Physics-Based Sentiment Forecasts - US Stocks |Sep 13 2024

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 13 2024):

Within the three-week forecast horizon of this report, the Short-Term Driver indicates increased optimism during the week of September 27. However, this naturally occurring shift will be temporary, as shown on the following page (p2). In addition, just beyond the horizon of the report, the Minor Flash Driver indicates a brief flash of pessimism. These shifts may result in greater market volatility later this month. The Long-Term Driver continues to indicate long-term naturally occurring optimism. Historically, this condition has been an important support for the stock market.

Pages 3 and 4 show growing evidence that investors are developing positive views about economic and market conditions. Although not discussed in this report, this evidence suggests that historically high stock valuations are not a drag on market performance.

Graphs on Following Pages

The graph on page 2 contains two panels. The upper panel displays the S&P 500 Equal Weight Index price alongside our Market Resilience Index® series. The MRI are derived solely from the index price and measure its return acceleration over varying time frames, from a few weeks (Micro MRI) to several quarters (Macro MRI). Each MRI is shown with its current level (ranging from 0 to 100) and its recent slope (Pos = Positive, Neg = Negative), as indicated in the legend.
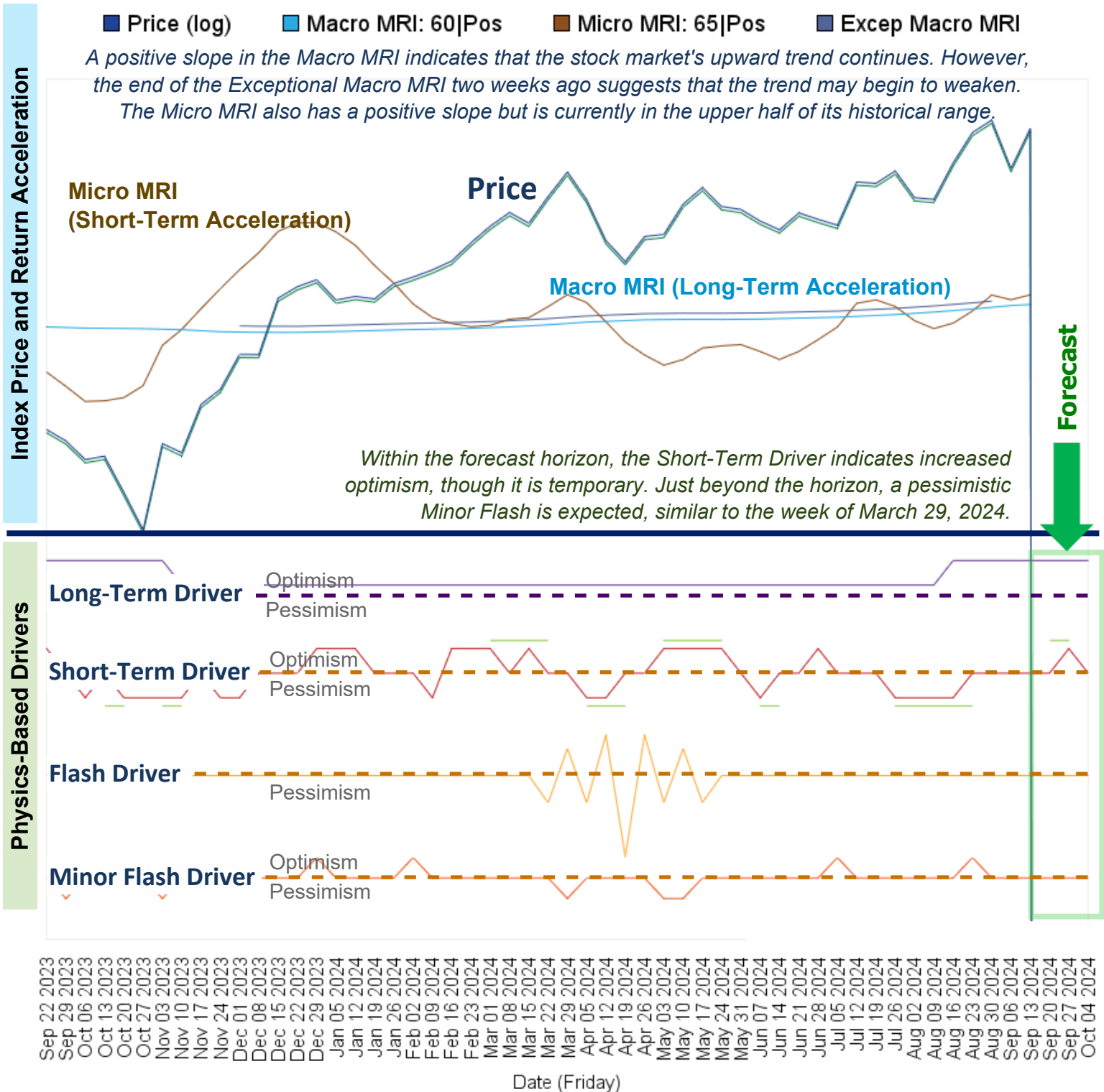
The lower panel on the following page presents physics-based drivers of investor sentiment, calibrated to reveal naturally occurring shifts that explain the MRI. These drivers have been validated over a multi-decade test period. The predicted status of each driver is shown in the light green box on the right.

Pages 3 and 4 provide forecasts for price momentum using the 14-week Relative Strength Index (RSI), a metric familiar to many investors. Refer to the Endnotes of this document for more information.
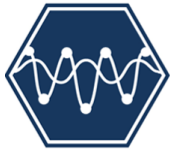
**Physics-Based Sentiment Forecasts
SP500 EW as of Sep 13 2024
MRI and Their Drivers: Sep 15 2023 – Oct 4 2024**

Index Price and Return Acceleration

Physics-Based Drivers

Legend: ■ Price (log)　■ Macro MRI: 60|Pos　■ Micro MRI: 65|Pos　■ Excep Macro MRI

A positive slope in the Macro MRI indicates that the stock market's upward trend continues. However, the end of the Exceptional Macro MRI two weeks ago suggests that the trend may begin to weaken. The Micro MRI also has a positive slope but is currently in the upper half of its historical range.

Micro MRI (Short-Term Acceleration)

Price

Macro MRI (Long-Term Acceleration)

Forecast

Within the forecast horizon, the Short-Term Driver indicates increased optimism, though it is temporary. Just beyond the horizon, a pessimistic Minor Flash is expected, similar to the week of March 29, 2024.

Long-Term Driver — Optimism / Pessimism

Short-Term Driver — Optimism / Pessimism

Flash Driver — Pessimism

Minor Flash Driver — Optimism / Pessimism

Date (Friday): Sep 22 2023 – Oct 04 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: Sep 26 2014 – Sep 13 2024
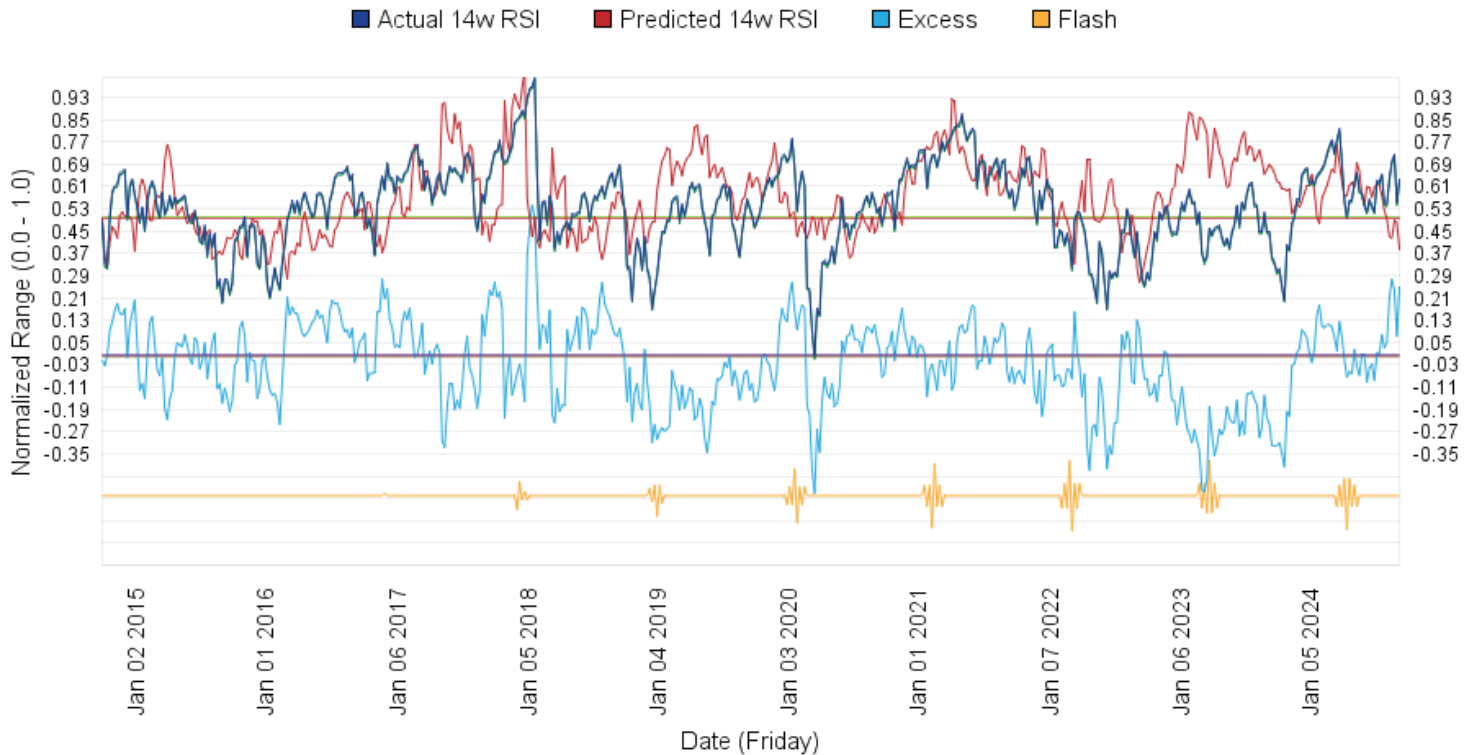

In the upper section of the figure above, we show the predicted and actual 14-week RSI for the market index (not shown) for the last 10 years. The light blue line in the middle of the figure indicates the difference ("Excess") between these two RSI series. High values of the light blue line indicate that the market has stronger price momentum than could be expected from the natural shifts in sentiment 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 13 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 we can expect from the naturally occurring shifts in sentiment. This suggests that investors have a positive view of economic and market forces.

S&P 500 Equal Weighted Index
Index Price, Predicted 14-Week RSI: Sep 15 2023 – Oct 4 2024
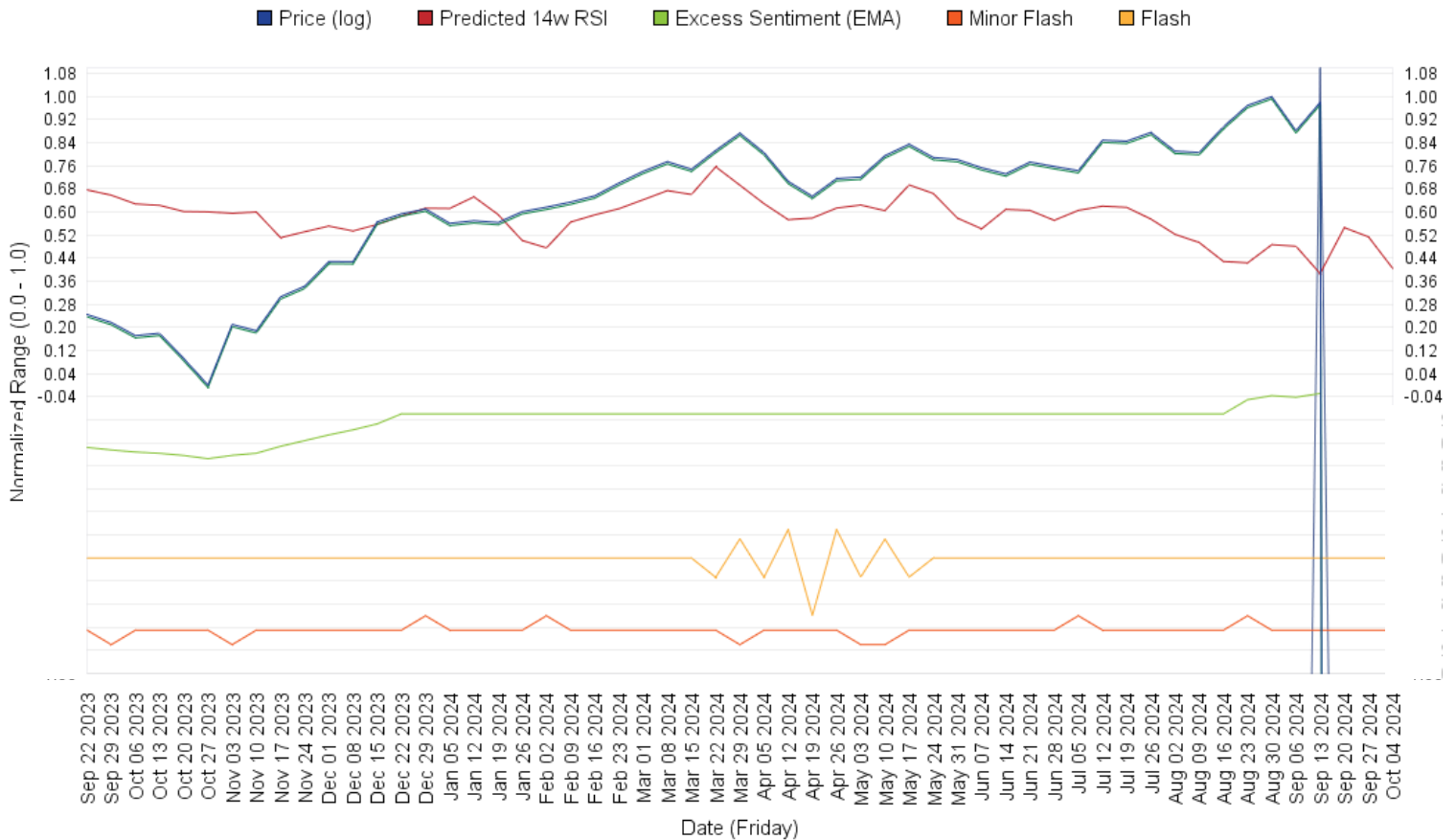
Index price (heavy blue line) and predicted price momentum measured as the 14w RSI (red) are shown in the upper panel. "Excess Sentiment (EMA)" is shown as the light green line. Conceptually, this line deviates from its neutral stance when the actual 14w RSI of the market (not shown) is meaningfully 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 13 2024): After not having meaningful deviation from the predicted 14w RSI for several months, a positive deviation has recently occurred. This suggests that market sentiment is responding to positive conditions. It is important to note that the Minor Flash Driver indicated that the week ending August 23 would see a burst of optimism and this could be the cause of the positive deviation. Should the positive deviation persist for a few more weeks we can then draw stronger conclusions about the strength of economic and market conditions. Within the forecast horizon, the predicted RSI signals higher price momentum the week ending Sep 20.

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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