



This Economic Outlook may include opinions, forecasts, projections, estimates, assumptions, and speculations (the "Contents") based on currently available information which is believed to be reliable and on past, current and projected economic, political, and other conditions. There is no guarantee as to the accuracy or completeness of the Contents of this Economic Outlook. The Contents of this Economic Outlook reflect judgments made at this time and are subject to change without notice, and the information and opinions herein are for general information use only. Regions specifically disclaims all warranties, express or implied, with respect to the use of or reliance on the Contents of this Economic Outlook or with respect to any results arising therefrom. The Contents of this Economic Outlook shall in no way be construed as a recommendation or advice with respect to the taking of any action or the making of any economic, financial, or other plan or decision.

2020 Economic Outlook: What's Wrong With This Picture?

As 2019 began, many analysts and market participants were on recession watch which, even if not quite justified, was at least understandable. Between equity prices taking a painful tumble in Q4 2018 and the FOMC having, in December, delivered the fourth Fed funds rate hike of 2018 while suggesting further rate hikes were on tap for 2019, it was quite understandable that there was a growing sense of pessimism over the course of the U.S. economy as 2019 began. Against the gloomy financial backdrop, however, the reality was that the economic data remained fairly solid, to the point that, at least in our view, concerns over the economy slipping into recession in 2019 were overdone. Hence the title of our *2019 Economic Outlook*: "Gloom, Despair, Agony, And, Oh By The Way, Above-Trend Economic Growth."

It wasn't that we completely dismissed the possibility of a recession starting in 2019 – we did not. But, while we acknowledged that the downside risks to growth had intensified, our view was that an awful lot would have to go wrong for the U.S. economy to slip into recession in 2019. To be sure, some of what we thought could go wrong did go wrong, such as trade. As we noted, "anything that would further inhibit trade flows would be a negative for global growth and domestic growth, including the U.S. manufacturing sector." That this came to pass is a main reason 2019 real GDP growth fell a bit short of our forecast, but growth was nonetheless above trend as our forecast anticipated.

As 2020 begins, however, gloom, despair, and agony have given way to, well, if not complacency, then something close to it. At least based on expectations of real GDP growth settling in right around 2.0 percent and central banks around the globe having signaled that they are on hold for some time to come. Yet, we can't help but admit to a certain sense of unease. To be sure, our forecast of 2020 real GDP growth is pretty much in line with the consensus, which in and of itself is a bit unsettling. Moreover, as we frequently note, while the current expansion, now in its 11th year, may be old, it hasn't done a lot of living. In other words, that the pace of growth over the current expansion has been so slow means there are few visible signs of the imbalances that tend to build up as expansions endure, thus sowing the seeds of recession.

While it is widely expected that the current expansion will endure through 2020, we can't shake a nagging sense of unease, along the lines of "what's wrong with this picture?". As we often do, we'll once again offer the words of Rudi Dornbusch – "in economics, things take longer to happen than you think they will and then they happen faster than you thought they could" – as a caution against complacency. For instance, with growth trending at such a relatively slow pace and little capacity for policy – fiscal or monetary – responses, the economy is more vulnerable to adverse

shocks, and this is even more true globally than for the U.S. economy. Moreover, as we look across the U.S. economy, we do see some cracks below the surface, most notably the combination of elevated levels of debt and compressing profit margins in the nonfinancial corporate sector. While we've been consistent in our view that this is a story for 2021 and beyond, rather than for 2020, we think it unwise to rule out something triggering a disruption in credit markets that could drag the economy into recession in 2020. At the same time, however, we also have to acknowledge there are upside risks to our baseline forecast, which we discuss later.

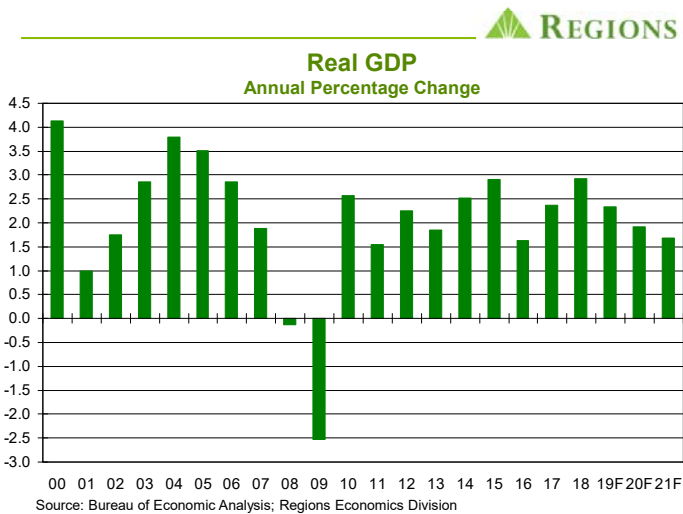
The current expansion is closer to its end than to its beginning, and we continue to see the balance of risks as being tilted to the downside, albeit only slightly. Nonetheless, we expect the current expansion to endure into 2021. In what follows we'll discuss some of the main elements of our baseline 2020 forecast. And, as we do each year at this time, we'll look both back and ahead; back to see how we did with our 2019 forecast and ahead to discuss what we think 2020 holds in store. We do so in a series of questions framing what we see as some key points of interest for the U.S. economy in 2020. Our answers will lay down markers for how we expect 2020 to turn out, and as we go we'll look back to our answers for 2019 and see how we fared on our calls. Doing so, as we do each year, is a useful reminder that those practitioners who do not find economic forecasting to be a humbling exercise probably should.

QUESTION 1: Real GDP growth – over or under 2.25 percent? Under – we look for real GDP growth of 1.9 percent in 2020. We set the same 2.25 percent bar for 2019 real GDP growth, but last year we took the over, as our baseline forecast anticipated 2.6 percent growth. While we won't have the initial Q4 2019 data until later this month, we have Q4 real GDP growth tracking just above 2.0 percent. This would put full-year 2019 real GDP growth at 2.3 percent, below our forecast but nonetheless above the economy's "speed limit," or, the rate of growth that can be sustained over time without sparking inflation pressures, which at present we peg at under 2.0 percent. Private sector spending grew at a slower pace than our 2019 baseline forecast anticipated, while public sector spending grew at a faster pace.

After having been the main driver of GDP growth in 2019, there is little reason to think that U.S. consumers are running out of steam, and consumer spending will again be the primary support for GDP growth in 2020. Household balance sheets are in better condition than at any time over the past two decades, growth in wage and salary earnings (the largest component of total personal income) continues to significantly outpace inflation, monthly household debt service burdens continue to hover near record lows, and consumer confidence remains elevated. We do, however, expect growth in labor earnings to slow a bit in 2020, which will in turn lead to growth in consumer spending slowing from 2019's pace.

Helped along by lower mortgage interest rates and solid demand-side conditions, residential fixed investment gradually firmed over

the course of 2019, and we look for further improvement in 2020. That said, lingering supply-side constraints will act as a cap on the contribution of residential fixed investment to top-line real GDP growth. The most concerning element of our miss on our forecast of 2019 real GDP growth was business investment spending coming in considerably weaker than our forecast anticipated, and we see business investment as the main wild card in our forecast of 2020 real GDP growth, as we discuss below. We look for trade to be a modest drag on top-line growth, as was the case in 2019.



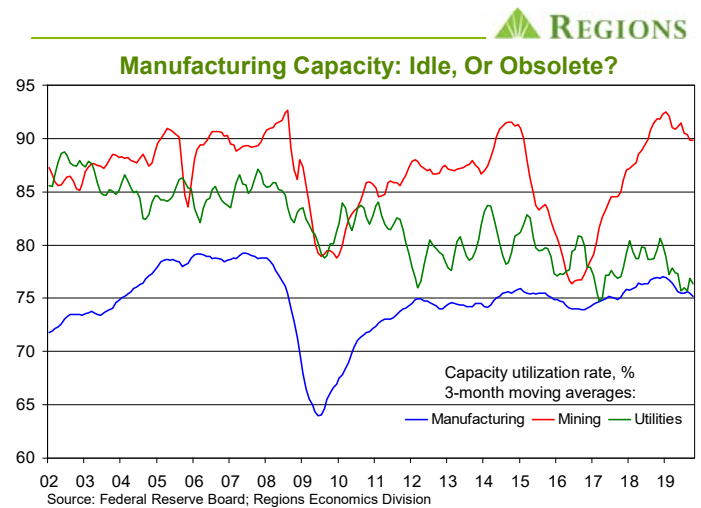
It is worth noting that Boeing’s decision to halt production of the 737 Max will wreak havoc on Q1 2020 real GDP growth, and could impact full-year growth. The hit to Q1 growth could be at least one-half of one percentage point. If production resumes at some point, then obviously there would be an offsetting boost to real GDP growth, but at this point it is not clear if, let alone when, this will happen. As such, while our baseline forecast anticipates the drag in Q1, we have no basis on which to incorporate a resumption of production. Also note that the effects of Boeing’s production halt will impact the data on manufacturing orders and shipments, industrial production, and the ISM Manufacturing Index.

QUESTION 2: Growth in real business fixed investment – over or under 2.5 percent? Under. Our marker last year was 4.0 percent growth in real business fixed investment, and we took the over. This was a reflection of business investment having been on a nice roll, a roll that, by the way, began in 2017. While we thought the provision in the 2017 tax bill allowing for immediate expensing of capital spending would help sustain growth in capital spending in 2019, we believed the more relevant drivers would be firms looking to upgrade aged and inefficient capital stocks and also looking to substitute capital for labor to counter increasingly tight labor market conditions. We did, however, cite the effects of trade disputes as a downside risk to business investment in 2019.

Escalating trade tensions contributed to sagging global economic growth in 2019 and took a significant toll on business sentiment. As a result, business investment slumped over the middle quarters of 2019, and even if, as we anticipate, the Q4 GDP data show modest growth, full-year 2019 growth in real business fixed investment will be right around 2.5 percent, well below our forecast. Though there were signs that global economic growth had begun to stabilize in late-2019 and there were positive

developments on the trade front as 2019 came to a close, whether this will be enough to help spark a meaningful rebound in business investment remains to be seen. In order for that to be the case, global growth would have to reaccelerate rather than merely stabilize at a very low rate, and firms would have to have confidence that the “phase one” trade deal between the U.S. and China heralds a meaningful and lasting easing of global trade tensions. Let’s just say the jury is still out on both of those counts.

There are other factors that, at least in our view, will be more critical in shaping the path of business investment spending in 2020. First, whether or not the U.S. manufacturing sector breaks free of the malaise that gripped it over the back half of 2019. Second, whether narrowing corporate profit margins lead firms to pull the in reins on capital spending. Third, whether labor market conditions tighten to the point that firms are incented to step up business investment to further enhance labor productivity and/or more aggressively substitute capital for labor – we’ve argued that over much of the current expansion, readily available and relatively cheap labor led to the substitution of labor for capital. Fourth, is a notably low capacity utilization rate a sign that the manufacturing sector is awash in idle capacity and, as such, has no incentive to add to the existing capital stock, or is the utilization rate being held down by obsolete capital that remains on the books?



Our premise has been that the need to upgrade aged, inefficient capital and growing incentive to enhance labor productivity would fuel growth in business investment spending. Clearly, that premise was called into question in 2019, but we’re not willing to concede defeat on this point just yet. Still, in a slower growth environment, there is less upside for business investment than would otherwise be the case. One critical component of business investment is spending on intellectual property products, which is largely overlooked despite accounting for roughly 35 percent of total business investment. Over 90 percent of outlays in this category are for software or research and development, and spending on intellectual property products is a precursor of faster growth in labor productivity. Growth in spending on intellectual property products has easily outpaced growth in spending on structures and on equipment and machinery for some time, which will remain the case in 2020. The main question is whether 2020 will bring a meaningful rebound in spending on physical capital, and on this point we remain a bit skeptical. Our forecast anticipates total real

business fixed investment will grow by around 1.0 percent in 2020. Admittedly, we do not have a lot of conviction in this forecast, and it may prove to be too low – we'd happily be wrong on this one. We are frequently asked why we devote so much attention to business investment, and our answer is always the same. Though consumer spending tends to dominate the discussion of economic growth at any point in time, it is investment that lays the groundwork for economic growth over time. The economy does not grow over time because of consumption. Consumption grows over time as the economy grows, and investment is the key link.

QUESTION 3: Growth in total nonfarm employment – over or under 2.0 million jobs? Under. This is the same marker we laid out for 2019, and we took the over. Though still preliminary, the data show the U.S. economy added just over 2.1 million jobs in 2019, an average of 176,000 jobs per month, down from the 2.679 million jobs added in 2018 (223,000 per month, on average), and we look for job growth to decelerate further in 2020. That job growth has decelerated should be neither surprising nor alarming. After all, real GDP grew by 2.9 percent in 2018, matching 2015 for the fastest growth of any year during the current expansion, and 2018 was, in turn, the best year for job growth since 2015. As the pace of real GDP growth has since slowed, so too has the pace of job growth. A slower pace of job growth in 2020 would be in keeping with our forecast of a slower pace of real GDP growth.

It is not uncommon for people to cite the monthly *Job Openings and Labor Turnover Survey*, or, the “JOLTS” data, as evidence of either the lack of labor or the lack of skilled labor infringing on the pace of hiring. Firms are not “running out of people to hire,” though we routinely hear this offered as an explanation for slowing job growth. Over the past 44 months, over 4.5 million people per month have transitioned to being employed after not having been in the labor force the prior month, a notably high number relative to historical averages, even when accounting for the size of the labor force. One driver of this steady inflow has been rising participation amongst the 25-to-54 year-old age cohort, i.e., the “prime working age” population. While this obviously cannot persist forever, we think it has further to run, which will help sustain job growth as the economy continues to expand in 2020.

While a lack of skilled labor is a problem in some industry groups, this does not account for the slowing pace of overall job growth. Though many simply use the headline JOLTS number, i.e., the number of open jobs, to make their case, the industry detail tell a different story. For instance, the job opening rate in the leisure & hospitality services industry is, and has for some time been, well above the rate for the private sector as a whole, and the share of job openings accounted for by this industry group is well above its share of total nonfarm employment. So, is this a question of skills or is this, despite minimum wage increases and firms having voluntarily raised entry level wages, a question of wages?

Though slower than in 2018 and 2019, the pace of job growth in 2020 will be sufficient to keep downward pressure on the unemployment rate, which we expect will end 2020 at or slightly below the 3.5 percent rate posted in December 2019. Aside from the pace of monthly job growth, here are a couple of indicators to watch for signs of stress in the labor market and in the broader economy, respectively. First, watch the length of the average workweek which, as we've frequently noted, remains shorter than

would be associated with a labor market at full employment. If firms were truly feeling labor supply constraints, they have room to increase total labor input by adding hours for their current workers. Second, one of the hallmarks of the current expansion is how broad based job growth has been. We routinely point to the one-month hiring diffusion index, which measures the breadth of hiring across private sector industry groups, as one of our favorite “beneath the headlines” indicators. If we see a sustained downturn in the hiring diffusion index, this will be a sign that hiring has become increasingly concentrated in a smaller number of industry groups, which would be a sign of vulnerability for the expansion.

QUESTION 4: Average hourly earnings growth (year-on-year) – over or under 3.5 percent in Q4 2020? Under. In our 2019 outlook we set the bar for growth in average hourly earnings at 3.5 percent in Q4 2019, and took the under. This proved the correct call, as average hourly earnings were up 3.0 percent year-on-year in Q4 2019. While we look for some further acceleration in wage growth as the labor market tightens further over the course of 2020, we think growth will nonetheless still be shy of 3.5 percent in Q4 2020. Over the past few years, our forecasts of wage growth have consistently been below-consensus, but have been closer to the mark. Our view is that, on net, labor force flows have acted as a drag on wage growth, and this has been reflected in our below-consensus forecasts of wage growth.

On average, 4.599 million people per month transitioned from not in the labor force in one month to employed in the following month in 2019, topping 2018 as the highest number on record. To be sure, over this same time there has been a steady, but slower, flow out of the labor force. On the whole, we see net labor force flows as having been a persistent drag on wage growth. One way to think about this is that those transitioning from not in the labor force to employed tend to have less experience or have, due to having been out of the labor force for some length of time, seen their skills lapse (or at least face this perception). These factors tend to hold down wages for those transitioning into the ranks of the employed. To the extent those leaving the labor force – the vast majority of whom are employed upon exit – are older and have earned higher wages, this would be a drag on growth in average hourly earnings even if labor force inflows and outflows exactly offset each other.

Of course, on net, inflows have easily topped outflows, which only reinforces the “flow effect” we've outlined here. Those who have been in the labor force for longer periods of time, whether in the same job or moving from one job to another, have seen stronger growth in earnings (the “tenure effect”). The broad average hourly earnings metric, however, captures both of these effects. If we are correct that by year-end 2020 we will see inflows into the labor force taper off, that will lead to faster growth in measured average hourly earnings, and if this happens either sooner or to a greater degree than we expect, wage growth will outperform our forecast.

That said, there are other factors that have weighed on wage growth over the course of the current expansion, some of which will remain in play in 2020. As noted above, the length of the average workweek is still below where it would be were the labor market truly at full employment. We have referred to the still-short workweek as an underappreciated form of labor market slack, and firms still have ample capacity to add to total labor input by adding

hours rather than by adding workers. Adding hours does not put material upward pressure on wages, so to the extent firms go this route it won't bolster hourly earnings growth.

Additionally, as we've often discussed, anemic labor productivity growth and persistently low inflation have acted as material drags on wage growth over recent years. Unless and until these factors begin to reverse – and the signs are mixed as we head into 2020 – even as labor force inflows begin to diminish, wage growth will remain below the 3.5-to-4.0 percent range that has historically been more consistent with a labor market at full employment. Still, while we think wage growth will be shy of 3.5 percent in Q4 2020, we do think it will be closer than at any point in the current expansion. As a side note, our 2019 forecast called for productivity growth of 1.6 percent. Productivity growth was running easily ahead of this pace, then stumbled badly in Q3 before righting itself in Q4. When the final Q4 data are released, full-year productivity growth should be within one-tenth of a point on either side of our forecast, better but nonetheless still well below historical norms.

QUESTION 5: Growth in real consumer spending – over or under 2.6 percent? Under. We picked 2.6 percent as the line here as it looks like, pending the Q4 GDP data, that's where full-year 2019 growth will come in, and our point is that we expect a slower pace of growth in real consumer spending this year. Don't take this to mean that we are concerned about U.S. consumers – we're not. Nonetheless, we do look for growth in consumer spending to decelerate a bit in 2020, which in turn helps shape our expectation of a slower pace of top-line real GDP growth.

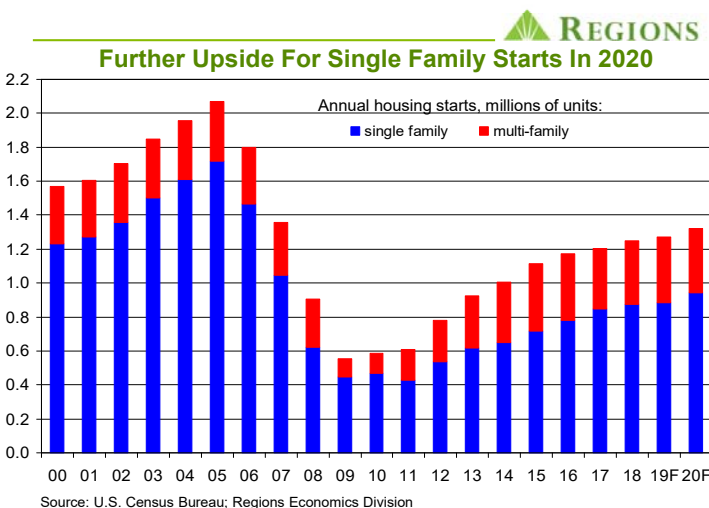
From pretty much day one of the current expansion, we've argued that growth in consumer spending during this cycle would be more closely aligned with growth in disposable personal income than had been the case in the years prior to the 2007-09 recession. Though there have been brief periods where the two have been out of alignment, our premise has been broadly correct, and we expect that will remain the case in 2020. As such, even if wage growth holds up as our forecast anticipates, a slower pace of job growth will mean slower growth in aggregate labor earnings, the largest component of personal income. While the slightly lower saving rate our forecast anticipates will provide a bit of a buffer, slower income growth will be the dominant factor. Additionally, we expect the pace of motor vehicle sales to slow further in 2020, which will weigh on growth in spending on consumer durables.

All of this adds up to a slower pace of growth in real consumer spending in 2020. If job growth and/or wage growth prove to be stronger than our baseline forecast anticipates, then our forecast of 2.5 percent growth in real consumer spending will be too low. Another possibility is that consumers abandon what has, on the whole, been a highly disciplined approach to debt over the course of this expansion. Yes, you read that right, and, yes, that is what we meant to write. The reality is that growth of household debt over the current expansion has significantly lagged growth rates seen over prior expansions. Moreover, growth in disposable personal income excluding transfer payments, which we see as the relevant pool of income out of which debt service payments are made, has significantly outpaced growth in household debt. This has left monthly household debt service burdens hovering at all-time lows. So, while consumers could become more willing to turn to debt to facilitate current consumption spending, we'd be very

much surprised to see materially faster growth in household debt in 2020 than has been the case over the past several years.

QUESTION 5 Bonus Follow Up: a) Number of new record levels of household debt we'll see in 2020? Four – as in, one per quarter; b) Number of screaming headlines we'll see in 2020 containing the words "record level of household debt" – over or under infinity? Over; c) Number of stories beneath these headlines that will attempt to put "record level of household debt" in any kind of meaningful context – over or under zero? Under. Okay, fine, perhaps we're exaggerating, at least on parts b and c, but not too much. We've routinely referred to "record level of household debt" as a headline in search of a story, yet, upon each quarterly release of updated data on household debt, we're treated to a new batch of screaming headlines atop stories quoting an "expert" warning us that households are "choking on debt" (our personal favorite), featuring examples of individuals who have made curiously bad choices but yet are offered as being representative of all consumers. We don't look for that to be any different in 2020.

QUESTION 6: Housing starts – over or under 1.350 million units in 2020? Under. Last year, we set the bar for total housing starts at 1.265 million units, and we took the under. Though close, it looks as though total starts will come in over our mark – through November, the not seasonally adjusted data show 1.181 million total starts, and the December data will likely push total starts a bit over our mark. Though we were close on our forecast of total housing starts, the mix of starts surprised us. Single family starts came in below our forecast while multi-family starts came in above our forecast. Still, single family starts entered 2019 on very shaky ground and got stronger as the year progressed, and our 2020 forecast anticipates single family starts will make more of a contribution to total starts than was the case in 2019.



That said, we're not looking for anything more than the steady but slow growth that has characterized the single family segment of the housing market over the course of this expansion. As we've argued all along, however, this is much more a reflection of the supply side of the market than the demand side of the market. Shortages of buildable lots and what in many markets is a much tougher regulatory environment are compounding shortages of skilled construction labor, thereby acting as a persistent drag on growth in single family construction. We see no reason to think

these supply side constraints will ease to a meaningful degree in 2020. As such, though builder confidence stood at a two-decade high and order backlogs were growing as 2019 came to a close, we look for more of the same in 2020, i.e., steady but slow growth in single family starts. While 2018's affordability shock made it clear that demand is vulnerable to materially higher mortgage interest rates, we do not anticipate such an increase in 2020.

While we're comfortable with our view of the single family segment of the market, we remain somewhat confused by the multi-family segment. Though faced with the largest and most persistent backlog of under construction multi-family units since the mid-1970s, new multi-family starts have yet to falter. As we routinely note, we think demand for multi-family rental units is strong, but we question whether it is strong enough to absorb all of the supply coming down the line, a distinction apparently beyond the grasp of those who, with an annoying frequency, feel compelled to point out to us our "lack of understanding" of the housing market. In any event, the ratio of multi-family completions to starts has been notably low for some time, as has the ratio of multi-family starts to permits. Our sense is that reporting abnormalities have resulted in multi-family permits being overstated – the annual benchmark revisions will help clear this up, but those are several months down the road. On the whole, however, after having been a drag on top-line real GDP growth in both 2018 and 2019, we look for residential fixed investment to add to top-line growth in 2020.

As a side point, we look for total home sales (new and existing) to top the 6.0 million mark in 2020. Though the data are not yet available, a "normal" December would have pushed total 2019 home sales slightly above the 6.0 million mark. But, while new home sales finished 2019 on a strong upward trajectory, existing home sales limped to the finish line, with diminishing inventories acting as an increasingly onerous drag on existing home sales. While we look for a healthy increase in new home sales in 2020, the path of existing home sales will depend on whether or not there is meaningful improvement in the inventory picture and, at least at present, we're not too optimistic on this point. Additionally, we look for the CoreLogic HPI to post an increase of between 3.25 and 3.50 percent on an annual average basis for 2020.

QUESTION 7: Core PCE inflation – over or under 2.0 percent at year-end 2020? Over. In last year's outlook, we set the bar at 2.2 percent and took the over, which proved far too ambitious. Core PCE inflation was running at 1.6 percent as of November, and will likely have held that pace in December, which would also leave full-year 2019 core PCE inflation at 1.6 percent. While our baseline forecast anticipates full-year 2020 core PCE inflation of 1.9 percent, we think that by year-end 2020 core PCE inflation will be above 2.0 percent. Recall that the PCE Deflator is the FOMC's preferred measure of inflation, which is why we focus on it here.

We had looked for core goods prices to firm up in 2019, particularly given the prospect of tariffs being applied to imported consumer goods. Additionally, we thought a modestly weaker U.S. dollar would act as a light tailwind for core goods inflation in 2019. The effects of tariffs were not as significant as we had anticipated, in part because the scope and magnitude of tariffs were less than we had anticipated, and also in part because, while there are some exceptions such as furniture, there was less pass through to goods prices than we had anticipated, as large retailers used their leverage to induce suppliers to bear a larger share of the tariff

burden. At the same time, core services inflation was slightly milder in 2019 than our forecast anticipated. The net result was core inflation falling short of our forecast in 2019.

We look for core PCE inflation to push higher in 2020, but not nearly to the point that inflation will become a major concern for the FOMC. Base effects will make the over-the-year comparisons easier, particularly in Q1 2020. More fundamentally, we look for faster core services inflation, as service providers have much more latitude to pass along higher labor costs in the form of higher output prices than do producers of goods. Within core services, medical care costs will be the main wild card in 2020, and we think the risks here are to the upside. The path of core goods prices will be shaped by tariffs and the exchange value of the U.S. dollar, though we suspect these effects will largely neutralize each other in 2020, which would mean core goods prices will not make a meaningful contribution to core PCE inflation.

QUESTION 8: The mid-point of the Fed funds rate target range at year-end 2020 – over, under, or at 1.625 percent? At, though from our introductory paragraphs, you'll understand that we don't necessarily have a lot of conviction in this call. Our 2019 forecast anticipated a single 25-basis point hike in the target range in 2019. Sure, while that may sound like crazy talk now, it was actually below consensus expectations at the time we made our 2019 forecast, not to mention below the two rate hikes implied by the FOMC's December 2018 dot plot. As it turned out, the FOMC instead delivered three 25-basis point funds rate cuts in 2019.

The December 2019 dot plot implies no changes in the funds rate target range in 2020, leaving the mid-point of the range at 1.625 percent. If the economy plays out – growth around 2.0 percent with mild inflation pressures – as is widely anticipated, including by the FOMC, there would be little rationale for any changes in the Fed funds rate. The FOMC is content to let the cumulative effects of 2019's three rate cuts make their way through the economy, particularly given that overall financial conditions are far more accommodative as 2020 begins than was the case as 2019 began.

The bar for any changes in the Fed funds rate is set high, though at present the bar for a rate hike is considerably higher than the bar for a rate cut. Indeed, in his press conference following the December 2019 FOMC meeting, Chairman Powell stated that he "would want to see a significant move up in inflation that is also persistent" before he would want to raise the funds rate to address concerns over inflation, and most other FOMC members likely share this view. Even before Chairman Powell put it in those terms, we argued that the next move in the funds rate will be a rate cut, given how we see the economy playing out and that we see the risks to the outlook being tilted to the downside. Whether that means a rate cut in 2020 or not until 2021 remains to be seen. But, as we discussed in our opening paragraphs, we can't shake the nagging feeling that 2020 won't play out as calmly and orderly as many, including global central banks, seem to expect, which would seem to up the odds of a rate cut prior to year-end 2020.

QUESTION 9: U.S. dollar – year-end 2020 value more than 5.0 percent below its year-end 2019 value? No. As measured by the Fed's Broad Dollar Index, we expect the value of the U.S. dollar to end 2020 no more than 5.0 percent below its year-end 2019 value. A year ago, we noted that we would not be surprised by the Broad Dollar Index hitting a new record high, but nonetheless expected

it to end 2019 slightly lower than it ended 2018. As it turned out, the Broad Dollar Index did hit a new high in 2019, and finished the year roughly 0.5 percent above its 2018 close. Though we could see more volatility in the exchange value of the dollar in 2020, we think the Broad Dollar Index will be lower at year-end.

With U.S. real GDP growth likely to come in around 2.0 percent and the FOMC on hold, it would follow that any improvement in global economic growth would diminish demand for U.S. dollar denominated assets, thus putting downward pressure on the U.S. dollar. Trade policy looms as a wild card in the path of the U.S. dollar in 2020; renewed trade tensions would support a firmer U.S. dollar, but further progress on resolving trade disputes peacefully would put downward pressure on the U.S. dollar. As always, the obvious caveat in any forecast of the path of the U.S. dollar is that any flare-ups of geopolitical tensions would raise demand for U.S. dollar denominated assets, thus propping up the exchange value of the dollar. In any given year, a considerable degree of volatility in the exchange value of the U.S. dollar is to be expected, but we look for the Broad Dollar Index to be slightly lower when 2020 comes to a close than it was at year-end 2019.

QUESTION 10: What are some of the main risks to our baseline 2019 forecast and which way does the balance of risks tilt? No forecast is complete unless it comes with an assessment of the key risks to that forecast. Still, any assessment of forecast risks reflects only the known unknowns, which isn't what keeps us up at night. What keeps us up at night is worrying about what we don't know that we don't know, which is something you typically only find out the hard way. Either way, it is always a useful exercise to sort through the known unknowns, the main ones we touch on here.

A year ago, we cited trade policy as the biggest downside risk to our outlook, and we think that remains the case in 2020, even if the degree of downside risk has diminished with the "phase one" trade deal between the U.S. and China. To us, however, the two main questions around the phase one deal are: 1) does this deal make things appreciably better, or does it simply keep things from getting worse; and 2) will this deal provide a meaningful boost to global business sentiment, thus acting as a catalyst for stronger business investment, here and abroad. Keep in mind that the truly tough issues, such as intellectual property rights, have yet to be addressed, and there is no guarantee of a resolution in 2020. Also, there are other avenues for trade disputes, such as the U.S. and the European Union, to shake global business confidence and disrupt global economic growth in 2020.

As we noted at the outset, the combination of a high level of debt and compressing profit margins in the nonfinancial corporate sector leaves us with an uneasy feeling. Though, as we noted earlier, we think this is more of a 2021 story, we think it at least worth including in our inventory of downside risks for 2020.

Other downside risks include significant deterioration in consumer and business confidence. It is actually possible to talk yourself, at least collectively, into recession, and while consumer confidence held up fairly well in 2019, business sentiment was much less firm. Further deterioration in business confidence would intensify the weakness already seen in capital spending, and the danger is that sagging business confidence could ultimately lead firms to cut back on hiring or even begin laying off workers. Any softening in labor market conditions would dent consumer confidence, which in turn

would weigh on consumer spending. We've argued that a solid labor market will keep a floor under consumer confidence, but confidence can be a fleeting thing – once it starts to go, it can go in a hurry. Aside from economic factors, geopolitical tensions also pose a threat to business and consumer confidence.

Many are pointing to political risk, specifically the 2020 elections, as a potential downside risk to the U.S. economy. The premise is that a change in administrations could herald a less business friendly environment, with potentially sweeping changes in tax and regulatory policy. Though we do not dismiss these concerns out of hand, we think which party controls the Senate will have a much bigger impact on fiscal and regulatory policy than which party controls the White House, on the premise that a divided Congress will be a significant barrier to meaningful tax and/or regulatory changes. Either way, to the extent worries about the political environment do impact decisions on capital spending and/or hiring, we think it unlikely that would happen before late-2020.

Last year at this time we struggled to identify meaningful, and plausible, upside risks to our baseline outlook. This year, that task is a bit easier. A stronger rebound in global economic growth in a more benign trade environment could mean faster growth in U.S. exports, and in turn a smaller trade deficit, than our baseline forecast anticipates, which would mean faster top-line real GDP growth. As we noted above, our forecast for business investment spending is a bit on the conservative side. If conditions in the manufacturing sector improve more than we anticipate, and should business confidence rebound meaningfully, growth in business investment could easily outperform our forecast.

While our baseline forecast anticipates residential fixed investment will make a contribution to full-year 2020 real GDP growth, we expect that contribution to be fairly modest. As with business fixed investment, this is an area in which some others have a more aggressive 2020 forecast than we do. It could be that multi-family starts and completions outperform our forecast. But, even if this is the case, multi-family construction has a much smaller impact on GDP than does single family construction, so it would have to be the case that multi-family activity significantly outperforms our forecast in order for there to be a meaningful boost to top-line GDP growth. Any such effect would have to come from single family construction outperforming our fairly upbeat forecast. Given what we think remain binding supply side constraints, that seems unlikely, though we do concede some upside risk. Additionally, it could be that labor productivity growth tops our expectations in 2020, which would be a best-case scenario for real GDP growth, wage growth, corporate profits, and, in turn, monetary policy. No pressure there, right? We cannot rule this out, given that even as investment in physical capital weakened in 2019, investment in intellectual property products continued to grow at a solid rate, which could pay dividends in the form of faster labor productivity growth in 2020 than our forecast anticipates.

Though not an exhaustive list, these are what we see as the most significant risks, downside and upside, to our 2020 forecast. At present, we see the risks as weighted to the downside, i.e., if we're wrong on our forecast of real GDP growth, it is more likely growth will come in below our forecast than above our forecast. Still, we think the upside and downside risks are more balanced now than was the case a year ago. As with each year's outlook, check back next year at this time to see how our 2020 forecast fared.

ECONOMIC OUTLOOK



January 2020

Q2 '19 (a)	Q3 '19 (a)	Q4 '19 (f)	Q1 '20 (f)	Q2 '20 (f)	Q3 '20 (f)	Q4 '20 (f)	Q1 '21 (f)		2017 (a)	2018 (a)	2019 (f)	2020 (f)	2021 (f)
2.0	2.1	2.3	1.3	2.3	1.9	1.9	1.7	Real GDP ¹	2.4	2.9	2.3	1.9	1.7
4.6	3.1	2.3	2.5	2.2	2.0	2.0	2.0	Real Personal Consumption ¹	2.6	3.0	2.6	2.5	1.9
-1.0	-2.3	0.2	0.8	2.5	2.7	2.5	2.4	Real Business Fixed Investment ¹	4.4	6.4	2.2	0.8	2.4
0.8	-3.8	0.5	-1.0	1.0	1.4	1.5	2.1	Equipment ¹	4.7	6.8	1.6	-0.1	1.8
3.6	4.7	5.3	5.1	4.8	4.7	4.4	4.1	Intellectual Property and Software ¹	3.7	7.4	7.7	4.8	4.2
-11.1	-9.9	-9.8	-2.7	1.7	2.0	1.1	-0.1	Structures ¹	4.7	4.1	-4.4	-4.0	0.3
-3.0	4.6	4.9	4.2	3.4	1.6	-1.0	-1.5	Real Residential Fixed Investment ¹	3.5	-1.5	-1.6	3.1	-0.7
4.8	1.7	2.0	1.0	1.0	1.5	0.6	1.1	Real Government Expenditures ¹	0.7	1.7	2.3	1.6	0.7
-980.7	-990.1	-934.5	-966.7	-982.9	-1,003.7	-1,007.9	-1,018.2	Real Net Exports ²	-849.7	-920.0	-962.3	-990.3	-1,023.6
847	894	923	934	943	947	944	938	Single Family Housing Starts, ths. of units ³	852	873	882	942	926
409	388	411	402	382	370	361	355	Multi-Family Housing Starts, ths. of units ³	357	377	389	379	350
17.0	17.0	16.8	16.8	16.8	16.8	16.7	16.6	Vehicle Sales, millions of units ³	17.1	17.2	16.9	16.8	16.3
3.6	3.6	3.5	3.5	3.4	3.4	3.5	3.5	Unemployment Rate, % ⁴	4.3	3.9	3.7	3.5	3.6
1.6	1.5	1.4	1.3	1.5	1.3	1.0	0.8	Non-Farm Employment ⁵	1.6	1.7	1.6	1.3	0.6
1.5	2.9	1.6	2.4	2.0	2.0	1.9	2.6	Real Disposable Personal Income ¹	2.9	4.0	3.0	2.1	2.0
1.7	1.7	1.6	1.9	1.7	1.7	1.9	1.9	GDP Price Deflator ⁵	1.9	2.4	1.7	1.8	1.8
1.4	1.4	1.5	1.9	1.8	1.9	2.0	1.9	PCE Deflator ⁵	1.8	2.1	1.4	1.9	1.9
1.8	1.8	2.0	2.4	2.2	2.3	2.1	2.0	Consumer Price Index ⁵	2.1	2.4	1.8	2.2	1.9
1.6	1.7	1.6	1.9	1.9	1.9	2.1	2.1	Core PCE Deflator ⁵	1.6	1.9	1.6	2.0	2.0
2.1	2.3	2.3	2.4	2.5	2.3	2.4	2.4	Core Consumer Price Index ⁵	1.8	2.1	2.2	2.4	2.3
2.38	2.18	1.70	1.63	1.63	1.63	1.63	1.63	Fed Funds Target Rate Range Mid-Point, % ⁴	0.97	1.78	2.16	1.63	1.63
2.33	1.80	1.79	1.87	1.91	1.90	1.83	1.72	10-Year Treasury Note Yield, % ⁴	2.33	2.91	2.14	1.88	1.65
4.01	3.66	3.70	3.78	3.83	3.81	3.75	3.67	30-Year Fixed Mortgage, % ⁴	3.99	4.54	3.94	3.79	3.61
-2.3	-2.3	-2.3	-2.4	-2.6	-2.7	-2.7	-2.8	Current Account, % of GDP	-2.3	-2.4	-2.3	-2.6	-2.9

a = actual; f = forecast; p = preliminary

- Notes:
- 1 - annualized percentage change
 - 2 - chained 2012 \$ billions
 - 3 - annualized rate
 - 4 - quarterly average
 - 5 - year-over-year percentage change