

Coronavirus: Supply Shock and Demand Shock

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The realization that the coronavirus known as COVID-19 has the potential to wreak havoc with the global economy hit the securities markets like a shock wave in the last week of February. Just as we thought that after the signing of the USMCA agreement and the temporary truce in the U.S.-China trade war would put both the U.S. and the global economy on the path to moderate growth in 2020 and beyond, we were struck with the realization that the public health emergency would morph into an economic emergency as portions of the Chinese, South Korean, Japanese and northern Italian economies began to shut down.

What makes COVID-19 different from the prior epidemics SARS (2002-03), MERS (2012), Ebola (1976-) and espe-

cially H1N1 (swine flu of 2009-10 which killed 12,500 Americans alone) is that although less fatal, it is potentially far more contagious. It is in the contagious nature of COVID-19 that triggered the economic shutdowns that have become so disruptive to the global economy. Remember China is far more integrated into the global economy than it was during the SARS epidemic.

In the last week of February the U.S. stock market as measured by the S&P 500 decline by 11.5%, its biggest decline since the height of the financial crisis in October 2008; the yield on the 10-year U.S. Treasury bond dropped 35 basis points to a record low of 1.15% and oil prices plummeted. (See Figures 1, 2 and 3) As a

Figure 1 S&P 500, 1MAR19 - 28FEB20



Source: BigCharts.com

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Figure 2 10-Year U.S. Treasury Yield, 1MAR19- 28FEB20



Source: BigCharts.com

Figure 3 West Texas Intermediate Crude Oil - Front Month Contract, 1MAR19-28FEB20



Source: BigCharts.com

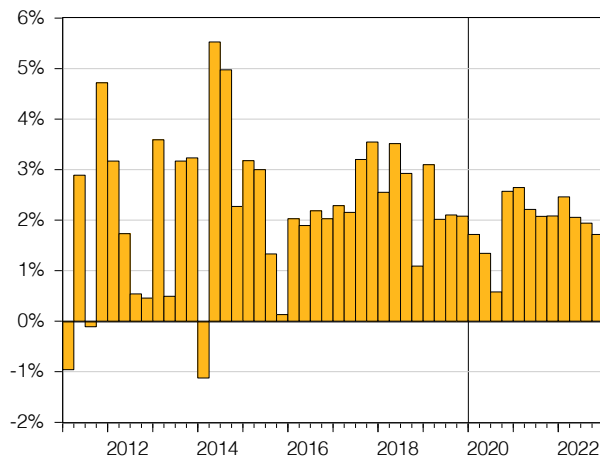
result, we tore up the forecast we were about to present and very quickly produced what you are about to read. And as a consequence take this forecast as an attempt to distill incomplete and rapidly evolving information into a framework for making reasonable judgments about the future course of the economy.

We view the COVID-19 epidemic and likely pandemic to work as both a supply shock and a demand shock on the economy. It affects supply by shutting down factories making critical products and decreases demand for travel, hotel, and recreational services. For modeling purposes, we looked at the demand response to the 9/11 event in 2001 to get a sense of the magnitudes. On the supply side, we looked at the risks to automobile, clothing and capital goods production.

As a result, we are assuming a two quarter hit to real GDP growth in the second and third quarters of this year with very modest increases of 1.3% and 0.6% respectively compared to the 2% plus growth we previously forecast. (See Figure 3) That would put 2020 growth on a fourth-quarter to fourth-quarter basis to a low 1.5%. You can view our forecast as the midpoint between the coronavirus having a very minimal effect to it causing

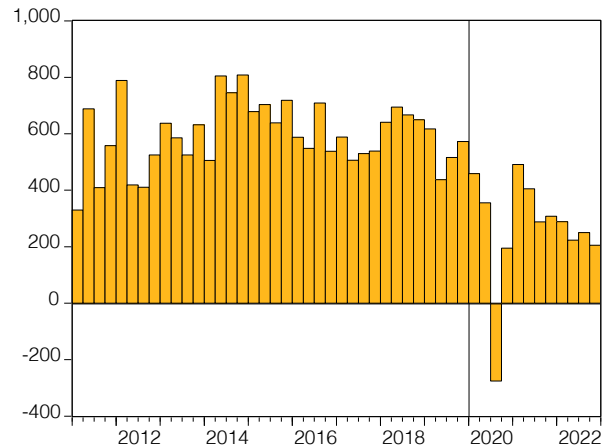
a full-blown recession. Time will tell. Very slow growth combined with the ending of temporary employment associated with the 2020 census will lead to about a drop of 300,000 jobs in the third quarter. Thereafter we anticipate employment growth to resume. (See Figure 4) Concomitantly the unemployment rate is forecast to increase modestly

Figure 4 Real GDP Growth, 2011Q1 -2022Q4 Percent Change, SAAR



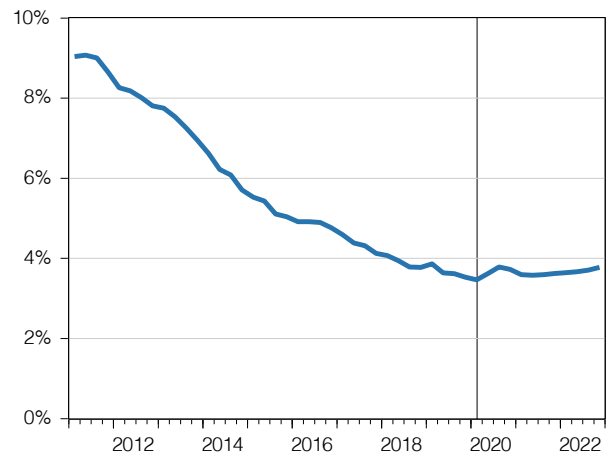
Source: U.S. Department of Commerce; UCLA Anderson Forecast

Figure 5 Payroll Employment, 2011Q1 -2022Q4F Change in Thousands, SA



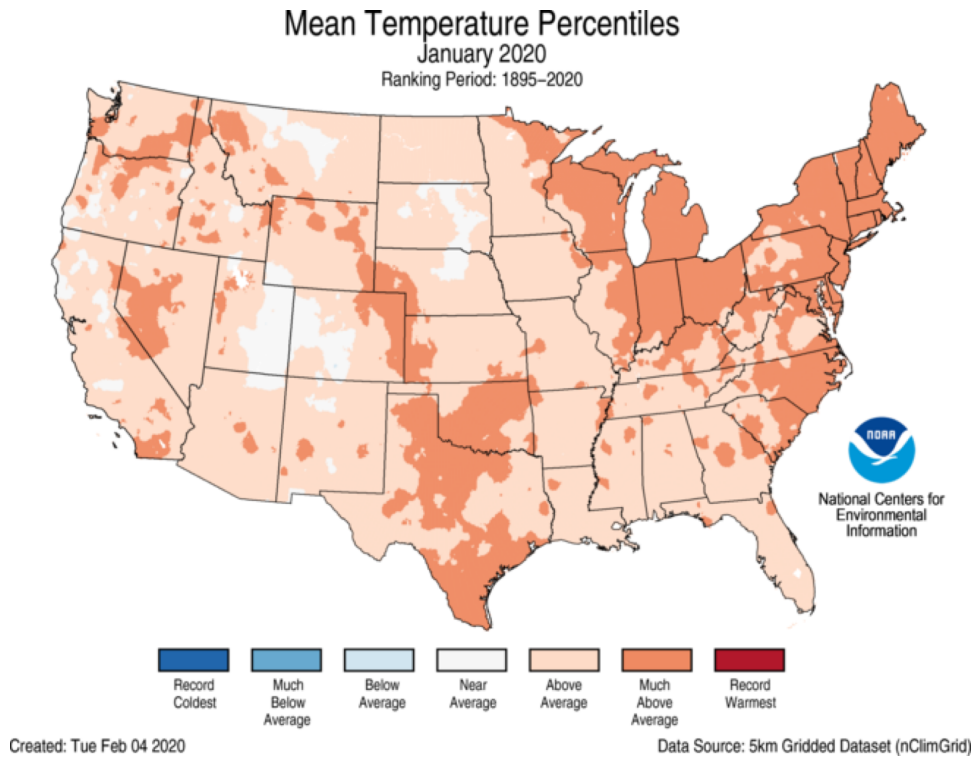
Source: U.S. Bureau of Labor Statistics and UCLA Anderson Forecast

Figure 6 Unemployment Rate, 2011Q1 -2022Q4F, Percent SA



Source: U.S. Bureau of Labor Statistics and UCLA Anderson Forecast

Figure 7 January 2020, Average Temperature Divergence



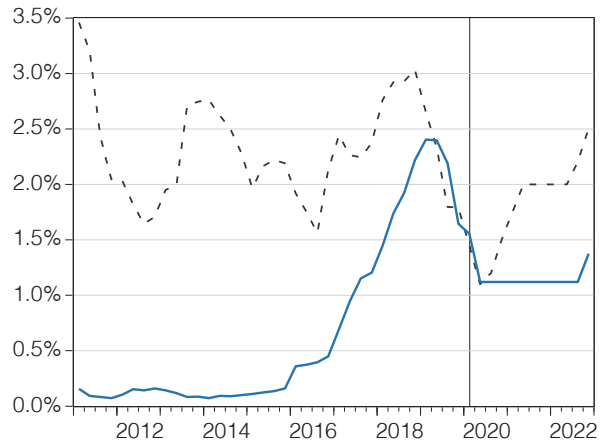
Source: National Oceanic and Atmospheric Administration

from 3.5% in the first quarter to 3.8% in the third quarter. (See Figure 5) **As an aside, do not be misled by the very strong 225,000 job gain reported for January which was influenced by unusually warm weather throughout the country.** (See Figure 7)

Monetary Policy to Become Super-Accommodative

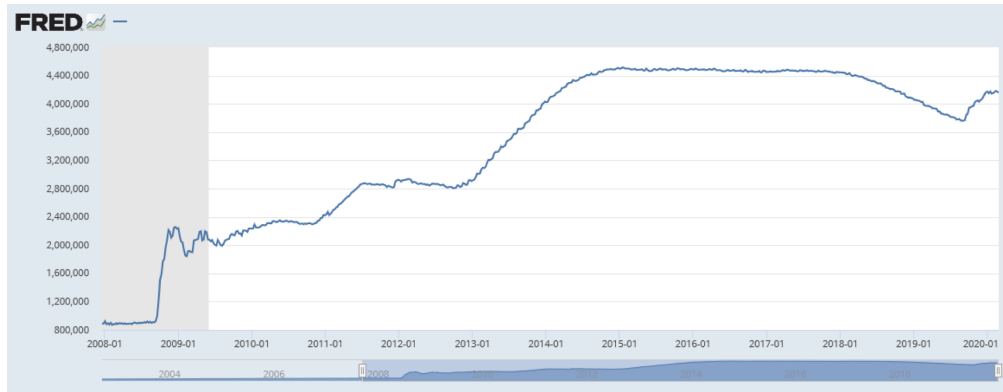
Monetary policy is not a cure for COVID-19 nor a vaccine for COVID-19. It cannot reopen factories in China or Italy and it cannot convince frightened people to travel, but it might reduce fears that something worse could happen to the economy and might alleviate the pain of stressed business-facing supply shortages. **The Fed cut its benchmark federal funds rate by a full 50 basis points on March 3rd, from the mid-point of 1.625% to 1.125%.** Although not in the formal forecast, further cuts are likely.

Figure 8 Federal Funds vs. 10-Year U.S. Treasury Bonds 2011Q1 - 2022Q4F, Rates



Source: Federal Reserve Board and UCLA Anderson Forecast

Figure 9 Federal Reserve Bank Assets, 18Dec07 - 26Feb20, In \$Millions

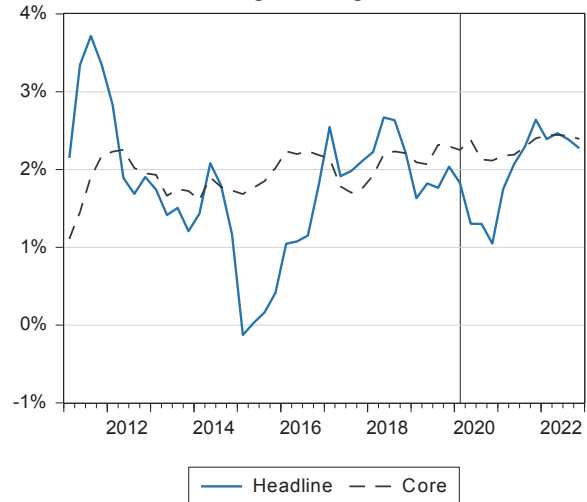


Source: Federal Reserve Board via FRED

Further, the balance sheet expansion process that the Fed undertook last September to solve a “plumbing problem” in the all-important repo market will, instead of winding down as planned, continue. (See Figure 9) Simply put the interaction between the Dodd-Frank regulatory regime and the Fed’s reserve requirements left the system short of reserves. And although the reserve replenishment programs are not exactly like the three quantitative easing programs of the past decade, it sure looks like it on the chart.

At least in the short-run, the Fed will be able to aggressively ease. Inflation remains quiescent and is likely to remain below its 2% target as measured by the consumption deflator. Here we chart the more familiar consumer price index which runs higher than the deflator. (See Figure 10) **Further, it is likely that the Fed will make its inflation target symmetric which means that prior undershoots will be offset by an overshoot in the inflation rate meaning that the near term target going forward could very well be 2.5%.** Another wrinkle to Fed policy is the potential for Trump acolyte Judy Shelton to receive Senate confirmation for a seat on the Federal Reserve Board. Put simply, she doesn’t play well with others. However, the supply shock coming from COVID-19 and continued trade issues with China have caused many businesses to rethink their global supply chains into thinking more local. **Thus over the long run de-globalization may work to increase inflation.**

Figure 10 Consumer Price Index vs. Core CPI, 2011Q1-2012Q4F Percent Change a Year Ago

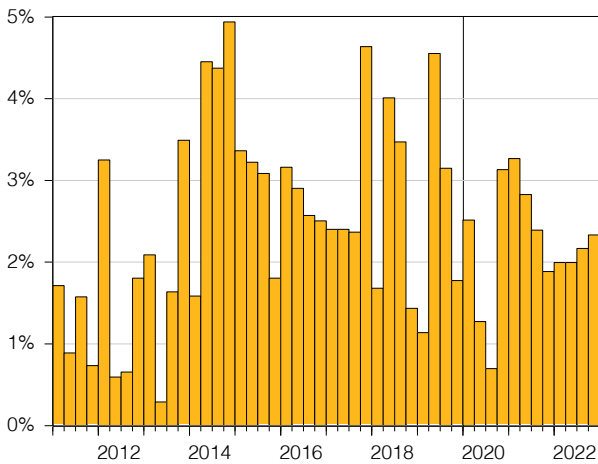


Source: Bureau of Labor Statistics and UCLA Anderson Forecast

Consumption Growth Slows to a Crawl and then Rebounds

Since 2014 Consumer spending has been the mainstay of the economy. However, the shock of the virus will likely dampen consumer spending in the second and third quarters with growth stalling out at 1.3% and 0.7%, respectively. (Figure 11) Thereafter we expect a rebound with automobile sales lagging as a result of credit problems in that sector.

Figure 11 Real Consumption Expenditures, 2011Q1-2022Q4F
Percent Change, SAAR

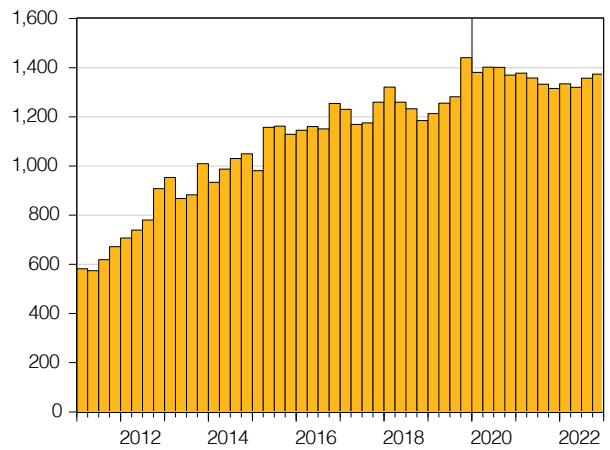


Source: U.S. Department of Commerce and UCLA Anderson Forecast

Housing Comes Alive

Although far from booming housing starts are ratcheting up on the order of 100,000 units a year. Instead of a previously forecast 1.25 million/year, we now envision starts to come in at somewhat above 1.35 million units a year. (See Figure 12) Rising income and the allure of 3.25% 30-year fixed rate mortgages are beginning to overcome the supply constraints caused by local zoning and do not forget that the low interest rate environment is bringing a torrent of money into the rental apartment market as investors hunt for yield in a yield starved world. Indeed, in some states, local zoning restrictions are being relaxed and that, in the long run, will enable housing starts to return to its historical run rate on the order of 1.4-1.5 million units/year. Far from a boom, but much better than the recent history.

Figure 12 Housing Starts, 2011Q1 - 2022Q4F
In Thousands of Units, SAAR

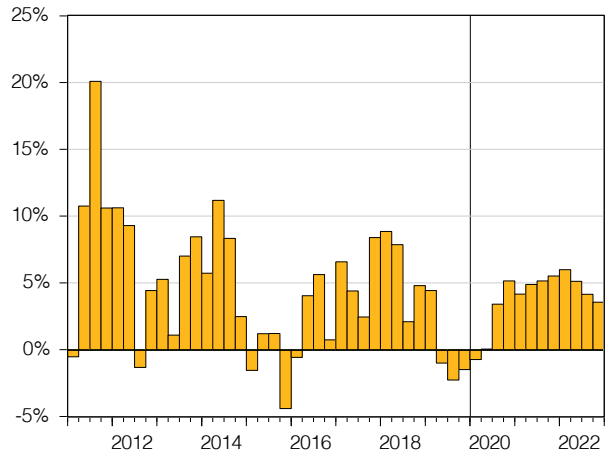


Source: U.S. Bureau of the Census and UCLA Anderson Forecast

737-Max Deliveries to Rescue Business Fixed Investment

We are assuming that Boeing’s long grounded 737-MAX airplane will soon be certified to fly and deliveries will start taking place in the third quarter. Thus the full-year decline in nonresidential fixed investment will soon come to an end. (See Figure 13) Those deliveries will likely offset the effects coming from the virus. If we are wrong here the outlook for

Figure 13 Real Business fixed Investment, 2011Q1- 2022Q4,
Percent Change, SAAR



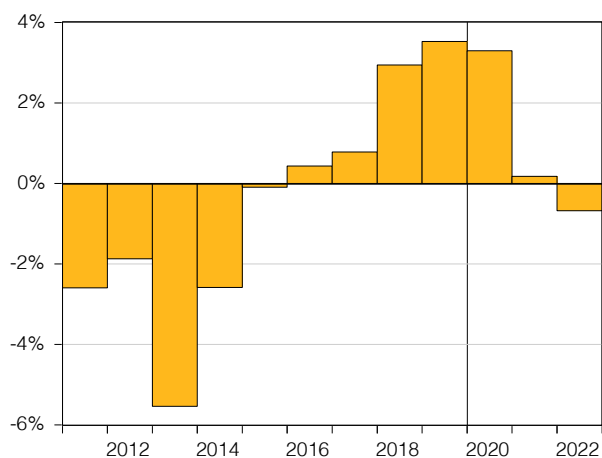
Source: U.S. Department of Commerce and UCLA Anderson Forecast

the second half will decidedly worsen. Of course, a lion's share of the gain in fixed investment will be offset by a reduction in inventory levels. Just to note a good part of the recent weakness in this sector is coming from substantial declines in structures for the oil and gas industry as low oil and gas prices weigh on the decade long fracking boom.

Government Spending: The Good News and the Bad News

To look at the 3%+ real growth in federal government purchases (excludes entitlements) from 2018-2020 you would think the Democrats were in power, yet under a Republican administration, we are witnessing dramatic growth in **both** defense and nondefense purchases. (See Figure 14) Contrast that to five years of annual declines from 2011-2015 under the prior Democratic administration. As a consequence instead of being a drag on real GDP growth, federal government purchases have been highly stimulative.

Figure 14 Real Federal Government Purchases
2011Q1 - 2022Q4F, Percent Change, Annual Data

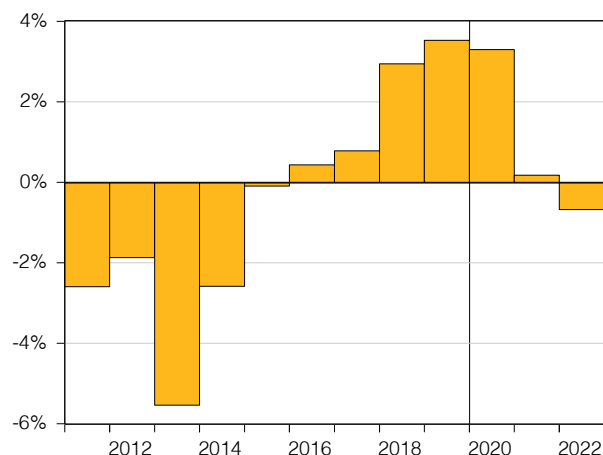


Source: U.S. Department of Commerce and UCLA Anderson Forecast

The bad news is that the party will likely end in 2021 as the growth in government purchases crawl to a halt. Here we see that the increases in public health spending associated with the virus will not be substantial. Defense spending is peaking and assuming gridlock in Washington in 2021, nondefense

spending will be under pressure, but nowhere near the budget cuts the Trump administration has proposed. Further as a result of the late 2017 tax cuts and the increases in spending, **the federal deficit will exceed a trillion dollars a year for as far as the eye can see.** (See Figure 15)

Figure 15 Federal Deficit, 2011 - 2022F
In \$Billions, Annual Data



Source: U.S. Office of Management and Budget and UCLA Anderson Forecast

Conclusions

The forecast presented herein represents our very preliminary estimate of the impact of the Coronavirus on the U.S. economy. **For the time being, we view our 1.5% forecast for real GDP growth on a fourth-quarter to fourth-quarter basis as a midpoint between a minimal effect and a full-blown recession.** At this stage, it is hard to model out the full effects of the supply and demand shocks that are now hitting the economy. In response, we anticipate that the Fed will go beyond its recent 50 basis point cut, and interest rates will remain low for the entire forecast period. The one bright spot in response to the low interest rates will be a much stronger housing market than we previously forecast. Of course, it goes without saying that this year's presidential election, like 2016's, will increase the risk of untested economic policies being put into place in 2021.