PULSe Indicator: Sentiment and Economic Uncertainty Rule in Q2

Inflation and central banks dominate markets, outweigh new coronavirus variants.

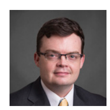
August 2021

KEY INSIGHTS

- In the June quarter, the PULSe indicator decreased. Improvements in the Pandemic, Liquidity, and Sentiment factors outweighed a deterioration in Uncertainty.
- The Sentiment factor oscillated between the crisis zone and the complacency zone, driven by inflation news and Fed discussions.
- Despite improving over the quarter, June saw a reversal. PULSe rose moderately due to a deterioration in the Uncertainty, Liquidity, and Sentiment factors.

Thomas Poullaouec
Head of Multi-Asset Solutions, APAC

Nathan Wang
Solutions Analyst, Multi-Asset Solutions, APAC



David Clewell
Quantitative Investment Analyst, Multi-Asset—Baltimore

PULSe is a composite indicator that is designed to monitor the state of global financial markets since the coronavirus crisis. It stands for Pandemic, Uncertainty, Liquidity, and Sentiment—four factors that we believe encompass much of the market's dynamics. High positive values of PULSe are typically a negative sign for market stability.[1]

The PULSe composite indicator rose in June and was characterized as Stable as of the end of the month.

- The Pandemic factor remained largely unchanged over the past month as improvements in Germany, Italy, and China made up for the spread of the Delta variant in the U.S. and UK.
- The Uncertainty factor rose as the U.S. oil rig count showed signs of peaking, copper prices dropped, long-term government bond yields declined, and the upward revision of earnings forecasts slowed down. Economic Uncertainty had been flirting with the elevated zone.
- The Liquidity factor also shot up as the U.S. three-month commercial paper spread widened.
- The Sentiment factor moved higher as carry currencies underperformed safe currencies and the gold/copper price ratio increased.

Background Note

In this note, we highlight three factors that contributed meaningfully to the PULSe indicator over the last month of the June quarter: The new virus wave continued to spread in the UK, copper prices dropped, and the equity put/call ratio declined.

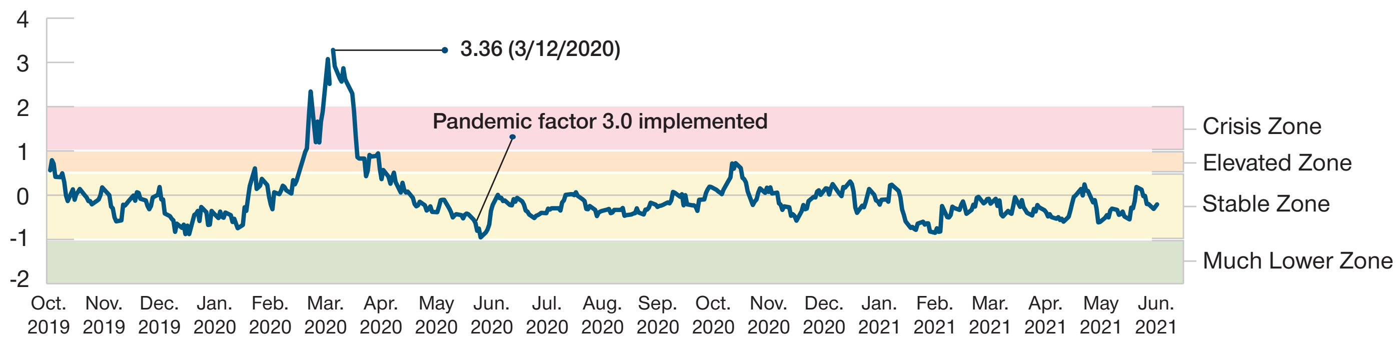
[1] For full details, please see our white paper, "Taking the Market's PULSe in the Coronavirus Era" and additional information at the end of this paper.

Visualizing the PULSe Indicator

(Fig. 1) Expressed as an average of the four component indicators

	PULSe	Pandemic	Uncertainty	Liquidity	Sentiment
Current	-0.18	-0.36	0.28	-0.24	-0.42
Zone	Stable	Stable	Stable	Stable	Stable
5-Day Trend	-0.19	0.11	0.19	-1.17	0.11
1-Month Trend	0.31	0.09	0.53	0.34	0.28
3-Month Trend	-0.09	-0.15	0.94	-1.09	-0.05

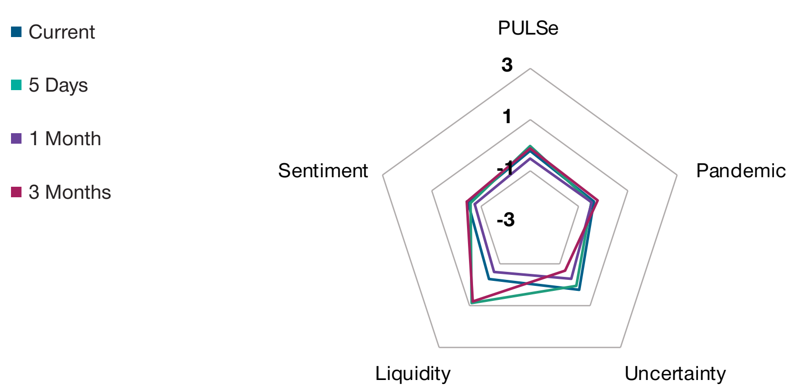
PULSe Indicator History



As of June 30, 2021.
Sources: Haver Analytics/Bloomberg Finance L.P. Analysis by T. Rowe Price.
For illustrative purposes only. Subject to change. The PULSe indicator has been developed by T. Rowe Price. Using different underlying indicators and data could yield different results. Future outcomes may differ significantly. Note: Positive indicator values are typically a negative sign for market stability. The division of PULSe into zones is subjective, based on historical data and statistical assumptions. “Trends” represent the change in the given indicator over the stated period. Please see additional information on the PULSe indicator at the end of this paper.

Radar Chart Showing the PULSe Indicator and Its Components

(Fig. 2) Radial axes expressed as z-scores (number of standard deviations from the mean)



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For illustrative purposes only. Subject to change. The PULSe indicator has been developed by T. Rowe Price. Using different underlying indicators and data could yield different results. Future outcomes may differ significantly. “5 Days,” “1 Month,” and “3 Months” represent the z-score readings at those time periods prior to the the current time period. Please see additional information on the PULSe indicator at the end of this paper.

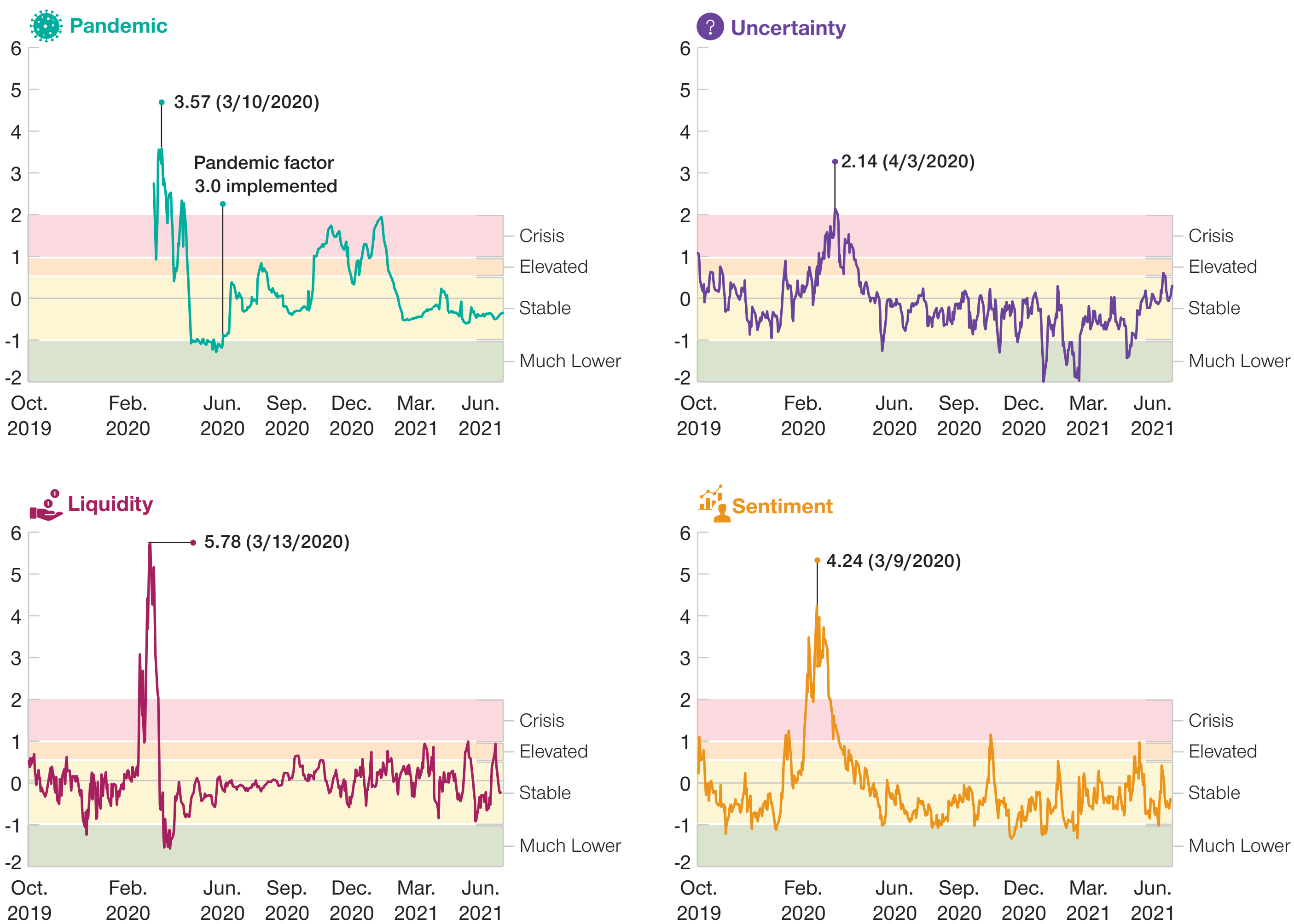
1. **The new Delta variant is dominating in the UK**

In the current Pandemic factor model, we look at three key metrics: (1) daily new cases to track the spread of the COVID-19 virus, (2) positive testing ratios to confirm the trend of the diffusion curves, and (3) Google retail mobility data to assess the ongoing impact of the pandemic on consumer behavior.

Earlier than most developed markets, the UK confronted the Delta variant, which combines notably higher transmissibility and the ability to escape immune responses compared with the earlier strains. As a result of the reduced efficacy rate against infections, in June the level of daily new cases in the UK rose to 10x the previous lows despite the country's high vaccination rate. In mid-June, UK Prime Minister

The Four Components of PULSe

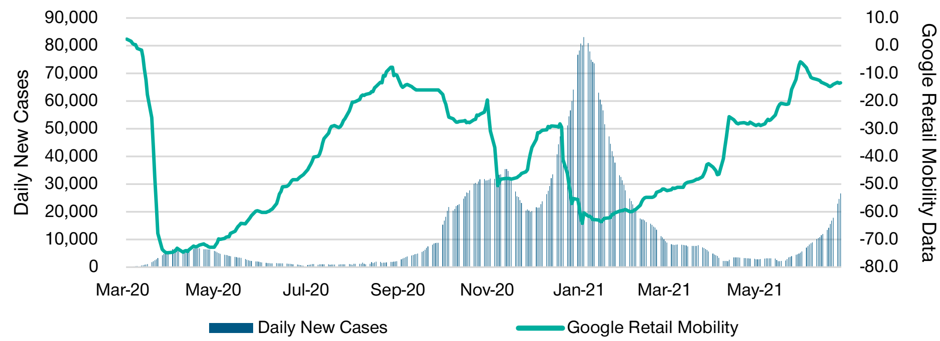
(Fig. 3) Currently only Liquidity is elevated



As of June 30, 2021.
Sources: Haver Analytics/Bloomberg Finance L.P. Analysis by T. Rowe Price.
Indicator level on left-hand side expressed as a z-score and also the subjective stability zone on the right-hand side of each chart.
For illustrative purposes only. Subject to change. The PULSe indicator has been developed by T. Rowe Price. Using different underlying indicators and data could yield different results. Future outcomes may differ significantly. Note: Positive indicator values are typically a negative sign for market stability. The division of PULSe into zones is subjective, based on historical data and statistical assumptions. Please see additional information on the PULSe indicator at the end of this paper.

Rising New Cases in UK Threaten Retail Mobility

(Fig. 4) UK Google retail mobility data and daily new cases



As of June 30, 2021.
Sources: Haver Analytics/Bloomberg Finance L.P.

Boris Johnson delayed a full reopening of society in England, which had been slated for June 21, for another month, saying that the vaccination campaign would be accelerated. The UK Google retail mobility data had been abating since then.

However, it's comforting to see that both the hospitalization rate and the death rate continue to fall, reflecting promising effectiveness of existing vaccines against severe symptoms. Early data suggest that most vaccines (mRNA, viral vector, and inactivated) should still provide roughly 90% protection against hospitalization. Hence, the pandemic news hasn't been driving the market volatility as much as it did in most of 2020.

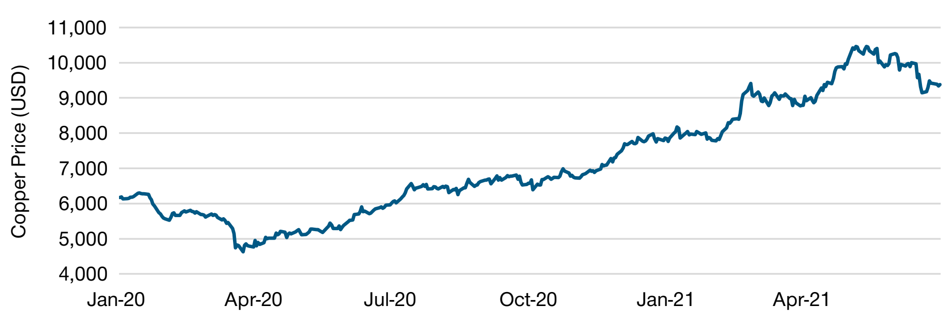
We are likely to continue to witness new variants emerging as vaccines race against virus mutations. The ability of the next-generation variant to escape immune responses is the key to watch, as it affects whether vaccines can still protect us from the disease.

2. Copper prices are on a downward trajectory

The price of copper is a measure of global infrastructure investment and activity levels, especially in China. After hitting a historical high price in early May, copper prices have been on a downtrend amid concerns about "peak" economic growth and China strengthening controls on commodity prices in its 14th Five-Year Plan for

A Drop in Copper Prices Indicates Increasing Economic Uncertainty

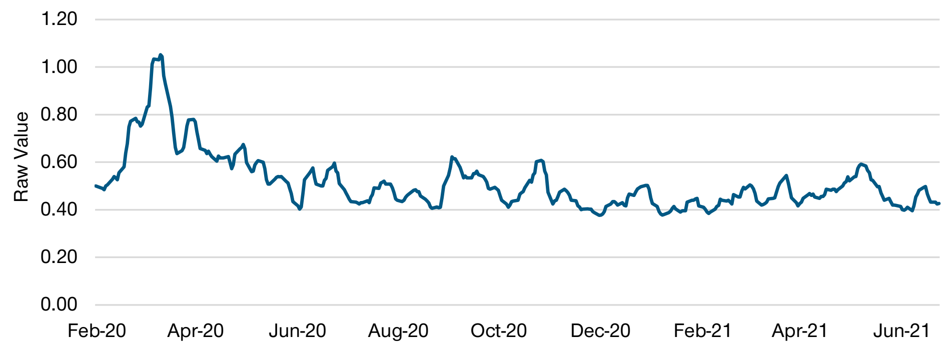
(Fig. 5) Copper prices (USD per tonne)



As of June 30, 2021.
Past performance is not a reliable indicator of future performance.
Sources: Haver Analytics/Bloomberg Finance L.P.

A Drop in the Put/Call Ratio Indicates Improving Market Sentiment

(Fig. 6) Equity put/call ratio (five-day moving average)



As of June 30, 2021.
Sources: Haver Analytics/Bloomberg Finance L.P.

2021–2025 to address abnormal price fluctuations and inflation pressure. This indicates higher economic uncertainty for our PULSe indicator.

Although copper is increasingly cited as a key ingredient within the sustainable infrastructure plans that are being announced globally, our metals and mining team thinks that the downward trend in copper prices may continue. They believe the commodity experience in 2020–2021 was driven by massive liquidity, a V-shaped demand recovery, and a period of low capex/DDA.[2] These trends are likely to diminish in 2022 as monetary and fiscal stimuli suffer harder comparisons, demand growth decelerates, and the aforementioned capital investment starts to come through.

3. The equity put/call ratio has declined

Since the U.S. Labor Department reported the surprise April consumer prices hike in mid-May, the S&P 500 put/call ratio had been abating, reflecting a drop in the demand for hedging and the recovery of investor confidence. However, the ratio was pushed higher again after the Fed policy meeting on June 16, as policymakers acknowledged that progress on vaccinations had allowed the economic recovery from the pandemic to gain strength and Fed officials began to discuss slowing the central bank's bond purchases, the first step toward eventually raising interest rates. Fed Chair Jerome Powell said that observers could characterize the meeting as "talking about talking about tapering." Later in the month, the equity put/call ratio returned to a downward trend, as investors continued to digest dovish remarks from Powell as he downplayed inflation as well as comments from New York Federal Reserve President John Williams, who stated that a rate hike is "way off in the future."

T. Rowe Price Chief U.S. Economist Alan Levenson believes that we're likely to get "advance notice" by the September 22 Federal Open Market Committee meeting that a taper announcement is coming, with the decision itself communicated on December 18. In the meantime, inflation and Fed discussions will likely continue to drive market volatility.

[2] DDA = depletion + depreciation + amortization costs.

Additional Information Regarding the PULSe Indicator:

We stress that the PULSe indicator is directional only, meant to show whether the key factors underlying the market turbulence are strengthening or weakening over time. It is not meant to be the basis for making market or asset allocation decisions and is not designed to be a market timing indicator.

A high number for the PULSe indicator is a sign of market stresses and, thus, potential turbulence.

Z-score: We focus on how the latest market data are different from the recent past using a z-score, where each data point is expressed in terms of the number of standard deviations above or below the mean, or average, of the series.

The Pandemic factor or score differs slightly from the other three factors in terms of its underlying principles and, thus, the manner of its construction. Our Pandemic series is measured focusing on the largest economies such as the G-7. We calculate the rate of increase in the number of COVID-19 cases for each country in our sample, and we take the maximum number to account for the ability of global trade activity to resume. We overlay this with a penalty score if one of the major countries is also showing an alarming growth rate of new cases. Our Uncertainty factor focuses on economic data and how they differ from market expectations. Examples of underlying data include the Bloomberg economic surprise indices, changes in oil supply and demand, yield curves, and earnings per share growth forecasts. The Liquidity indicator aims to identify any stresses in the credit market. Spreads on credit typically widen when liquidity dries up. Our Liquidity gauge uses the commercial paper spread, the financials sector spread, the high yield energy and ex-energy spreads, and ratio. Finally, our gauge of market Sentiment looks at risk appetite from market participants. This includes put/call ratio, implied volatility, a measure of extremes in daily returns, currency sentiment, and some commodity prices.

Our aggregate PULSe indicator is composed of the four components or factors that are themselves composite indices. A simple average is taken across the four components.

For full details, please see our white paper, “Taking the Market’s PULSe in the Coronavirus Era.”

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