Potential GDP: Why U.S. growth prospects look stronger now than before COVID-19

By Joe Seydl and Pieter Clerger

As the U.S. economic recovery picks up steam, some observers are wondering what history might tell us about the decade now underway. Might the economy reprise the 1990s growth surge, when labor productivity jumped, helping GDP clip along at around 4% on average? Or is the economy doomed to repeat the sluggish rebound from the 2008 global financial crisis (GFC), or worse, the 1970s, stagflation?

It's too soon to answer that question, but on balance we're more optimistic than the consensus view of economists.

We expect the U.S. economy to bounce back to its pre-COVID-19 growth trend much faster than the rebound from the GFC—as we first said in September 2020—as soon as the first half of 2022. This "quick recovery" view is now more or less the consensus among economists. Where there is less consensus, however, is whether the pre-COVID-19 growth path is still the right benchmark for the economy's growth potential. We're optimistic about this, too.

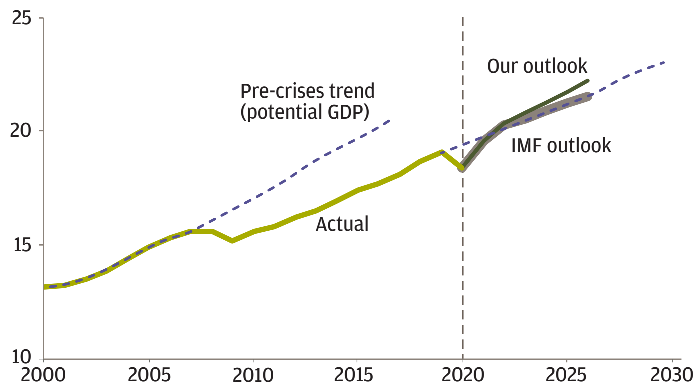
We think the most likely scenario is that the economy's potential GDP growth coming out of the COVID-19 shock may need to be revised upward. An upward revision would be an unquestionably positive development—one we have not seen since the mid-1990s. Specifically, we think potential GDP growth could run at a rate of around 2.25% in the new cycle, up from current estimates of 1.8%.[1]

Why? Underlying this strength, we think, should be a quick growth rate for labor productivity (GDP per hours worked) of 1.75%–2.00%, far higher than the 1.25% rate that prevailed in the last cycle. We discuss here the components of this possible improvement—work from home, more women in the labor force and automation—that could help boost potential GDP growth higher than in past cycles. It could even create something like a 1990s-style growth surge.

A REBOUND UNLIKE THE SLUGGISH POST-GFC RECOVERY

The recovery from the COVID-19 shock is likely to be a much more rapid bounceback—very different from the sluggish rebound after the 2008 GFC. Then, the U.S. the economy never regained its pre-crisis growth rate. The GFC inflicted permanent damage: Labor force scarring, underinvestment in capital, and prolonged household deleveraging and risk aversion.[2]

THE ECONOMY NEVER REGAINED ITS PRE-GFC GROWTH
Annual real GDP ($ trillions)



Sources: Bureau of Economic Analysis, Congressional Budget Office, IMF, J.P. Morgan Private Bank. Data as of June 30, 2021.

[1] Assumed by the Congressional Budget Office, whose projections tend to be the gold standard when it comes to modelling potential GDP. *The Budget and Economic Outlook: 2020 to 2030,* Congressional Budget Office, February 2021.

[2] An alternate interpretation, which may hold some truth, is that the pre-GFC GDP path was unsustainable because it was being financed by higher and higher household and bank leverage.

WHAT IS POTENTIAL GDP?

We believe the potential GDP's components may each get a boost in the years ahead. What is potential GDP, and what are its components?

Potential GDP is an estimate of the total capacity of the economy to produce goods and services, consistent with the Federal Reserve's (Fed's) inflation objective (currently 2%). When the actual economy (i.e., aggregate spending) runs hotter than its supply-side capacity (i.e., aggregate production of goods and services), that should put upward pressure on the inflation rate, and vice versa when the economy runs below capacity.[3]

In simplified terms, potential GDP is a function of two inputs: The total number of hours that can be worked in the economy and how much GDP can be produced per hour of work. The hours metric is influenced by population growth, labor force participation and hours worked each day. GDP per hour is what economists call labor productivity or how much workers can accomplish in a day.

Of these ingredients in potential GDP, population growth is the easiest to project, and it likely won't change much as a result of the pandemic. But there are good reasons to think that labor force participation, the amount of hours worked each day and labor productivity may each get a boost in the years ahead.

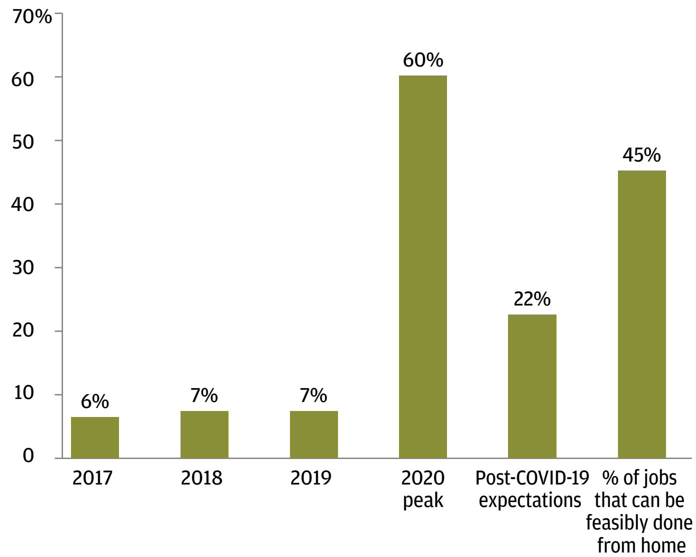
TECHNOLOGY IS THE BIG THEME

The COVID-19 shock accelerated technological adoption. Digital work-from-home technologies—indeed, the digital economy as a whole—received unprecedented protection (in an economic sense, from competition) during the pandemic, which in turn had an impact on potential GDP.[4]

To put numbers to it, prior to 2020, the share of hours worked remotely in the U.S. economy was slightly more than 5%. At the pandemic's 2020 peak, about 60% of all worker hours were remote. Nobody knows precisely where this number will settle in the future (survey evidence suggests that about 20% to 25% of work will be done remotely when COVID-19 is over), but it will almost certainly be higher than before the pandemic. It's also likely that this percentage may rise over time, since an estimated 45% of work done in the United States can be feasibly done remotely (and that fraction may rise further over time).[5]

WORKING FROM HOME IS LIKELY TO REMAIN MORE COMMON THAN BEFORE THE PANDEMIC

Share of hours worked remotely (U.S.)



Sources: Department of Commerce, Department of Labor, Bloomberg Finance L.P., Bureau of Labor Statistics: Jose Maria Barrero, Nicholas Bloom and Steven J. Davis, "Why Working from Home Will Stick," April 2021.

THE POTENTIAL GDP IMPACTS OF WORK FROM HOME

Labor force participation: We know that labor force participation is a GDP input. What could it mean for GDP if remote work permanently increased the number of women in the workforce?

To be sure, labor force participation for women has improved by more than 30 percentage points (ppt) since the 1960s. However, women still participate by 10ppt less than men during their prime working years (chart at the top of page 3), the same gap as in the late 1990s. Many labor economists attribute this gap to having and caring for children. We believe the normalization of remote work and increased utilization of work-from-home technologies may now enable more women to remain in the labor force.

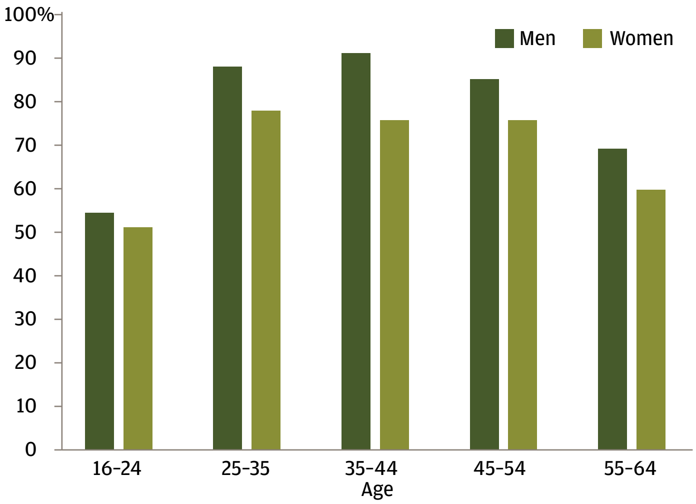
[3] In principle; in practice the relationship is less clear, especially in real time. A conundrum of the last cycle is that the economy was operating above most estimates of potential GDP in 2018 and 2019, yet the inflation rate was unable to sustainably rise above 2%.

[4] COVID-19 mandatory lockdowns served as a natural form of infant industry protection by a government (which typically offers protection from competition from foreign trade). A notable example is the Japanese automobile sector following World War II. When foreign currency quotas effectively capped imports, Japan's domestic auto sector was able to mature and become so competitive it disrupted the U.S. auto sector in the 1970s and 1980s, beginning the secular demise of cities including Detroit and Kenosha.

[5] Matthew Dey, Harley Frazis, et al., "Ability to work from home: Evidence from two surveys and implications for the labor market in the COVID-19 pandemic," *Monthly Labor Review*, Bureau of Labor Statistics, June 2020. The data shows younger generations, particularly Millennials and Gen Z, regard work from home more favorably than older generations, a skew likely implying that in the long term, the share of hours worked from home will likely rise beyond the expected 20%–25%.

REMOTE WORK MAY HELP CLOSE THE GENDER GAP

Labor force participation rate by age



Source: Bureau of Labor Statistics. Data as of 2019.

If women fully close the participation gap versus men, this would add approximately 10 million workers to the pool of available labor supply, a roughly 6% increase. If this pickup in participation played out over 10 years, it would boost potential GDP by roughly 60 basis points (bps) a year. These estimates may be aggressive. If the gap instead closes only halfway, and over 20 years, the boost to potential GDP would still be meaningful—15bps a year.

Hours worked: We think hours worked, another GDP input, stands to gain, too. This metric is all about reduced commute times. Prior to the pandemic, the average U.S. worker spent 54 minutes per day commuting. If we assume the post-pandemic norm becomes 25% of worker hours done remotely (down from the 60% pandemic peak), that works out to roughly 30 million fewer commuting hours per work day.

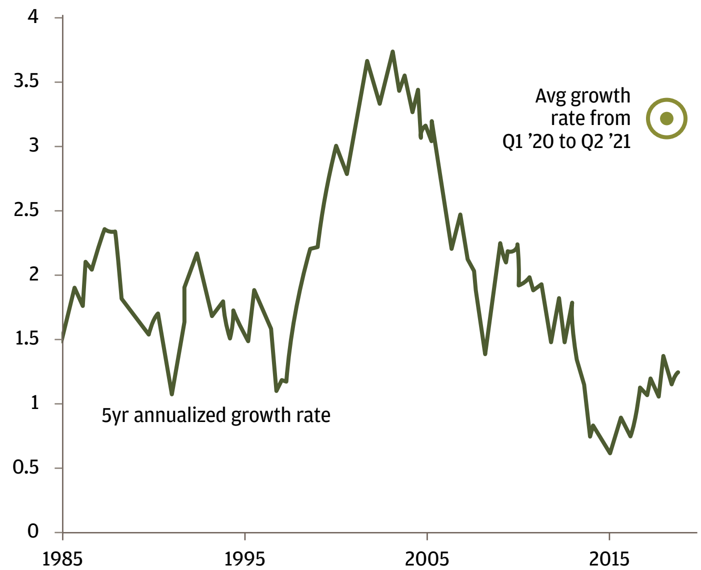
Survey evidence suggests that about 35% of this time savings during the pandemic has been spent working extra hours.[6] We calculate that fewer commuting hours may boost potential GDP by 1%, or 10bps a year over the next 10 years.[7]

And it's worth noting that in addition to likely boosting GDP, workers spending 65% fewer hours commuting enjoyed more time with their families, or cooking, exercising, etc. So along with GDP, human welfare stands to benefit, too.

Labor productivity: This input (GDP per hour worked) is the least quantifiable. Nevertheless, consider the data so far: Prior to the pandemic, labor productivity was stuck for years at a meager 1.25%, but since the beginning of 2020 it has stepped up significantly—to nearly 3.5%.

LABOR PRODUCTIVITY PICKED UP DURING THE PANDEMIC

GDP per hours worked



Sources: Bureau of Labor Statistics, Bureau of Economic Analysis. Data as of Q2, 2021.

Why the pickup? The most direct explanation is a massive shift away from spending on services toward spending on goods—about a 5ppt shift in each sector's relative share of GDP. Mechanically, more spending on goods increases the economy's productivity growth rate because the level of labor productivity growth in the goods sector (which includes manufacturing and construction) is about 15% to 20% higher than in the services sector.[8]

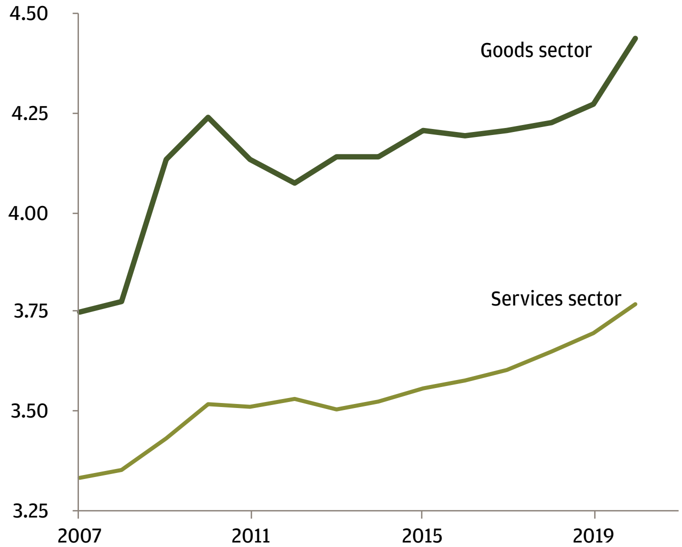
[6] Jose Maria Barrero, Nicholas Bloom and Steven J. Davis, "Why Working from Home Will Stick," *National Bureau of Economic Research Working Paper 28731*, April 2021.

[7] Calculated from: [(30 million fewer commuting hours) x (251 working days per year) x (35%)]/(275 billion hours worked per year). J.P. Morgan Private Bank, June 2021.

[8] The fact that productivity is lower in the services sector is the main reason why overall economic growth slows as countries cross the threshold from emerging market to advanced economy (think China today, where the domestic economy continues to shift away from manufacturing toward services).

THE GOODS SECTOR IS MORE PRODUCTIVE

GDP per hours worked



Sources: Bureau of Economic Analysis, Bureau of Labor Statistics. Data as of December 31, 2020.

Transformation of real estate and housing are linchpins

Is the shift toward more goods spending and manufacturing sustainable? We think so, because they are functions of greater reliance on work-from-home (WFH) technologies. The WFH trend is also closely tied to the reconfiguration that is unfolding in the U.S. residential housing market.

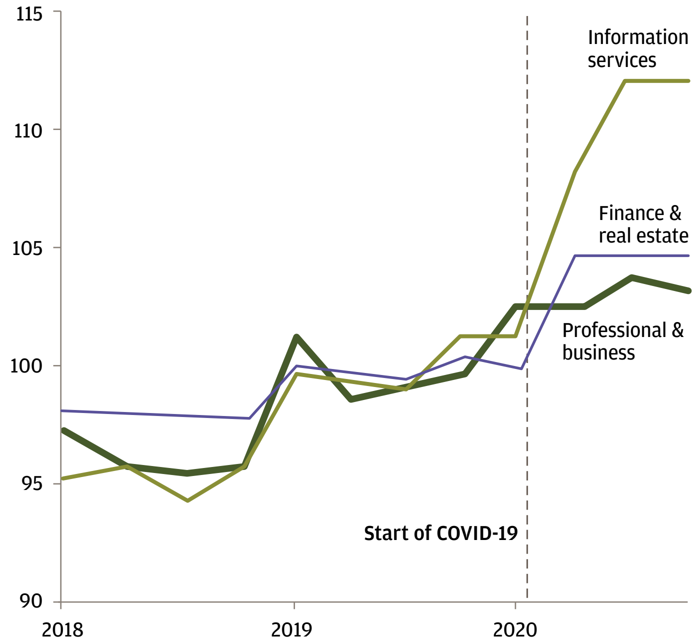
It is our view that the real estate markets are currently being transformed as a result of increased remote work, and the primary beneficiaries so far have been the suburbs, the South and the Rocky Mountain region (which we wrote about here). Given the current shortage of homes available for sale in these key markets, the implication is that a strong residential construction cycle will likely last years, which bodes well for the manufacturing sector to continue driving growth.

Why has the services sector become more productive?

Manufacturing isn't the whole story. The services sector has also seen a notable jump in productivity since the pandemic began (chart below). What explains this is more speculative. One hypothesis is that workers have been able to get into more of a "flow state" at home with fewer distractions. Another view is that even group work may be enhanced using remote technologies. The idea here is that brainstorming may be better done separately first before coming together in a group setting. In the office, people can be influenced by others before group meetings begin.[9] Popular media articles have proposed the idea that perhaps service sector workers are simply getting more sleep without their commutes.

SERVICES EXPERIENCED A PRODUCTIVITY JUMP

Quarterly output per hour (2019 average = 100)



Sources: Bureau of Economic Analysis, Bureau of Labor Statistics. Data as of Q4 2020.

CAPEX, PRODUCTIVITY AND ROBOTS

COVID-19 may prompt more corporate investment spending on automation, and this may raise potential GDP.

Through much of the 2010s, the media hyped up the dangers of automation to workers. The slant mirrored a landmark 2013 report from the University of Oxford, whose dramatic finding was that automation put nearly half of U.S. jobs at risk.[10] The trouble was that the corporate capital expenditures (capex) cycle in the 2010s when the report was published was stagnant, especially automation-oriented capex. This is no longer the case.

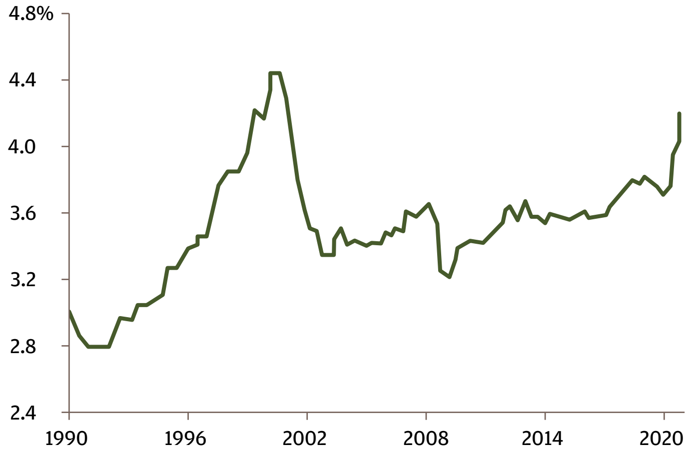
Further undercutting the Oxford thesis, the unemployment rate fell to a cycle low of 3.5% in 2019. Apparently, robots were not taking away all the jobs. (The media narrative hasn't caught up.) Today, corporate capex appears to be gaining steam, especially automation capex (which we measure using the proxy of information processing equipment and software investment, as in the chart at the top of page 5).

[9] Sarah Green Carmichael, "What's the Point of the Office Again? The workplace offers the opportunity for social display, not improved productivity," Bloomberg Opinion, May 26, 2021.

[10] Carl Benedikt Frey and Michael Osborne, "The Future of Employment," *Oxford Martin Programme on Technology and Employment Working Paper,* University of Oxford, September 17, 2013.

AUTOMATION CAPEX IS PICKING UP

Software and information processing CAPEX as a % of GDP



Sources: Bureau of Economic Analysis, Congressional Budget Office. Data as of March 31, 2021.

Automation can bolster labor-intensive industries

The scary robots narrative is further undercut when it's combined with other macro and monetary forces at work today. An important recent Fed survey did find more than half of corporate CFOs surveyed were laser-focused on reducing costs via automation, and planning to "use automation or technology to reduce the reliance on labor...[in part to] solve labor-related challenges caused by the pandemic."[11] Yet contrary to the popular media narrative, this is a positive development for the economy and even for the labor market.

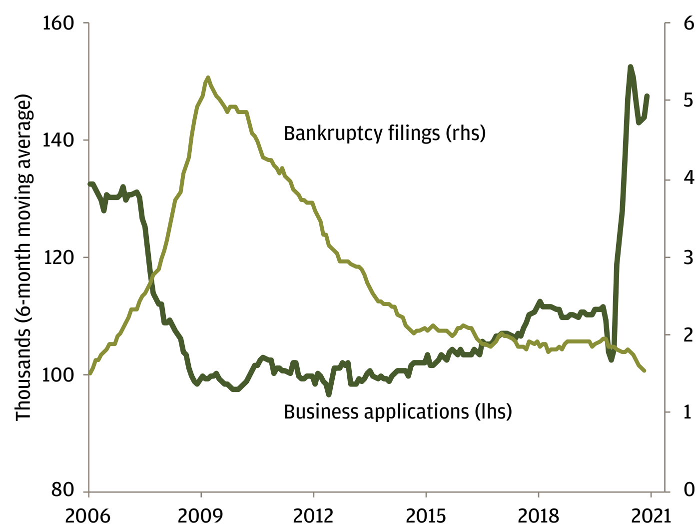
After the 2008 financial crisis, the dynamic of stronger wage growth leading to more corporate investment leading to more income and spending in the economy never really got going—which helps explain why productivity growth was so weak. But post-COVID-19, we'll likely see labor costs firming, thanks to the Fed's new emphasis on prioritizing its labor market mandate, as well as continued fiscal support. That should incentivize firms to invest more.

There's no doubt that automation will require labor to make adjustments. A portion of the roughly 10 million jobs the economy is down, relative to the pre-COVID-19 trend, will not come back in the same form due to automation. But this need not lead to permanently higher unemployment in the new cycle, provided labor is reallocated to rapidly growing and labor-intensive sectors such as clean energy installation, elderly care and the non-automatable segments of leisure and tourism.

Moreover, the microeconomic evidence shows that for firms investing heavily in automation, the relationship to the total number of jobs is positive.[12]

We are already seeing a spike in new business formation—which is running at a 25% to 30% annualized pace, up from 5% to 10% prior to the pandemic—at a time when there is a glut of workers on the sidelines. This is a healthy development from a reallocation perspective. The flip side is that business bankruptcies, which are still running at a depressed pace, will likely trend higher as the cycle continues and the emergency fiscal measures such as the Paycheck Protection Program are wound down. This should be seen positively as a reflection of increased creative destruction; indeed, they were also high in the high-growth 1990s. Compare that to the sluggish 2010s: Firm bankruptcies (relative to the total number of firms) were about 1ppt lower.

RESOURCE REALLOCATION



Sources: Census Bureau, Administrative Office of the U.S. Courts. Data as of March 31, 2021.

PUTTING IT ALL TOGETHER: HIGHER GDP ... AND THE RISKS

We think potential GDP will grow at a sustained rate of around 2.25% in the current cycle, as we said in the beginning, up from current estimates of 1.8%. That may not seem like a big difference, but cumulatively it adds up: Over the next 10 years, our view amounts to nearly $1.2 trillion in additional GDP, relative to the Congressional Budget Office's potential growth path.

[11] "The CFO Survey," Federal Reserve Bank of Richmond/Federal Reserve Bank of Atlanta/Duke University Fuqua School of Business, December 2020.

[12] Phillippe Aghion, Celine Antonin, Simon Bunel and Xavier Jaravel. What are the Labor and Product Market Effects of Automation: New Evidence from France, SciencesPo Publications. January 2020.

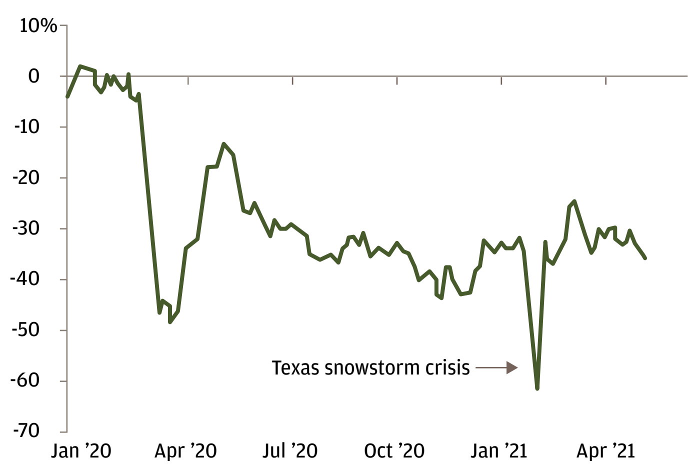
The main risk to this view is fiscal policy—in particular, whether the United States shifts back to a gridlocked Congress following the 2022 midterm elections (which would likely bring about abrupt fiscal austerity). The labor and housing reallocation processes described earlier will require sizable fiscal support through much of the cycle to mitigate potential scarring impacts on the labor market. Public investments in education and worker retraining will be critical in the years ahead, given the degree of sheer economic change.

Considering climate change as a risk

Climate change will likely continue to impact the economy if infrastructure is not substantially upgraded and weatherized through significant public investments. We don't see investments in public infrastructure to mitigate climate change as catalysts for higher potential GDP growth but rather as necessary simply to maintain the current productivity of the economy and prevent the repeated stalling of economic activity. The winter storm that hit Texas in February is a case in point. Having to stop the economy and rebuild after repeated climate disasters will make for a very unproductive economy, indeed.

IMPACT OF CLIMATE CHANGE ON THE ECONOMY

Small business revenue % difference from January 2020 (7-day moving average)



Source: Womply.com via Opportunity Insights. Data as of May 21, 2021.

WHAT DOES IT ALL MEAN FOR MARKETS?

Interest rates and fixed income: Over the medium term (three to five years), higher sustained potential GDP growth may give the Fed more room to raise interest rates to a higher neutral rate compared to the last cycle. Specifically, if our view on potential GDP is correct, it's likely at some point in the years ahead the Fed revises up its estimate of the neutral rate in this cycle to about 3%, from the 2.5% longer-term fed funds rate that the Federal Open Market Committee is currently projecting.

Importantly, higher interest rates resulting from stronger potential GDP growth will come in the form of higher real interest rates, not higher inflation. If anything, stronger potential GDP growth will reduce inflationary pressures in the economy, since the backdrop reflects more aggregate supply capacity. To put numbers to it, whereas a real longer-term interest rate of 1% proved too restrictive for the economy in the last cycle (in late 2018), it's possible in this cycle that a 1% real rate may be achieved in equilibrium without significantly harming growth.

With this view, we raise the high estimate of our long term fair-value range for nominal 10-year Treasury yields to 3% (from 2.75%).

RATES ARE LIKELY TO RISE

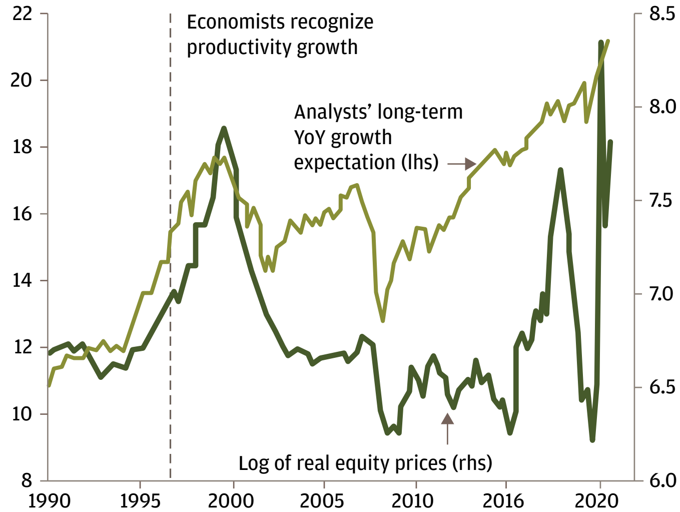
U.S. 10-year Treasury yield

Sources: Bloomberg Finance L.P., J.P. Morgan Private Bank. Data as of June 30, 2021.

A positive for equities: While we'll have to wait years for the theme of higher potential GDP growth to play out in the fixed income markets, the equity markets will take notice much sooner. They may already be moving due to revisions to longer-term expected growth.

The 1990s equity bull market began in 1994. But it wasn't until 1995 to 1996 that equity analysts started to revise upward their longer-term earnings growth expectations. Economists eventually came last: Only in mid-1997 were they seriously entertaining the idea that economy-wide productivity was increasing.[13]

THE EQUITY MARKET ROSE BEFORE ANALYSTS' GROWTH EXPECTATIONS



Source: Bloomberg Finance L.P. Data as of June 30, 2021.

Today's equity market may well be comparable to 1994 to 1995. The market is not likely to triple over the next five years as it did back then, but today's high valuations, on a forward-earnings basis, might not be as high as they seem if one incorporates stronger potential growth on the other side of COVID-19.

Indeed, in examining the relationship between S&P 500 earnings versus nominal GDP and real unit labor costs, we find that the revision in potential GDP from 1.8% to 2.25% would lift trend earnings by about 12%, cumulatively, over the next five years. This implies that the five-year-ahead price-to-earnings ratio for the S&P 500 may be around 14x—not the 15.7x of current trend earnings assumptions.

The bottom line: Our higher potential GDP view, and the 1994 to 1995 comparison, reinforces our preference to overweight equities and underweight fixed income. It implies we'll likely maintain this preference for longer than we otherwise would, in the aftermath of the COVID-19 downturn. And in our equity investment portfolios, we continue to have a preference for technology (semiconductors and software) and industrials (machinery), which stand to benefit the most from a strong corporate capex cycle, particularly with respect to automation.

[13] Richard G. Anderson and Kevin L. Kliesen, "The 1990s Acceleration in Labor Productivity: Causes and Measurement," *Federal Reserve Bank of St. Louis Economic Research Volume 88, No. 3,* May/June 2006.

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