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A dark winter gives way to a brighter post-pandemic economic outlook

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- A year ago – though it feels like a decade – we titled our outlook "A less than roaring start to the 20s." While that title broadly captured the sentiment, if not the severity, of this year correctly, no forecaster could have anticipated the unprecedented events that shook the US and global economies in 2020. However, thanks to an unparalleled policy response and the remarkable resilience of the US economy, dire predictions have given way to a more favorable reality: the economy is set to contract a relatively modest 2.4% in 2020 with the unemployment rate settling below 7%.
- Although the pandemic continues to rattle the country, we enter 2021 with optimism beyond the near term. Extraordinary scientific breakthroughs could make it possible to vaccinate two-thirds or more of the US population around midyear, and Washington looks set to provide a fiscal bridge to that point. We expect growth to be 4.3% (Q4/Q4) in 2021, the pre-virus level of activity to be attained in Q3, and the unemployment rate to close out 2021 at 5%. But even with above 3% growth in 2022, the unemployment rate is unlikely to near pre-virus levels until late 2023.
- The trajectory for inflation will be a lively debate, with the vaccine-driven reopening of the economy likely to trigger a jump in prices for items at the epicenter of the pandemic. However, we anticipate that any price pressures triggered by these events will prove transitory and that ultimately the disinflationary pressures from shelter and health care will keep inflation subdued. We see core CPI and PCE ending next year not far from current levels at 1.7% and 1.5%, respectively.
- With labor market scars lasting for some time, policymakers will likely maintain very supportive stances. The Biden administration is intent on providing additional near-term fiscal support and has pushed an agenda of "building back better" after the pandemic, which includes plans for a large-scale infrastructure package. While our baseline assumes that these initiatives will be constrained by a Republican-controlled Senate, the results of the January 5th Senate runoffs in Georgia will be critical. A Democratic sweep in those elections, and the fiscal stimulus that would accompany it, represent meaningful upside risks to our forecast.
- The Federal Reserve will likely also keep its foot on the accommodation pedal this year. While tapering of asset purchases could come into focus by year-end, we expect it won't commence until 2022. On the policy rate, our forecast sees the conditions for lift-off first being reached in 2024. As such, while the pre-virus level of activity is expected to be regained in relatively short order, lingering scars in the labor market and lagging inflation should continue to impact monetary policy for years to come.

Deutsche Bank Securities Inc.

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Introduction

A year ago – though it feels like a decade – we titled our outlook "A less than roaring start to the 20s." While that title broadly captured the sentiment of this year correctly, no forecaster could have anticipated the unprecedented events that shook the US and global economies in 2020. The Covid-19 pandemic, which at this point has taken more than 300k lives in the US alone and nearly 1.7 million lives globally, caused a collapse in economic activity, a rise in joblessness, and the emergence of economic hardship at a speed unobserved in economic history. At times early in the crisis, it seemed as though dire forecasts of persistently double-digit unemployment were unavoidable.

However, thanks to an unparalleled response from fiscal and monetary policymakers and the remarkable resilience of the US economy, those dire predictions about the trajectories for growth and unemployment gave way to, at least from a very narrow economic perspective, something close to a best-case scenario. The US economy is set to contract a relatively modest 2.4% in 2020, masking the growth valleys and peaks that defined the year, and the unemployment rate should settle below 7%, less than half of its high point just eight months ago.

While the effects of the pandemic are in no way behind us, indeed record growth in Covid-19 cases and mortalities will continue to rattle the country in the coming months, we enter 2021 with a sense of optimism beyond the very near term. Extraordinary scientific breakthroughs could make it possible to vaccinate more than two-thirds of the US population by midyear, and Washington looks set to provide a fiscal bridge to that point. These developments have pulled forward the timing of the boost to economic activity from vaccination into the first half of 2021. We now expect growth to average 4.3% (Q4/Q4) in 2021, the pre-virus level of activity to be attained in Q3, and the unemployment rate to close out 2021 at 5%. However, it will take several years to return to the pre-crisis level of the unemployment rate, and we expect scars from this pandemic to impact economic activity for some time.

With the labor market expected to remain far from its pre-pandemic levels and inflation short of the Federal Reserve's newly defined average inflation target, policymakers will likely continue their supportive stances. The Biden administration is intent on providing additional near-term fiscal support as the pandemic continues to rage and has pushed an economic agenda of "building back better" after the pandemic which calls for a large-scale infrastructure package, a "buy America" initiative, and structural policies to support education and the labor market, among other objectives. While our baseline assumes that these initiatives will be constrained by a Republican-controlled Senate, the results of the January 5th Senate runoffs in Georgia will be critical in determining these policies' fates.

The Federal Reserve is also likely to keep its foot on the accommodation pedal this year faced with these economic conditions. While tapering of asset purchases could come into focus by year-end, we expect it won't commence until 2022, and, based on the post-GFC experience, the Fed will take a gradual approach to drawing down net additions to its portfolio. On the policy rate, our forecast sees the conditions for lift-off – maximum employment and 2% inflation reached sustainably with expectations of some overshoot – first being reached in 2024. As such, while the pre-virus level of activity is expected to be regained in relatively short order, lingering scars in the labor market and subdued inflation should continue to impact monetary policy for years to come.

Key themes for 2021: Fiscal, Georgia and vaccine

Near-term fiscal: Building a bridge

It took some time – and a year-end government shutdown deadline to force the issue – but Washington has finally made progress on another Covid package to wrap up the year. While the legislative text remains uncertain at the time of writing, the price tag is approximately $900bn and includes: $166bn for stimulus checks ($600 for individuals, $1,200 for couples, and $600 per child); the return of an additional $300 per week for the unemployed through March 14; extensions of PUA and PEUC federal unemployment benefits; another round of funds for small businesses via the Paycheck Protection Program (PPP) amounting to $284bn; targeted relief to sectors at the epicenter of the crisis including airlines, live venues, movie theaters and museums; and funds for state and local governments to support education and health objectives, including vaccine distribution. This package is about a month earlier than we expected and slightly larger than the $750bn we had previously built into our forecast with more support for the consumer. As a result, we lifted our Q1 growth expectations, viewing this support as going a long way towards building a sufficient bridge to the vaccine next year.

Excluded from this round of negotiations are direct funds for state and local governments to fill budget gaps and liability protection for employers, two contentious topics that bogged down talks in recent months. Senator McConnell said that these issues will be returned to once Biden takes office, and the new administration will no doubt aggressively push for more support. The mid-March expiration of expanded unemployment benefits could provide the next deadline to legislate additional support. However, assuming that Republicans maintain control of the Senate (more on this next) and Covid and economic data do not force further action, we see the possibility for only a slimmed-down package to support state and local governments legislated in Q1 next year, which would likely require Democrats to show flexibility on the employer liability immunity question.

Election implications: Georgia on my mind

Although we are a month and a half removed from Election Day, uncertainties remain about the government makeup for the next two years. While Joe Biden is President-elect and Democrats maintained (significantly narrower) control of the House, two runoff elections in Georgia on January 5th will determine which party controls the Senate. With the current Senate tally at 50-48 in favor of Republicans, they need to win just one of these elections to maintain control of the Senate. Conversely, a Democratic sweep of those two runoffs would leave the Senate at a 50-50 split, with Democrats controlling the tie breaker via the vice president. If this transpires, Democrats would have historically slim margins in the House (possibly only one seat depending on administration nominations) and Senate (a tie), which could make legislating difficult.

Current polls view both Georgia races as close, with Republicans holding slight leads for both seats, and predicting turnout in runoff elections is difficult – even more so for the current ones which will receive outsized national and local attention and funds as they will determine Senate control and, by extension, the fate of the policy debate in the coming years. Indeed, there has been a large influx of voter registrations in Georgia since Election Day, with the demographics of these new voters seemingly skewed towards Democrats. That said, our forecast assumes that Republicans win at least one of the runoffs, supported by the facts that the Republican candidate for one of the seats (David Perdue) fell just short of the more than 50% vote threshold needed to avoid the runoff but received more votes in the state than Donald Trump. In total, Republican Senate candidates combined received more than 100k votes than their Democratic counterparts.

If Republicans maintain Senate control, we expect to see little additional fiscal stimulus over the next year. While a large-scale infrastructure package could prove to be a potential area of agreement, particularly with Biden's experience in the Senate, moderate leanings, and past inclinations to reach across the political aisle, we anticipate that disagreements on how such a deal would be funded (i.e., publicly financed versus public-private partnerships) and the insertion of a politically contentious issue like green energy into the calculus could make an agreement difficult. We leave this possibility as an upside risk, rather than a baseline scenario. In addition, the sweeping tax increases that have been part of the Biden platform also look unlikely if Republicans keep control of the Senate, reducing some downside risks to the outlook from these measures in 2022 and beyond.

If, however, Democrats take control of the Senate, another large fiscal stimulus package would be likely, possibly including some of the more structural policies such as infrastructure. For reference, based on our simulations of the Fed staff's model for the US economy (FRB/US), an additional $1tn of net fiscal stimulus could add around 3 percentage points to real GDP growth over the course of a year, though the benefits of an infrastructure package would be distributed over a longer horizon.[1]

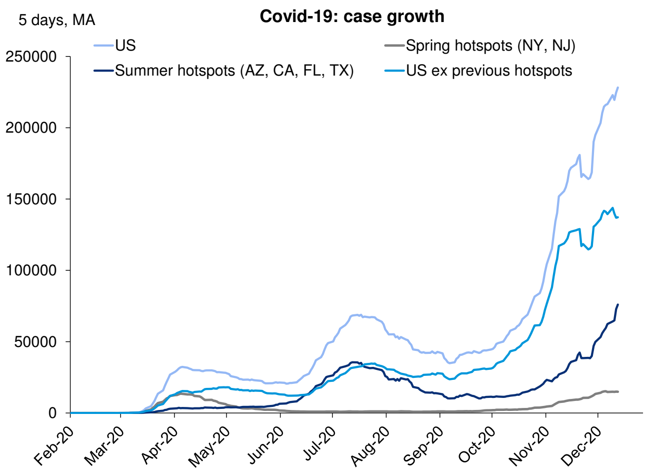
Previous publications have detailed our broader expectations for the Biden administration. For those discussions see: Implications of Janet Yellen's Nomination for Secretary of Treasury and "World outlook: Post vaccine news and US elections".

Covid and vaccine: A dark winter gives way to a hopeful spring

Covid remains the greatest near-term downside risk to the economic outlook. Case growth, hospitalizations, and mortalities are all at record highs and rising. While this deterioration is no doubt broad-based – our GDP-at-risk metric shows that counties representing three-quarters of national output are experiencing worsening trends in cases and deaths – it is also clear that recent trends have been worst in areas largely spared by the first two waves earlier this year. In those states currently at the epicenter, Covid case growth is about three times its prior peak. According to projections from the IHME and other health institutes, these worsening trends are likely to continue into the early months of 2021. Recent evidence of a more virulent stain of the virus encountered in the UK also bears watching.

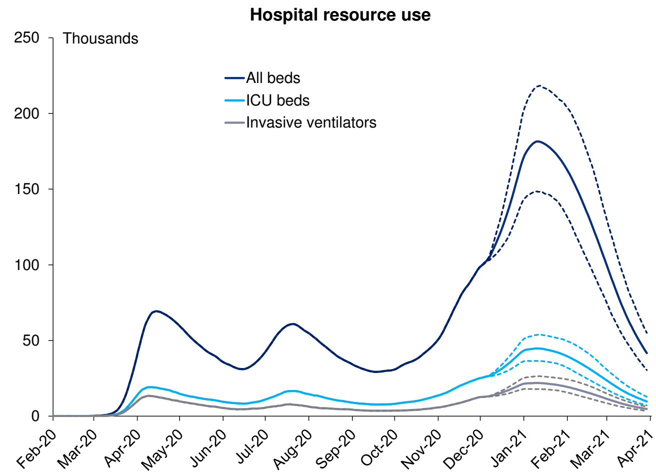
1 See Election could bring sweeping changes to the economic outlook

Figure 1: Covid cases continue to touch new highs



Source : JHU, Haver Analytics, Deutsche Bank

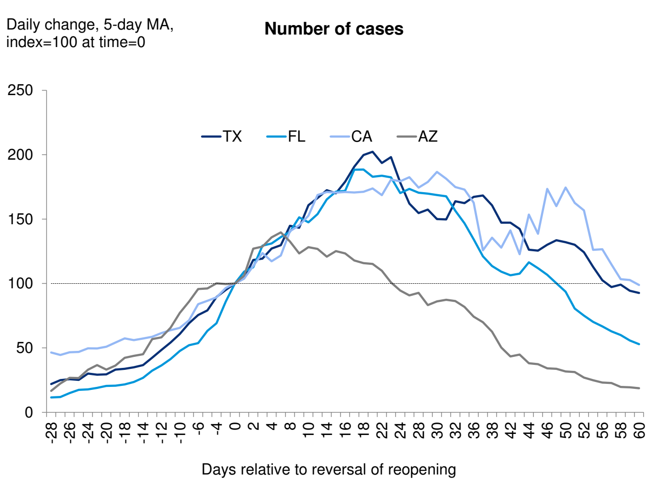
Figure 2: Hospital resource use expected to rise into Jan / Feb



Source : covid19.healthdata.org, Deutsche Bank

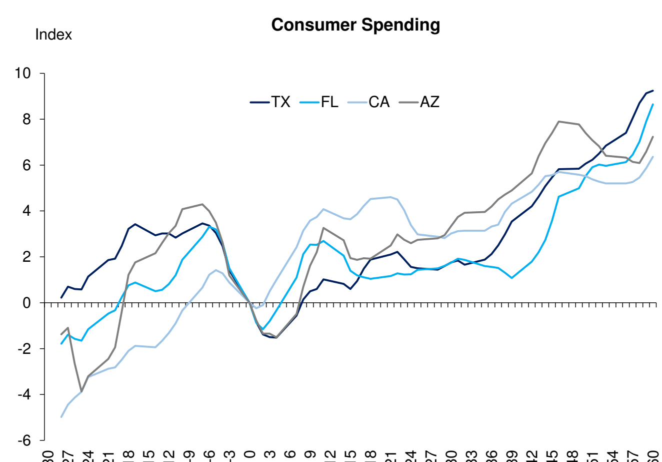
In response to these trends and the expected strain on hospital resources, many areas of the US have reintroduced constraints on mobility and economic activity. While these restrictions are less severe than during the original lockdowns in March and April, the experience from the summer hotspots suggests that it could take one to two months to bring Covid case growth back down to an acceptable level. Moreover, according to this experience, mobility and consumer spending are also likely to dip during this period and take a similar time horizon to recover. With health care spending also being restrained by the cancellation of elective surgeries as hospitals near capacity in some areas, we expect consumer spending to remain under pressure into early 2021 given these Covid trends.

Figure 3: It took nearly 2 months to sufficiently reduce case growth in the summer hotspots



Source : JHU, Haver Analytics, Deutsche Bank

Figure 4: And consumer spending took 1-2 months to recover, except in CA

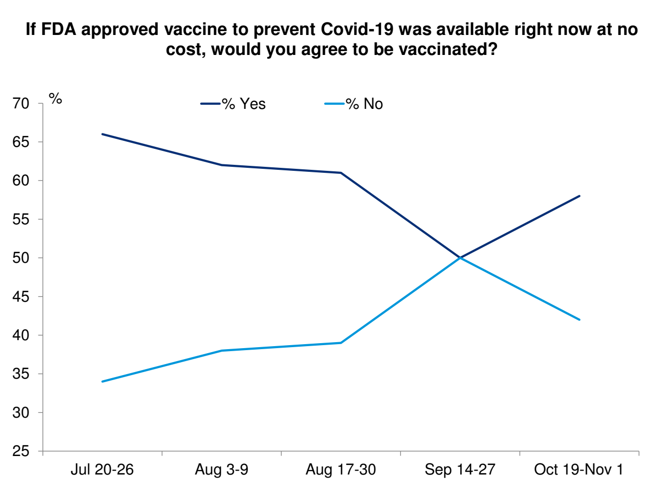


Source : Affinity Solutions vis Opportunity Insights, Haver Analytics, Deutsche Bank

Beyond the near term, however, vaccine developments have been the greatest source of upgrades to our economic outlook. Vaccines from Pfizer and Moderna have shown an effectiveness around 95%, higher than was commonly assumed just a few months ago and far higher than the 50% FDA threshold. Moreover, even with modest disruptions to Pfizer's distribution plans for 2020, production plans from these two companies alone indicate that about 200mn doses of the vaccine could be deployed in the US by the end of Q1 next year. Given the two-dose nature of these vaccines, this indicates that theoretically about 100mn Americans could be vaccinated around that time. While uncertainties no doubt remain about the timeline of production schedules and ability to distribute the vaccine in large scale, it is plausible that more than two-thirds of the US population could be vaccinated by around mid-year, exceeding the levels believed to be needed for herd immunity. The implication of these developments is that some normalcy can return to economic activity in the US early in the second half of 2021.

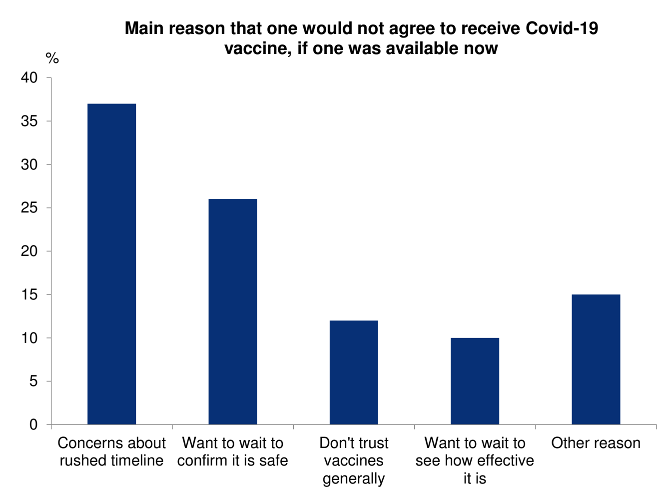
One additional uncertainty is whether enough of the population will be willing to take the vaccine to bring these optimistic views to fruition. While recent surveys indicate that only 50-60% of the population says they would take the vaccine, recent results from Gallup suggest that many of the concerns leading to these reservations – for example, efficacy and safety – could be alleviated with positive early experience with vaccination. According to this survey, a relatively small share of the population (around 5%) are opposed to the Covid vaccine based on generally negative views about vaccines. As such, we remain optimistic that, with some time, these surveys underestimate the share of the population that will be willing to receive the vaccine, and therefore, this will not be a meaningful impediment to normalcy.

Figure 5: Less than 60% of Americans say they would take the Covid-19 vaccine



Source : Gallup survey, Deutsche Bank

Figure 6: But most of those concerns could be alleviated with some time & experience with vaccine



Source : Gallup survey, Deutsche Bank

GDP: Primed for a post-pandemic growth bump

Relative to our last outlook update, we have raised our Q4 2020 real GDP growth projection by 2.2ppts to 4.5% (annualized), which results in 2020 inflation-adjusted output growth of -2.4% (Q4/Q4). This is a truly remarkable achievement given the depth of the decline in output witnessed earlier in the year. However, the majority of the improved growth profile in the current quarter stems from significantly better nonresidential fixed investment and inventories. Indeed, we still expect real PCE to expand just 2.9% in Q4 as services expenditures, in particular health care, should be depressed by record-high Covid case growth and renewed restrictions in many parts of the country.

For 2021, we have nudged up our growth projection by 10bps to 4.3% (Q4/Q4). In general, the economic outlook for next year reflects some lingering weakness in consumer activity at the start, giving way to a very strong finish as momentum builds in Q2 and carries through to the back half of the year supported by the attainment of herd immunity. In the near term, we expect similar Covid-related weakness in consumer spending to limit real GDP growth to 3.6% in the first quarter. However, as vaccine availability accelerates, and vaccination kicks into high hear in Q2/Q3, we expect real GDP growth to rise to 4.3% in the second quarter, followed by 4.7% growth over the back half of the year as high-contact service industries begin to more fully normalize. Further normalization of services spending should lead to a virtuous cycle of job gains and labor income growth over this period, sustaining the recovery for the foreseeable future.

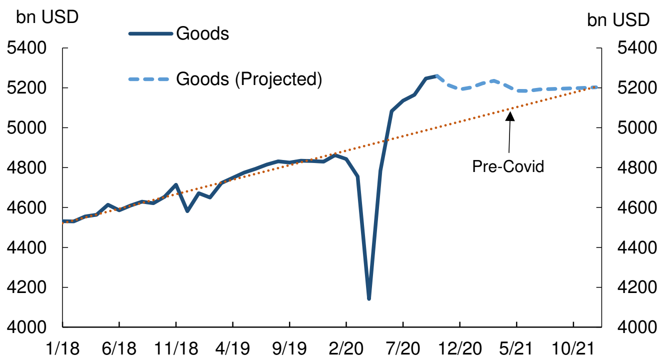
With abundant monetary accommodation expected to remain in place through 2022 and 2023, and with the potential for persistently greater fiscal support pointing to upside risks, we continue to expect inflation-adjusted output to expand above trend, rising 3.1% and 2.2% (Q4/Q4), respectively.

Consumer spending on services will be critical

As we noted previously, services spending is likely to be curtailed somewhat in Q1 due to ongoing Covid-related disruptions. As we learned during the depths of the virus surge last spring, health care expenditures in particular were the epicenter of the decline in consumer spending as hospitals had to cancel elective surgeries and other services in order to deal with the influx of Covid patients. At the same time, goods spending, which has been elevated over the past couple of quarters, should begin to slow back toward its pre-Covid trend. We have already seen emerging evidence of this dynamic in recent retail sales weakness. Thus, while the monthly retail sales figures may appear somewhat soft over the next few months, it is more important to focus on the trends in services spending.

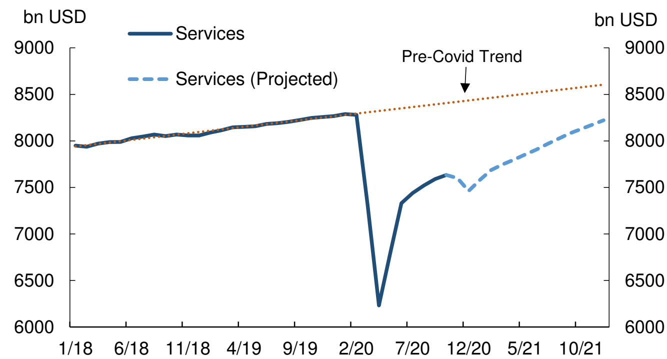
Figures 7 and 8 show our projections for the level of inflation-adjusted expenditures on goods and services compared to their pre-virus trends. As the figures illustrate, we anticipate a mix shift in spending as services should begin to more fully normalize alongside the ramp up in vaccination that will allow life to return to normal. To be sure, full service sector normalization will likely take some time, especially for industries such as travel and accommodations. The upshot is that real PCE is expected to expand 4.3% this year (Q4/Q4) – the fastest pace of growth since the four quarters ending in Q1 2015 (4.3%). To put this into perspective, prior to the aforementioned 2015 episode, the last time that real PCE had grown above 4% over any four-quarter period was Q1 2004 (4.2%).

Figure 7: Real goods spending is expected to slow...



Source : BEA, Haver Analytics & Deutsche Bank

Figure 8: ...While real services spending begins to normalize

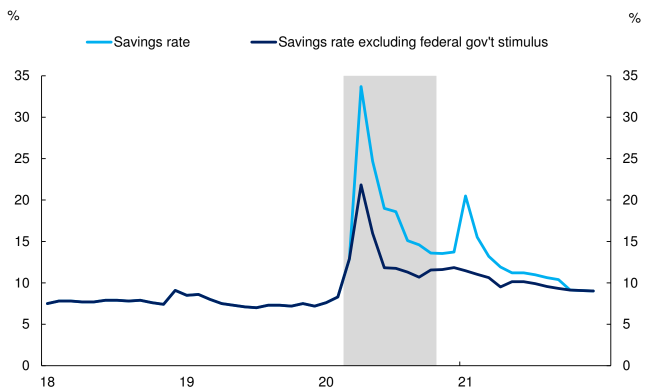


Source : BEA, Haver Analytics & Deutsche Bank

To be sure, there are risks to our assumptions for a robust rebound in consumer spending. The most prominent of course is any delays or disruptions to vaccine distribution, which would undoubtedly depress the pace of the expected recovery given that it hinges importantly on a normalization in services spending.

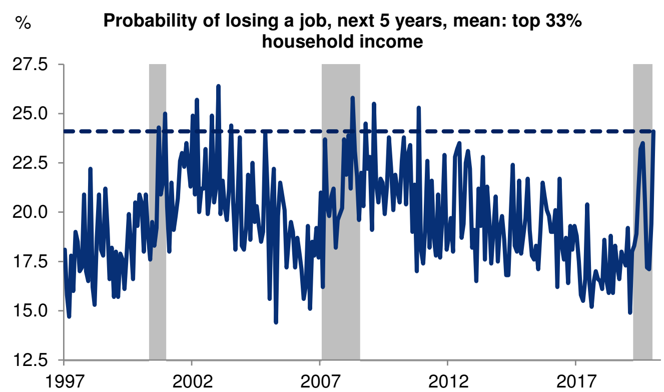
In addition, an elevated savings rate may be overstating the degree of consumer spending power. First, as we illustrate in Figure 9, the savings rate is currently being boosted by government subsidies – namely, stimulus checks, federal unemployment insurance (UI) programs and small business subsidies via the Payroll Protection Program (PPP). However, this latest fiscal package is likely to be the last infusion in these areas, and with the federal UI programs likely ending in March, alongside a declining boost to proprietors' income from PPP, the personal savings rate will likely drop sharply in H2, falling to around 9% by year end under our nominal consumption profile. Second, much of this savings is concentrated in the hands of upper-income households, who have a lower marginal propensity to consume and who have shown tentative signs of a rise in precautionary savings given lingering concerns about the economic outlook. For example, nearly one-quarter of households in the top third of the income distribution expect to lose their job at some point over the next five years, which is a near-record high (Figure 10). With these households holding the large share of aggregate savings, caution on labor market prospects should induce higher savings. As such, while a 9% savings rate will nevertheless be elevated relative to the 7.5% average in 2019, there are thus reasons to expect a modest rise in precautionary savings.

Figure 9: The savings rate will drop when federal gov't stimulus measures wane in H2 2021



Source : BEA, Haver Analytics, Deutsche Bank

Figure 10: But savings could remain elevated for precautionary reasons: Unemployment expectations high for upper income

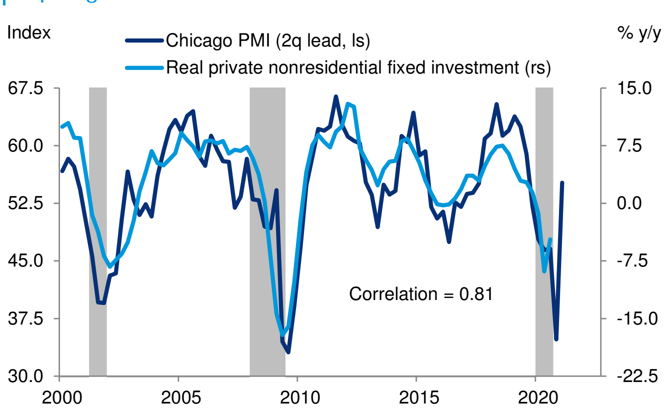


Source : University of Michigan, Haver Analytics, Deutsche Bank

Capex rebound to continue

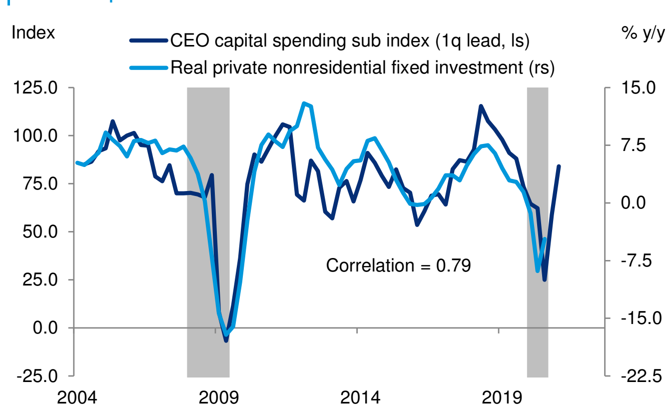
The robust rebound in nonresidential fixed investment to this point has partly reflected pent-up demand from the pause in virtually all economic activity that took place during the Covid-related shutdowns. However, forward-looking indicators of business sentiment point to a continued recovery over the next year. As Figures 11 and 12 indicate, sharp rebounds in the Chicago PMI and Business Roundtable CEO surveys have historically foreshadowed recoveries in nonresidential fixed investment. Though corporate debt no doubt remains high, the Fed has committed to maintaining accommodative financial conditions through its asset purchase program until substantial further progress has been made toward its maximum employment and price stability goals. Hence, as long as financial conditions remain supportive, with interest rates pinned at the zero lower bound, there will be ample incentives for firms to invest in capex.

Figure 11: The manufacturing rebound points to sturdy capex gains



Source : MNI, BEA, Haver Analytics, Deutsche Bank

Figure 12: A recovery in business confidence typically leads capex

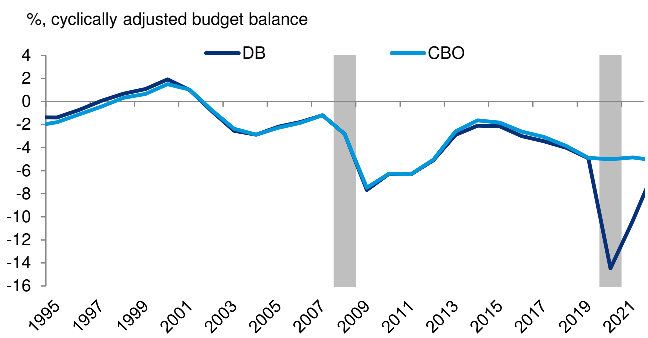


Source : Business Roundtable, Haver Analytics, Deutsche Bank

Government spending necessary to bridge the output gap

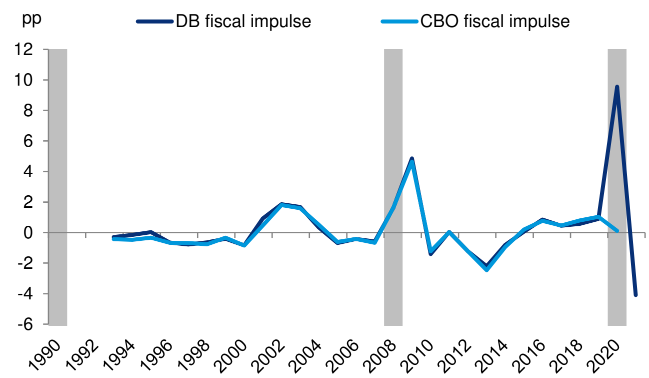
One sector of the economy that will not be as supportive for growth this year is government spending. To be clear, the roughly $900bn fiscal package set to be passed by Congress should provide meaningful support to the economy in 2021, and is critical with respect to providing an economic bridge until herd immunity to the virus can hopefully be achieved by Q3 2021. Indeed, the cyclically adjusted budget deficit, which strips out automatic stabilizers, should remain at historically negative values in 2021 (Figure 13). However, relative to last year's massive Covid-related stimulus efforts worth roughly $2.7bn, this latest package will result in sharp drop in the fiscal impulse (Figure 14). Barring a surprise Democratic sweep in the two Georgia Senate runoff races on January 5 or a surprising rapprochement between the two parties, it is likely that this latest Covid relief package will be the last major infusion of government support in the economy.

Figure 13: But cyclically adjusted deficit remains large next year with still meaningful fiscal support



Source : CBO, Haver Analytics, Deutsche Bank

Figure 14: Fiscal impulse is negative in 2021 given the massive infusion in 2020

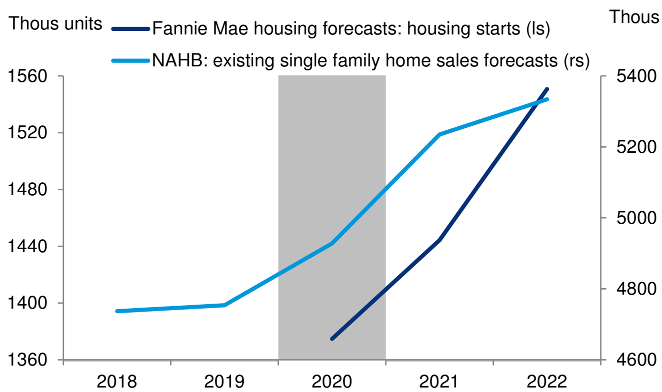


Note: CBO has not updated estimates of automatic stabilizers since the covid crisis, so the DB measures use our own estimates. Source : CBO, Haver Analytics, Deutsche Bank

Residential investment & inventories should offset drag from net exports

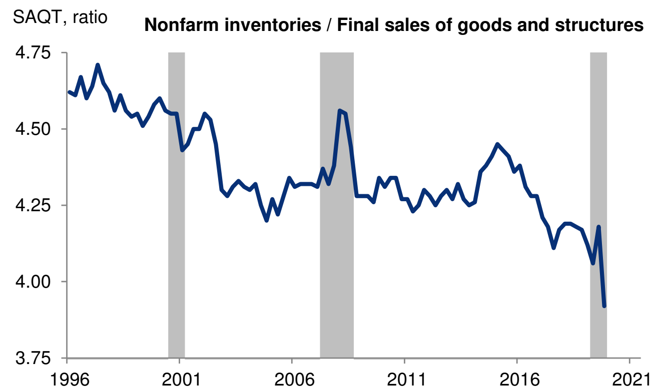
With the Fed on hold until at least 2024 on our forecast, the conditions for the housing market are ripe for continued expansion. To be sure, the heady pace of transactions that we have seen of late partly reflect the release of pent-up activity from the Covid-related disruptions over the past year. Thus, in the near term, we expect transactions to moderate, resulting in a slight decline in real residential investment in the first quarter of the year. However, beyond the expected Q1 pause, real residential investment should gradually pick up and is due to contribute roughly 30bps to real GDP growth next year mostly due to base effects. Our residential investment forecast is broadly consistent with projections from Fannie Mae and the NAHB (Figure 15). Inventory restocking should also contribute roughly a full percentage point to growth next year. As Figure 16 illustrates, the ratio of nonfarm inventories to final sales of goods and structures has plunged, pointing to the need for a sizeable inventory rebuild next year.

Figure 15: Forecasts for improving housing market in next few years



Source : FMAE, NAHB, Haver Analytics, Deutsche Bank

Figure 16: Inventory rebuild needed with low inventory to sales ratio



Source : BEA, Haver Analytics, Deutsche Bank

While the approval of the Boeing 737 Max could present a drag on inventories at some point when Boeing starts to deliver those planes to customers, this drag will mostly be made up via increased capital expenditures (if the planes are delivered to domestic customers) or exports (if delivered to foreign buyers). Indeed, Boeing deliveries are important for the trade outlook next year. Recall that one of the keys to the Phase I trade agreement with China is increased Chinese imports of US manufacturing products. China has no hope of meeting these targets without the Boeing planes. Deliveries of the 737 Max, along with a weaker dollar, should result in exports growth outpacing that of imports in 2021 (Q4/Q4 basis). However, due to base effects, net exports will nonetheless drag on overall output by a little over a percentage point. Please see the table below for our complete forecast profile.

Figure 17: DB's detailed US economic forecasts

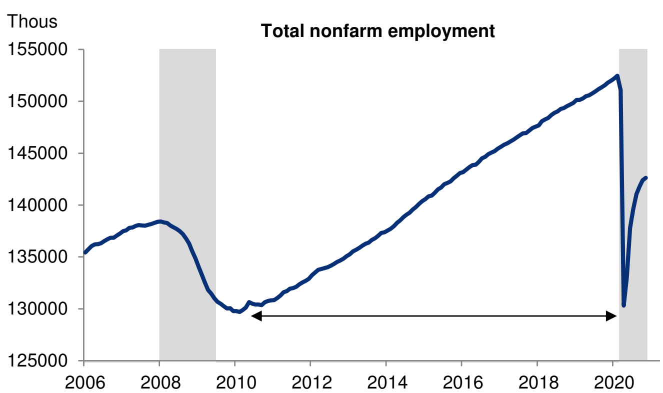
Economic Activity	**2020**				**2021**				**2022**				**2020F**	**2021F**	**2022F**	**2023F**
(% qoq, saar)	**Q1**	**Q2**	**Q3**	**Q4F**	**Q1F**	**Q2F**	**Q3F**	**Q4F**	**Q1F**	**Q2F**	**Q3F**	**Q4F**	**Q4/Q4**	**Q4/Q4**	**Q4/Q4**	**Q4/Q4**
GDP	-5.0	-31.4	33.1	4.5	3.6	4.3	4.9	4.5	3.3	3.4	3.1	2.6	-2.4	4.3	3.1	2.2
Private consumption	-6.9	-33.2	40.6	2.9	3.1	4.7	4.9	4.6	3.5	3.0	2.9	2.9	-2.6	4.3	3.1	2.8
Investment	-9.0	-46.6	84.9	23.2	6.4	7.7	9.0	5.3	4.5	6.2	5.5	3.0	2.6	7.1	4.8	2.4
Nonresidential	-6.7	-27.2	21.8	10.9	5.8	6.3	7.0	7.0	6.4	5.8	4.8	4.3	-2.1	6.5	5.3	3.2
Residential	19.0	-35.5	62.3	27.0	-1.0	3.5	4.0	4.6	3.5	3.7	3.9	4.0	12.1	2.8	3.8	2.5
Gov't consumption	1.3	2.5	-4.9	-1.3	4.4	-0.1	0.7	1.0	1.5	1.3	1.1	1.1	-0.6	1.5	1.2	1.1
Exports	-9.5	-64.4	60.5	16.0	11.0	12.7	14.1	13.0	8.5	7.5	6.1	5.0	-12.0	12.7	6.8	3.5
Imports	-15.0	-54.1	93.1	15.0	10.4	11.1	11.8	7.5	7.0	6.0	5.0	4.1	-3.5	10.2	5.5	4.5
Contribution (pp): Inventories	-1.3	-3.5	6.6	1.4	0.3	0.4	0.5	-0.2	-0.2	0.2	0.2	-0.2	-0.7	1.0	0.1	-0.1
Net trade	1.1	0.6	-3.2	-0.7	-0.5	-0.4	-0.4	0.2	-0.2	-0.1	-0.1	-0.1	-0.7	0.2	-0.1	-0.4
Unemployment rate, %	3.8	13.0	8.8	6.8	6.3	6.0	5.3	5.0	4.8	4.6	4.3	4.1	6.8	5.0	4.1	3.7
Prices (% yoy)																
CPI	2.1	0.4	1.3	1.2	1.6	2.8	2.1	1.9	1.7	1.9	1.9	1.9	1.2	1.9	1.9	2.2
Core CPI	2.2	1.3	1.7	1.6	1.6	2.3	1.7	1.7	1.7	2.0	2.1	2.2	1.6	1.7	2.2	2.3
PCE	1.7	0.6	1.2	1.2	1.4	2.1	1.7	1.7	1.6	1.6	1.6	1.5	1.2	1.7	1.5	1.7
Core PCE	1.8	1.0	1.4	1.4	1.3	1.8	1.3	1.5	1.6	1.8	1.8	1.8	1.4	1.5	1.8	1.9
Fed Funds	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125

Source : Deutsche Bank

Labor market: Recovery to continue but scars will be felt for some time

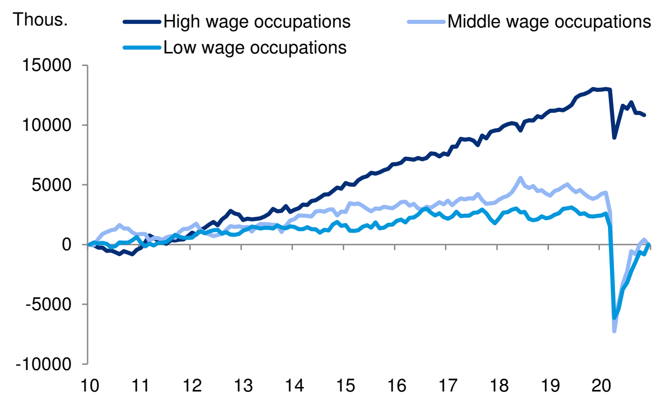
The havoc that Covid-19 has wrought in the labor market this year has been nothing short of devastating. In March and April, over 22 million jobs were lost (Figure 18), wiping out an entire decade of job gains in just two months. As seen in Figure 19, the brunt of the impact has fallen on medium- and low-wage occupations, with those sectors experiencing zero net jobs growth since 2010 even after some recovery following the Covid-induced plunge.

Figure 18: A decade's worth of job gains wiped out in two months



Source : BLS, Haver Analytics, Deutsche Bank

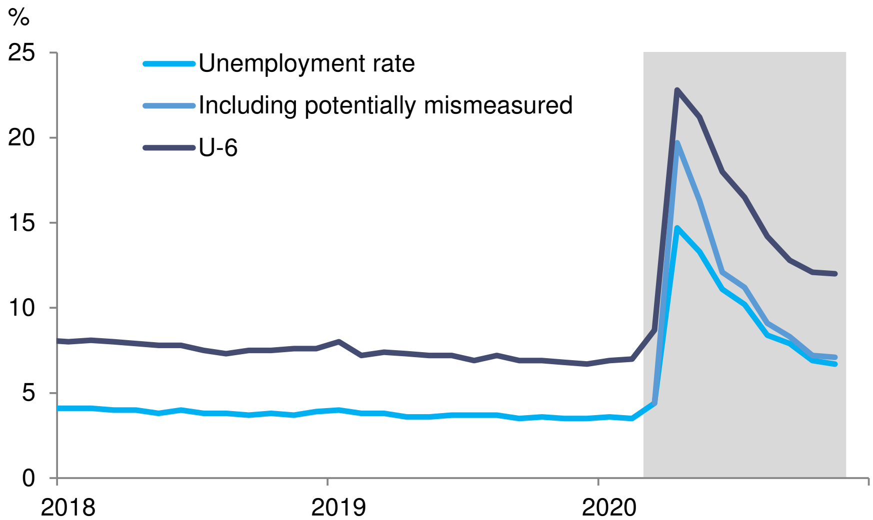
Figure 19: Medium- and low-wage occupations have felt the brunt of the crisis



Source : BLS, Haver Analytics, Deutsche Bank

This sharp drop in employment, in turn, drove the unemployment rate up to nearly 15%, the highest since the Great Depression. Even that staggering rate likely underestimates the extent of the impact of Covid on the labor market. Indeed, given some mismeasurement issues, the unemployment rate could have been up to 20%, roughly twice the peak that we saw in the wake of the Global Financial Crisis (Figure 20). The U-6 rate, which incorporates other dimensions of labor market slack such as marginally attached workers and those working part-time for economic reasons, more than tripled, almost reaching 25%.

Figure 20: Unemployment peak of 15% understates the extent of the labor market shock

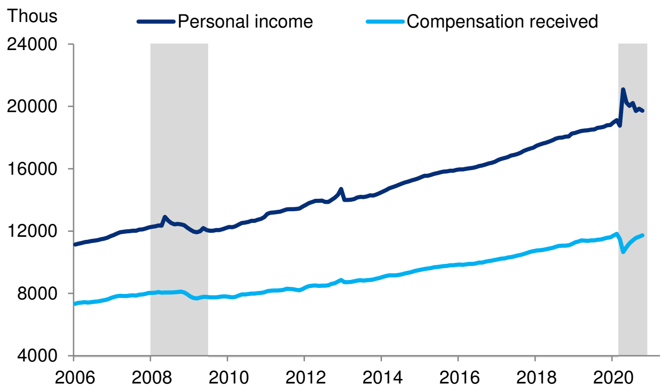


Source : BLS, Haver Analytics, Deutsche Bank

However, the recovery thus far has been equally staggering. In the seven months from May to November, over 12 million jobs have been added, restoring over half of the jobs lost and driving the unemployment rate down below 7%. In contrast, about 9 million jobs were lost during the Global Financial Crisis, and it took about two and a half years from the 2010 bottom in payrolls to recover a similar share of those jobs lost as has been done thus far.

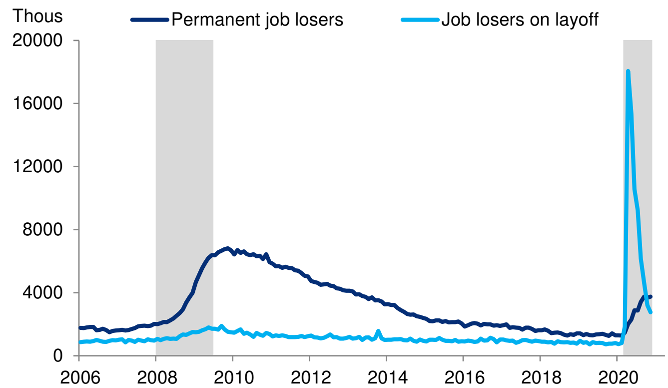
There are several reasons behind the speed of this recovery. First, the underlying health of the economy prior to March combined with the exogenous nature of the Covid shock meant that there were few excesses or imbalances that needed to be worked off before a recovery could begin in earnest. Second, the speed and size of the fiscal stimulus done in the CARES Act, through stimulus checks, extended and enhanced unemployment benefits, small business relief, loan forbearance, and eviction moratoriums just to name a few aspects, helped to put a floor underneath aggregate demand. Case in point, personal income actually *increased* this year even as wages and salaries and other forms of labor compensation fell (Figure 21), allowing households, on balance, to maintain consumption levels and preventing doom loop dynamics from setting in.

Figure 21: Government stimulus more than offset the loss of labor market income, which is very atypical



Source : BEA, Haver Analytics, Deutsche Bank

Figure 22: In contrast with previous recessions, most of the job losses were temporary layoffs

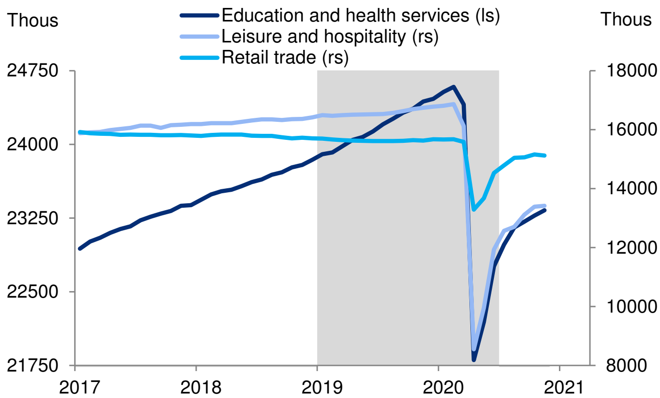


Source : BLS, Haver Analytics, Deutsche Bank

Third, in contrast with prior recessions, the majority of jobs lost this time around tended to be "temporary" rather than "permanent" job losses (Figure 22). Presumably, those temporarily laid-off employees maintain closer connections to their previous employer and could be more easily recalled when demand began to pick up. Indeed, we have seen a very large drop off in those temporary job losers as the recovery has progressed, but very little progress in addressing the numbers of jobs permanently lost.

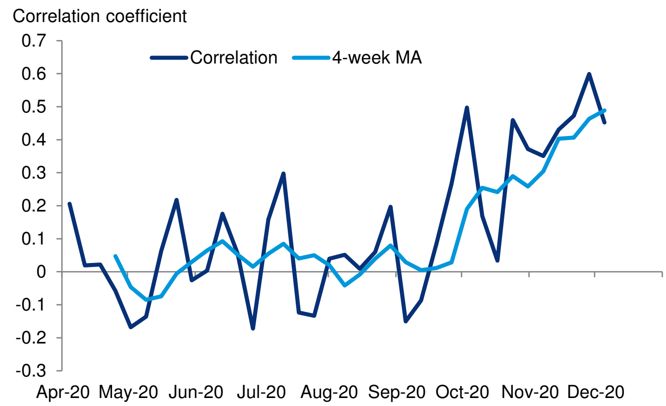
That being said, the remaining half of the recovery in the labor market will be much harder and take much longer. Indeed, the pace of job gains has downshifted dramatically over the last couple months, from a 4.7 million pace in June to only 245k in November. Should that 245k pace hold, it would take more than three years to recover the almost 10 million remaining jobs lost due to Covid. One reason for the recovery's slowdown is Covid itself. Large swathes of the US labor market centered on the service sector will not be able to operate at full capacity, and, therefore, will not need a full contingent of workers until the virus is under control. Indeed, depressed employment levels in some sectors could prove to be more persistent, with the shift towards more productive activity like online sales versus brick-and-mortar one key example. We have seen particularly sharp dropoffs in job gains of late in those sectors that are most impacted by Covid, namely leisure and hospitality, health and education services, and retail trade (Figure 23).

Figure 23: Job gains in Covid-impacted industries have slowed to a crawl



Source : BLS, Haver Analytics, Deutsche Bank

Figure 24: A state's growth in continuing claims is becoming increasingly correlated with its growth in Covid cases

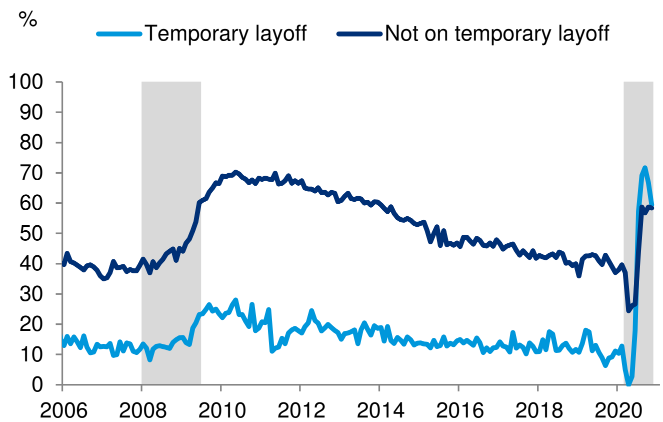


Source : DoL, John Hopkins, Haver Analytics, Deutsche Bank

In addition, the recent surge in Covid cases has led to many states reimplementing lockdown measures and other business restrictions that will likely crimp the labor market recovery in the short run. As we wrote in November (see "With fiscal support in the backseat, Covid driving local labor markets"), we have already begun to see some evidence of this in the high-frequency data, with changes in a state's jobless claims becoming increasingly correlated with the state's growth in Covid cases (Figures 24). As Covid cases continue to rise, hiring will likely continue to slow and could even reverse.

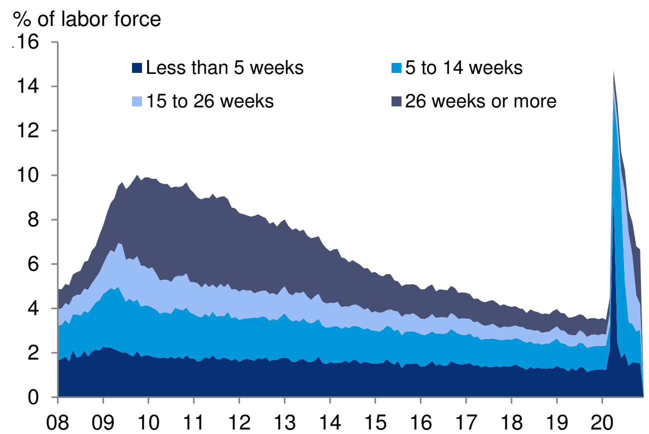
Even once Covid is no longer a major issue, echoes of this recent disruption will persist for some time. As mentioned previously, there has been much progress getting those workers on temporary layoff out of unemployment. However, for those that are left, it increasingly looks like the temporary moniker is a distinction without a difference. As of November, about 60% of the temporarily unemployed were out for 15 weeks or longer, matching the share of permanently unemployed out for that long (Figure 25). As is clear from previous labor market recoveries, the longer people remain unemployed, the deeper the scars are and the harder it is to get them back into a job.

Figure 25: Percentage share of unemployed 15 weeks or longer



Source : BLS, Haver Analytics, Deutsche Bank

Figure 26: Unemployment duration extending

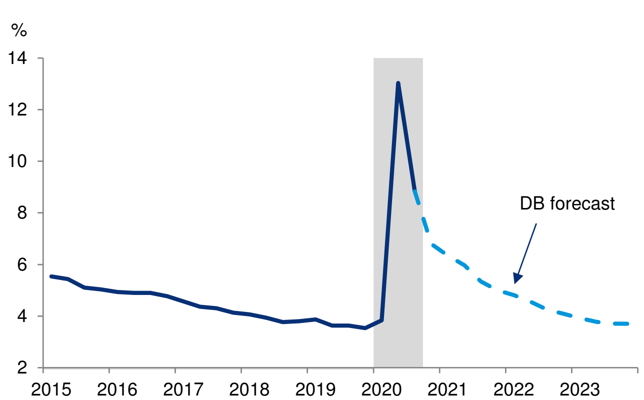


Source : BLS, Haver Analytics, Deutsche Bank

Exacerbating this is the potential for workers to become discouraged and drop out of the labor force. We have already seen a large drop off in the participation rate in this crisis, even amongst prime-age workers, whose rate fell to 79.9% in April, the lowest since the early 1980s. While some of this has certainly been driven by workers having to leave the labor force to provide their own education, healthcare, and childcare services, it will be a lot harder to pull some of these workers back into the labor force. Case in point, it took the unemployment rate breaking below 4% and plumbing five-decade lows to get the participation rate to begin to tick up.

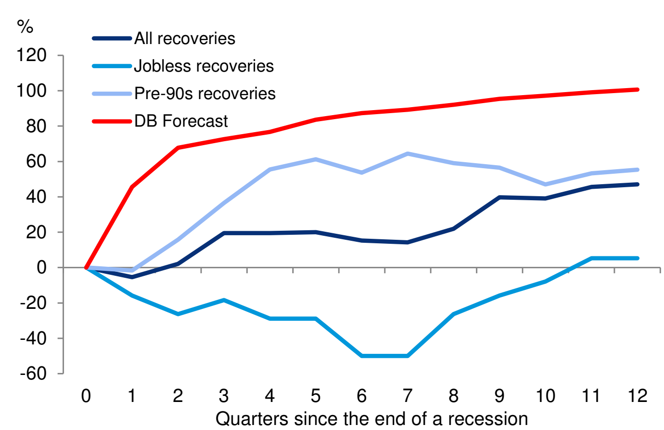
Given the above-trend GDP growth forecast from the previous section, we continue to see the unemployment rate falling over the next couple years (Figure 27). Compared to previous recessions, the pace of recovery we envision is particularly quick, especially compared with the so-called jobless recoveries after the previous three recessions. Figure 28 shows the share of the run up in the unemployment rate in each recession that had been subsequently unwound by each quarter following the end of a recession.

Figure 27: Unemployment rate to normalize over next 3 years



Source : BLS, Haver Analytics, Deutsche Bank

Figure 28: Share of the run-up in unemployment rate that had been unwound by each point in the recovery



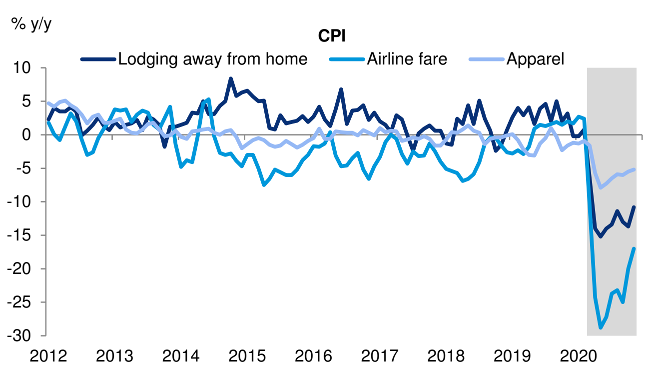
Source : BLS, NBER, Haver Analytics, Deutsche Bank

The unemployment rate should end this year (on a quarterly basis) at 6.8%, closing about two-thirds of the run-up in the unemployment rate. By the end of 2021, it should fall to 5%, almost 90% of the way back to the pre-Covid level, with the remainder to be worked off over the next two years. We should see the unemployment rate at 3.7%, in the neighborhood of the lows just prior to pandemic, by the end of 2023, which, as we discuss in the next section, should provide some tailwind to price pressures as the Fed attempts to get inflation back to target and engineer an overshoot.

Inflation: Patience is a virtue

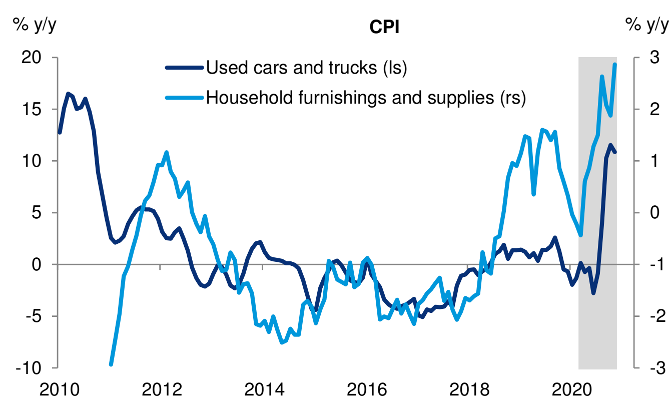
The pandemic has also had similarly drastic impacts on inflation. On one hand, given the lockdowns and reduced mobility, there were sharp drops in demand for apparel as well as for travel services like airfare and lodging away, which caused prices in those categories to plunge (Figure 29). On the other, supply chain disruptions and increased residential investment led to price surges for durable goods such as used cars and home furnishings (Figure 30). Food is also another category where supply chains were severely disrupted as people shifted their consumption away from restaurants and towards cooking at home. On net, however, the immediate impact was disinflationary, with year-over-year rates in core CPI and core PCE plunging as low as 1.2% (June) and 0.9% (April) respectively.

Figure 29: Changes in patterns of demand have led to sharp drops in prices for some goods and services...



Source : BLS, Haver Analytics, Deutsche Bank

Figure 30: ...and price surges for others

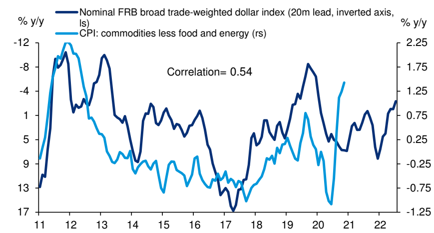


Source : BLS, Haver Analytics, Deutsche Bank

As the recovery progresses and vaccines allow for normal economic activity to recommence, demand patterns should begin to shift away from goods and back towards services. Looking at goods first, the Covid-related shifts in demand and supply chain disruptions have led core goods inflation to spike almost 2.5 percentage points , breaking, at least temporarily, the traditional lead-lag relationship between core goods inflation and the dollar (Figure 31). As goods demand moderates and supply chains heal, there will likely be some modest disinflationary pressures as the dollar reasserts itself as a primary driver of goods prices.

In contrast, with respect to services, as vaccines come on line and consumption patterns return to normal, there are some potential short-term upside risks to inflation in 2021. Broadly speaking, this risk is a function of how fast demand comes back compared to how quickly supply can be brought back on line. As an example, with air travel down significantly, many airlines have temporarily mothballed some of their planes in deserts around the world. Should demand for travel suddenly explode post-vaccination without the requisite supply reactivated, airfare prices could increase quite dramatically. A similar story could be told for food away from home given how restaurants have been impacted in the crisis. Our forecast does include a temporary boost to airfare and lodging away prices in 2021 Q3 and Q4 to account for this possibility, but we are somewhat uncertain about the precise timing and magnitude of this effect. Regardless, any such tailwind to inflation would most likely be temporary as price signals would encourage more supply to be brought on line.

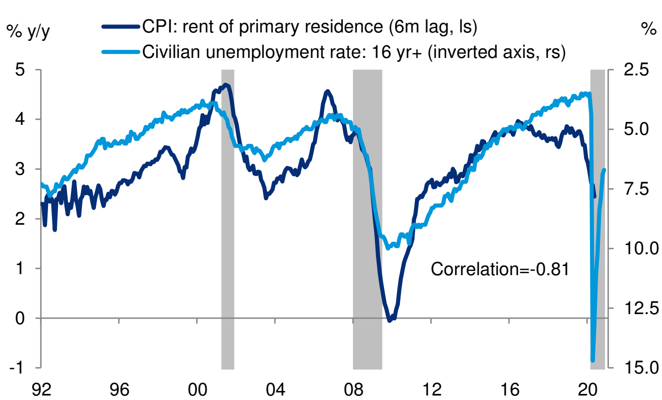
Figure 31: Traditional relationship between the dollar and core goods prices broke down



Source : BLS, FRB, Haver Analytics, Deutsche Bank

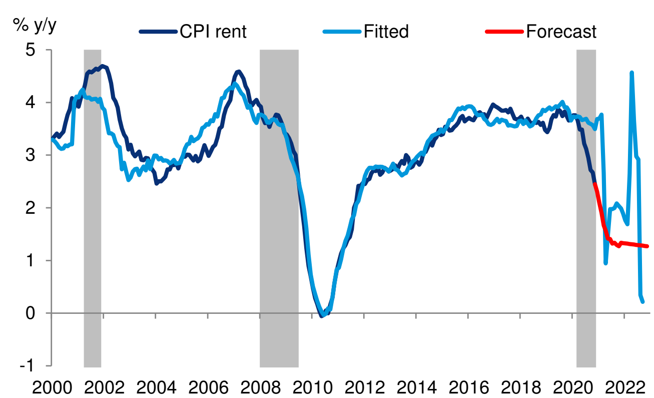
On top of that, these sectors comprise only a moderate share of households' consumption basket. For example, transportation services, lodging away, and food away from home comprise only about 12% of the headline CPI basket. In contrast, trends in rents as well as healthcare services are much more important for the trajectory of overall inflation, with those categories comprising almost 40% of the CPI basket. As to the former, rental inflation is one of the categories for which the Phillips curve seems to work (Figure 32). Given our expectations that the unemployment rate will remain above 5% for most of next year combined with the potential scarring effects for those out of the labor force, we expect that rental inflation will continue to decelerate over the next couple years. Indeed, recent data suggest that the lowest share of households were paying full rent in early December since the onset of the pandemic, reinforcing the view that rental inflation should remain under pressure.

Figure 32: Rental inflation correlated with the unemployment rate



Source : BLS, Haver Analytics, Deutsche Bank

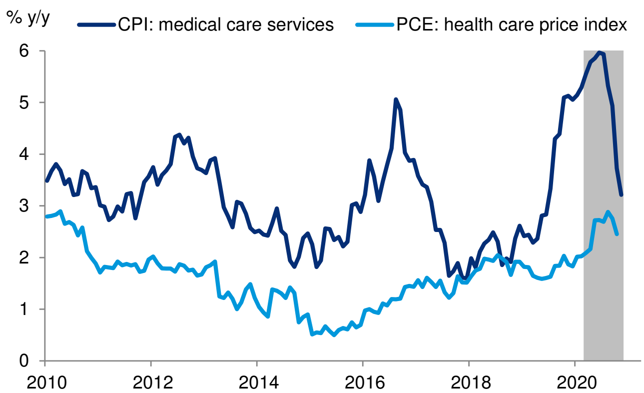
Figure 33: Elevated unemployment to put downward pressure on rental inflation



Source : BLS, Haver Analytics, Deutsche Bank

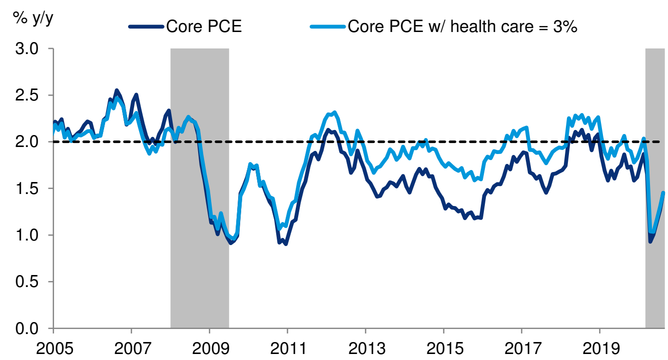
In terms of healthcare, this category has actually been a boost to both CPI and PCE inflation this year, though the underlying story differs somewhat between the two (Figure 34). Within the CPI, the fundamental driver was health insurance prices, which, at their fastest, rose over 20% year over year. Since September, there have been three significant negative monthly prints in a row, and, given how this series is constructed, that string of negative prints could very well extend to August 2021. Despite only being about 1.5% of the core CPI basket, health insurance alone could exert as much as a 30bps drag on core CPI through the end of next year.

Figure 34: Healthcare services inflation



Source : BLS, BEA, Haver Analytics, Deutsche Bank

Figure 35: Core PCE vs. counterfactual where healthcare services inflation at 3%

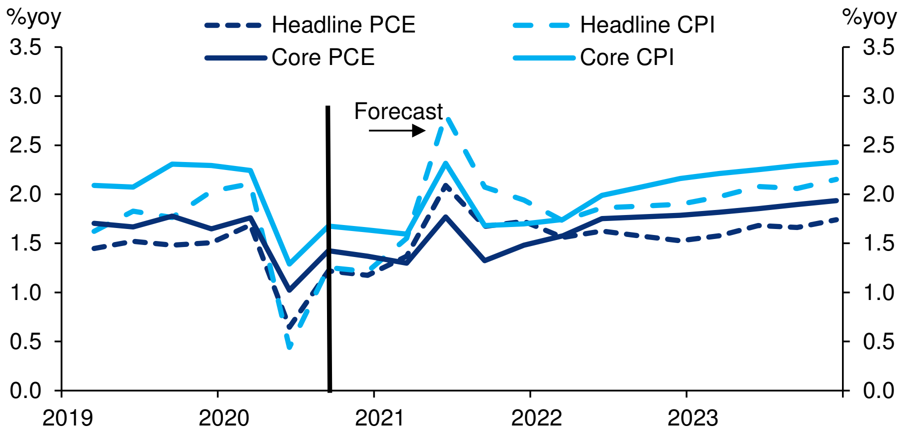


Source : BEA, Haver Analytics, Deutsche Bank

In the PCE, healthcare prices have also been particularly strong, running at almost 3%, the fastest pace in almost a decade. If sustained, this would likely be welcomed by the Fed, as persistently soft healthcare inflation was a key reason why the Fed has missed its 2% target over the last decade (Figure 35). However, this uptick seems to be related to provisions of the CARES act which, from May 1 to December 31, 2020, temporarily suspended the 2% cut to Medicare reimbursement rates that went into effect in 2013. If Congress does not continue this provision, that cut will come back into effect in the January print, causing a sharp dropoff in healthcare inflation through 2021. If Congress does extend the suspension, this would merely push off the negative impact of the effective price cut. Depending on how this is handled in the fiscal package, this category could exert a 15-30bps drag on core PCE inflation next year.

Given the trends in rents and healthcare prices discussed above, our inflation forecast is relatively muted. Core CPI and core PCE should end this year at 1.6% and 1.4% Q4/Q4 respectively. Next year will see some base effects turbulence, with year-over-year rates spiking up to 2.4% in May for core CPI and 1.9% in April for core PCE. Those surges should quickly subside and core CPI and core PCE should end the year at 1.7% and 1.5% Q4/Q4. Through 2022 and 2023, both should converge towards the Fed's target, reaching 2.3% and 1.9% by the end of 2023, on track to reach and potentially overshoot the Fed's target in 2024.

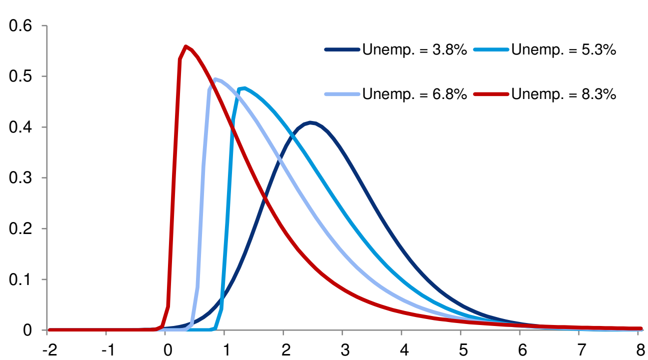
Figure 36: DB inflation forecasts



Source : BEA, BLS, Haver Analytics, Deutsche Bank

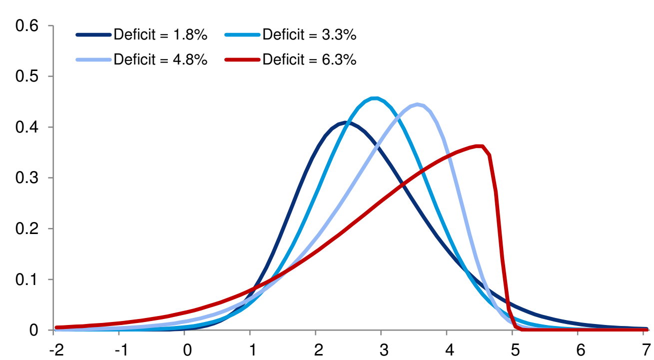
While we are particularly uncertain about forecasts beyond our forecast horizon, the normalization of the labor market and the return to low unemployment rates should provide some optimism about the Fed's ability to engineer an overshoot. Figure 37 shows a comparative static exercise examining how changes in the unemployment rate affect the forecast distribution for ten-year ahead core PCE inflation. With unemployment extremely elevated earlier in the year, the modal expectation was for core PCE to run well below the Fed's target for the next decade. However, with an unemployment rate around 7%, the modal expectation is centered much closer to the Fed's target, with the whole distribution of inflation outcomes shifting to the right as the unemployment rate falls.

Figure 37: Forecast distribution for 10-year ahead inflation to shift out to the right as the labor market recovers



Source : Deutsche Bank

Figure 38: Forecast distribution for 10-year ahead inflation to come back in as the deficit normalizes



Source : Deutsche Bank

We show a similar exercise in Figure 38, where we increase the deficit while keeping the unemployment rate low. Should this fiscal expansion be a one-time occurrence, the ten-year ahead inflation forecast distribution should converge back towards something centered around the Fed's target. While the increase in the deficit certainly does present some inflationary pressures, we think you would need to see sustained fiscal expansion with a beyond-full-employment labor market at the same time for serious upside inflation risks to emerge.

Fed: Committing to a new policy framework

The Fed's response to the global pandemic was unprecedented. The US central bank quickly cut rates to zero, substantially increased their balance sheet, and, with the support of Congress, provided a backstop to an increasing set of markets, including corporate credit, municipal debt, and funding for small and medium-sized businesses.

The second phase of their response over recent months was to cement their accommodative policy stance through providing forward guidance about their policy rate and asset purchases. This language was used to reinforce their newly adopted policy framework announced at Jackson Hole in August, in which the Fed committed to "broad-based and inclusive" labor market gains, only responding to employment shortfalls, and achieving 2% average inflation over time. At the September meeting, the Fed committed to keep rates near zero at least until the economy achieved maximum employment and "inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time." And at the December meeting, they pledged to maintain the current robust pace of asset purchases until "substantial further progress" was reached on their dual mandate goals.

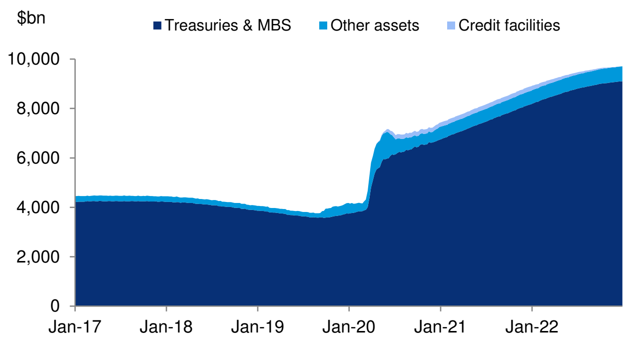
Looking ahead, the key questions for monetary policy relate to the unwind of this exceptional accommodation. In short, we think this process will be handled very cautiously and proceed gradually over time.

Balance sheet: Keeping the pace until "substantial further progress" is made

The December FOMC press conference provided few clues about what economic conditions constitute the "substantial further progress" that is needed to trigger a gradual tapering of asset purchases. In our view, "substantial further progress" within the Fed's new average inflation targeting framework suggests that the Fed will be conducting asset purchases further into the cycle relative to the post-GFC experience. In particular, we see the Fed maintainting the current pace of QE through all of 2021 until the unemployment rate has neared 5% – about 1 percentage point above NAIRU – and there is clear evidence that core PCE inflation has moved sustainably above current levels of 1.4% year-over-year. With (1) these conditions unlikely to be met until late 2021 at the earliest; (2) confidence that normalization is progressing smoothly driven by the vaccination process unlikely before midyear; and (3) Chair Powell's clear signal that the Committee will give ample forewarning about the start of tapering, we think hints of tapering come into view in the second half of 2021 with the process starting in early 2022.

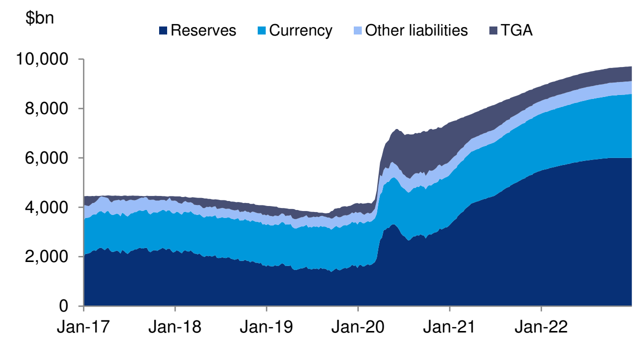
Once it begins, Powell was clear that the process would be gradual, and at this point we see it playing out through the course of 2022. Under these assumptions, we see the Fed's balance sheet rising to a bit more than $9tn by the end of 2022, with reserves beginning to level off near $6tn at that time, with the latter given an additional boost from a sharp drawdown in the Treasury General Account (TGA) (Figures 39 and 40). Once net asset purchases cease, the minutes to the November meeting also indicated that the Committee would reinvest to keep the portfolio constant for some time prior to liftoff. In this respect, tapering of asset purchases over the course of 2022 and then holding the balance sheet steady for 2023 would be consistent with the objective of providing more accommodation further into the cycle aimed at achieving an overshoot of inflation.

Figure 39: Fed asset projections through 2022



Source : FRB, Deutsche Bank

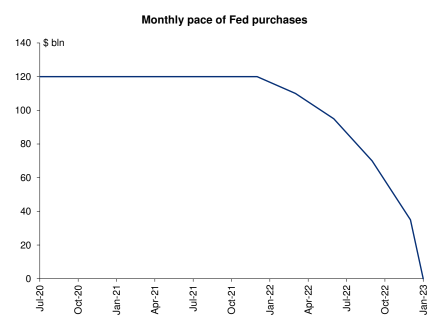
Figure 40: Fed liability projections through 2022



Source : FRB, Deutsche Bank

Although there has been intense discussion about possibly adjusting the duration or pace of purchases, at this point we expect these parameters to remain unchanged. Although Powell was careful to reiterate at the December FOMC presser that the Committee could always extend the duration or adjust the pace of purchases if needed, our read was that neither of these parameters were likely to be altered on the Fed's forecast. Indeed, Powell highlighted that their current policy stance is appropriate; that financial conditions remain very accommodative; that the level of interest rates is not impeding the recovery since interest-sensitive sectors are performing quite well; that doing more on QE might not help much on inflation; and that monetary policy continues to operate with long and variable lags, and as such they may not want to adjust these parameters to respond to a possibly near-term and short-lived dip in the economy. When he was asked specifically about the possibility of extending WAM but reducing pace, a la the Bank of Canada, Powell noted it was not something "high on the list of possibilities."

Figure 41: Fed purchases likely to begin to slowly decline in early 2022



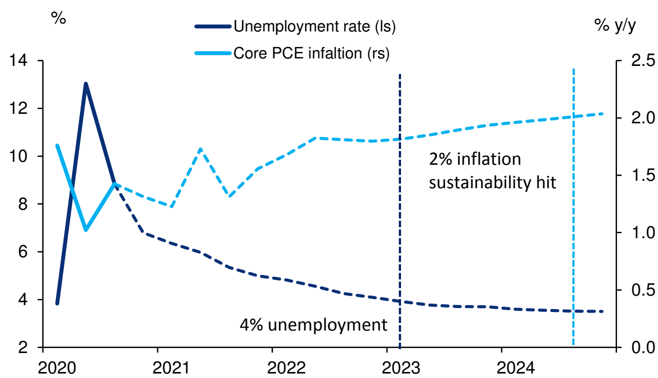
Source : Deutsche Bank

Lift-off: Still "not even thinking about thinking about raising rates"

The conditions for lift-off are detailed in the Committee's forward guidance introduced at the September FOMC meeting. This outcome-based forward guidance, combined with the Committee's own projections detailed in their latest Summary of Economic Projections (SEP), indicate that lift-off could come into view by the end of 2023 with rate increases possible in 2024.

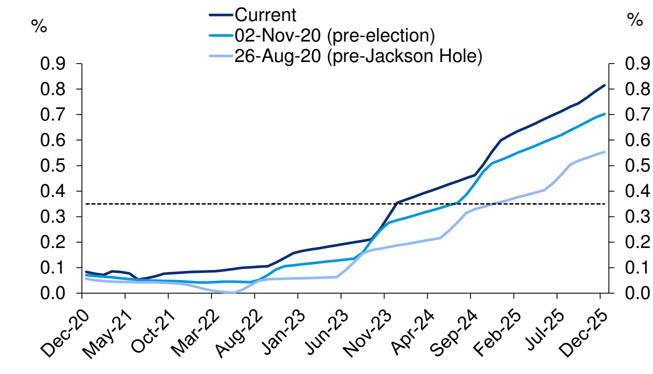
Our own economic forecasts are consistent with these expectations. We see sub-4% unemployment recaptured by the end of 2023, falling to a level below the Committee's median view of NAIRU at that point. This, we think, would satisfy the "maximum employment" leg of their forward guidance. However, given the Committee's shift to an asymmetric employment mandate, where they are only focused on counteracting unemployment that is too high, sub-4% unemployment is a necessary but not sufficient condition for lift-off. On our forecast, the achievement of 2% sustained inflation with realistic prospects of a modest overshoot does not occur until early 2024. With the Committee likely wanting to see that level of inflation maintained for at least six months or so, we have penciled in lift-off in the second quarter of 2024. This is slightly later than market pricing, which despite the Committee's policy framework shift and consistent messaging has moved earlier since the Jackson Hole announcement. The move towards a more optimistic pricing by the market has been driven by positive fundamental news about the outlook, namely vaccine developments.

Figure 42: Fed's inflation objective unlikely to be hit until 2024



Source : BLS, BEA, Haver Analytics, Deutsche Bank

Figure 43: Market pricing lift-off in H2 2024



Source : Bloomberg Finance LP, Deutsche Bank

While we do not expect any changes to the Committee's target range for the fed funds rate for a few years, it is possible that 2021 brings more technical adjustments to the interest rate on excess reserves (IOER). One surprising feature of the Fed's response to the pandemic was that, despite the massive rise in reserves, the fed funds rate remained in close proximity to IOER. However, as indicated in a recent speech by Lorie Logan, the head of the SOMA portfolio, several of the factors that led to a higher-than-expected effective fed funds rate – substantial Treasury bill issuance, a sharp increase in the TGA which limited the increase in reserves, and "domestic banks' apparent comfort with reserve growth – could reverse this year, leading to a move lower in fed funds. If this happens, the Fed would likely respond by raising IOER to ensure that the effective fed funds rate remained comfortably within the target range.

Committee changes

The Senate recently confirmed Christopher Waller as the final Trump nominee for the Board of governors. Waller's monetary policy leanings appear to be dovish, including his views that the nominal neutral fed funds rate to be very low, likely in the range of 1-1.5% due importantly to strong demand for global safe assets; does not "buy into the Phillips curve story that low unemployment causes inflation"; did not agree with arguments for raising rates earlier in the cycle as he did not see overheating risks in the economy; and believes that there are important benefits to inflation make-up strategies such as price-level targeting, as an unanchoring of inflation expectations to the downside could lead to a "world of hurt." For more, see here: "What to expect from Shelton and Waller's nomination hearing".

Along with adding Waller as a new voting member, the annual reshuffling in regional presidents among the voting members paints the Committee in a somewhat more dovish light compared to 2020. Of particular note, Chicago Fed President Evans will be voting, and he has been a strong advocate of the Fed's commitment to achieving an inflation overshoot to anchor inflation expectations, even going as far as to say he would be comfortable with 2.5% inflation. Similarly, San Francisco's Daly is on the dovish end of the Committee with a particular focus on the broad based and inclusive labor market gains that come from achieving a tight employment picture.

Figure 44: Fed voters turn incrementally dovish in 2021

		Permanent Voting Members			
		Jerome Powell, Chair	3		
		Richard Clarida Vice Chair	2		
		John Williams, New York	2		
		Lael Brainard, Governor	3		
		Randal Quarles, VC Sup.	3		
		Michelle Bowman, Governor	3		
		Christopher Waller, Governor	1		
		Rotating voters			
2020		**2021**		**2022**	
Robert Kaplan, Dallas	3	Charles Evans, Chicago	2	Loretta Mester, Cleveland	4
Loretta Mester, Cleveland	4	Mary Daly, San Francisco	2	Eric Rosengren, Boston	5
Patrick Harker, Philadelphia	4	Raphael Bostic, Atlanta	3	Esther George, Kansas City	5
Neel Kashkari, Minneapolis	1	Thomas Barkin, Richmond	4	James Bullard, St. Louis	1
Average H/D ranking >	**2.5**	**Average H/D ranking >**	**2.4**	**Average H/D ranking >**	**2.8**

Note: Hawk/Dove scores: 1=Dove, 3=Neutral, 5=Hawk; Averages are for all voting members

Source : Deutsche Bank

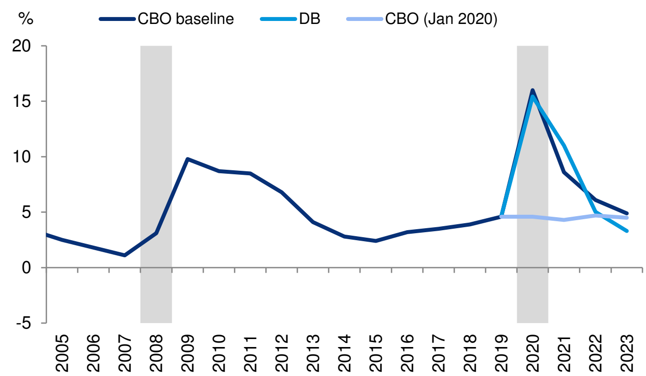
In terms of further additions to the Board, Waller's appointment leaves only one unfilled seat for the Biden administration, and his ability to fill that seat quickly likely depends on the results of the two Georgia Senate elections. Further out, Chair Powell's and Vice Chair Clarida's terms expire in early 2022. The current Fed leadership has received exemplary marks for the central bank's performance during the Covid crisis, having prevented a potential financial market meltdown while at the same time shifting the focus of policy in the longer term toward greater progress on a more "broad-based and inclusive" labor market objective. That said, it is possible that Biden would want to put his mark on the central bank – though his ability to do so could be constrained by a Republican Senate – or that Powell or Clarida would prefer to move on. If Powell and/or Clarida depart, Governor Brainard would be a prime candidate for the Chair position, as she was also frequently mentioned as a top candidate for the Treasury secretary position that ultimately went to Janet Yellen.

The more consequential turnover in Fed leadership could be for the Vice Chair of Supervision seat, with Randal Quarles' term for this position ending on October 13, 2021, though his Board seat does not expire until 2032. Biden would likely want to replace Quarles with someone with regulatory leanings more in line with his administration's desire to strengthen regulation across the board, including the financial sector. However, once again, their ability to do so could be hampered by a Republican Senate. As such, an easy "fix" could be to have Governor Brainard fill this role in an unofficial capacity for some time. If the Biden administration wants to appoint a new person to the Board to fill this seat, one possible candidate would be Nellie Liang, a former senior Fed staffer who has focused on financial stability and regulatory issues.

Fiscal deficits and debt: A necessary cost of the pandemic

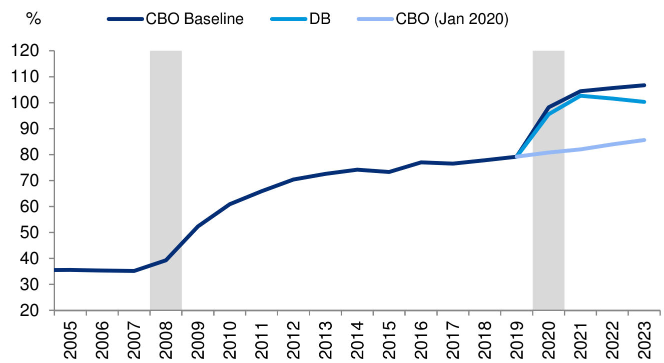
The rapid and aggressive monetary and fiscal response to the Covid-19 crisis was a necessary condition for the recovery's outperformance to date. However, it also came at a considerable cost in terms of elevated federal government debt. In 2020, the deficit-to-GDP rose to more than 15%, by far a record over the post-World War period, and the debt-to-GDP level jumped to about 95%. Assuming the roughly $900bn fiscal stimulus that should be passed shortly, the deficit should stay very elevated in 2021 at nearly 10% and the debt-to-GDP ratio should rise above 100% for the first time since 1946. Our projections differ from CBO's in two important ways. First, they build in this additional fiscal stimulus. Second, our GDP assumptions are more optimistic than CBO's, particularly for 2021. That leads to a very slight decline in the debt-to-GDP ratio over 2022-2023 according to our projections.

Figure 45: Deficit-to-GDP spiked around Covid-19 crisis



Source : CBO, Haver Analytics, Deutsche Bank

Figure 46: And debt-to-GDP set to exceed 100%

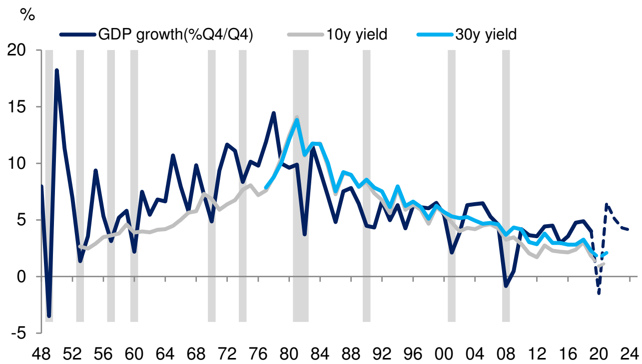


Source : CBO, Haver Analytics Deutsche Bank

Beyond the near-term fiscal considerations and running against the dire long-term fiscal projections is an emerging dynamic that is actually quite supportive for longer-run debt trajectories. In particular, for the first time since the late 1970s, nominal GDP growth has consistently exceeded long-term borrowing costs as measured by the 10- and 30-year Treasury yields. This dynamic is expected to continue over the next few years, and all else equal, will put downward pressure on the debt-to-GDP ratio in the US. Along with negative real borrowing rates, the need for significant investments in both physical and intangible capital (e.g., education), combined with the fact that monetary policy is likely to be more constrained as a cyclical stabilizer, argues in favor of a more persistently robust fiscal response in the US. This topic will no doubt receive more attention over the coming year. Indeed, there has been an emerging view from a number of former economic policymakers that fiscal policy must take a more proactive role in returning the economy to maximum employment.[2]

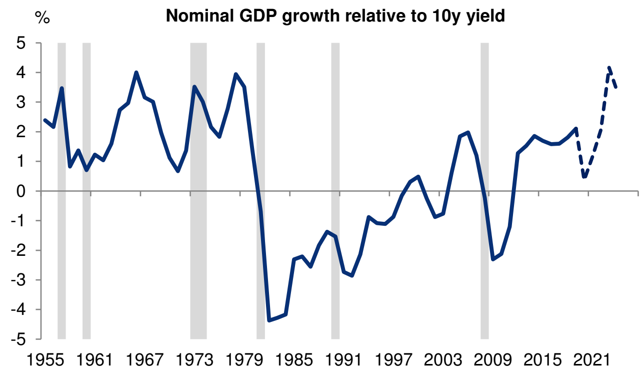
2 See "Fiscal policy advice for Joe Biden and Congress", a co-hosted event by the Hutchins Center on Fiscal & Monetary Policy and the Peterson Institute for International Economics, December 1, 2020.

Figure 47: Nominal GDP growth set to consistently outstrip borrowing costs



Source : BEA, FRB, Haver Analytics, Deutsche Bank

Figure 48: Nominal GDP outperformance set to be the highest since the 1970s



Note: We have adjusted the market forward curve upwards by 15bps to reflect the higher trajectory our rates strategist have built in through end 2021. Source: BEA, FRB, Haver Analytics, Deutsche Bank

Appendix 1

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