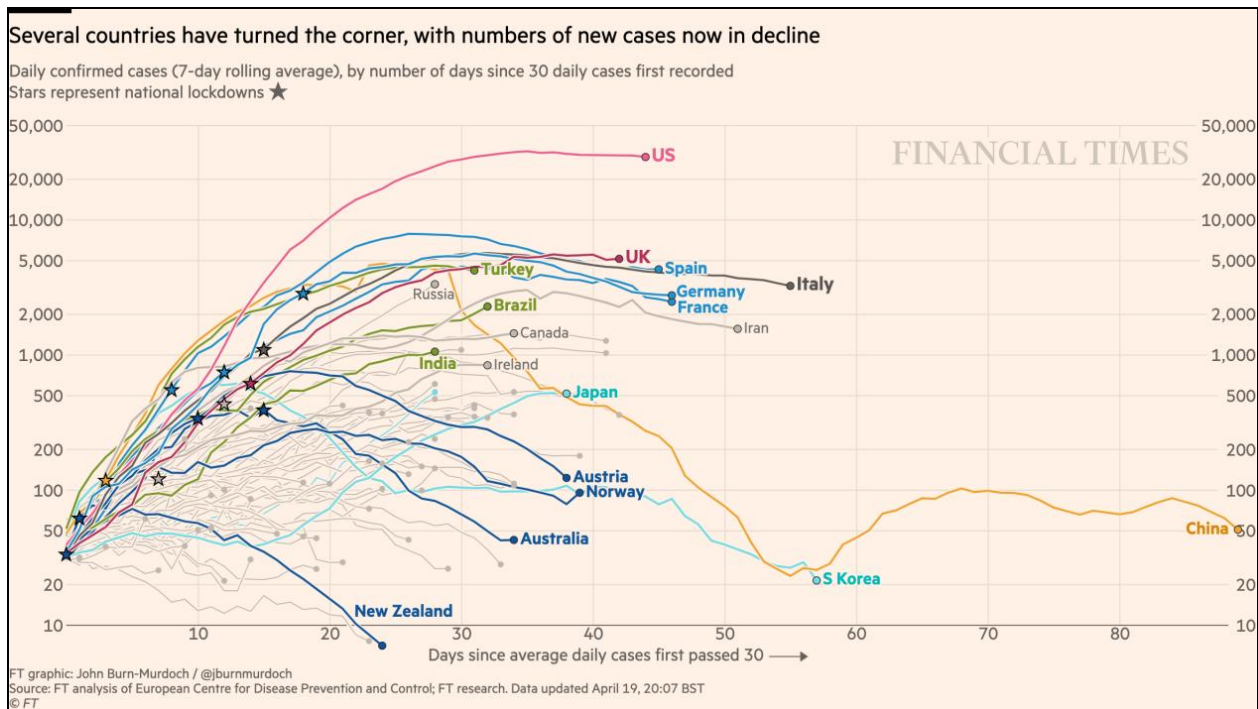


Looking for something to read? See our [Reading List](#); these books, separated by category, are ones we find interesting and insightful. We will be adding to the list over time.

**[Posted: April 20, 2020—9:30 AM EDT]** Global equity markets are generally mixed this morning. The EuroStoxx 50 is down 0.8% from its last close. In Asia, the MSCI Asia Apex 50 closed down 0.6% from the prior close. Chinese markets were higher, with the Shanghai Composite up 1.0% and the Shenzhen Composite up 0.1%. U.S. equity index futures are signaling a lower open. With 47 companies having reported, the S&P 500 Q1 earnings stand at \$33.00, lower than the \$35.51 forecast for the quarter. The forecast reflects a 10.0% decrease from Q1 2019 earnings. Thus far this quarter, 70.2% of the companies have reported earnings above forecast, while 29.8% have reported earnings below forecast.

Good morning and happy Monday! [Equities are lower this morning](#), but the [market catching most of the attention is oil](#). In equities, [there is a large short position developing against the S&P 500](#). We update the [COVID-19](#) news. Here are the details:

**COVID-19:** The [number of reported cases](#) is 2,416,135 with 165,939 deaths and 632,983 recoveries. Here is the *FT* chart:



The U.S. data is showing a flattening. We continue to note the data because it is the best we have, but data collection is problematic. The [anecdotal reports strongly suggest serious undercounting](#) of infections and fatalities, especially in emerging economies.

*The virus news:*

- The reopening after lockdown is the next phase of the virus.
  - [In the U.S.](#), there are [growing tensions against state orders](#). And, tensions are not unique to America. There are protests to government lockdowns around the world. Protests have emerged in [Lebanon, Iraq, India](#) and [Israel](#).
  - We are starting to see halting measures to reopen economies.
    - [In Denmark, schools have reopened](#).
    - [Other European nations are slowly reopening](#); the common theme is to open up previously restricted businesses.
  - The problem with reopening is confidence. For example, even if restaurants reopen, patrons have to feel confident that if they venture out they won't get sick. That confidence is tied to testing.
    - Sadly, [the testing apparatus is still a problem](#) in the U.S. [Backlogs are up](#). The testing companies are finding that the only tests they are processing are COVID-19, which is reducing their earnings. Test reliability varies widely. The reagents necessary to conduct the tests are in short supply and often come from China. Until these bottlenecks are resolved, policies to open up the economies will not be all that effective in lifting growth.
    - The other element of testing is the serological studies. These are antibody tests to determine who has been exposed to the disease. [New York](#) is starting these tests; so is [Germany](#). However, as with confirmation testing, problems with this [type of testing continue](#) as well.
    - The bigger problem with serological testing is that if a person has antibodies for the virus, what sort of immunity does it confer? Although immunity follows most viral infections, [it isn't clear how long it lasts with COVID-19](#). There has been talk of using a system similar to China's in which a previously infected person gets a "passport" making them eligible to work and circulate in the population. That in and of itself could lead to all sorts of issues. We could see the young and desperate having "COVID-19 parties," similar to the old "chickenpox parties" before there was a vaccine, because having the passport would likely bring a wage premium. Of course, as anyone who has visited a college town knows, the potential for fraudulent passports could become a serious problem as well.
    - One strength of the U.S. federal system is that a good deal of authority is devolved to state and local governments, allowing these smaller government entities to tailor policies to their specific needs. At the same time, it can create differences that can be somewhat difficult to discern. In other words, [one state's non-essential business can be another state's essential one](#). This can lead to cross-border activity and other issues.

- Surveys suggest [Americans are still unsure of how much they should circulate](#), so even if stay-at-home orders are relaxed, a rapid rebound in traffic isn't likely. This isn't just a U.S. issue, either. [Europe has similar concerns](#).
- One of the problems with creating policy to deal with the pandemic is that we don't have complete data. In the absence of certitude, [we are left with models](#). Modeling outcomes is perfectly normal; in economics and finance, we use them all the time. But, anyone familiar with modeling knows its weaknesses; the outcome will not only be affected by the variables included and excluded, but also assumptions must be made about relationships. Although models can help guide decisions, problems develop when decisionmakers are not the modelers. A decisionmaker wants to know the future so he can make good decisions; if a model offers an outcome, the modeler should know the impact of the outcome if assumptions are changed. But, the decisionmaker probably doesn't. With regard to the pandemic, we have seen forecasts very wide of the actual. For example, if fatalities are lower than expected, it might be that the model underestimated the degree or impact of social distancing. Or, it might be that the virus isn't as virulent as assumed. But, when decisionmakers are not aware of this nuance, the inaccuracy of forecasts may lead them to assume modeling is a worthless exercise. In our experience, modeling isn't worthless, but it is important that the modeler explain to the decisionmaker where the best estimate might lead astray. And, of course, once the media gets ahold of a model estimate, nuance is almost always lost.

***The policy news:***

- Although a deal to expand funding for small businesses hasn't been passed yet, [it does appear a deal is in the offing](#).
- The U.S. [is giving businesses a partial tariff holiday](#).
- The Fed's aggressive expansion of its backstop is [starting to raise concerns](#)—where does it stop? In other words, the Fed is venturing into dangerous territory politically because it may become hard to justify why some borrowers are supported while others are left to their own devices. Our view is that, so far, the Fed has mostly expanded its backstop to prevent systemic risk. But, once this path is taken, it will become increasingly difficult to maintain a “bright line” between systemic risk and economic support. It isn't hard to imagine the Fed buying up student debt to extinguish it due to the support it would give the economy. And that might be a reasonable policy. But, in the absence of price controls on tuition, which would come from legislation, this sort of policy would simply be a green light for higher college costs.

***The economic news:***

- One of the areas we continue to watch is behavior after the pandemic. There is a rising chance that the [millennial generation](#) will end up behaving like the silent generation, who came to adulthood under the scars of the Great Depression and WWII.

***The market news:***

- S&P earnings releases will ramp up this week. [It's probably going to be a bit ugly](#), but that isn't really a surprise.

- As we noted above, [oil prices are getting hammered this morning](#). Much of this is tied to the futures expiration but the [longer-term worry is the lack of storage](#). Exacerbating this problem is the deep contango in the futures market. For example, the spread between June futures and September futures is over \$8 per barrel. Thus, if one can find storage, a producer could sell into September and use the spread to defray the cost of storage. Tank storage costs vary but are well below \$8 per barrel. But, once that storage is filled, costs rise rapidly. Once that occurs, the front-month prices are at risk of falling even further. The only solution is to shut in production; unfortunately, some of that production will never return. Therefore, as long as firms have hedges in place, they will continue to produce oil, putting further downside pressure on prices.
- [The entire airline industry](#), from manufacturing to airlines themselves, has been rocked by the COVID-19 crisis.
- We have been watching the dividend/buyback issue for the past several weeks. The core to the issue is the tension between return to capital versus return to labor. [Recent news from Disney \(DIS, 106.63\) will add to tensions](#).
- Another area of tension is between [insurers and the insured](#). Companies are making claims for business interruption; insurers are arguing that they never intended to insure against pandemic risk (which they really couldn't—the insurance model can't handle systemic risk).
- COVID-19 has [crippled the drug cartels](#).
- [Australia is mandating that news aggregators pay originators for content](#).
- [The lockdown of people has done the same for bees](#). Commercial beekeepers, who usually transport bees to pollinate crops, have been less able to do so due to shut-in orders. As a result, various crops are at risk.
- [U.S. strip mall owners paid less than half April's rent](#).

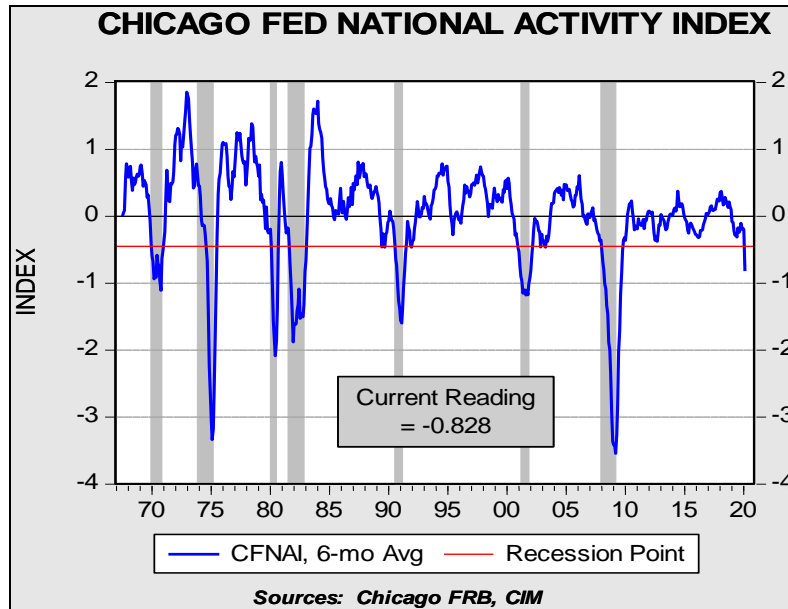
***The foreign policy news:***

- China is dealing with the shortages of debt payments with [widespread forbearance](#). The regime can do this because it has near-complete control of the banking system.
- When COVID-19 hit the West there was a run on personal paper products. In Russia, [there was a massive move to cash](#).

**Odds and ends:** [Bondholders are not impressed](#) with Argentina's restructuring proposal. [North Korea disputes reports of correspondence between Kim and President Trump](#).

**U.S. Economic Releases**

The Chicago Fed National Activity Index came in at -4.19 compared to the consensus estimate of -3.00. The prior report was revised downward from 0.16 to 0.06.



The chart above shows the six-month moving average of the Chicago Fed National Activity Index. According to this indicator, the economy officially dipped into recession in March.

There are no other economic releases or Fed events scheduled for the rest of the day.

### Foreign Economic News

We monitor numerous global economic indicators on a continuous basis. The most significant international news that was released overnight is outlined below. Not all releases are equally significant, thus we have created a star rating to convey to our readers the importance of the various indicators. The rating column below is a three-star scale of importance, with one star being the least important and three stars being the most important. We note that these ratings do change over time as economic circumstances change. Additionally, for ease of reading, we have also color-coded the market impact section, which indicates the effect on the foreign market. Red indicates a concerning development, yellow indicates an emerging trend that we are following closely for possible complications and green indicates neutral conditions. We will add a paragraph below if any development merits further explanation.

Country	Indicator			Current	Prior	Expected	Rating	Market Impact
<b>ASIA-PACIFIC</b>								
China	5-Year Loan Prime Rate	w/w	20-Apr	4.7%	4.8%	4.7%	**	Equity and bond neutral
	1-Year Loan Prime Rate	w/w	20-Apr	3.9%	4.1%	3.9%	**	Equity and bond neutral
Japan	Trade Balance	m/m	Mar	¥4.9 Bil	¥1109.8 Bil	¥459.9 Bil	**	Equity bearish, bond bullish
New Zealand	CPI	y/y	1Q	2.5%	1.9%	2.1%	***	Equity bearish, bond bullish
<b>Europe</b>								
Eurozone	ECB Current Account SA	m/m	Feb	40.2 Bil	34.7 Bil		**	Equity bullish, bond bearish
	Trade Balance	m/m	Feb	25.8 Bil	17.3 Bil	20.0 Bil	**	Equity bullish, bond bearish
Italy	Current Account Balance	m/m	Feb	4.783 Bil	-0.209 Bil		**	Equity bullish, bond bearish
Germany	PPI	y/y	Mar	-0.8%	-0.1%	-0.8%	**	Equity and bond neutral
UK	Rightmove House Prices	y/y	Apr	2.1%	3.5%		**	Equity and bond neutral
Switzerland	Domestic Sight Deposits	w/w	17-Apr	560.0 Bil	552.0 Bil		*	Equity and bond neutral
	Total Sight Deposits	w/w	17-Apr	637.2 Bil	634.1 Bil		*	Equity and bond neutral

## Financial Markets

The table below highlights some of the indicators that we follow on a daily basis. Again, the color coding is similar to the foreign news description above. We will add a paragraph below if a certain move merits further explanation.

	Today	Prior	Change	Trend
<b>3-mo Libor yield (bps)</b>	111	114	-3	Down
<b>3-mo T-bill yield (bps)</b>	10	11	-1	Neutral
<b>TED spread (bps)</b>	101	102	-1	Up
<b>U.S. Libor/OIS spread (bps)</b>	8	8	0	Up
<b>10-yr T-note (%)</b>	0.63	0.64	-0.01	Neutral
<b>Euribor/OIS spread (bps)</b>	-24	-22	-2	Neutral
<b>EUR/USD 3-mo swap (bps)</b>	-42	-45	3	Down
<b>Currencies</b>	<b>Direction</b>			
dollar	Up			Neutral
euro	Flat			Up
yen	Down			Up
pound	Down			Down
franc	Down			Up

## Commodity Markets

The commodity section below shows some of the commodity prices and their change from the prior trading day, with commentary on the cause of the change highlighted in the last column.

	Price	Prior	Change	Explanation
<b>Energy Markets</b>				
Brent	\$26.99	\$28.08	-3.88%	Lack of storage space
WTI	\$13.50	\$18.27	-26.11%	
Natural Gas	\$1.75	\$1.75	-0.11%	
Crack Spread	\$19.10	\$15.37	24.27%	
12-mo strip crack	\$8.56	\$8.00	6.91%	
Ethanol rack	\$1.15	\$1.15	-0.10%	
<b>Metals</b>				
Gold	\$1,677.93	\$1,682.82	-0.29%	
Silver	\$15.15	\$15.18	-0.19%	
Copper contract	\$235.20	\$235.70	-0.21%	
<b>Grains</b>				
Corn contract	\$ 328.00	\$ 329.25	-0.38%	
Wheat contract	\$ 546.00	\$ 533.75	2.30%	
Soybeans contract	\$ 839.25	\$ 842.25	-0.36%	
<b>Shipping</b>				
Baltic Dry Freight	751	726	25	

## Weather

The 6-10 and 8-14 day forecasts currently call for warmer-than-normal temperatures for most of the country, with cooler temps for the eastern third of the country. Wet conditions are expected for most of the eastern region.

## **Asset Allocation Weekly**

*Confluence Investment Management offers various asset allocation products which are managed using “top down,” or macro, analysis. We report asset allocation thoughts on a weekly basis, updating this section every Friday. Note that this report is also offered as a separate document on our [website](#).*

April 17, 2020

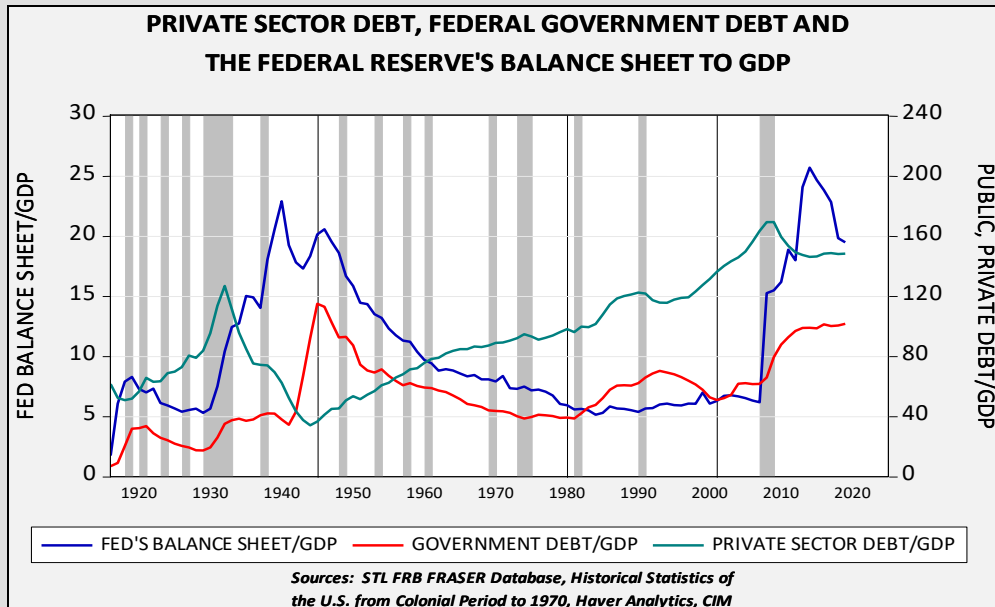
The Federal Reserve’s aggressive expansion of its balance sheet has been in response to fears of systemic risk. The experience of the 2008 Great Financial Crisis has made it clear that systemic risk can occur from a myriad of different parts of the financial system, so the Fed has broadened its support to include a significant expansion of credit risk, including corporate credit, both investment-grade and below-investment-grade, municipal debt, commercial paper along with mortgage and Treasuries. Although the Fed did similar actions in the depths of the 2008 Great Financial Crisis, the current policy actions are far more aggressive than what was seen in the last decade, both in the level of the balance sheet expansion and the breadth of assets being purchased. The Fed’s balance sheet is currently \$6.083 trillion, a new record high.

Although the FOMC’s actions have been in response to concerns over systemic risk, there is a structural backdrop as well. Private sector debt in the U.S. is elevated and is probably unsustainable at current levels. The sustainability of debt levels is more art than science. Although there are obvious ways to measure debt service costs and one can compare historical levels, there is a psychological element to the lending and borrowing process. If confidence is high, lenders are anxious to “put money to work” and borrowers have high hopes that their borrowing will be beneficial. For example, Americans believed that home prices would continue to rise from 1995 to 2005 and lending that now looks reckless seemed reasonable at the time. But, once confidence in home prices waned, there was a scramble to reduce exposure to the sector that culminated in the 2008 Great Financial Crisis.

We have seen a decline in private sector debt<sup>1</sup> since 2007; however, the slow growth seen during this expansion likely reflects the fact that we haven’t seen enough debt liquidation. We saw a similar situation in the 1930s.

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<sup>1</sup> We define private sector debt as household debt plus non-financial corporate debt; the financial system debt is excluded because much of that debt is to the non-financial components and thus including it would be double counting.

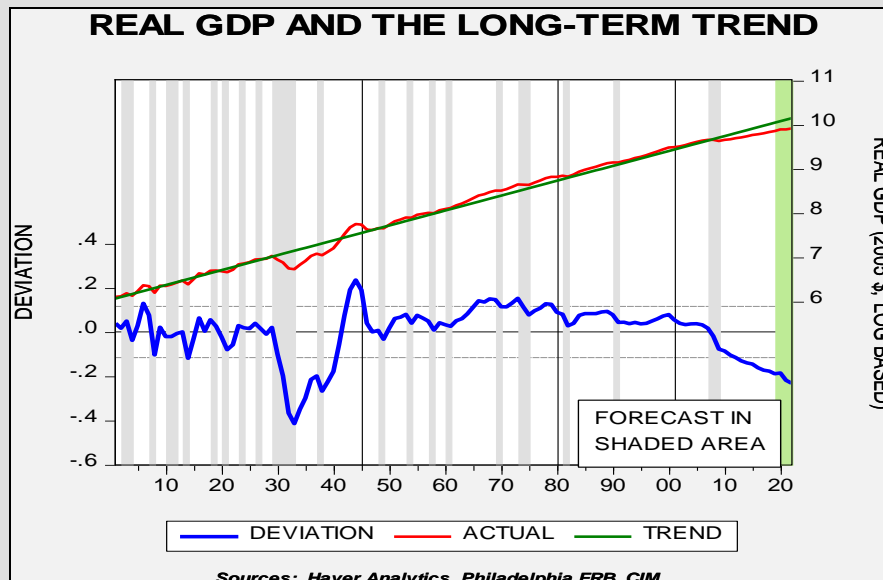


When private sector debt becomes excessive, there are two paths of resolution. The first is to allow the debt to be liquidated through bankruptcy. At a microlevel, this path is perfectly reasonable. After all, if a borrower and a lender took risks, they should bear the burden of their mistakes. However, at a macrolevel, this path of resolution tends to create systemic risk.<sup>2</sup> One party's debt is another party's asset. If the debt is resolved at a loss, the asset falls in value too. The process can lead to deep and widespread collateral damage. For example, in 1928 there were 26,401 commercial banks in the U.S.; by 1934, this number had declined to 15,913. The decline in asset values and the loss of bank deposits tend to lead to bank failures and the hoarding of cash that can cause a deflationary spiral. Politically, allowing a debt restructuring to occur "naturally" has become a non-starter.

Therefore, if the private sector debt overhang isn't resolved by liquidation and asset price declines, the other option is to socialize the debt. The debt is shifted to the public sector balance sheet and resolved over time. Referring to the above chart, the Fed's balance sheet began to rise aggressively after 1932, with only a modest increase in the government's debt. Although the expansion of the Fed's balance sheet helped end the initial phase of the Great Depression, private sector debt continued to decline, which we would argue shows a continued lack of confidence by borrowers and lenders.

<sup>2</sup> This [process was described by Irving Fisher](#) in 1933.





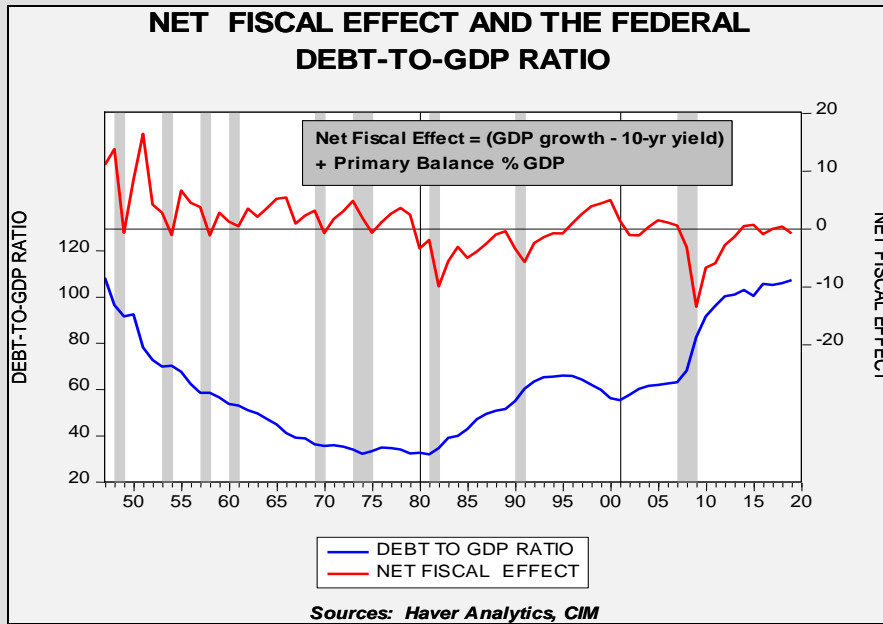
This chart shows real annual log-transformed GDP starting in 1901. We regress a time trend through the data. Despite the Fed’s efforts, GDP remained below trend, suggesting the full impact of the debt liquidation tied to the Great Depression had not been resolved. The full resolution wasn’t accomplished until the rise of government spending for WWII, along with the further expansion of the Fed’s balance sheet. The combination led to a decline in private sector debt to below 40% of GDP. The decline in private sector debt laid the groundwork for the postwar recovery. It took nearly 15 years, a massive expansion of the Fed’s balance sheet and WWII spending to fully resolve the private sector debt overhang that developed prior to the 1930s.

However, the private sector debt didn’t disappear—it was transformed into public sector debt and that debt overhang needed to be resolved. That resolution was executed by financial repression and regulation. It is important to note that government debt issued in the currency that government controls is different that private sector debt. The former doesn’t actually need to be paid off; it merely needs to be serviced. Servicing government debt is a function of the relative size of that debt to the economy. The formal process is called the Net Fiscal Effect. This process is a formula:

$$\text{Net Fiscal Effect} = (y/y\% \text{ nominal GDP} - \text{government interest rate}) + \text{primary balance as \% of GDP}$$

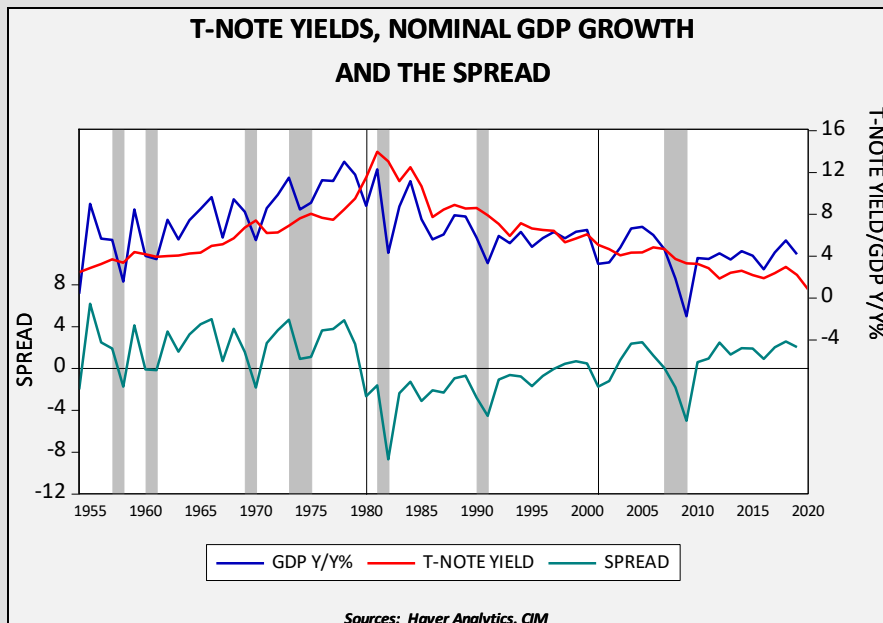
If nominal GDP rises faster than the rate of interest the government pays on the debt plus primary balance,<sup>3</sup> then the overall government debt/GDP ratio will fall. Here is a chart:

<sup>3</sup> The primary balance = government revenue/GDP - (government spending - interest paid)/GDP. In other words, it’s net government spending less interest payments.



This chart shows the net fiscal effect on the upper line (we use the 10-year T-note yield as a proxy for borrowing costs). From the end of WWII into the early 1980s, the net fiscal effect was positive, and the government debt/GDP ratio steadily declined.

If policymakers follow the Great Depression/WWII path, we would expect a gradual rise in long-term interest rates.



This chart shows the 10-year T-note yield, the yearly change in nominal GDP and the difference between the two series. The postwar period to the early 1980s was a secular bear market for bonds. That may not happen this time around, or it may be slower to evolve. The Fed may

engage in yield curve control, preventing Treasury rates from rising. The aging population could reduce inflation fears; it is important to note that the [Millennial generation may be scarred by the last two decades](#) and may behave like the Depression/War generation. That would mean less spending and risk taking. But it would be reasonable to expect that a gradual reflation is likely; after all, it supports the net fiscal effect.

What should investors do in this environment? We will discuss this issue at much greater length in an upcoming WGR series but here is how we are dealing with this development in our Asset Allocation strategies:

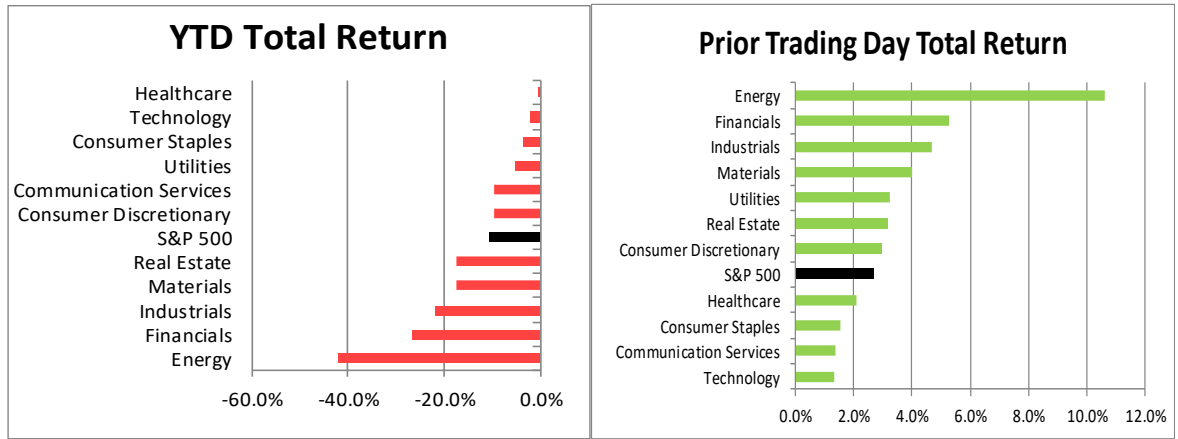
1. We have deployed bond ladders using ETFs. Bond laddering is an effective way to deal with gradually rising interest rates. We use a mix of corporate and Treasuries in the ladders.
2. We have added allocations to precious metals across all portfolios.
3. Historically, equities have been a good inflation hedge; however, we may see a period of adjustment in the next decade as investors deal with rising inflation. This may entail multiple contraction. Although it is too early to reduce equity exposure for this event, we are cognizant of future development.

Addressing the private sector debt overhang through socializing it to the public balance sheet is a rare event. This one will be a challenge for investors, but it can be managed. However, what has worked for the past 40 years (equity investing via blind indexing, holding long duration bonds, etc.) probably won't work for the next four decades.

*Past performance is no guarantee of future results. Information provided in this report is for educational and illustrative purposes only and should not be construed as individualized investment advice or a recommendation. The investment or strategy discussed may not be suitable for all investors. Investors must make their own decisions based on their specific investment objectives and financial circumstances. Opinions expressed are current as of the date shown and are subject to change.*

**Data Section**

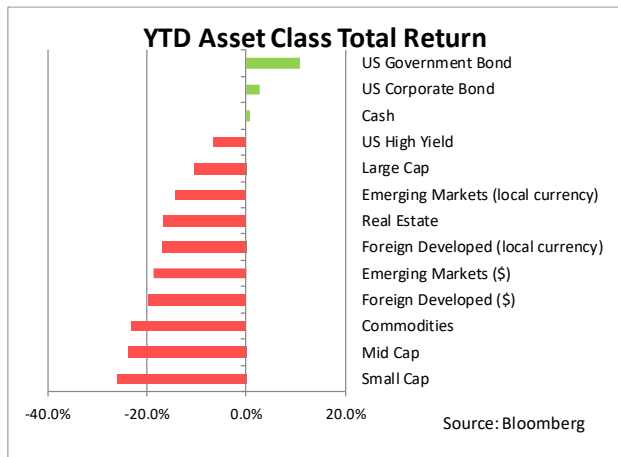
**U.S. Equity Markets – (as of 4/17/2020 close)**



(Source: Bloomberg)

These S&P 500 and sector return charts are designed to provide the reader with an easy overview of the year-to-date and prior trading day total return. Sectors are ranked by total return; green indicating positive and red indicating negative return, along with the overall S&P 500 in black. These charts represent the new sectors following the 2018 sector reconfiguration.

**Asset Class Performance – (as of 4/17/2020 close)**

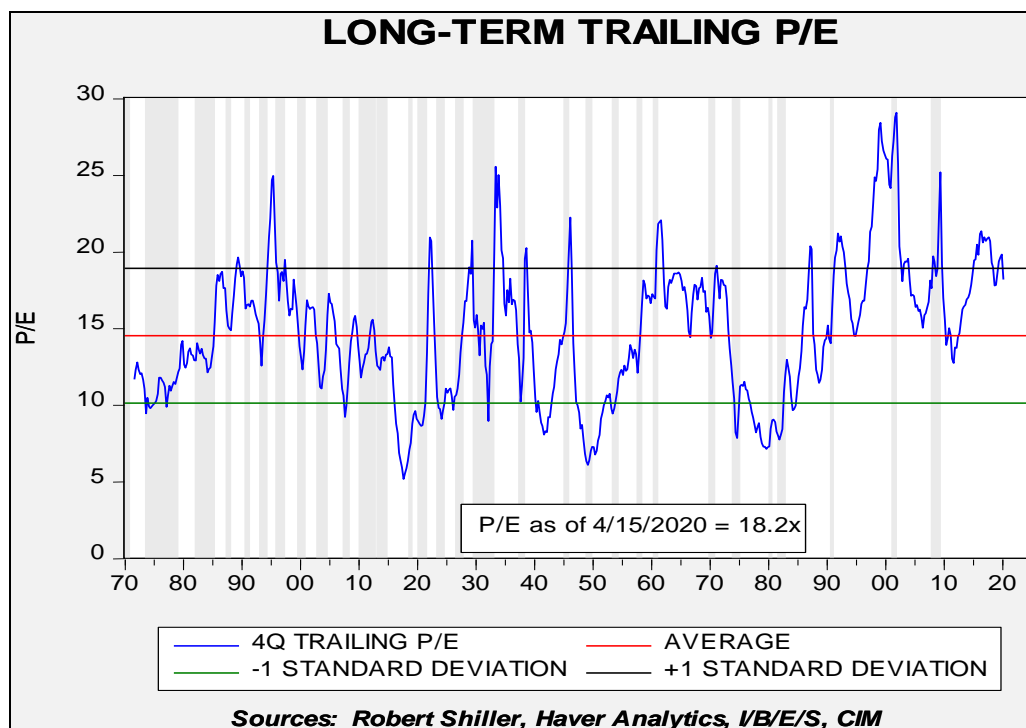


This chart shows the year-to-date returns for various asset classes, updated daily. The asset classes are ranked by total return (including dividends), with green indicating positive and red indicating negative returns from the beginning of the year, as of prior close.

Asset classes are defined as follows: Large Cap (S&P 500 Index), Mid Cap (S&P 400 Index), Small Cap (Russell 2000 Index), Foreign Developed (MSCI EAFE (USD and local currency) Index), Real Estate (FTSE NAREIT Index), Emerging Markets (MSCI Emerging Markets (USD and local currency) Index), Cash (iShares Short Treasury Bond ETF), U.S. Corporate Bond (iShares iBoxx \$ Investment Grade Corporate Bond ETF), U.S. Government Bond (iShares 7-10 Year Treasury Bond ETF), U.S. High Yield (iShares iBoxx \$ High Yield Corporate Bond ETF), Commodities (Bloomberg total return Commodity Index).

## P/E Update

April 16, 2020



Based on our methodology,<sup>4</sup> the current P/E is 18.2x, up 1.1x from last week. The rise in the P/E was caused by the recovery in the S&P and falling earnings estimates.

*This report was prepared by Confluence Investment Management LLC and reflects the current opinion of the authors. It is based upon sources and data believed to be accurate and reliable. Opinions and forward-looking statements expressed are subject to change. This is not a solicitation or an offer to buy or sell any security.*

<sup>4</sup> This chart offers a running snapshot of the S&P 500 P/E in a long-term historical context. We are using a specific measurement process, similar to *Value Line*, which combines earnings estimates and actual data. We use an adjusted operating earnings number going back to 1870 (we adjust as-reported earnings to operating earnings through a regression process until 1988), and actual operating earnings after 1988. For the current quarter, we use the I/B/E/S estimates which are updated regularly throughout the quarter; currently, the four-quarter earnings sum includes two actual quarters (Q3 and Q4) and two estimates (Q1). We take the S&P average for the quarter and divide by the rolling four-quarter sum of earnings to calculate the P/E. This methodology isn't perfect (it will tend to inflate the P/E on a trailing basis and deflate it on a forward basis), but it will also smooth the data and avoid P/E volatility caused by unusual market activity (through the average price process). Why this process? Given the constraints of the long-term data series, this is the best way to create a long-term dataset for P/E ratios.