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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.

August 12, 2020

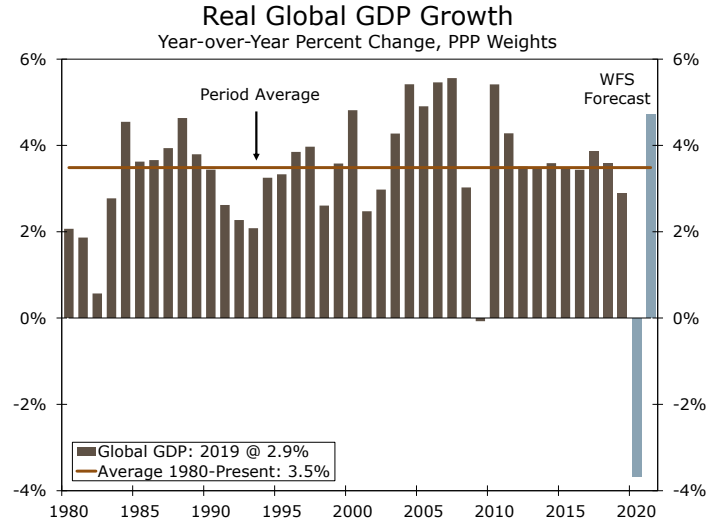
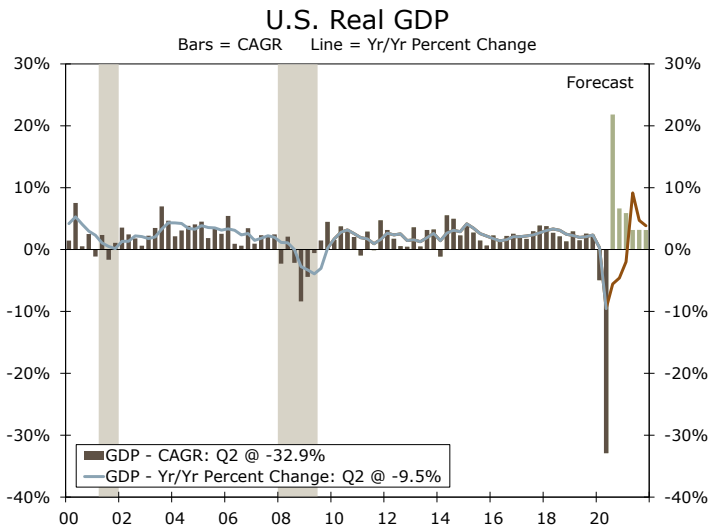
Together we'll go far



Key Takeaways

Developments since our July Monthly Economic Outlook

- Our forecast for the level of real GDP over 2020 and 2021 has ticked modestly higher, as Q2-2020 was not quite as bad as we feared. Some recent signs of stalling in the U.S. recovery could end up pushing some of the third quarter bounce back into the fourth quarter.
- Our forecasts for nonfarm payrolls and unemployment are largely unchanged: we continue to expect the unemployment rate to finish 2020 a bit above 8% and 2021 a bit above 6%.
- 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.
- We have downwardly revised our year-end forecast for the 10-year Treasury yield to 0.90%, from 1.15%.
- We have upwardly revised our global growth forecast one tenth of a percentage point for 2020 and three tenths for 2021. Most developed market economies saw upgrades, while China and India were left unchanged and the Mexican economy saw a notable downgrade.



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

Monthly Macro Calendar: August 10-September 4

Monday	Tuesday	Wednesday	Thursday	Friday
10	11	12	13	14
JOLTS Job Openings Jun 5,889K	PPI Final Demand (YoY) Jul -0.4% Barkin (Richmond Fed) Takes part in Webinar Discussion Daly (San Francisco Fed) Speaks at Business Women of California Event	Consumer Price Index (YoY) Jun 0.6%; Jul 0.3% (W) Monthly Budget Statement Jun -\$864.1B United Kingdom GDP (QoQ) Q1 -2.2% Kaplan* (Dallas Fed) Speaks to Lubbock Chamber of Commerce	Import Price Index (MoM) Jun 1.4%; Jul 0.5% (W) Initial Jobless Claims Jul 311,186K; Aug 81,100K (C) Brainard* (Board of Governors) Speaks at Fintech Event Bostic (Atlanta Fed) Discusses fair solutions for the future of cities	Retail Sales (MoM) Jun 7.5%; Jul -1.4% (W) Industrial Production (MoM) Jun 5.4%; Jul 2.8% (W) Kaplan* (Dallas Fed) Takes part in moderated Q&A
17	18	19	20	21
	Housing Starts (SAAR) Jun 1,186K	U.K. Consumer Price Index (YoY) Jun 0.6% Canada Consumer Price Index (YoY) Jun 0.7% FOMC Meeting Minutes	Japan Natl Consumer Price Index (YoY) Jun 0.1%	Existing Home Sales (SAAR) Jun 4.72M
24	25	26	27	28
	New Home Sales (SAAR) Jun 776K Consumer Confidence Index Jul 92.6 Daly (San Francisco Fed) Takes part in a Panel on Inequity and Covid-19	Durable Goods Orders (MoM) Jun 7.6%		Personal Income & Spending (MoM) Jun -1.1%; 5.6%
31	1	2	3	4
	ISM Manufacturing Index Jul 54.2 Eurozone Consumer Price Index (YoY) May 0.1%	US Federal Reserve Releases Beige Book	Trade Balance Jun -\$50.7B ISM Services Index Jul 58.1 Evans (Chicago Fed) Discusses Economy and Monetary Policy	Nonfarm Payrolls (Monthly Change) Jul 1,763K

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

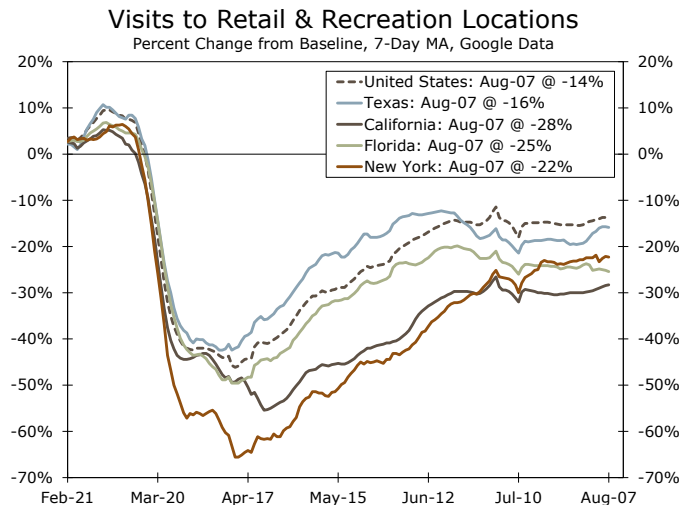
Source: Bloomberg LP and Wells Fargo Securities

Real GDP growth forecast for Q3-2020: 21.8% (seasonally adjusted annualized rate)

- **Change since last forecast: +3.4 percentage points**
- The U.S. economy contracted at a historic pace in Q2, although the collapse was not quite as bad as we thought it might be. **Momentum at the end of the second quarter sets Q3 up for a strong growth rate, and the historic surge we expect in Q3 is, to a large extent, a reflection of momentum in May-July as the economy bounced off of a low base.** High frequency mobility data suggests the rebound at the end of Q2 has slowed significantly in recent weeks as the U.S. economy is moving past its re-opening bounce. The recent stalling in activity may push some of the Q3 growth into the fourth quarter.

Real GDP growth forecast for full-year 2020: -4.9% (year-over-year percent change)

- **Change since last forecast: +1.2 percentage points**
- **The upward revision to our 2020 GDP estimate is largely a reflection of the better-than-expected outturn in Q2. The virus continues to set the time table in regards to the economic recovery, and a reacceleration in cases in the fall remains a serious downside risk.** Our forecast continues to be 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.



Source: Google and Wells Fargo Securities

Key Themes and Upside/Downside Scenarios

- **Upside scenario:** The COVID-19 outbreak subsides and/or a medical breakthrough 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 economic recovery begins to reverse.

Inflation Forecast

- We did not make any major changes to our inflation forecast and still look for the year-over-year rate of the PCE deflator to remain below 2% for quite some time.

Labor Market Forecast

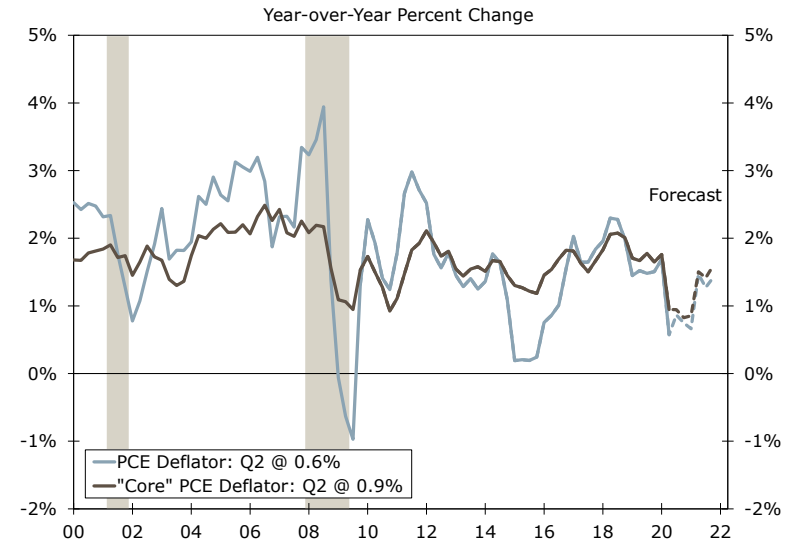
- We did not make any major changes to our employment forecast. We still forecast the unemployment rate to be a bit above 6% at the end of 2021.
- Nonfarm payrolls have yet to recover even half of the jobs lost in March and April. With the pace of re-opening slowing in recent weeks and the COVID-19 spread still relatively high, we believe nonfarm payrolls will rise more slowly in the coming months.
- Even by the end of 2021, we project that total nonfarm employment will be lower than it was in February 2020.

Fed Funds Outlook

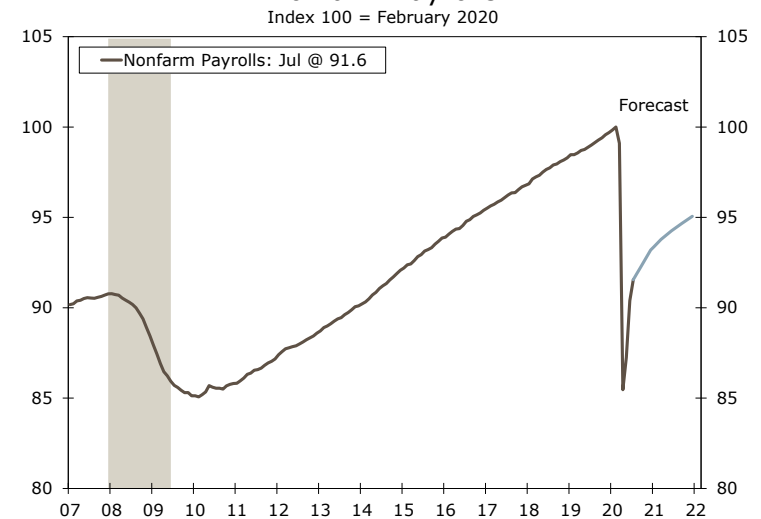
Fed Funds Forecast for 2020 & 2021: No Change

- We expect the FOMC to keep the fed funds target range unchanged at 0%-0.25% for the foreseeable future.
- For now, the Fed seems content to remain in a holding pattern, neither removing the current level of stimulus nor jumping into new tools such as negative rates or yield curve control.
- The Fed stands ready to do whatever it takes, but at this stage we believe additional fiscal support would be more effective than additional monetary policy easing. See *Topic of the Month* on slide 10 for a fiscal policy update.

PCE Deflator & "Core" PCE Deflator



Nonfarm Payrolls



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	0.25	0.25	0.25	0.25	0.25	0.25				
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	2.75	2.80	2.85	2.95	3.00	3.05				
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	0.15	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	0.15	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	0.15	0.20	0.20	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	0.15	0.20	0.25	0.35	0.40	0.50				
5 Year Note	2.56	2.73	2.94	2.51	2.23	1.76	1.55	1.69	0.37	0.29	0.35	0.50	0.65	0.75	0.85	0.90				
10 Year Note	2.74	2.85	3.05	2.69	2.41	2.00	1.68	1.92	0.70	0.66	0.70	0.90	1.05	1.20	1.30	1.35				
30 Year Bond	2.97	2.98	3.19	3.02	2.81	2.52	2.12	2.39	1.35	1.41	1.40	1.60	1.80	2.00	2.10	2.15				

Forecast as of: August 12, 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, **but at 64 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 coming anytime soon.**
 - **Second, markets need to price in some rate hikes eventually.**
 - The OIS market implies no fed funds hikes for most of the 2020s. 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.
 - While inflation expectations as measured by breakevens have recovered most of their decline since February, real yields are at all-time lows. If the economic outlook steadily improves but market expectations for rate hikes remain unchanged, this is a recipe for low real yields.
 - **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 an acceleration in cases eventually results in a surge in the death-rate and holds back the economic rebound in particular sectors.

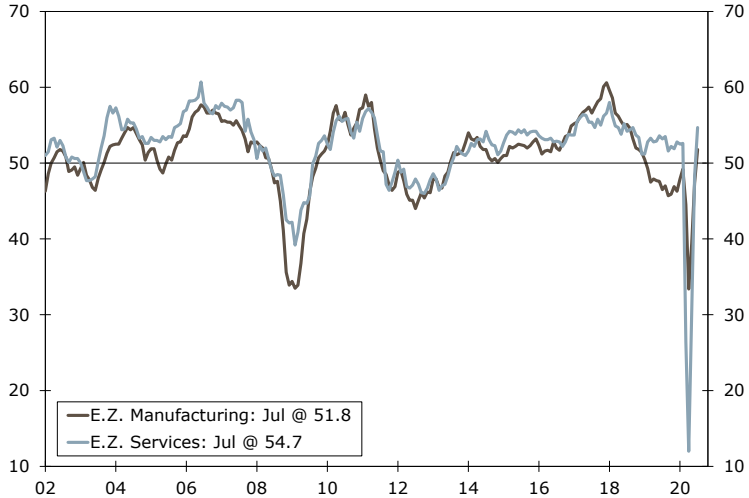
European Recovery Gathering Momentum

- **The level of economic activity remains depressed in most major economies, but a gradual recovery continues to take hold.** Through the first six months of the year, the average level of Eurozone retail sales is “only” down 4.2%. In July, the Eurozone PMIs for manufacturing and services rose to 51.8 and 54.7, respectively. With both indices now firmly above 50, the pace of economic recovery in the Eurozone appears to be gathering momentum.
- **On net, a downward revision to Eurozone real GDP growth in 2020 has been more than offset by upward revisions to our expectations for 2021.**

A Journey of a Thousand Miles...

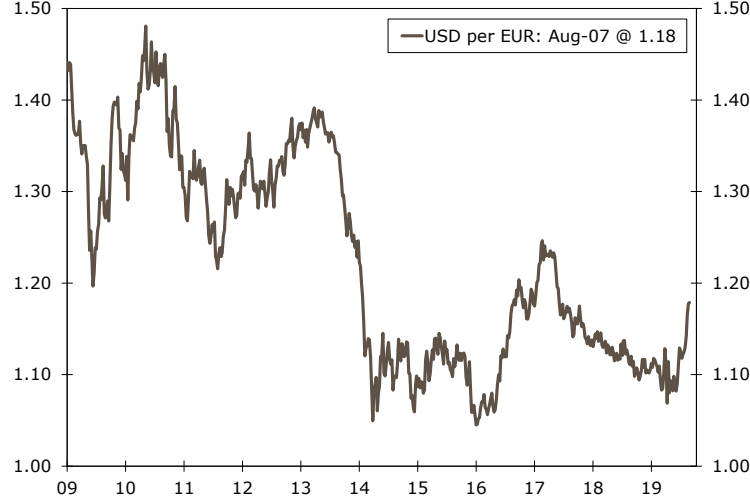
- Our thematic expectations for the global economy over the next 12 months largely remain intact. **The negative output gaps in most economies are large, and it will be a long slog before they are fully closed. But, some of the worst case economic scenarios envisioned back in March and April have been avoided thus far, fought off by historic monetary and fiscal policy responses.** If the economic recovery can continue over the next couple quarters, we believe steady progress on the public health front can help keep the upward economic momentum going in 2021.

Eurozone Purchasing Managers' Indices



Source: Bloomberg LP and Wells Fargo Securities

Euro Exchange Rate



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: August 12, 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.

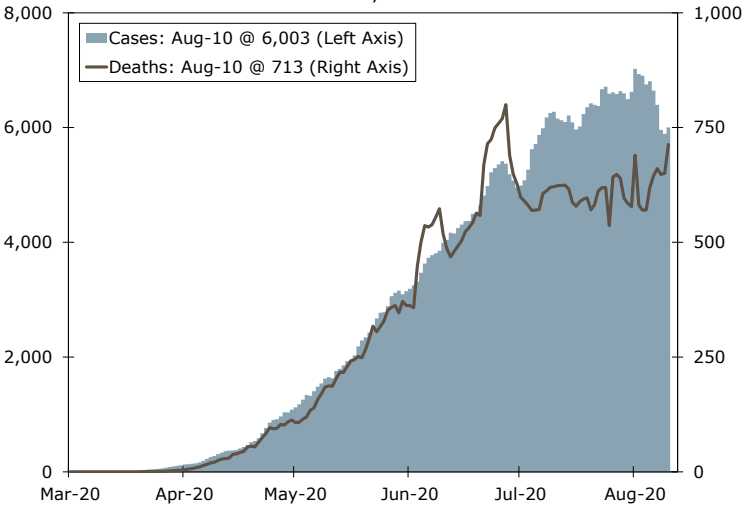
Mexico Still Struggling with COVID Spread

- Unfortunately, not all economies are on the upswing. Mexico's economy remains in a difficult place as the country grapples with its still-robust spread of COVID-19. Industrial production in Mexico was down 16.7% year-over-year in June, compared to 10.8% in the United States. And in July, the manufacturing PMI for Mexico registered a 40.4 reading, up just a bit from 38.6 in June and still firmly in contractionary territory. With few signs of a meaningful fiscal stimulus on the way, the country may not see as much of a rebound in economic growth in H2-2020.

Lack of Fiscal Stimulus Limiting Recovery

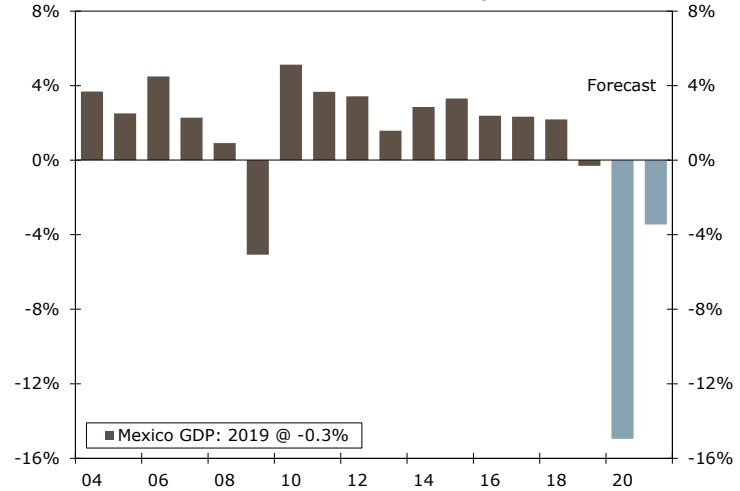
- We have long maintained that countries with the fiscal capacity, capital markets access and political will to float their economies through the COVID-19 would have a major leg up, and Mexico's experience thus far is a prime example of how a country without these ingredients may struggle mightily when dealing with the economic fallout from COVID-19. Accordingly, our latest forecast has downgraded real GDP growth for Mexico for both 2020 and 2021. If realized, Mexican real GDP would contract in three consecutive years from 2019-2021.

Mexico COVID-19 New Cases and Deaths
7-Day MA



Source: Bloomberg LP and Wells Fargo Securities

Mexico GDP Growth
Year-over-Year Percent Change

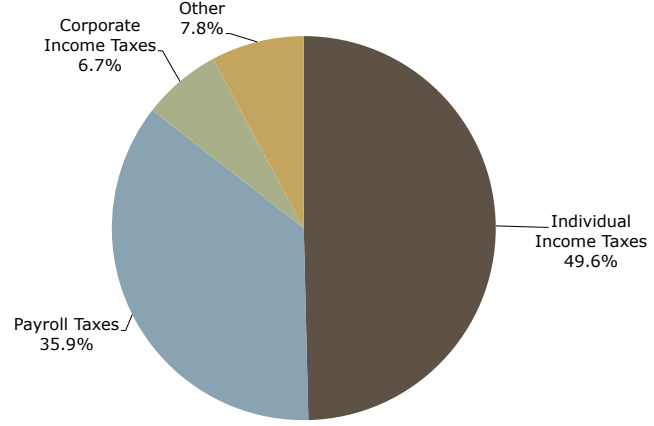


No Fiscal Deal in Congress, but Executive Orders Galore

- Last week, talks between Congressional Democrats and the White House for another round of COVID-19 fiscal relief petered out. **At present, both the House and the Senate have left town for August recess, though members are on call to return to Washington D.C. in the event of a major breakthrough.**
- Against this backdrop, President Trump has attempted to take matters into his own hands through executive orders. **First, the president instructed the U.S. Treasury to halt collection of payroll taxes from September 1 through December 31 for workers who earn approximately \$100,000 or less per year. Second, emergency federal unemployment benefits were reinstated at \$400 per week, down from the previous \$600 that lapsed on July 31. Third, the Secretary of Health and Human Services and the Director of the CDC were directed to “consider” whether temporarily halting residential evictions is necessary to prevent the spread of COVID-19. Finally, interest on student loans held by the federal government will be waived through the end of 2020, and payments can be deferred until December 31.**
- These steps represent more support for the economy than would have occurred otherwise. But, they are not as material as initially meets the eye. **The payroll tax holiday is a deferral, not an outright cut, so these taxes will still be owed at some point, although President Trump has said he will push Congress for a permanent cut. The \$400 per week in unemployment benefits utilizes an emergency disaster relief unemployment program and we estimate that there is only enough money to last 4-6 weeks given the expected number of claims.**

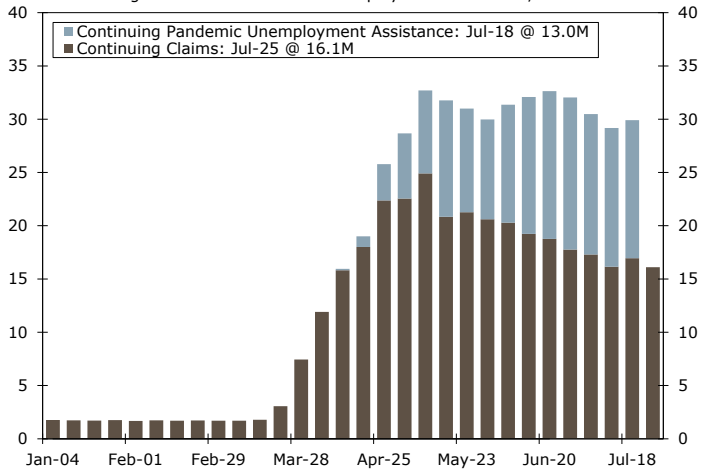
For further reading, see our recent [special report](#) on this topic.

Composition of Federal Revenue (FY 2019)



Continuing Claims for Unemployment

Regular State + Pandemic Unemployment Assistance, Millions



Source: Congressional Budget Office, U.S. Department of Labor and Wells Fargo Securities

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)	3.8	2.7	2.1	1.3	2.9	1.5	2.6	2.4	-5.0	-32.9	21.8	6.6	5.9	3.2	3.2	3.2	3.0	2.2	-4.9	3.8				
Personal Consumption	2.0	3.2	2.7	1.6	1.8	3.7	2.7	1.6	-6.9	-34.6	29.8	7.8	3.9	3.8	3.7	3.4	2.7	2.4	-5.0	4.4				
Business Fixed Investment	12.2	6.2	2.6	5.0	4.2	0.0	1.9	-0.3	-6.7	-27.0	2.2	1.1	2.4	3.9	5.0	5.5	6.9	2.9	-6.8	0.7				
Equipment	10.1	2.4	6.1	9.6	2.0	-3.8	-1.7	-1.7	-15.2	-37.7	16.1	5.3	3.5	4.1	4.4	5.3	8.0	2.1	-10.8	2.3				
Intellectual Property Products	8.8	12.3	4.4	12.1	4.5	4.1	5.3	4.6	2.4	-7.2	-0.6	0.5	3.7	4.8	6.9	6.7	7.8	6.4	0.9	2.6				
Structures	21.6	5.0	-5.9	-12.6	8.2	1.6	3.6	-5.3	-3.7	-34.9	-19.0	-7.5	-3.0	1.5	2.5	3.0	3.7	-0.6	-11.6	-6.8				
Residential Investment	-3.3	-1.7	-5.4	-5.2	-1.7	-2.1	4.6	5.8	19.0	-38.7	22.0	9.0	7.0	6.5	7.0	7.0	-0.6	-1.7	-0.2	5.2				
Government Purchases	1.5	2.9	2.5	-0.9	2.5	5.0	2.1	2.4	1.3	2.7	-4.3	0.8	-1.2	-0.8	-0.4	0.0	1.8	2.3	1.3	-0.7				
Net Exports	-833.0	-820.2	-920.3	-937.3	-907.4	-951.4	-950.2	-861.5	-788.0	-780.7	-857.2	-929.2	-944.3	-938.2	-938.3	-938.0	-877.7	-917.6	-838.8	-939.7				
Pct. Point Contribution to GDP	0.3	0.3	-1.8	-0.3	0.6	-0.8	0.0	1.5	1.1	0.7	-1.8	-1.6	-0.3	0.1	0.0	0.0	-0.3	-0.2	0.4	-0.6				
Inventory Change	47.3	-4.9	79.1	92.3	101.7	49.4	44.0	-1.1	-80.9	-315.5	-150.0	-50.0	90.0	80.0	70.0	60.0	53.4	48.5	-149.1	75.0				
Pct. Point Contribution to GDP	0.4	-0.9	1.6	0.2	0.2	-1.0	-0.1	-0.8	-1.3	-4.0	3.9	2.2	3.1	-0.2	-0.2	-0.2	0.2	0.0	-1.0	1.2				
Nominal GDP (a)	6.2	6.3	3.8	3.3	4.0	4.1	4.0	3.9	-3.4	-34.3	25.2	7.8	6.9	4.5	5.0	4.9	5.5	4.0	-3.9	5.0				
Real Final Sales	3.4	3.7	0.5	1.1	2.7	2.5	2.7	3.2	-3.6	-29.3	18.5	4.3	2.7	3.4	3.4	3.4	2.8	2.2	-3.8	2.7				
Retail Sales (b)	4.4	5.3	5.0	3.0	2.7	3.4	4.0	4.0	1.2	-8.1	3.8	7.9	13.5	24.7	10.2	6.5	4.4	3.5	1.2	13.3				
Inflation Indicators (b)																								
PCE Deflator	2.0	2.3	2.3	2.0	1.4	1.5	1.5	1.5	1.7	0.6	0.9	0.7	0.7	1.5	1.3	1.4	2.1	1.5	1.0	1.2				
"Core" PCE Deflator	1.8	2.1	2.1	2.0	1.7	1.7	1.8	1.6	1.8	0.9	0.9	0.8	0.9	1.5	1.4	1.6	2.0	1.7	1.1	1.3				
Consumer Price Index	2.2	2.7	2.7	2.2	1.6	1.8	1.8	2.0	2.1	0.4	0.8	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	1.3	1.0	0.8	0.8	1.6	1.7	1.8	2.1	2.2	1.3	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	-0.8	-0.5	-0.2	0.5	2.4	2.6	2.5	2.9	1.7	-0.1	2.0				
Employment Cost Index	2.7	2.8	2.8	2.9	2.8	2.7	2.8	2.7	2.8	2.7	2.3	2.0	1.6	1.5	1.7	1.8	2.8	2.7	2.4	1.7				
Real Disposable Income (b)	3.6	3.4	3.6	3.7	3.2	2.1	1.8	1.6	1.4	11.5	3.3	-0.1	0.1	-8.2	-0.8	2.7	3.6	2.2	4.0	-1.7				
Nominal Personal Income (b)	5.5	5.5	5.5	4.8	4.7	4.1	3.5	3.5	3.2	10.1	3.2	-0.3	-0.3	-6.2	0.5	4.2	5.3	3.9	4.0	-0.6				
Industrial Production (a)	2.3	4.6	5.2	3.9	-1.9	-2.3	1.1	0.4	-6.8	-42.6	33.5	4.6	3.5	5.0	5.7	3.6	3.9	0.9	-7.8	3.6				
Capacity Utilization	77.9	78.5	79.1	79.4	78.6	77.8	77.6	77.2	75.8	66.0	70.9	71.7	72.3	73.1	74.1	74.8	78.7	77.8	71.1	73.6				
Corporate Profits Before Taxes (b)	6.9	5.8	5.7	5.9	-1.1	1.7	-0.5	1.3	-6.7	-18.0	-11.0	-5.0	6.0	20.0	12.0	3.0	6.1	0.3	-10.2	9.9				
Corporate Profits After Taxes	11.4	9.2	8.6	5.8	-3.3	0.5	-0.3	1.3	-5.7	-17.5	-11.4	-4.2	5.6	19.7	12.2	2.9	8.7	-0.4	-9.7	9.7				
Federal Budget Balance (c)	-375	-7	-172	-319	-372	-56	-237	-357	-387	-2001	-656	-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	109.8	112.7	110.3	106.5	105.5	104.5	103.8	103.3	103.3	106.4	110.1	108.8	103.7				
Nonfarm Payroll Change (e)	234	211	153	172	139	159	203	210	-303	-4424	921	500	300	240	210	200	193	178	-826	238				
Unemployment Rate	4.1	3.9	3.8	3.8	3.9	3.6	3.6	3.5	3.8	13.0	9.6	8.3	7.5	7.1	6.6	6.3	3.9	3.7	8.7	6.9				
Housing Starts (f)	1.31	1.26	1.24	1.18	1.20	1.26	1.29	1.43	1.48	1.04	1.25	1.30	1.32	1.29	1.28	1.27	1.25	1.29	1.27	1.29				
Light Vehicle Sales (g)	17.1	17.2	17.0	17.5	16.9	17.0	17.0	16.8	15.0	11.3	14.2	14.3	14.9	15.5	16.1	16.4	17.2	17.0	13.7	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	43.0	44.0	46.0	48.0	46.0	50.0	71.5	63.6	43.2	47.5				
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	0.25	0.25	0.25	0.25	0.25	0.25	2.31	2.33	0.56	0.25				
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	2.75	2.80	2.85	2.95	3.00	3.05	4.54	3.94	3.04	2.96				
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	0.15	0.15	0.15	0.15	1.97	2.11	0.14	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	0.15	0.15	0.20	0.20	2.14	2.11	0.16	0.18				
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	0.15	0.20	0.20	0.25	0.30	2.33	2.05	0.16	0.24				
2 Year Note	2.27	2.52	2.81	2.48	2.27	1.75	1.63	1.58	0.23	0.16	0.15	0.20	0.25	0.35	0.40	0.50	2.53	1.97	0.19	0.38				
5 Year Note	2.56	2.73	2.94	2.51	2.23	1.76	1.55	1.69	0.37	0.29	0.35	0.50	0.65	0.75	0.85	0.90	2.75	1.95	0.38	0.79				
10 Year Note	2.74	2.85	3.05	2.69	2.41	2.00	1.68	1.92	0.70	0.66	0.70	0.90	1.05	1.20	1.30	1.35	2.91	2.14	0.74	1.23				
30 Year Bond	2.97	2.98	3.19	3.02	2.81	2.52	2.12	2.39	1.35	1.41	1.40	1.60	1.80	2.00	2.10	2.15	3.11	2.58	1.44	2.01				

Forecast as of: August 12, 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 July 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)	1.23	-0.81	-0.81	0.23	-0.16	-0.52	0.47	0.24	0.04	3.93	3.48	-3.08	0.80	-0.07	0.07	0.64	0.07	-0.17	1.30	0.47
Personal Consumption	0.36	-0.85	-0.81	0.13	0.71	-0.85	-0.44	-0.25	-0.04	2.42	5.02	-1.64	-0.08	-0.01	0.06	0.59	-0.30	-0.18	0.88	0.50
Business Fixed Investment	3.34	-1.64	0.54	0.19	-0.25	1.05	4.15	2.10	-0.30	4.49	11.48	-2.00	-0.52	-1.26	0.17	0.57	0.56	0.81	3.12	1.28
Equipment	3.44	-0.92	3.20	2.22	2.09	-4.67	2.08	2.59	1.35	1.39	26.94	-9.66	-1.05	-0.50	0.45	1.34	1.21	0.78	3.47	1.69
Intellectual Property Products	-0.89	0.41	0.31	0.42	-6.33	0.46	0.63	1.83	1.07	6.51	2.21	4.87	0.01	-2.62	0.01	0.01	0.45	-1.15	2.62	1.25
Structures	9.50	-6.02	-3.80	-3.54	4.23	12.75	13.41	1.95	-6.34	10.06	0.00	0.00	0.00	0.00	0.00	0.00	-0.46	3.65	3.82	1.10
Residential Investment	1.98	1.98	-1.37	-0.55	-0.67	0.85	-0.05	-0.67	0.75	-3.74	16.00	7.00	4.00	1.50	1.00	0.50	0.88	-0.21	1.15	4.12
Government Purchases	-0.45	0.33	0.45	-0.52	-0.42	0.23	0.44	-0.12	0.15	10.33	-1.42	-2.98	-3.03	-1.22	-0.01	0.59	0.10	-0.04	1.71	-1.01
Net Exports	51.2	30.3	42.1	45.8	36.6	29.3	39.9	39.2	28.6	98.7	69.3	7.6	-1.1	10.9	9.0	9.5	42.4	36.2	51.1	7.1
Pct. Point Contribution to GDP	0.29	-0.42	0.22	0.08	-0.18	-0.11	0.18	0.01	-0.18	2.00	-0.66	-1.35	-0.19	0.26	-0.04	0.01	0.05	-0.03	0.08	-0.24
Inventory Change	6.80	23.10	-8.12	-0.70	-14.25	-19.96	-25.39	-14.12	-6.18	-65.50	-80.00	-70.00	0.00	0.00	0.00	0.00	5.27	-18.43	-55.42	0.00
Pct. Point Contribution to GDP	0.28	0.26	-0.56	0.16	-0.32	-0.06	-0.06	0.16	0.22	-0.34	-0.42	0.18	1.52	0.00	0.00	0.00	0.12	-0.13	-0.19	0.29
Nominal GDP	1.25	-0.79	-1.00	0.38	0.09	-0.53	0.16	0.39	0.06	3.85	4.64	-2.97	0.80	-0.07	0.07	0.65	0.03	-0.13	1.42	0.61
Real Final Sales	0.94	-1.09	-0.24	0.07	0.17	-0.47	0.54	0.08	-0.18	4.25	5.15	-3.22	-0.76	-0.08	0.07	0.64	-0.04	-0.06	1.44	0.25
Retail Sales (b)	0.00	0.00	0.00	0.00	0.00	-0.04	0.00	0.00	0.00	1.44	2.36	1.77	1.86	0.14	-0.72	0.00	0.00	-0.01	1.40	0.30
Inflation Indicators (b)																				
PCE Deflator	0.02	0.03	0.03	0.07	0.07	0.10	0.08	0.10	0.05	0.02	0.21	0.20	0.21	0.21	0.03	0.00	0.04	0.09	0.12	0.11
"Core" PCE Deflator	0.02	0.04	0.04	0.08	0.08	0.11	0.09	0.07	0.03	-0.10	-0.11	-0.12	-0.11	-0.07	0.00	0.00	0.04	0.09	-0.08	-0.04
Consumer Price Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.15	-0.08	-0.08	-0.07	0.07	0.00	0.00	0.00	-0.06	-0.02
"Core" Consumer Price Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.09	-0.21	-0.20	-0.20	-0.11	0.02	0.00	0.00	0.00	-0.13	-0.07
Producer Price Index (Final Demand)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.19	-0.50	-0.50	-0.48	-0.32	0.00	0.00	0.00	0.00	-0.30	-0.20
Employment Cost Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.23	0.13	0.06	-0.32	-0.43	-0.39	0.00	0.00	0.15	-0.27
Real Disposable Income (b)	-0.25	-0.44	-0.53	-0.20	-0.07	-0.93	-0.93	-0.98	-0.27	2.37	1.83	-1.12	-1.59	-3.24	-3.20	-0.29	-0.35	-0.73	0.70	-2.14
Nominal Personal Income (b)	-0.14	-0.35	-0.38	-0.11	0.02	-0.57	-0.72	-0.75	0.00	2.17	1.85	-1.10	-1.67	-3.13	-3.20	-0.30	-0.24	-0.51	0.73	-2.13
Industrial Production (a)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	2.28	18.48	-0.83	0.00	-1.26	0.00	0.00	0.00	0.00	2.33	1.82
Capacity Utilization	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	1.04	2.88	1.00	0.82	0.62	0.63	0.63	0.00	0.00	1.27	0.67
Corporate Profits Before Taxes (b)	4.02	3.41	1.49	1.71	1.09	0.42	0.73	-0.92	0.21	-3.00	1.00	-3.00	0.00	5.00	-2.00	-2.00	2.65	0.34	-1.22	0.11
Corporate Profits After Taxes	1.10	0.97	-2.70	-4.32	-0.37	-0.77	-0.05	-0.86	0.97	-3.20	0.50	-2.70	-1.70	3.40	-3.10	-3.30	-1.28	-0.51	-1.14	-1.32
Federal Budget Balance (c)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-335.58	335.58	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	-0.01	0.00	0.00	-4.10	-3.65	-3.65	-3.53	-3.43	-3.30	0.00	0.00	-1.94	-3.48
Nonfarm Payroll Change (e)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.67	-179.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	-43.33	5.00
Unemployment Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.13	-0.10	0.00	0.00	0.00	0.00	0.00	0.05	-0.03
Housing Starts (f)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.11	0.09	0.10	0.06	0.04	0.03	0.00	0.00	0.07	0.06
Light Vehicle Sales (g)	0.00	-0.03	-0.02	0.06	0.06	0.02	0.04	0.13	-0.01	-0.03	1.11	0.72	0.77	-0.45	-0.24	-0.10	0.00	0.06	0.45	-0.01
Crude Oil - Brent - Front Contract (h)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.00	6.00	4.00	0.00	0.00	0.00	0.00	0.00	3.25	1.00
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	-0.05	-0.05	-0.10	-0.05	-0.05	-0.05	0.00	0.00	-0.02	-0.06
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	0.00	-0.25	-0.20	-0.20	-0.10	-0.10	-0.15	0.00	0.00	-0.11	-0.14
3 Month Bill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	0.00	0.00	0.00	0.00	0.00	0.00	-0.01
2 Year Note	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	-0.05	-0.05	-0.05	-0.10	-0.15	0.00	0.00	-0.03	-0.01
5 Year Note	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.15	-0.10	-0.10	-0.10	-0.10	-0.10	0.00	0.00	-0.06	-0.01
10 Year Note	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.30	-0.25	-0.20	-0.10	-0.10	-0.15	0.00	0.00	-0.14	-0.09
30 Year Bond	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.35	-0.25	-0.10	0.05	0.05	0.05	0.00	0.00	-0.15	-0.10

Forecast as of: August 12, 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 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%	-3.7%	4.7%	3.6%	3.4%	3.1%	2.9%
Advanced Economies ¹	2.2%	1.9%	-6.1%	3.8%	2.0%	1.6%	0.8%	1.2%
United States	3.0%	2.2%	-4.9%	3.8%	2.4%	1.8%	1.0%	1.3%
Eurozone	1.9%	1.3%	-8.3%	4.0%	1.8%	1.2%	0.5%	1.2%
United Kingdom	1.3%	1.5%	-10.1%	5.9%	2.5%	1.8%	0.8%	1.4%
Japan	0.3%	0.7%	-5.5%	1.0%	1.0%	0.5%	0.0%	0.2%
Canada	2.0%	1.7%	-6.6%	3.8%	2.3%	1.9%	0.6%	1.7%
Developing Economies ¹	4.5%	3.6%	-2.0%	5.3%	4.8%	4.8%	4.7%	4.1%
China	6.7%	6.1%	1.6%	9.5%	2.1%	2.9%	2.7%	1.8%
India	6.8%	4.9%	-1.6%	3.6%	3.9%	3.7%	5.0%	3.6%
Mexico	2.2%	-0.3%	-15.0%	-3.4%	4.9%	3.6%	3.2%	3.5%

Forecast as of: August 12, 2020

¹Aggregated Using PPP Weights

Source: International Monetary Fund and Wells Fargo Securities

Changes to the Wells Fargo International Economic Forecast

	GDP				CPI			
	2018	2019	2020	2021	2018	2019	2020	2021
Global (PPP Weights)	0.00%	-0.01%	0.09%	0.35%	0.00%	0.00%	0.05%	-0.02%
Advanced Economies ¹	0.00%	0.00%	0.46%	0.86%	0.00%	0.00%	0.05%	0.03%
United States	0.00%	0.00%	1.39%	0.47%	0.00%	0.00%	-0.06%	-0.02%
Eurozone	0.00%	0.00%	-0.63%	1.13%	0.00%	0.00%	0.06%	-0.07%
United Kingdom	0.00%	0.00%	-1.14%	1.80%	0.00%	0.00%	0.12%	0.09%
Japan	0.00%	0.00%	0.92%	1.32%	0.00%	0.00%	0.07%	0.05%
Canada	0.00%	0.00%	1.17%	0.47%	0.00%	0.00%	0.26%	0.29%
Developing Economies ¹	0.00%	-0.01%	-0.17%	-0.01%	0.00%	0.00%	0.05%	-0.05%
China	0.00%	0.00%	0.39%	0.00%	0.00%	0.00%	0.00%	0.00%
India ²	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%
Mexico	-0.01%	0.01%	-5.54%	-1.72%	0.00%	0.00%	0.21%	0.15%

Forecast as of: August 12, 2020

¹Aggregated Using PPP Weights

Source: International Monetary Fund and Wells Fargo Securities

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	0.25%	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	0.15%	0.20%	0.25%	0.35%	0.40%	0.50%
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	0.30%	0.35%	0.40%	0.45%	0.55%	0.70%
	10-Year Note					
	2020		2021			
	Q3	Q4	Q1	Q2	Q3	Q4
United States	0.70%	0.90%	1.05%	1.20%	1.30%	1.35%
Eurozone ²	-0.40%	-0.25%	-0.15%	-0.05%	0.05%	0.10%
United Kingdom	0.25%	0.45%	0.55%	0.60%	0.65%	0.70%
Japan	0.05%	0.10%	0.10%	0.10%	0.15%	0.15%
Canada	0.60%	0.80%	0.90%	1.00%	1.05%	1.15%

Forecast as of: August 12, 2020

¹ ECB Deposit Rate ² German Government Bond Yield

Source: International Monetary Fund and Wells Fargo Securities

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%	0.00%
Eurozone ¹	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
United Kingdom	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Japan	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Canada	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

	2-Year Note					
	2020		2021			
	Q3	Q4	Q1	Q2	Q3	Q4
United States	-0.05%	-0.05%	-0.05%	-0.05%	-0.10%	-0.15%
Eurozone ²	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
United Kingdom	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Japan	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Canada	-0.05%	-0.05%	0.00%	0.00%	0.00%	0.00%

	10-Year Note					
	2020		2021			
	Q3	Q4	Q1	Q2	Q3	Q4
United States	-0.30%	-0.25%	-0.20%	-0.10%	-0.10%	-0.15%
Eurozone ²	-0.15%	-0.10%	-0.10%	-0.10%	-0.10%	-0.10%
United Kingdom	-0.15%	-0.15%	-0.10%	-0.10%	-0.10%	-0.10%
Japan	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Canada	-0.15%	-0.10%	-0.05%	0.00%	0.00%	0.00%

Forecast as of: August 12, 2020

¹ ECB Deposit Rate ² German Government Bond Yield

Source: International Monetary Fund and Wells Fargo Securities

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