-Week RSI - Actual and Predicted: Oct 3 2014 - Sep 20 2024



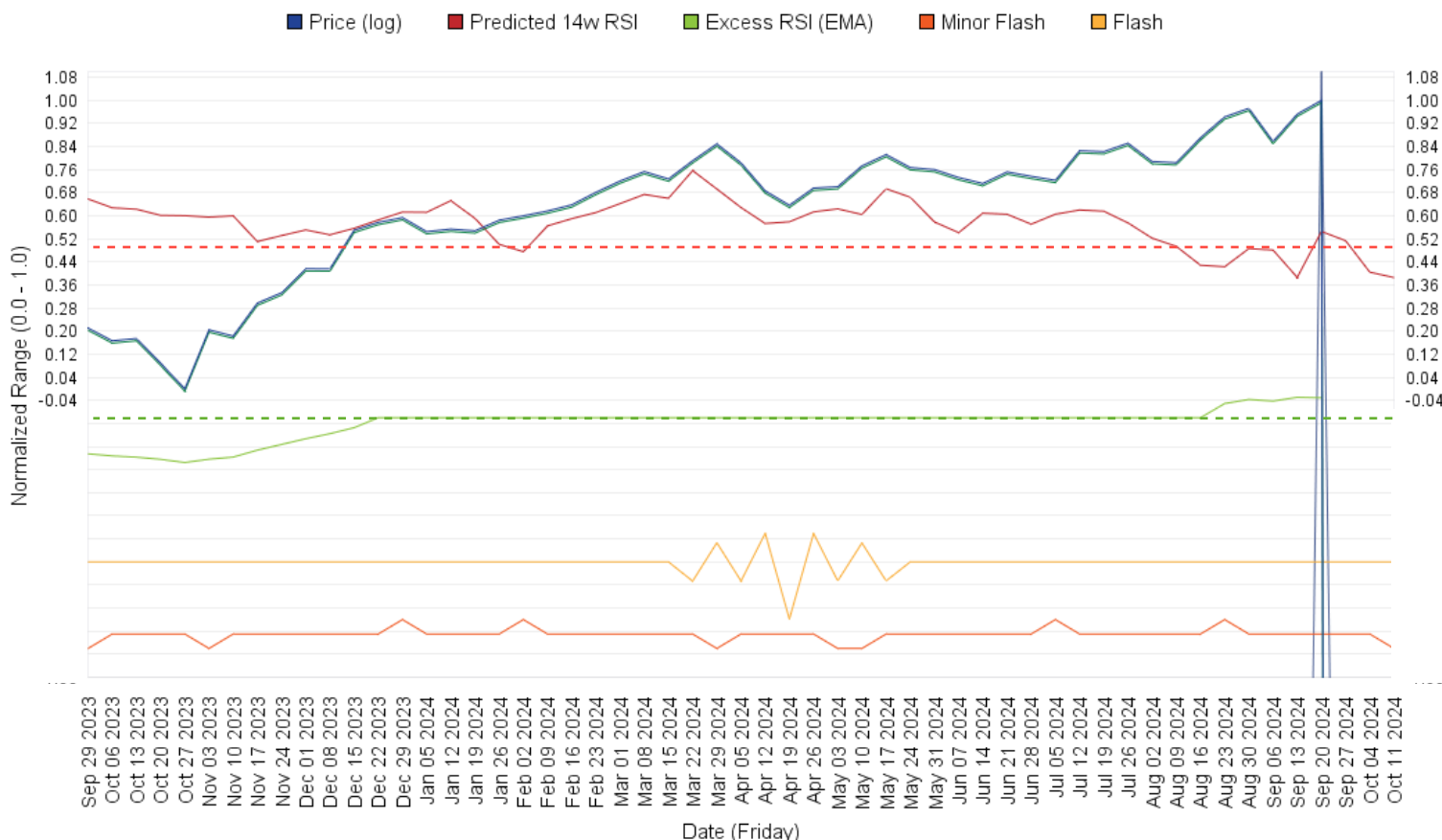
In the upper section of the figure above, we show the predicted and actual 14-week RSI for the market index (not shown) for the last 10 years. The light blue line in the middle of the figure indicates the difference ("Excess RSI") between these two RSI series. High values of the light blue line indicate that the market has stronger price momentum than can be expected from the natural shifts indicated by the predicted RSI, presumably due to positive economic and/or market conditions. Low values indicate that the market has weaker price momentum than expected, presumably because of negative conditions. The Flash Driver is shown for reference.

Comment (data as of Sep 20 2024): On the far right of the graph, the light blue line shows a positive spike, which indicates that the price momentum of the index has been higher than what can be attributed to the naturally occurring shifts in sentiment. This suggests that investors have a positive view of economic forces.



Physics-Based Sentiment Forecasts - US Stocks | Sep 20 2024

S&P 500 Equal Weighted Index Index Price, Predicted 14-Week RSI: Sep 22 2023 - Oct 11 2024



The index price (heavy blue line) and predicted price momentum measured as the 14w RSI (red) are shown in the upper panel. "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 strong or weak based on the sustained deviation of the actual RSI relative to the predicted RSI. This is calculated as the exponential moving average (EMA) of the actual 14w RSI less the predicted 14w RSI (labeled "Excess" on the prior page). Only values in excess of a z-score of ± 0.5 are shown 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.

Comment (data as of Sep 20 2024): After not having meaningful deviation from the neutral line for several months, the Excess RSI (EMA) has developed a positive deviation. This suggests positive investor views about economic forces. However, within the forecast horizon, the predicted RSI (red line) signals lower price momentum beginning the week ending Sep 27.



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Please contact us with questions: contact@cpminvesting.com

See additional notes: www.cpminvesting.com/notes

General information: www.cpminvesting.com

Endnotes

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 sentiment shifts have a bigger impact than many investors realize, and typically explain over 70% of the 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.

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.

In general, a key early indicator of an impending market correction is when an actual sentiment metric, such as one of our Market Resilience Indexes, converges with a negatively trending predicted metric.

Two types of Physics-Based 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.

See this page (<https://cpminvesting.com/notes>) for descriptions of each driver.

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

See this page (<https://cpminvesting.com/notes>) for descriptions of the MRI.



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