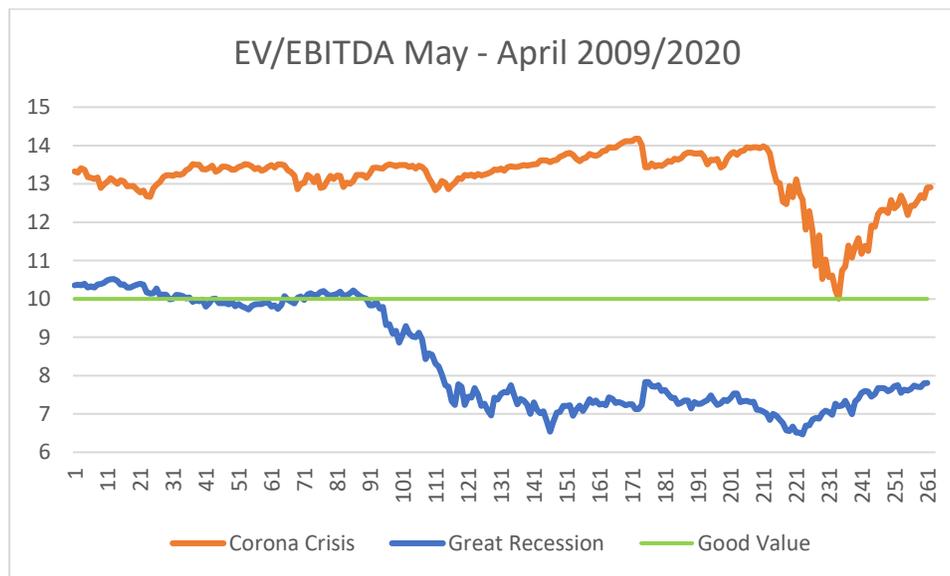


## Markets vs. Economists

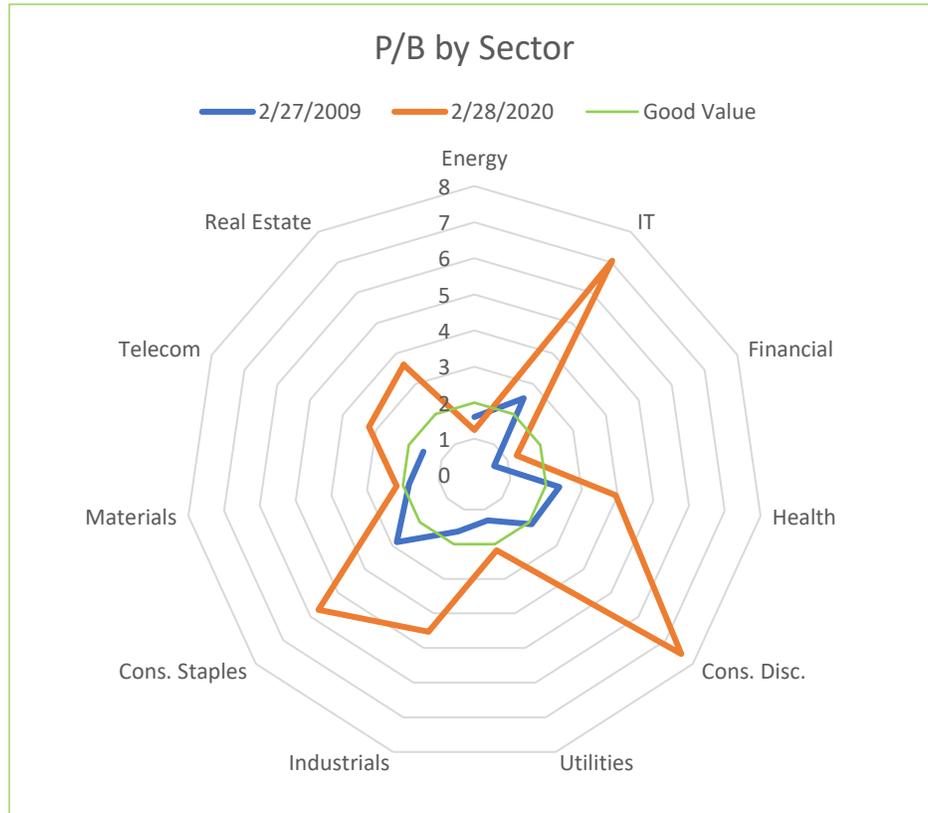
Investors are expecting a quick return to pre-virus times now that many states are allowing economic activity to resume. At the same time, the IMF and other reputable sources predict that the virus recession will be worse than the Great Recession of 2008. Why do investors and economists come to such divergent conclusions and who is right?

Investors sell their positions when they are pessimistic. This drives prices down until they become a bargain. The plots below show the valuation of the S&P 500 and GICS sectors. The green line is a somewhat arbitrary boundary between expensive and cheap. The orange line shows the current crash. The blue line shows the Great Recession.



In 2009, there were bargains everywhere, but this time nothing is cheap.





In 2009, almost every sector was cheap (blue). At the bottom of the 2020 S&P decline only two out of 11 sectors looked attractive (orange). These valuations indicate that markets were never expecting an ugly recession.

Investors also buy insurance against market declines. Implied volatility indices like the VXO measure the price of this insurance. The plot below shows that insurance is much cheaper than it was six weeks ago. This confirms that investors are no longer terribly worried about the economy.





Economists in contrast seem to mostly predict a recession as bad or worse than the Great Recession. It is not hard to see why. Initial jobless claims are an order of magnitude higher than at the peak of the Great Recession.



Industrial production has suffered an incredibly rapid decline.





Most economic indicators paint an equally grim picture. So why do economists and investors come to these very different conclusions?

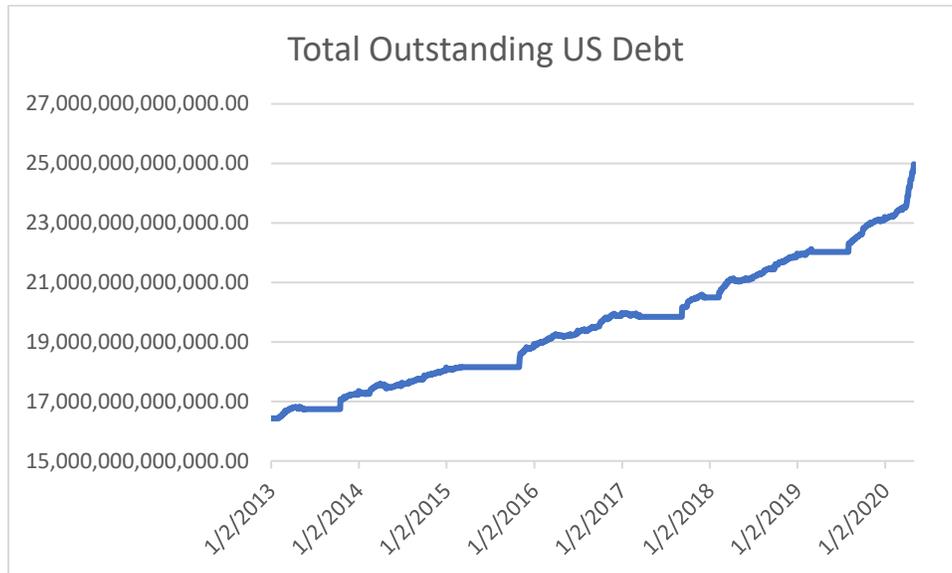
We expect that investors will be closer to the truth than economists. Economic forecasts use empirical models. These models encode relationships observed in the past and assume that these relationships will hold in the future. Empirical models generally fail when the future is unlike the past.

Shutting down the world economy is unprecedented. No empirical model can project the recovery from a shutdown if the model calibration did not include similar historical events. Economic models implicitly interpret changes in unemployment numbers and industrial production as caused by lack of demand. And the lack of demand causes more layoffs and consequently even lower demand. However, it is unlikely that much of the demand and many of the lost jobs will reappear once the shutdown is lifted and businesses start catering to the pent up demand.

Economists are probably overly pessimistic and investors are probably too sanguine. This is unlikely that the economy will spring back immediately. A few examples:

- Daily new cases have been around 30,000 since early April, when restrictions took effect. The restrictions keep the daily case count from rising. The second wave will probably start as soon as restrictions are lifted and will probably lead to renewed restrictions.
- About 50% of all jobs in the US are in small businesses. Federal programs to help small businesses seem to have been largely ineffective. If a significant number of businesses collapse, spending will crater, unemployment will rise, and there is a possibility that widespread bankruptcies will cause a credit crisis.
- Behaviors may change permanently. People who started shopping online due to the lockdown may continue to do so, accelerating the demise of retail stores. After working remotely for weeks, companies and employees may just decide to continue. This would depress demand for gasoline, cars, air travel, hotels, work clothes, lunches, office space, parking garages, housing in reasonable commuting distance, and countless other services and products.

- The Federal Reserve never materially raised the low interest rates that propelled the economy out of the 2008/2009 slump. They cannot soften the next recession by lowering interest rates because they are near zero already.
- The Federal Government was already drowning in debt before the pandemic. Heavy borrowing to pay for Federal aid to families and businesses is certainly justified, but even at low interest rates, servicing this much debt will reduce funding for all other activities of the Federal Government.



Markets will eventually price in a recession as more economic data becomes available, and economic models may regain their footing once the shutdown and restart fades into the past. Stocks and other assets become cheap in recessions. We expect stock indices to decline below the lows set in March before a real recovery takes place.

You can find our earlier coronavirus commentary on our website.

Please let us know if you have any questions and stay healthy!

Pivot Point Advisors