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SECURITIES

Wells Fargo Economics *Monthly Macro Manual*

Your guide to the data and events that will shape the economic outlook and drive financial markets in the month ahead.

July 09, 2020

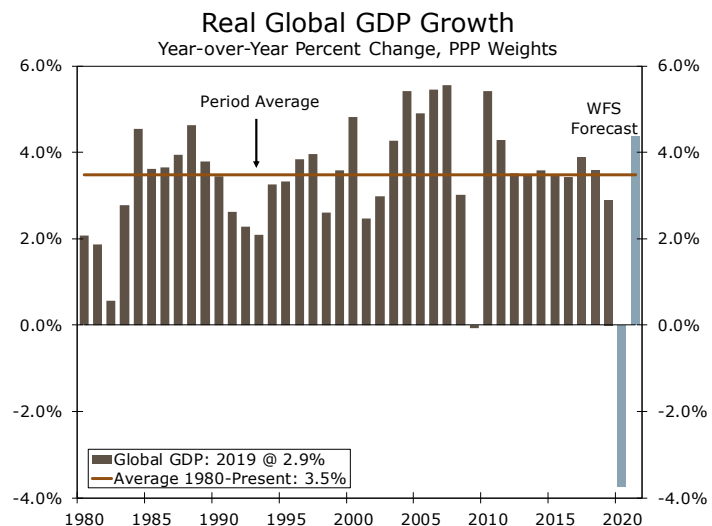
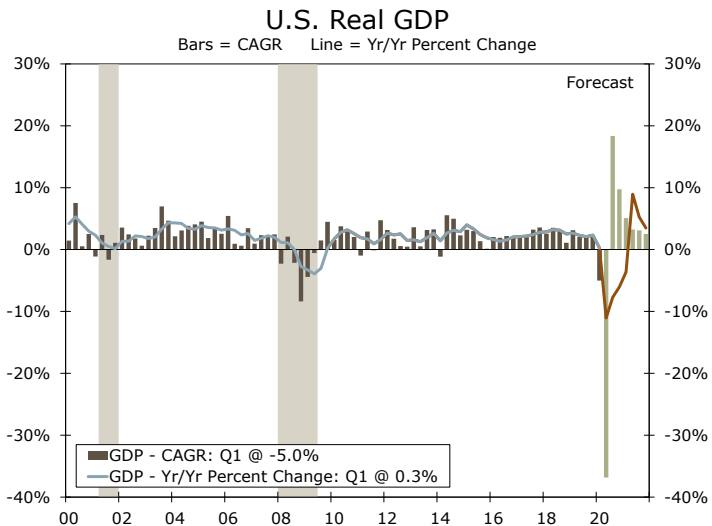
Together we'll go far



Key Takeaways

Developments since our June Monthly Economic Outlook

- We have downwardly revised our 2020 U.S. real GDP growth forecast as a result of localized pauses/reversals in the re-opening process. The revision is relatively modest (-0.3 ppts for the year) but it highlights the risks posed by localized restrictions becoming more severe and/or widespread.
- We upwardly revised our unemployment rate forecast modestly, but the overall trend largely remains the same: an unemployment rate of roughly 8% at year-end 2020 and 6% at year-end 2021.
- Our baseline U.S. forecast continues to assume no additional fiscal stimulus beyond what has already passed. Thus, should another large package become law, there would be upside risk to our forecasts for the U.S. economy, with the actual magnitude dependent on the ultimate size and design of the package.
- Our year-end 2020 forecast for the 10-year Treasury yield remains 1.15%, but with risks to the downside.
- We have downwardly revised our 2020 global growth forecast by less than a tenth to -3.8%. Upward revisions to the growth outlook in the Eurozone were offset by downward revisions to growth elsewhere, particularly the United States, United Kingdom and Mexico.



Source: U.S. Department of Commerce, International Monetary Fund and Wells Fargo Securities

Monthly Macro Calendar: July 6-August 7

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--|--|---|--|--|
| 6 | 7 | 8 | 9 | 10 |
| ISM Non-Manufacturing Index Jun 57.1 | JOLTS Job Openings May 5,397 K Quarles* (Board of Governors) Makes Financial Stability Board Remarks Daly (San Fran Fed) & Barkin (Richmond) Take Part in NABE talk on Economy | Bostic (Atlanta Fed) Takes Part in Webinar on Economy China Consumer Price Index (YoY) May 2.4%; Jun 2.5% (C) | Initial Jobless Claims Jun 27 1,427 K; Jul 4 1,275 K (C) Bostic (Atlanta Fed) Takes Part in Webinar on Economy | Producer Price Index Final Demand (YoY) May -0.8%; Jun -0.2% (W) |
| 13 | 14 | 15 | 16 | 17 |
| Williams* (New York Fed) Discusses Labor in a Joint Webinar with BoE | Consumer Price Index (YoY) May 0.1%; Jun 0.6% (C) Bullard (St. Louis Fed) Discusses Economy and Monetary Policy | Import Price Index (YoY) May -6.0% Industrial Production (MoM) May 1.4%; Jun 4.4% (C) China Q2 GDP (QoQ, NSA) Q1 -6.8%; Q2 2.5% (C) | Retail Sales (MoM) May 17.7%; Jun 5.6% (C) Williams* (New York Fed) Speaks to Fin. Research Advisory Committee ECB Rate Decision (Deposit Rate) Previous -0.500% | Housing Starts (SAAR) May 974 K; Jun 1,180 K (C) |
| 20 | 21 | 22 | 23 | 24 |
| Japan Natl Consumer Price Index (YoY) May 0.1% FOMC Blackout Period Begins | | Existing Home Sales (SAAR) May 3.91 M; Jun 4.65 M (C) Canada Consumer Price Index (YoY) May -0.4% | | New Home Sales (SAAR) May 676 K; Jun 700 K (C) |
| 27 | 28 | 29 | 30 | 31 |
| Durable Goods Orders (MoM) May 15.7% | Consumer Confidence Jun 98.1 | FOMC Rate Decision (Upper Bound) Previous 0.25%; Jul 0.25% (W) | U.S. Q2 GDP (QoQ, SAAR) Q1 -5.0%; Q2 -3.6.8% (W) | Personal Income & Spending (MoM) May -4.2% & 8.2% Employment Cost Index (QoQ) Q1 0.8% Eurozone Q2 GDP (QoQ, SA) Q1 -3.6% |
| 3 | 4 | 5 | 6 | 7 |
| ISM Manufacturing Index Jun 52.6 Evans (Chicago Fed) Holds Media Roundtable on Economic Outlook | Reserve Bank of Australia Rate Decision Previous 0.25% | Trade Balance May -\$54.6 B ISM Non-Manufacturing Index Jun 57.1 Central Bank of Brazil Rate Decision Previous 2.25% | Bank of England Rate Decision Previous 0.100% Reserve Bank of India Rate Decision Previous 3.00% (Cash Rate) | Nonfarm Payrolls (Monthly Change) Jun 4,800 K |

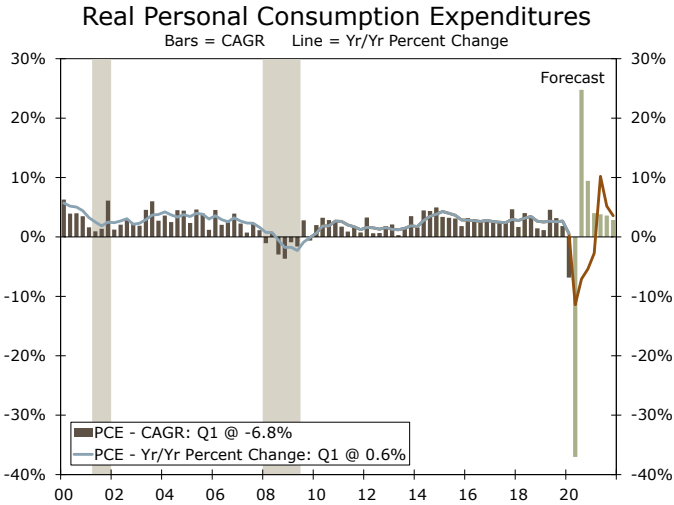
Note: (W) = Wells Fargo Estimate, (C) = Consensus Estimate, * = voting FOMC member in 2020, Red = Market Moving Releases

Source: Bloomberg LP and Wells Fargo Securities

U.S. Growth Outlook

Real GDP growth forecast for Q2-2020: -36.8% (seasonally adjusted annualized rate)

- **Change since last forecast: +0.8 percentage points**
- **We still look for the U.S. economy to have contracted at an extraordinary rate in Q2** as economic activity went into free fall in April amid shelter-in-place restrictions. But, activity subsequently picked-up in May as many states eased those restrictions. The quicker-than-expected bounce, particularly in consumer spending on durables, is largely behind our modestly higher Q2 estimate. This rebound seems to have carried into June, and the U.S. economy appears to have entered the third quarter with a bit of momentum, albeit from a very low base.
- Real GDP growth forecast for full-year 2020: -6.1% (year-over-year percent change)
 - **Change since last forecast: -0.3 percentage points**
 - **The recent acceleration in COVID-19 cases is a serious downside risk to the recovery.** Our forecast is predicated on the assumption that a generalized lockdown of the economy, such as what occurred in March and April, does not reoccur. There may, however, be localized setbacks. **The recent pick-up in case growth has led many states to hit pause on the re-opening process and/or implement some new restrictions. As such, we have modestly dialed back the expected rebound in the second half of this year.**



Source: U.S. Department of Commerce and Wells Fargo Securities

Key Themes and Upside/Downside Scenarios

- *Upside scenario:* The COVID-19 outbreak subsides and/or a medical solution is found. Economic activity begins to rapidly ramp up, and stimulative monetary and fiscal policy responses create the backdrop for a robust second half of the year and 2021.
- *Downside scenario:* COVID-19 case growth continues to move higher, leading to more shutdowns and crimping economic growth. Monetary and fiscal policy responses are not as effective/forthcoming the second time around, and the sharp recession we currently project drags on over several quarters, leading to more structural damage and a much less robust recovery.

Inflation Forecast

- We upwardly revised our inflation forecast. We now look for YoY CPI inflation to dip to only 0.6% (from 0.3% previously) by year-end, and for core CPI inflation to be to 1.0% (from 0.8% previously). Demand has come back a bit stronger than expected, and there have been some anecdotal reports from businesses that discounting is no longer required and they feel at least partially able to pass higher input costs to consumers. But, still-low inflation expectations will limit the extent of the pass-through.

Labor Market Forecast

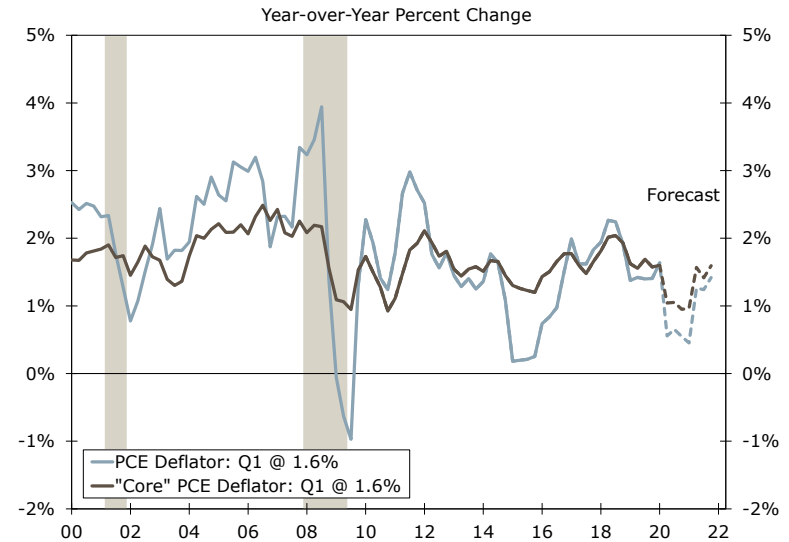
- The U.S. labor market has rebounded quicker than expected, but nonfarm employment still remains down about 10% from its February pre-COVID peak. We still forecast the unemployment rate to be around 6% at the end of 2021.

Fed Funds Outlook

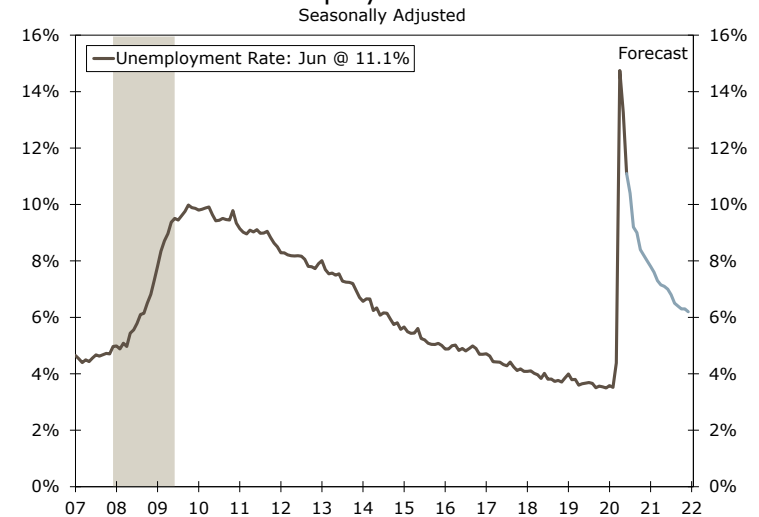
Fed Funds Forecast for 2020 & 2021

- We still expect the FOMC to keep the fed funds target range unchanged at 0%-0.25% for the foreseeable future.
- The Fed has restarted quantitative easing and dusted off some of its crisis-era playbook—increasing swap lines with other central banks, reopening facilities for buying commercial paper, lending to primary dealers, etc. In addition, some of the Fed's newest programs, such as the corporate bond buying and the Main Street Lending Program, are just getting up and running, so the full effect of Fed policy action is yet to be felt.

PCE Deflator & "Core" PCE Deflator



Unemployment Rate



Source: U.S. Department of Commerce, U.S. Department of Labor and Wells Fargo Securities

Wells Fargo Securities U.S. Interest Rate Forecast

| | Actual | | | | | | | | | | | | | | | | Forecast | | | |
|----------------------------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|--|--|--|
| | 2018 | | | | 2019 | | | | 2020 | | | | 2021 | | | | | | | |
| | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | | | | |
| Quarter End Interest Rates | | | | | | | | | | | | | | | | | | | | |
| Federal Funds Target Rate | 1.75 | 2.00 | 2.25 | 2.50 | 2.50 | 2.50 | 2.00 | 1.75 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | | | | |
| 3 Month LIBOR | 2.31 | 2.34 | 2.40 | 2.81 | 2.60 | 2.32 | 2.09 | 1.91 | 1.45 | 0.30 | 0.30 | 0.30 | 0.35 | 0.30 | 0.30 | 0.30 | | | | |
| Prime Rate | 4.75 | 5.00 | 5.25 | 5.50 | 5.50 | 5.50 | 5.00 | 4.75 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | | | | |
| Conventional Mortgage Rate | 4.44 | 4.57 | 4.63 | 4.64 | 4.28 | 3.80 | 3.61 | 3.72 | 3.45 | 3.16 | 3.00 | 3.00 | 3.05 | 3.05 | 3.10 | 3.20 | | | | |
| 3 Month Bill | 1.73 | 1.93 | 2.19 | 2.45 | 2.40 | 2.12 | 1.88 | 1.55 | 0.11 | 0.16 | 0.15 | 0.15 | 0.20 | 0.15 | 0.15 | 0.15 | | | | |
| 6 Month Bill | 1.93 | 2.11 | 2.36 | 2.56 | 2.44 | 2.09 | 1.83 | 1.60 | 0.15 | 0.18 | 0.15 | 0.15 | 0.20 | 0.15 | 0.20 | 0.20 | | | | |
| 1 Year Bill | 2.09 | 2.33 | 2.59 | 2.63 | 2.40 | 1.92 | 1.75 | 1.59 | 0.17 | 0.16 | 0.15 | 0.20 | 0.20 | 0.25 | 0.25 | 0.30 | | | | |
| 2 Year Note | 2.27 | 2.52 | 2.81 | 2.48 | 2.27 | 1.75 | 1.63 | 1.58 | 0.23 | 0.16 | 0.20 | 0.25 | 0.30 | 0.40 | 0.50 | 0.65 | | | | |
| 5 Year Note | 2.56 | 2.73 | 2.94 | 2.51 | 2.23 | 1.76 | 1.55 | 1.69 | 0.37 | 0.29 | 0.50 | 0.60 | 0.75 | 0.85 | 0.95 | 1.00 | | | | |
| 10 Year Note | 2.74 | 2.85 | 3.05 | 2.69 | 2.41 | 2.00 | 1.68 | 1.92 | 0.70 | 0.66 | 1.00 | 1.15 | 1.25 | 1.30 | 1.40 | 1.50 | | | | |
| 30 Year Bond | 2.97 | 2.98 | 3.19 | 3.02 | 2.81 | 2.52 | 2.12 | 2.39 | 1.35 | 1.41 | 1.75 | 1.85 | 1.90 | 1.95 | 2.05 | 2.10 | | | | |

Forecast as of: July 09, 2020

Source: Federal Reserve Board and Wells Fargo Securities

What Are We Watching in the Month Ahead?

- What will it take to get higher Treasury yields?
 - U.S. equity markets have recouped much of their losses, and the economic data have largely surprised to the upside. **But at 68 bps, the 10-year Treasury yield is basically unchanged since the end of March. What will it take to see higher yields?**
 - **First, markets must see a stronger denial from the Fed that yield curve control is not coming anytime soon.**
 - The Fed has made clear its near unanimous opposition to negative rates, but yield curve control appears to split the committee more evenly.
 - **Second, markets need to price in some rate hikes eventually.**
 - The OIS market implies no hikes until the second half of the 2020s, and even then only a very gradual pace of tightening. If markets are convinced the fed funds rate will be near zero for most of the decade, to some extent this caps yields even at the back end of the curve to some extent.
 - **Third, markets need more evidence that the surge in new cases won't lead to a reversal of the recovery.**
 - Yes, the economic data have been strong, but fears remain that this progress will be reversed if the acceleration in cases eventually results in surging deaths and some degree of shutdown to slow the spread.

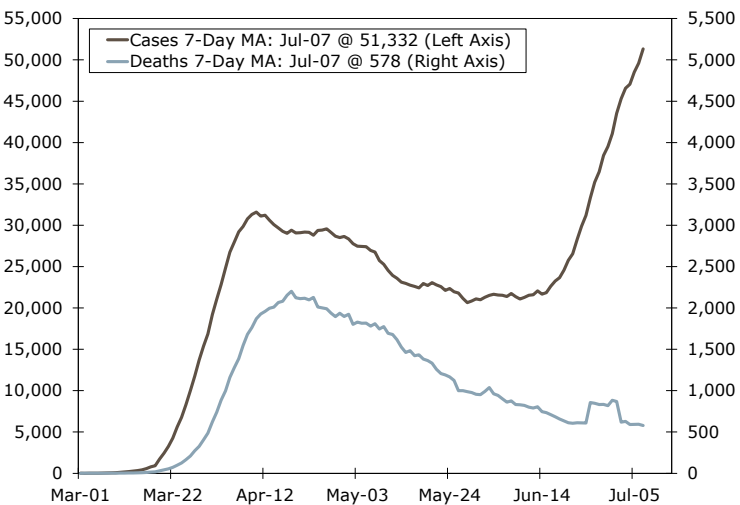
European COVID Spread Manageable

- Unlike the United States, most of Europe has managed to get the spread of COVID-19 under control. **New cases in the four biggest Eurozone economies, for example, have plateaued around just a couple thousand a day.**
- The economic contraction in Europe in March and April was even more severe than it was in the United States, largely due to the more strict lockdown measures put in place there. **But, as these restrictions have been lifted, there are signs that the Eurozone economy is beginning to rebound robustly.**

Can the European Economy Catch Up?

- Eurozone retail sales surged in May, rising 17.8% over the month and down just 5.1% compared to May 2019, and the Eurozone composite PMI is at its highest level since February.
- Accordingly, **we have made our first upward revision to 2020 real GDP growth in Europe since January.** We now look for the Eurozone economy to “only” contract 7.7%, compared to 8.9% in our previous forecast. **We still expect the output gap to be bigger in Europe than in the U.S. at the end of 2020 and 2021, but this could change if the respective public health situations diverge further.**

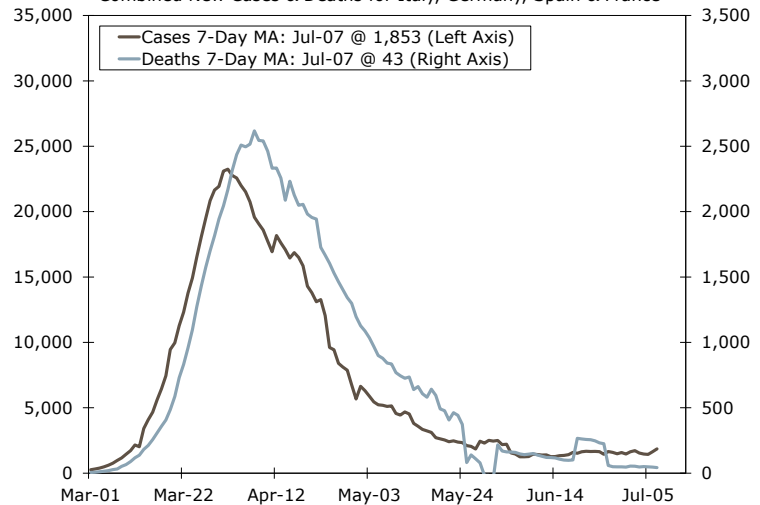
U.S. Covid-19 New Cases & Deaths



Source: Bloomberg LP and Wells Fargo Securities

Europe Covid-19 New Cases & Deaths

Combined New Cases & Deaths for Italy, Germany, Spain & France



Wells Fargo Central Bank Policy Forecasts

| Central Bank | Current Policy Rate | Last Major Policy Change | WF Next Forecasted Policy Change |
|----------------------|-----------------------|---|---|
| United States (FOMC) | 0.25% | June 2020 <i>Announced an expansion of the Main Street Lending Program to allow for more small and medium sized businesses to receive support, in addition to announcing each U.S. state is allowed to have at least two cities or counties eligible regardless of population and issuers are allowed to directly use the facility</i> | No change through Q4-2021 |
| Eurozone (ECB) | -0.50% (Deposit Rate) | June 2020 <i>Expanded its Pandemic Emergency Purchase Program (PEPP) purchases by €600B, extended the horizon for PEPP purchases to June 2021 and provided some guidance on PEPP reinvestments</i> | No change through Q4-2021 |
| United Kingdom (BoE) | 0.10% | June 2020 <i>Announced a £100B increase in its asset purchase target to £745B</i> | Raise its asset purchase target by a further £100B in Q4-2020 |
| Japan (BoJ) | -0.10% | April 2020 <i>Raised its purchase target for corporate bonds and commercial paper to ¥20T</i> | No change through Q4-2021 |
| Canada (BoC) | 0.25% | April 2020 <i>Announced two new asset purchases programs, a provincial bond purchase program of C\$50B and corporate bond purchase program of C\$10B</i> | No change through Q4-2021 |

Forecast as of: July 09, 2020

Source: Bloomberg LP and Wells Fargo Securities

What Are We Watching in the Month Ahead?

European Central Bank

- At this point in time, we do not anticipate any further easing from the ECB. Policymakers have thus far eschewed a deeper foray into negative rates, and we believe the magnitude and pace of asset purchases is sufficient at this time.

Bank of Japan

- At this point in time, we do not anticipate any further easing from the BoJ, though we see the risks as clearly skewed towards some type of more accommodative policy.

Bank of England

- We think the BoE is done cutting its policy rate, but we look for another £100 billion or so increase in asset purchases in Q4-2020.

Bank of Canada

- At this point in time, we do not anticipate any further easing from the BoC.

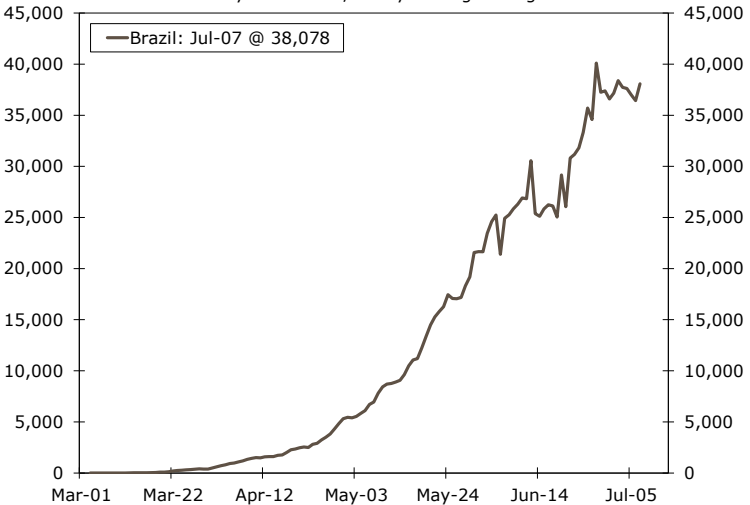
Brazil Still Struggling with COVID Spread

- The Brazilian economy has had a rough decade, hit first by the 2008-2009 global recession, then another significant contraction from 2014-2016, and now a brutal battle against COVID-19.
- **New cases in Brazil have been steadily climbing since March, and have only recently begun to show even slight signs of a slowdown.** This surge in cases comes even though the country does not yet have the testing capacity of many developed economies. Brazil has done about one-tenth the number of tests per capita compared to the United States has done.

Fiscal, Monetary Policy Somewhat Limited

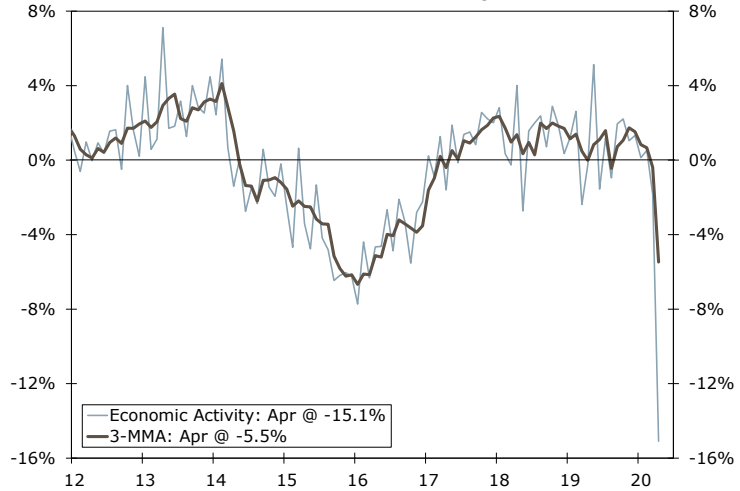
- The country's economic activity index declined 15.1% year-over-year in April, and likely saw little recovery in May. Fiscal policymakers have responded with a decently sized package thus far, but the country's well documented public finance challenges make another sizable round of stimulus difficult.
- On the monetary side, the central bank has cut its main policy rate by 225 bps since December. **But the real has gotten crushed this year against the dollar, down 32%. If the currency continues to weaken, the huge output gap could be paired with faster inflation, a nightmare scenario for the central bank.**

COVID-19 Cases in Brazil
Daily New Cases, 7-Day Moving Average



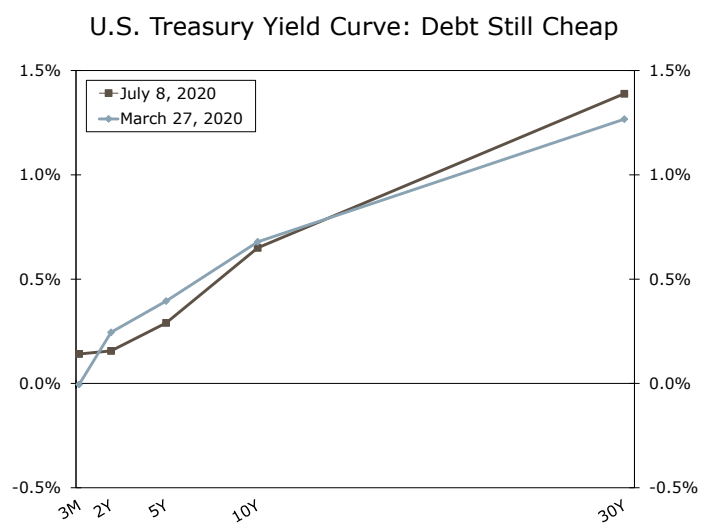
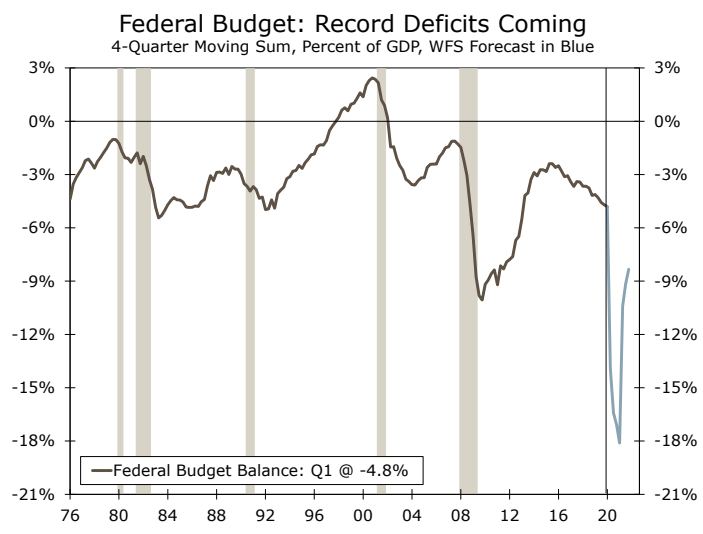
Source: Bloomberg LP and Wells Fargo Securities

Brazilian Economic Activity Index
Year-over-Year Percent Change



Will It Be a Summer of Stimulus for Congress?

- Since COVID-19 sprang onto the scene in the United States, there have been four major laws enacted by Congress in response to the pandemic, with the first enacted on March 6 and the last on April 24.
- Since the Phase IV bill was enacted on April 24, on and off discussions about another round of stimulus have occurred, but progress has repeatedly stalled out. But, when Congress returns from recess in mid-July, it will face a critical few-week period to consider additional fiscal stimulus.
- Emergency expanded unemployment benefits expire on July 31, many states will face tough budget decisions as their fiscal years begin on July 1 and the traditional month long August recess will loom large.
- We view the odds of another large (>\$500 billion) bill as a bit better than fifty-fifty. Although the jobs numbers for June were stronger-than-expected, the localized reversals of some lockdown easing have built a stronger case for additional stimulus.
- If a bill does come to pass, our best guess at this time is that it would be roughly \$1 trillion in size, with the bulk of the money going towards state and local aid and stimulus to households through policies like a payroll tax cut or another round of direct household checks.
- Our baseline U.S. macro forecast continues to assume no additional fiscal stimulus beyond what has already passed. Thus, should a large package become law, there would likely be upside risk to our forecasts for the U.S. economy, with the actual magnitude dependent on the ultimate size and design of the package.
- For further reading, see our recent [special report](#) on this topic.



Source: U.S. Department of the Treasury, Bloomberg LP and Wells Fargo Securities

Wells Fargo Securities U.S. Economic Forecast

| | Actual | | | | | | | | | | | | | | | | Forecast | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|----------|--------|--|--|--|--|
| | 2018 | | | | 2019 | | | | 2020 | | | | 2021 | | | | Actual | | Forecast | | | | | |
| | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 2018 | 2019 | 2020 | 2021 | | | | |
| Real Gross Domestic Product (a) | 2.6 | 3.5 | 2.9 | 1.1 | 3.1 | 2.0 | 2.1 | 2.1 | -5.0 | -36.8 | 18.4 | 9.7 | 5.1 | 3.2 | 3.1 | 2.5 | 2.9 | 2.3 | -6.1 | 3.3 | | | | |
| Personal Consumption | 1.7 | 4.0 | 3.5 | 1.4 | 1.1 | 4.6 | 3.1 | 1.8 | -6.8 | -37.0 | 24.8 | 9.4 | 4.0 | 3.8 | 3.6 | 2.8 | 3.0 | 2.6 | -5.8 | 3.9 | | | | |
| Business Fixed Investment | 8.8 | 7.9 | 2.1 | 4.8 | 4.4 | -1.0 | -2.3 | -2.4 | -6.4 | -31.5 | -9.3 | 3.1 | 2.9 | 5.2 | 4.9 | 4.9 | 6.4 | 2.1 | -10.0 | -0.6 | | | | |
| Equipment | 6.6 | 3.4 | 2.9 | 7.4 | -0.1 | 0.8 | -3.8 | -4.3 | -16.6 | -39.1 | -10.8 | 15.0 | 4.6 | 4.6 | 4.0 | 4.0 | 6.8 | 1.3 | -14.3 | 0.6 | | | | |
| Intellectual Property Products | 9.7 | 11.9 | 4.1 | 11.7 | 10.8 | 3.6 | 4.7 | 2.8 | 1.3 | -13.7 | -2.8 | -4.4 | 3.7 | 7.4 | 6.9 | 6.7 | 7.4 | 7.5 | -1.7 | 1.4 | | | | |
| Structures | 12.1 | 11.0 | -2.1 | -9.0 | 4.0 | -11.1 | -9.9 | -7.2 | 2.6 | -45.0 | -19.0 | -7.5 | -3.0 | 1.5 | 2.5 | 3.0 | 4.1 | -4.3 | -15.4 | -7.9 | | | | |
| Residential Investment | -5.3 | -3.7 | -4.0 | -4.7 | -1.0 | -3.0 | 4.6 | 6.5 | 18.2 | -35.0 | 6.0 | 2.0 | 3.0 | 5.0 | 6.0 | 6.5 | -1.5 | -1.5 | -1.4 | 1.1 | | | | |
| Government Purchases | 1.9 | 2.6 | 2.1 | -0.4 | 2.9 | 4.8 | 1.7 | 2.5 | 1.1 | -7.7 | -2.8 | 3.8 | 1.8 | 0.4 | -0.4 | -0.6 | 1.7 | 2.3 | -0.4 | 0.3 | | | | |
| Net Exports | -884.2 | -850.5 | -962.4 | -983.0 | -944.0 | -980.7 | -990.1 | -900.7 | -816.6 | -879.4 | -926.4 | -936.8 | -943.2 | -949.0 | -947.3 | -947.5 | -920.0 | -953.9 | -889.8 | -946.7 | | | | |
| Pct. Point Contribution to GDP | 0.0 | 0.7 | -2.1 | -0.4 | 0.7 | -0.7 | -0.1 | 1.5 | 1.3 | -1.3 | -1.1 | -0.2 | -0.1 | -0.1 | 0.0 | 0.0 | -0.4 | -0.2 | 0.3 | -0.3 | | | | |
| Inventory Change | 40.5 | -28.0 | 87.2 | 93.0 | 116.0 | 69.4 | 69.4 | 13.1 | -74.8 | -250.0 | -70.0 | 20.0 | 90.0 | 80.0 | 70.0 | 60.0 | 48.1 | 67.0 | -93.7 | 75.0 | | | | |
| Pct. Point Contribution to GDP | 0.1 | -1.2 | 2.1 | 0.1 | 0.5 | -0.9 | 0.0 | -1.0 | -1.6 | -3.6 | 4.3 | 2.1 | 1.6 | -0.2 | -0.2 | -0.2 | 0.1 | 0.1 | -0.8 | 0.9 | | | | |
| Nominal GDP (a) | 5.0 | 7.1 | 4.8 | 2.9 | 3.9 | 4.7 | 3.8 | 3.5 | -3.4 | -38.2 | 20.6 | 10.8 | 6.1 | 4.6 | 5.0 | 4.2 | 5.4 | 4.1 | -5.3 | 4.4 | | | | |
| Real Final Sales | 2.4 | 4.8 | 0.8 | 1.0 | 2.6 | 3.0 | 2.1 | 3.1 | -3.5 | -33.5 | 13.4 | 7.5 | 3.5 | 3.5 | 3.3 | 2.8 | 2.8 | 2.2 | -5.3 | 2.4 | | | | |
| Retail Sales (b) | 4.4 | 5.3 | 5.0 | 3.0 | 2.7 | 3.5 | 4.0 | 4.0 | 1.2 | -9.6 | 1.5 | 6.2 | 11.6 | 24.6 | 10.9 | 6.5 | 4.4 | 3.5 | -0.2 | 13.0 | | | | |
| Inflation Indicators (b) | | | | | | | | | | | | | | | | | | | | | | | | |
| PCE Deflator | 1.9 | 2.3 | 2.2 | 1.9 | 1.4 | 1.4 | 1.4 | 1.4 | 1.6 | 0.6 | 0.7 | 0.5 | 0.5 | 1.3 | 1.2 | 1.4 | 2.1 | 1.4 | 0.8 | 1.1 | | | | |
| "Core" PCE Deflator | 1.8 | 2.0 | 2.0 | 1.9 | 1.6 | 1.6 | 1.7 | 1.6 | 1.7 | 1.0 | 1.1 | 0.9 | 1.0 | 1.6 | 1.4 | 1.6 | 2.0 | 1.6 | 1.2 | 1.4 | | | | |
| Consumer Price Index | 2.2 | 2.7 | 2.7 | 2.2 | 1.6 | 1.8 | 1.8 | 2.0 | 2.1 | 0.5 | 0.9 | 0.6 | 0.6 | 1.8 | 1.3 | 1.6 | 2.4 | 1.8 | 1.0 | 1.3 | | | | |
| "Core" Consumer Price Index | 1.9 | 2.2 | 2.3 | 2.2 | 2.1 | 2.1 | 2.3 | 2.3 | 2.2 | 1.4 | 1.2 | 1.0 | 1.0 | 1.7 | 1.6 | 1.8 | 2.1 | 2.2 | 1.5 | 1.5 | | | | |
| Producer Price Index (Final Demand) | 2.8 | 3.0 | 3.1 | 2.8 | 1.9 | 2.0 | 1.6 | 1.1 | 1.3 | -0.7 | 0.0 | 0.3 | 1.0 | 2.8 | 2.6 | 2.5 | 2.9 | 1.7 | 0.2 | 2.2 | | | | |
| Employment Cost Index | 2.7 | 2.8 | 2.8 | 2.9 | 2.8 | 2.7 | 2.8 | 2.7 | 2.8 | 2.5 | 2.0 | 1.8 | 1.5 | 1.8 | 2.1 | 2.2 | 2.8 | 2.7 | 2.3 | 1.9 | | | | |
| Real Disposable Income (b) | 3.9 | 3.9 | 4.1 | 3.9 | 3.3 | 3.0 | 2.7 | 2.6 | 1.7 | 9.1 | 1.4 | 1.0 | 1.7 | -5.0 | 2.4 | 3.0 | 4.0 | 2.9 | 3.3 | 0.4 | | | | |
| Nominal Personal Income (b) | 5.6 | 5.8 | 5.9 | 4.9 | 4.6 | 4.7 | 4.2 | 4.2 | 3.2 | 7.9 | 1.4 | 0.8 | 1.4 | -3.0 | 3.7 | 4.5 | 5.6 | 4.4 | 3.3 | 1.6 | | | | |
| Industrial Production (a) | 2.3 | 4.6 | 5.2 | 3.9 | -1.9 | -2.3 | 1.1 | 0.4 | -6.9 | -44.9 | 15.0 | 5.5 | 3.5 | 6.3 | 5.7 | 3.6 | 3.9 | 0.9 | -10.1 | 1.8 | | | | |
| Capacity Utilization | 77.9 | 78.5 | 79.1 | 79.4 | 78.6 | 77.8 | 77.6 | 77.2 | 75.6 | 64.9 | 68.0 | 70.7 | 71.4 | 72.5 | 73.5 | 74.2 | 78.7 | 77.8 | 69.8 | 72.9 | | | | |
| Corporate Profits Before Taxes (b) | 2.9 | 2.4 | 4.2 | 4.2 | -2.2 | 1.3 | -1.2 | 2.2 | -6.9 | -15.0 | -12.0 | -2.0 | 6.0 | 15.0 | 14.0 | 5.0 | 3.4 | 0.0 | -9.0 | 9.8 | | | | |
| Corporate Profits After Taxes | 10.3 | 8.3 | 11.3 | 10.1 | -2.9 | 1.3 | -0.3 | 2.2 | -6.6 | -14.3 | -11.9 | -1.5 | 7.3 | 16.3 | 15.3 | 6.2 | 10.0 | 0.1 | -8.6 | 11.0 | | | | |
| Federal Budget Balance (c) | -375 | -7 | -172 | -319 | -372 | -56 | -237 | -357 | -387 | -1665 | -991 | -541 | -658 | -328 | -472 | -383 | -779 | -984 | -3400 | -2000 | | | | |
| Trade Weighted Dollar Index (d) | 103.1 | 107.3 | 107.6 | 110.1 | 109.8 | 109.7 | 111.0 | 109.9 | 112.7 | 110.3 | 110.6 | 109.2 | 108.2 | 107.3 | 106.7 | 106.6 | 106.4 | 110.1 | 110.7 | 107.2 | | | | |
| Nonfarm Payroll Change (e) | 234 | 211 | 153 | 172 | 139 | 159 | 203 | 210 | -303 | -4429 | 1100 | 500 | 280 | 240 | 210 | 200 | 193 | 178 | -783 | 233 | | | | |
| Unemployment Rate | 4.1 | 3.9 | 3.8 | 3.8 | 3.9 | 3.6 | 3.6 | 3.5 | 3.8 | 13.0 | 9.5 | 8.2 | 7.6 | 7.1 | 6.6 | 6.3 | 3.9 | 3.7 | 8.6 | 6.9 | | | | |
| Housing Starts (f) | 1.31 | 1.26 | 1.24 | 1.18 | 1.20 | 1.26 | 1.29 | 1.43 | 1.48 | 0.97 | 1.14 | 1.21 | 1.22 | 1.23 | 1.24 | 1.24 | 1.25 | 1.29 | 1.20 | 1.23 | | | | |
| Light Vehicle Sales (g) | 17.1 | 17.3 | 17.0 | 17.4 | 16.8 | 17.0 | 17.0 | 16.7 | 15.0 | 11.4 | 13.1 | 13.6 | 14.2 | 15.9 | 16.3 | 16.5 | 17.2 | 16.9 | 13.3 | 15.7 | | | | |
| Crude Oil - Brent - Front Contract (h) | 66.9 | 74.6 | 75.8 | 68.6 | 63.8 | 67.6 | 61.5 | 61.7 | 51.0 | 34.7 | 36.0 | 38.0 | 42.0 | 48.0 | 46.0 | 50.0 | 71.5 | 63.6 | 39.9 | 46.5 | | | | |
| Quarter-End Interest Rates (i) | | | | | | | | | | | | | | | | | | | | | | | | |
| Federal Funds Target Rate | 1.75 | 2.00 | 2.25 | 2.50 | 2.50 | 2.50 | 2.00 | 1.75 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 1.96 | 2.25 | 0.25 | 0.25 | | | | |
| 3 Month LIBOR | 2.31 | 2.34 | 2.40 | 2.81 | 2.60 | 2.32 | 2.09 | 1.91 | 1.45 | 0.30 | 0.30 | 0.30 | 0.35 | 0.30 | 0.30 | 0.30 | 2.31 | 2.33 | 0.59 | 0.31 | | | | |
| Prime Rate | 4.75 | 5.00 | 5.25 | 5.50 | 5.50 | 5.50 | 5.00 | 4.75 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 4.96 | 5.25 | 3.25 | 3.25 | | | | |
| Conventional Mortgage Rate | 4.44 | 4.57 | 4.63 | 4.64 | 4.28 | 3.80 | 3.61 | 3.72 | 3.45 | 3.16 | 3.00 | 3.00 | 3.05 | 3.05 | 3.10 | 3.20 | 4.54 | 3.94 | 3.15 | 3.10 | | | | |
| 3 Month Bill | 1.73 | 1.93 | 2.19 | 2.45 | 2.40 | 2.12 | 1.88 | 1.55 | 0.11 | 0.16 | 0.15 | 0.15 | 0.20 | 0.15 | 0.15 | 0.15 | 1.97 | 2.11 | 0.14 | 0.16 | | | | |
| 6 Month Bill | 1.93 | 2.11 | 2.36 | 2.56 | 2.44 | 2.09 | 1.83 | 1.60 | 0.15 | 0.18 | 0.15 | 0.15 | 0.20 | 0.15 | 0.20 | 0.20 | 2.14 | 2.11 | 0.16 | 0.19 | | | | |
| 1 Year Bill | 2.09 | 2.33 | 2.59 | 2.63 | 2.40 | 1.92 | 1.75 | 1.59 | 0.17 | 0.16 | 0.15 | 0.20 | 0.20 | 0.25 | 0.25 | 0.30 | 2.33 | 2.05 | 0.17 | 0.25 | | | | |
| 2 Year Note | 2.27 | 2.52 | 2.81 | 2.48 | 2.27 | 1.75 | 1.63 | 1.58 | 0.23 | 0.16 | 0.20 | 0.25 | 0.30 | 0.40 | 0.50 | 0.65 | 2.53 | 1.97 | 0.21 | 0.46 | | | | |
| 5 Year Note | 2.56 | 2.73 | 2.94 | 2.51 | 2.23 | 1.76 | 1.55 | 1.69 | 0.37 | 0.29 | 0.50 | 0.60 | 0.75 | 0.85 | 0.95 | 1.00 | 2.75 | 1.95 | 0.44 | 0.89 | | | | |
| 10 Year Note | 2.74 | 2.85 | 3.05 | 2.69 | 2.41 | 2.00 | 1.68 | 1.92 | 0.70 | 0.66 | 1.00 | 1.15 | 1.25 | 1.30 | 1.40 | 1.50 | 2.91 | 2.14 | 0.88 | 1.36 | | | | |
| 30 Year Bond | 2.97 | 2.98 | 3.19 | 3.02 | 2.81 | 2.52 | 2.12 | 2.39 | 1.35 | 1.41 | 1.75 | 1.85 | 1.90 | 1.95 | 2.05 | 2.10 | 3.11 | 2.58 | 1.59 | 2.00 | | | | |

Forecast as of: July 09, 2020

Notes: (a) Compound Annual Growth Rate Quarter-over-Quarter

(b) Year-over-Year Percentage Change

(c) Quarterly Sum - Billions USD; Annual Data Represents Fiscal Yr.

(d) Federal Reserve Advanced Foreign Economies Index, 2006=100 - Quarter End

(e) Average Monthly Change

(f) Millions of Units - Annual Data - Not Seasonally Adjusted

(g) Quarterly Data - Average Monthly SAAR; Annual Data - Actual Total Vehicles Sold

(h) Quarterly Average of Daily Close

(i) Annual Numbers Represent Averages

Source: U.S. Department of Commerce, U.S. Department of Labor, IHS Markit, Federal Reserve Board and Wells Fargo Securities

U.S. Economic Forecast: Change Since June 09, 2020

Changes to the Wells Fargo Securities U.S. Economic Forecast

| | Actual | | | | | | | | Forecast | | | | | | | | Actual | | Forecast | |
|--|--------|------|------|------|------|-------|------|------|----------|---------|---------|--------|-------|-------|--------|--------|--------|-------|----------|-------|
| | 2018 | | | | 2019 | | | | 2020 | | | | 2021 | | | | 2018 | 2019 | 2020 | 2021 |
| | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | | | | |
| Real Gross Domestic Product (a) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.78 | -5.54 | -0.85 | 2.00 | 0.50 | 0.41 | 0.12 | 0.00 | 0.00 | -0.36 | -0.01 |
| Personal Consumption | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.05 | 6.62 | -14.87 | -1.20 | 1.01 | 1.15 | 0.93 | 0.35 | 0.00 | 0.00 | 0.51 | -0.29 |
| Business Fixed Investment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.49 | -3.39 | -0.03 | -0.17 | -0.04 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | -0.45 | -0.37 |
| Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | -5.65 | -0.02 | -0.11 | -0.01 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | -1.38 | -0.64 |
| Intellectual Property Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | -1.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.23 | -0.12 |
| Structures | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.38 | 0.00 |
| Residential Investment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.06 | 0.00 |
| Government Purchases | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.27 | -0.36 | -1.23 | 1.18 | 0.30 | -0.30 | -0.60 | -0.59 | 0.00 | 0.00 | -0.09 | -0.06 |
| Net Exports | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.6 | -74.2 | -77.7 | -79.8 | -81.9 | -83.4 | -85.0 | -86.5 | 0.0 | 0.0 | -58.1 | -84.2 |
| Pct. Point Contribution to GDP | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | -1.55 | -0.08 | -0.05 | -0.05 | -0.04 | -0.03 | -0.03 | 0.00 | 0.00 | -0.30 | -0.15 |
| Inventory Change | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -7.62 | -170.00 | -30.00 | -40.00 | 15.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | -61.90 | 5.00 |
| Pct. Point Contribution to GDP | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.13 | -3.37 | 3.37 | -0.21 | 1.23 | -0.22 | -0.11 | 0.00 | 0.00 | 0.00 | -0.32 | 0.38 |
| Nominal GDP | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.97 | -5.15 | -1.01 | 1.17 | -0.03 | 0.61 | 0.37 | 0.00 | 0.00 | -0.25 | -0.23 |
| Real Final Sales | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 | 3.29 | -9.28 | -0.63 | 0.73 | 0.73 | 0.52 | 0.12 | 0.00 | 0.00 | -0.03 | -0.39 |
| Retail Sales (b) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.03 | 0.00 | 0.00 | 0.03 | 8.13 | 11.99 | 12.54 | 13.16 | 3.91 | 0.00 | 0.00 | 0.00 | -0.01 | 8.24 | 4.40 |
| Inflation Indicators (b) | | | | | | | | | | | | | | | | | | | | |
| PCE Deflator | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.10 | 0.20 | 0.16 | -0.05 | -0.27 | -0.32 | -0.23 | 0.00 | 0.00 | 0.12 | -0.22 |
| "Core" PCE Deflator | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.19 | 0.47 | 0.48 | 0.40 | 0.15 | -0.14 | -0.13 | 0.00 | 0.00 | 0.29 | 0.07 |
| Consumer Price Index | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.59 | 0.29 | 0.09 | 0.01 | -0.53 | 0.03 | 0.00 | 0.00 | 0.24 | -0.10 |
| "Core" Consumer Price Index | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.29 | 0.26 | 0.18 | 0.02 | -0.19 | -0.15 | 0.00 | 0.00 | 0.16 | -0.04 |
| Producer Price Index (Final Demand) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.06 | 0.25 | 0.43 | 0.43 | 0.49 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.26 | 0.17 |
| Employment Cost Index | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.11 | 0.14 | 0.00 | 0.00 | 0.05 | 0.10 |
| Real Disposable Income (b) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | 3.85 | 3.53 | 2.73 | 2.87 | -0.64 | -0.73 | 0.00 | 0.00 | 0.00 | 2.53 | 0.36 |
| Nominal Personal Income (b) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.04 | 3.66 | 3.72 | 2.88 | 2.85 | -0.68 | -1.07 | -0.24 | 0.00 | 0.00 | 2.56 | 0.23 |
| Industrial Production (a) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.23 | 1.95 | 27.21 | 10.56 | 0.41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.03 | 5.80 |
| Capacity Utilization | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 1.63 | -2.40 | -0.47 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.30 | 0.00 |
| Corporate Profits Before Taxes (b) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.62 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.39 | -0.02 |
| Corporate Profits After Taxes | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.98 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.48 | -0.02 |
| Federal Budget Balance (c) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 111.88 | -111.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Trade Weighted Dollar Index (d) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | -0.65 | -0.60 | -0.10 | 0.28 | -0.07 | -0.20 | 0.00 | 0.00 | -0.30 | -0.02 |
| Nonfarm Payroll Change (e) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 630.00 | -900.00 | -50.00 | 0.00 | 0.00 | -15.00 | -15.00 | 0.00 | 0.00 | -80.00 | -7.50 |
| Unemployment Rate | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.33 | -0.40 | 0.50 | 0.70 | 0.70 | 0.40 | 0.20 | 0.00 | 0.00 | -0.06 | 0.50 |
| Housing Starts (f) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | -0.04 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | 0.00 |
| Light Vehicle Sales (g) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.40 | 1.10 | 0.82 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.58 | 0.00 |
| Crude Oil - Brent - Front Contract (h) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.65 | 3.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.66 | 0.00 |
| Quarter-End Interest Rates (i) | | | | | | | | | | | | | | | | | | | | |
| Federal Funds Target Rate | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 Month LIBOR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Prime Rate | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Conventional Mortgage Rate | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 | 0.05 | 0.05 | 0.05 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.02 |
| 3 Month Bill | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 Year Note | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | 0.00 |
| 5 Year Note | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.21 | -0.10 | -0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.09 | 0.00 |
| 10 Year Note | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.24 | -0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.07 | 0.00 |
| 30 Year Bond | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.24 | -0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.07 | 0.00 |

Forecast as of: July 09, 2020

Notes: (a) Compound Annual Growth Rate Quarter-over-Quarter

(b) Year-over-Year Percentage Change

(c) Quarterly Sum - Billions USD; Annual Data Represents Fiscal Yr.

(d) Federal Reserve Advanced Foreign Economies Index, 2006=100 - Quarter End

(e) Average Monthly Change

(f) Millions of Units - Annual Data - Not Seasonally Adjusted

(g) Quarterly Data - Average Monthly SAAR; Annual Data - Actual Total Vehicles Sold

(h) Quarterly Average of Daily Close

(i) Annual Numbers Represent Averages

Source: U.S. Department of Commerce, U.S. Department of Labor, IHS Markit, Federal Reserve Board and Wells Fargo Securities

Wells Fargo Securities International Economic Forecast

(Year-over-Year Percent Change)

| | GDP | | | | CPI | | | |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | <u>2018</u> | <u>2019</u> | <u>2020</u> | <u>2021</u> | <u>2018</u> | <u>2019</u> | <u>2020</u> | <u>2021</u> |
| Global (PPP Weights) | 3.6% | 2.9% | -3.8% | 4.4% | 3.6% | 3.4% | 3.1% | 2.9% |
| Advanced Economies ¹ | 2.2% | 1.9% | -6.5% | 3.0% | 2.0% | 1.6% | 0.7% | 1.2% |
| United States | 2.9% | 2.3% | -6.1% | 3.3% | 2.4% | 1.8% | 1.0% | 1.3% |
| Eurozone | 1.9% | 1.2% | -7.7% | 2.8% | 1.8% | 1.2% | 0.5% | 1.2% |
| United Kingdom | 1.3% | 1.5% | -9.0% | 4.1% | 2.5% | 1.8% | 0.7% | 1.3% |
| Japan | 0.3% | 0.7% | -6.4% | -0.4% | 1.0% | 0.5% | -0.1% | 0.1% |
| Canada | 2.0% | 1.7% | -7.8% | 3.3% | 2.3% | 1.9% | 0.4% | 1.4% |
| Developing Economies ¹ | 4.5% | 3.7% | -1.8% | 5.3% | 4.8% | 4.8% | 4.7% | 4.1% |
| China | 6.7% | 6.1% | 1.2% | 9.5% | 2.1% | 2.9% | 2.7% | 1.8% |
| India | 6.8% | 4.9% | -1.6% | 3.6% | 3.9% | 3.7% | 4.7% | 3.6% |
| Mexico | 2.2% | -0.3% | -9.4% | -1.7% | 4.9% | 3.6% | 3.0% | 3.3% |

Forecast as of: July 09, 2020

¹Aggregated Using PPP Weights

Source: International Monetary Fund and Wells Fargo Securities

Changes to the Wells Fargo International Economic Forecast

(Year-over-Year Percent Change)

| | GDP | | | | CPI | | | |
|-----------------------------------|-------|-------|--------|--------|-------|-------|--------|--------|
| | 2018 | 2019 | 2020 | 2021 | 2018 | 2019 | 2020 | 2021 |
| Global (PPP Weights) | 0.00% | 0.00% | 0.00% | -0.01% | 0.00% | 0.00% | 0.08% | -0.03% |
| Advanced Economies ¹ | 0.00% | 0.00% | 0.08% | 0.00% | 0.00% | 0.00% | 0.17% | -0.08% |
| United States | 0.00% | 0.00% | -0.36% | -0.01% | 0.00% | 0.00% | 0.27% | -0.16% |
| Eurozone | 0.00% | 0.00% | 1.19% | 0.13% | 0.00% | 0.00% | 0.18% | 0.00% |
| United Kingdom | 0.00% | 0.05% | -1.33% | -0.17% | 0.00% | 0.00% | -0.06% | -0.10% |
| Japan | 0.00% | 0.00% | -0.59% | -0.16% | 0.00% | 0.00% | -0.06% | -0.03% |
| Canada | 0.00% | 0.00% | -0.39% | -0.16% | 0.00% | 0.00% | -0.04% | -0.02% |
| Developing Economies ¹ | 0.00% | 0.00% | -0.06% | -0.02% | 0.00% | 0.00% | 0.01% | 0.01% |
| China | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | -0.01% | 0.00% |
| India | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Mexico | 0.00% | 0.00% | -1.08% | -0.43% | 0.00% | 0.00% | 0.26% | 0.13% |

Forecast as of: July 09, 2020

¹Aggregated Using PPP Weights

Wells Fargo Securities International Interest Rate Forecast

(End of Quarter Rates)

| | Central Bank Key Policy Rate | | | | | |
|-----------------------|------------------------------|--------|--------|--------|--------|--------|
| | 2020 | | 2021 | | | |
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| United States | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% |
| Eurozone ¹ | -0.50% | -0.50% | -0.50% | -0.50% | -0.50% | -0.50% |
| United Kingdom | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| Japan | -0.10% | -0.10% | -0.10% | -0.10% | -0.10% | -0.10% |
| Canada | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% |
| | 2-Year Note | | | | | |
| | 2020 | | 2021 | | | |
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| United States | 0.20% | 0.25% | 0.30% | 0.40% | 0.50% | 0.65% |
| Eurozone ² | -0.60% | -0.55% | -0.45% | -0.35% | -0.25% | -0.15% |
| United Kingdom | 0.05% | 0.10% | 0.20% | 0.30% | 0.40% | 0.60% |
| Japan | -0.15% | -0.10% | -0.05% | 0.00% | 0.05% | 0.05% |
| Canada | 0.35% | 0.40% | 0.40% | 0.45% | 0.55% | 0.70% |
| | 10-Year Note | | | | | |
| | 2020 | | 2021 | | | |
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| United States | 1.00% | 1.15% | 1.25% | 1.30% | 1.40% | 1.50% |
| Eurozone ² | -0.25% | -0.15% | -0.05% | 0.05% | 0.15% | 0.20% |
| United Kingdom | 0.40% | 0.60% | 0.65% | 0.70% | 0.75% | 0.80% |
| Japan | 0.05% | 0.10% | 0.10% | 0.10% | 0.15% | 0.15% |
| Canada | 0.75% | 0.90% | 0.95% | 1.00% | 1.05% | 1.15% |

Forecast as of: July 09, 2020

¹ ECB Deposit Rate ² German Government Bond Yield

Source: International Monetary Fund and Wells Fargo Securities

Change in Wells Fargo International Interest Rate Forecast

(End of Quarter Rates)

| | Central Bank Key Policy Rate | | | | | |
|-----------------------|------------------------------|--------|--------|--------|--------|----|
| | 2020 | | 2021 | | | |
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| United States | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| Eurozone ¹ | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| United Kingdom | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| Japan | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| Canada | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| | 2-Year Note | | | | | |
| | 2020 | | 2021 | | | |
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| United States | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| Eurozone ² | -0.05% | -0.05% | -0.05% | -0.05% | -0.10% | |
| United Kingdom | -0.10% | -0.15% | -0.15% | -0.15% | -0.15% | |
| Japan | 0.00% | 0.00% | -0.05% | -0.05% | 0.00% | |
| Canada | -0.05% | -0.05% | -0.05% | -0.05% | -0.05% | |
| | 10-Year Note | | | | | |
| | 2020 | | 2021 | | | |
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| United States | -0.05% | 0.00% | 0.00% | 0.00% | 0.00% | |
| Eurozone ² | -0.05% | -0.05% | -0.05% | -0.05% | -0.05% | |
| United Kingdom | -0.10% | -0.05% | -0.05% | -0.05% | -0.05% | |
| Japan | 0.00% | 0.00% | 0.00% | -0.05% | 0.00% | |
| Canada | -0.10% | -0.05% | -0.05% | -0.05% | -0.05% | |

Forecast as of: July 09, 2020

¹ ECB Deposit Rate ² German Government Bond Yield

Source: International Monetary Fund and Wells Fargo Securities

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