

## HAVE THE MARKETS BECOME UNMOORED FROM FUNDAMENTALS?

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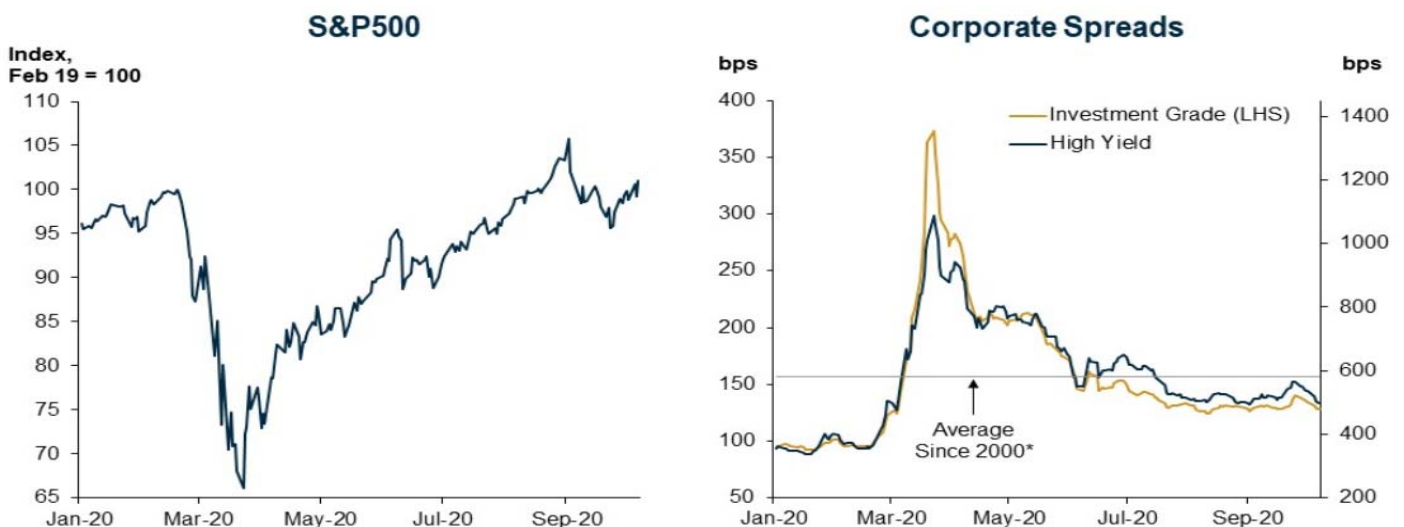
The strong recovery of financial markets in recent months has far outpaced the real economy's more mixed rebound. We show that a broadly similar divergence has been a feature of every U.S. recession for more than 50 years. Furthermore, the timing of such divergences has typically been a powerful signal of a forthcoming macro recovery.

Following an unprecedented, virus-induced decline through the spring, the U.S. economy posted a remarkably strong rebound during the summer. Third-quarter real GDP growth appears to have expanded 30% (on an annualized basis)—the strongest quarterly pace of the post-war period. Similarly, the labor market has restored well over 10 million jobs.

But, even so, the overall level of economic performance remains weak. Real GDP is down roughly 3-4% relative to its level in Q4 2019, and the labor market still has a deficit of more than 10 million jobs. Available macro indicators point to a somewhat softer pace of recovery in the months ahead, even as Washington has failed to reach agreement on another round of fiscal stimulus—including much-needed unemployment benefits. All of this is occurring in the face of a historically contentious presidential election, with the controversies threatening to drag on until well after election day. And the virus remains a severe concern.<sup>1</sup>

Notwithstanding these uncertainties, U.S. financial markets have rebounded vigorously in recent months (Figure 1). Equity prices, while down from their early-September peak, are above pre-virus levels. Corporate spreads for U.S. investment-grade and high-yield debt have also recovered substantially. While still somewhat above pre-pandemic levels, these spreads have moved back below their twenty-year averages.

**FIGURE 1: THE REBOUND IN U.S. EQUITIES AND CORPORATE CREDIT SPREADS**



Source: Standard & Poor's and Bloomberg. \*For both investment grade and high yield.

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All of this raises the question: have the markets become unmoored from the fundamental realities of the economy?

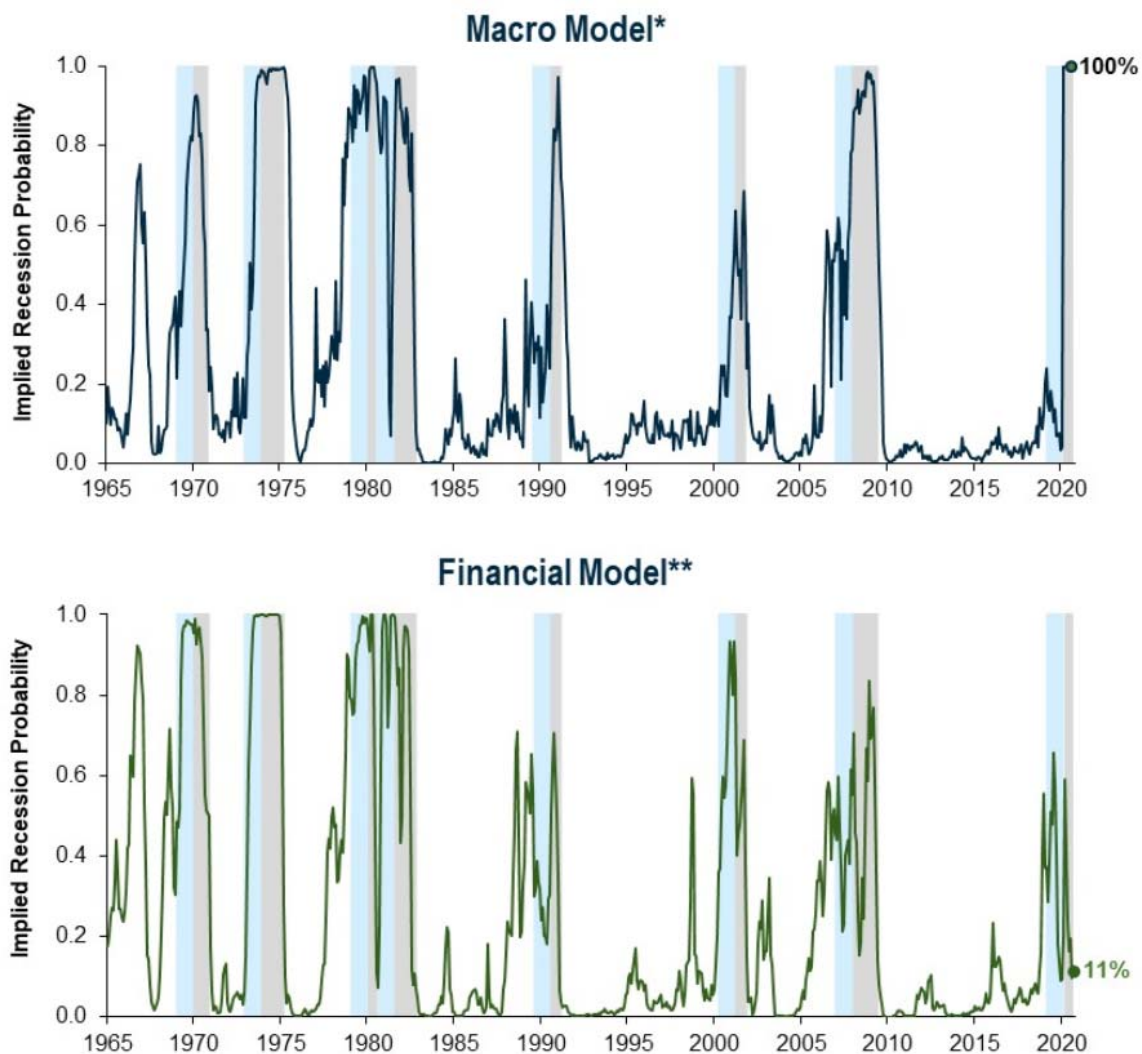
Figure 2 draws on a recession probability model that we developed in a February 2020 white paper to shed light on this question. At the time, we found little hint of recessionary forces at work in the U.S. economy. Of course, everything changed as the virus proliferated across the globe.<sup>2</sup>

Our model assesses the probability that the economy is in recession during the coming year. Applying this framework to recent data confirms a marked divergence between the macro and financial variables.

Looking just at macro variables—including initial unemployment claims, goods consumption, and consumer confidence—the model sees conclusive evidence (100% probability) that the economy remains in recession.

In contrast, the financial model, which incorporates the Treasury term spread, real returns on the S&P500, and the non-commercial paper spread, shows only a slightly elevated recession probability. Financial markets seem to be taking a more buoyant view of the economy’s prospects.

**FIGURE 2: RECESSION TRACKING MODELS ARE DIVERGING**



\*Variables include Initial Unemployment Claims, Real Goods PCE, Consumer Confidence, Housing Permits, and Average Hourly Earnings. \*\*Variables include Term Spread, Real S&P500 Index, Nonfinancial Commercial Paper Spread. Source: PGIM Fixed Income

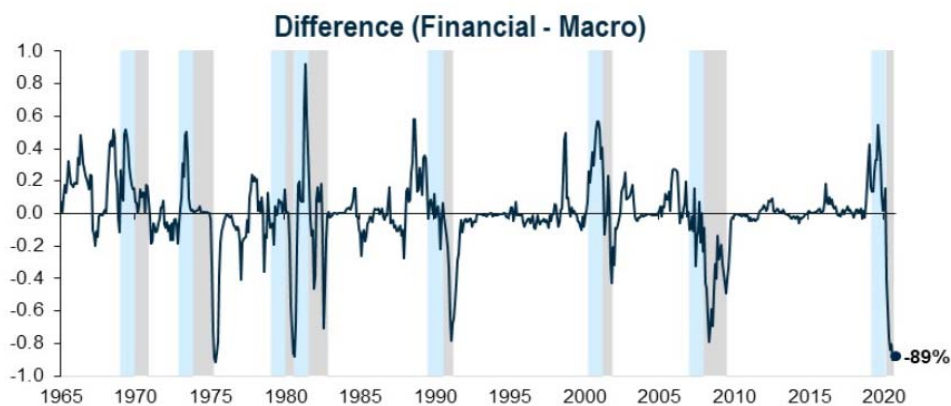
By our reckoning, this divergence between macro and financial performance reflects several factors. First, the Fed’s massive monetary stimulus tends to provide rapid support to the markets, but its effects on the real economy—on spending, investment, and housing—percolate more slowly over time. Second, and more fundamentally, the markets are forward-looking in their assessments. Asset prices reflect the state of the economy today, but they also factor in the prospects for economic recovery going forward.

Of course, another possibility is that large-scale economic stimulus and other policy interventions are blunting the market’s capacity to assess risks, with investors expecting further policy interventions in the event of renewed downside pressures. These expectations, in turn, may be creating unrealistic expectations for the timing and strength of the recovery, artificially lifting asset prices.

With this in mind, Figure 3 looks at the divergence between the recession probabilities obtained from the two models using data back to the mid-1960s.<sup>3</sup> Viewed in historical context, the current divergence is significant but hardly unprecedented. Divergences of similar magnitude have occurred before. And, notably, a sizable divergence has characterized the end of all eight previous U.S. recessions.

The lower table examines these downward spikes in more detail. In each instance, the recession’s trough has been accompanied by a roughly contemporaneous divergence between the estimates of the two models. Such divergences have been remarkably reliable signals that a recession is coming to an end.

**FIGURE 3: EXUBERANCE—OR A SIGNAL THAT THE RECESSION IS ENDING?**



**Difference Between Financial and Macro Model**

Recession Start	Trough (Difference)	Trough Date	Months Before End of Recession Before (+) / After (-)
Jan-70	-18%	Jan-71	-2
Dec-73	-91%	May-75	-2
Feb-80	-88%	Aug-80	-1
Aug-81	-70%	Aug-82	3
Aug-90	-78%	Feb-91	1
Apr-01	-43%	Nov-01	0
Jan-08 (1)	-80%	May-08	13
Jan-08 (2)	-49%	Jun-09	0
Mar-20	-90%	Aug-20	?

Source: PGIM Fixed Income

The one false positive from this framework occurred in May of 2008. Following the financial disruptions in the fall of 2007 and the collapse of Bear Stearns in March 2008, it looked like stresses were poised to abate.

As just one example of perspectives at the time, at the June 2008 FOMC meeting, St. Louis Fed President Jim Bullard noted, “Policy was very aggressive during January and March of this year. This was, in part, a pre-emptive action, insurance against a particularly severe downturn brought on by financial contagion. This was a very real possibility, but it did not materialize.”

Of course, the situation deteriorated further, leading the Fed to again ramp up its stimulus. The two models again diverged in June 2009 and, this time, nailed the trough of the downturn.

These results suggest that through recessionary periods, markets have been a powerful forward-looking signal of recovery. As such, the recent rebound in financial markets, while extraordinary given the ongoing challenges the economy faces, should not be quickly dismissed as just “market exuberance.” Clearly, the macro uncertainties remain high, but in past episodes, the markets have done exceptionally well in piercing through the fog.

<sup>1</sup> Consistent with these observations, the Fed’s minutes from its September meeting noted, “Participants continued to see the uncertainty surrounding the economic outlook as very elevated, with the path of the economy highly dependent on the course of the virus...”

<sup>2</sup> Our paper, memorably entitled, “Can This Expansion Last Forever?,” provides more details regarding the structure and estimation of our framework

<sup>3</sup> Light blue shading indicates the 12 months before a recession; gray shading indicates the recession period.

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