OXFORD ECONOMICS

CECL Macroeconomic Scenarios Service

US Country Report

June 2021

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Contents

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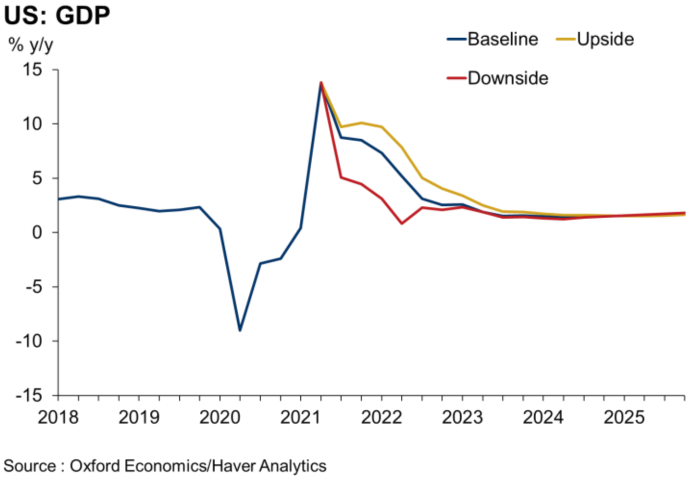
Executive summary



Oxford Economics combines two decades of **forecast errors** with our quantitative assessment of the current risks facing the global and domestic economy to produce robust forward-looking distributions for the economy. As well as the baseline forecast, this report summarizes two alternative scenarios, which reflect alternative points on the distribution. The upside scenario reflects the 15th percentile, and sees output, household income, and interest rates rise above baseline (and correspondingly, sees unemployment fall below baseline). The downside scenario reflects the 85th percentile, and sees output, household income, and interest rates fall below baseline (and correspondingly, sees unemployment rise above baseline).

We expect GDP growth of 7.7% in 2021, the fastest rate since 1951. The US economy is about to experience a summer boom fueled by reduced virus fear, steady household incomes, and elevated savings. Higher inflation will be a feature of the transitory supply and demand imbalance, but we don't foresee the economy overheating.

The upside scenario sees economic activity surprise to the upside in 2021, with GDP growth reaching 8.4% this year compared with 7.7% in the baseline. The recovery is sustained, with the level of GDP around 3.3% higher than baseline in 2025. Possible drivers of an upside scenario include a faster run down of the excess savings accumulated over the course of the pandemic, leading an even stronger rebound in consumption and growth. Further fiscal stimulus is also a possible driver of stronger near-term growth.

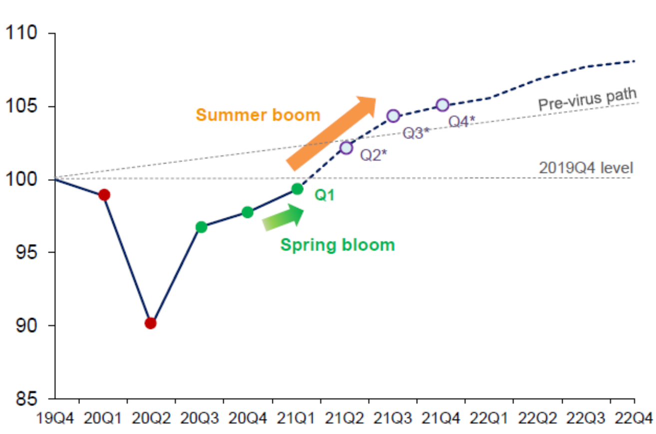
The downside scenario sees a slower economic recovery than in the baseline, with GDP growth of 5.8% in 2021 compared with 7.7% in the baseline. The shock to economic output is sustained, with the level of GDP still 4.2% below baseline by 2025. Possible drivers of a downside scenario include a weaker recovery in consumption growth amid consumer caution, vaccine hesitancy, and a potentially slower reduction in voluntary social distancing. A further sharp rise in inflation driven by a weak recovery in labor force participation and rising inflation expectations could also be damaging, as this would reduce real household income and potentially trigger a negative reaction in financial markets.

Further information on how these scenarios were constructed can be found at the end of this report, alongside summary tables.

Baseline

The US economy is about to experience a summer boom fueled by reduced virus fear, steady household incomes, and elevated savings. Consumer demand will rotate from goods toward services while supply gradually responds to stronger activity. Higher inflation will be a feature of the transitory supply and demand imbalance, but we don't foresee the economy overheating. We expect GDP growth of 7.7% in 2021, the fastest rate since 1951.

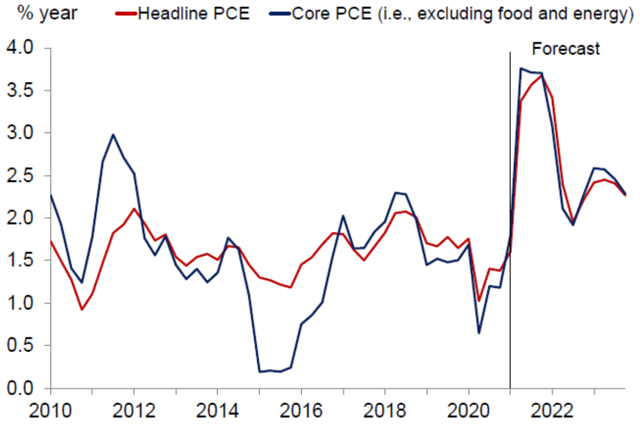
Mini-boom in economic activity



Source: Oxford Economics

After the sharp rebound in activity through 2022, economic growth will cool as the fiscal impulse fades. We expect GDP growth of around 1.6% in 2024-2030, slightly below our potential growth estimate of 2%. Slower projected population growth will result in lower output growth in the long run, but the US will maintain a flexible labor force, giving it an advantage over its peers. We also expect productivity growth will firm modestly in the medium to long term.

US: Headline and core PCE prices



Source: Oxford Economics/Haver Analytics

Major inflation surprises over the past few weeks have brought back fears of overheating. But, while the US economy is expected to feel a lot warmer over the coming months, we do not anticipate spiraling inflation. Weak pre-Covid structural inflation dynamics, lingering demand-side shortfalls, a supply-side response to stronger demand, and anchored inflation expectations lead us to believe inflation won't spiral out of control. We expect inflation will cool in the coming quarters, but will remain higher than it has been since the early 1990s. We see headline inflation at 3.8% and core inflation at 3.1% in 2021.

As it contemplates these risks to inflation, the Fed will proceed cautiously in removing policy accommodation. We see rate liftoff taking place in early 2023 with a total of two 25bps rate increases over the year, with QE tapering to begin in early 2022.

Congress is working on a version of Biden's American Jobs Plan (AJP), which proposes to spend $2.3tn on a wide array of infrastructure projects, which is incorporated into our baseline. If an agreement isn't reached, Democrats will shift to moving the AJP through the budget reconciliation process.

Upside scenario (15th percentile)

Possible drivers of an upside scenario include a faster run down of the excess savings accumulated over the course of the pandemic, leading an even stronger rebound in consumption and growth. Further fiscal stimulus is also a possible driver of stronger growth.

US households have accumulated excess savings worth around $2.5tn since the onset of the crisis. While some of these funds have been used to pay down debt, we anticipate about 13% will be used to smooth out consumer spending into 2022. A greater or faster use of those funds would lead to stronger growth, although risks triggering higher inflation.

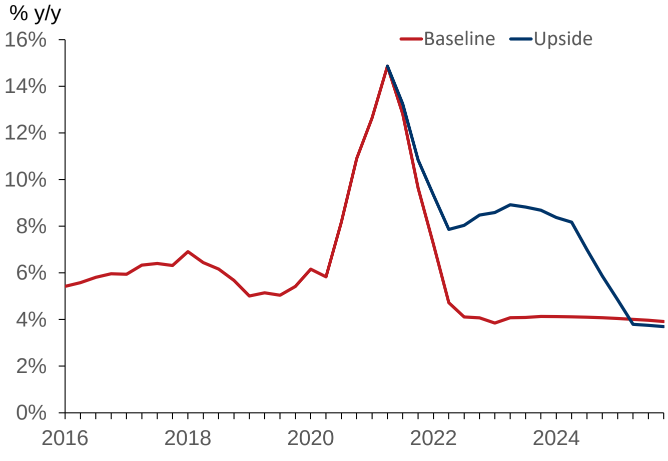
Congress is working on a version of Biden's American Jobs Plan (AJP), which proposes to spend $2.3tn on a wide array of infrastructure projects. President Biden has also unveiled his American Families Plan (AFP), which would spend $1.8tn to support workers and families by boosting spending on education, healthcare, and childcare, which if passed could further boost growth in the near term.

The upside scenario sees economic activity surprise to the upside in 2021, with GDP growth reaching 8.4% this year compared with 7.7% in the baseline. The recovery is sustained, with the level of GDP around 3.3% higher than baseline in 2025.

Strong momentum in consumption growth is maintained moving into the new year, with US consumer spending expanding 10.3% in 2021. Private sector business investment also picks up and records growth of 9% in 2021.

The stronger rebound in activity leads to greater inflationary pressures in the medium term, with headline CPI inflation rising to 4% year-on-year in 2021 and 3.8% in 2022 as a result of rising earnings and commodity prices. In the long-term core inflation remains stable and converges to around 2% year on year in line with the Fed's target rate.

House price index



Source : Oxford Economics/Haver Analytics

Reflecting the improved economic environment, asset prices appreciate in the near term. Equity prices are around 4.2% above baseline levels by the end of 2021 and 10.9% above baseline by end 2022. Residential house prices are 1.1% higher than in the baseline scenario by end-2021 and 5.4% higher by end-2022.

Downside scenario (85th percentile)

Possible drivers of a downside scenario include a weaker recovery in consumption growth amid consumer caution, vaccine hesitancy, and a slower reduction in voluntary social distancing. A further sharp rise in inflation driven by a weak recovery in labor force participation and rising inflation expectations could also be damaging, as this would reduce real household income and potentially trigger a negative reaction in financial markets.

Consumers are driving the strong recovery in our baseline forecast. But uncertainty around the pandemic situation and a significant degree of vaccine hesitancy could push consumers to be more cautious in their spending over the coming months, even as public health restrictions are removed.

Inflation heated up in May, with core CPI rising to the fastest annual pace since 1992, while core PPI rose at its fastest rate in the series' history. Whilst our baseline forecast shares the Fed's view that this will not trigger an upward inflationary spiral, risks of further upward pressure on prices remain. Continued weak labor market participation, supply chain bottlenecks and increased inflation expectations could all trigger uncomfortably higher spurts of inflation over the coming quarters. This has the potential to derail the recovery as a result of the effect on real household income and potentially triggering a sharp negative reaction in financial markets, particularly fixed income.

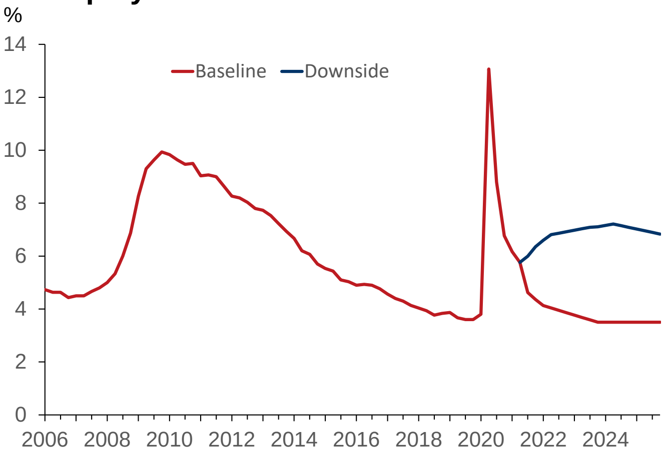
The downside scenario sees a slower economic recovery than in the baseline, with GDP growth of 5.8% in 2021 compared with 7.7% in the baseline. The shock to economic output is sustained, with the level of GDP still 4.2% below baseline by 2025.

Both consumption and business investment experience a more moderate recovery and are 4.8% and 5.6% lower in 2022 than in the baseline.

The shock to aggregate demand and the labor market weighs on prices, which in the near term is reinforced by a further fall in commodity prices. Headline inflation falls to just 0.7% in 2022.

Asset prices are weaker than under the baseline scenario, with the S&P500 index 11.9% lower in 2022 and house prices 12.4% lower by 2025. The spread of 10-year corporate bond yields over the 10-year Treasury yield rises to around 225 bps in 2021 Q4, 85 bps higher than in the baseline.

Unemployment Rate



Source : Oxford Economics/Haver Analytics

Shifts in key risks for impairment

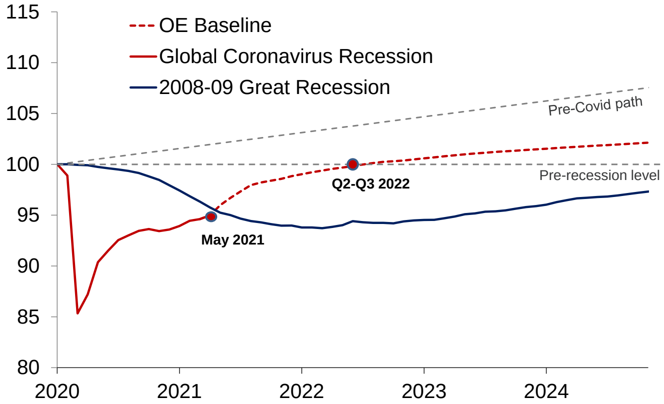
Residential property prices: House price growth remained solid during the pandemic, buoyed by strong demand, low rates and fiscally supported income. However, home sales are starting to slow given tight supplies and the sharp rise in prices, although we still expect strong demand and low rates to keep a floor under sales.

Commercial real estate prices: Risks to commercial real estate are firmly tilted to the downside. Capitalization rates (annual rental income relative to prices of recently transacted commercial property) remain at historically low levels and vacancy rates have increased. We expect prices to decline in H1 2021 before beginning to recover, but further economic and financial market stress could see prices fall more sharply.

Unemployment: We foresee a hiring spree in the summer, with the economy likely to add over 8mn jobs this year. Still, under our current forecast it will still take until 2022 to recoup all Covid job losses.

US: Employment recovery paths

Peak pre-recession employment = 100



Source: BLS/Oxford Economics/Haver Analytics

Household income gearing: Household debt were at healthy levels pre-virus, and the extraordinary income support measures enacted by the Federal government have led to stable ratios of household financial obligations and interest payments relative to income. Underlying vulnerabilities remain however, such as student loans, auto-loans and credit card debt. A sharp deterioration in financial conditions could see some household balance sheets become strained.

Non-financial corporate income gearing: Corporate profits slumped 20% in the first half of 2020 – twice as much as nominal GDP - as the coronavirus pandemic brought economic activity to a sudden stop. But as the economy reopened, the turnaround in profitability was remarkably swift, with before tax profits surging 27% in 2020 Q3 to reach an all-time high of $2.3 trillion – about 1.2% higher than prior to the pandemic. Moreover, low interest rates and ample liquidity have given businesses the opportunity to restructure their debt on more favorable terms – leaving many in a stronger balance sheet position. As a result, the ratio of NFCs short-term debt to total debt dropped by 3.3ppts to 29.7%, reversing nearly half of the rise during the economic expansion prior to the pandemic.

Equity prices: Elevated prices for risky assets became even more lofty over the past six months. Even adjusted for low Treasury yields, valuations for some assets remain expensive on a historical basis. These asset prices have significant downside risk if investor risk appetite deteriorates. Equity prices and corporate bonds look particularly vulnerable.

CECL scenarios

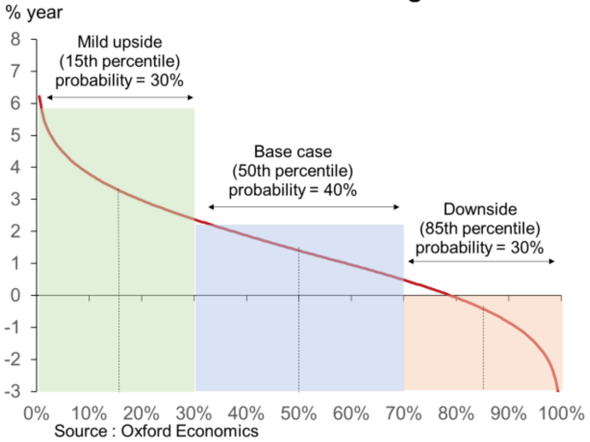
Oxford Economics combines two decades of forecast errors with our quantitative assessment of the current risks facing the global and domestic economy to produce robust forward-looking distributions for the economy. We construct the following 3 alternative scenarios at specific percentile points in the distribution.

In any distribution, the probability of a given discrete scenario is close to zero. Therefore, scenario probabilities represent the probability of that scenario or similar scenarios occurring. In effect, a given scenario represents the average of a broader bucket of similar severity scenarios and the probability reflects the width of that bucket.

Given that it is known where the CECL scenarios sit in the distribution (the percentiles), their probability (the width of the bucket of similar scenarios) will depend on how many scenarios are chosen. Scenario probabilities must add up to 100% so the more scenarios chosen, the smaller the section of the distribution, or bucket, each scenario represents and therefore the smaller the probability.

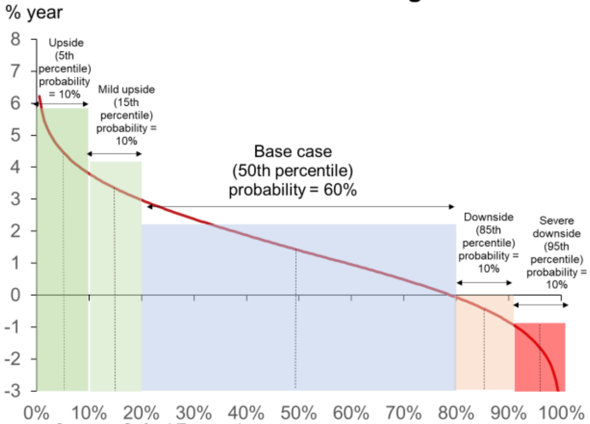
This allows the probabilities to be calculated according to whichever subset of scenarios institutions choose to use in the ECL calculation. For example, if 6 are used, the base case would have a 50% probability and each of the alternative scenarios would have a 10% probability. If, for example, only one upside (15th percentile), base case (approximately the 50th percentile) and downside scenario (85th percentile) were used then the two alternatives would attract a 30% probability and the base case 40% (see chart). Two other possible subsets of scenarios are shown in the charts opposite, however this is not a comprehensive list.

Cumulative distribution for GDP growth



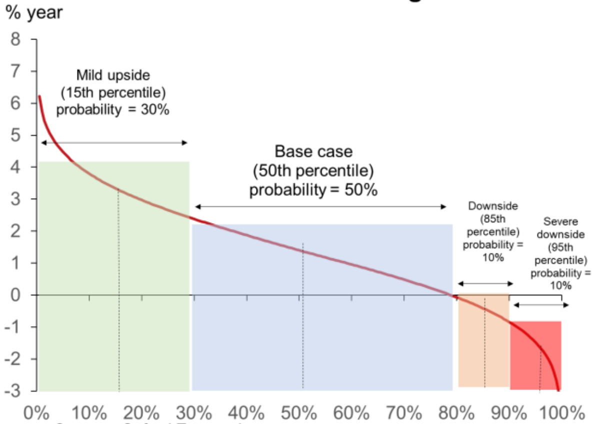
Source : Oxford Economics

Cumulative distribution for GDP growth



Source : Oxford Economics

Cumulative distribution for GDP growth



Source : Oxford Economics

The following table details some high-level annual indicators for each of these scenarios.

CECL Scenarios

		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Baseline												
GDP	% year	3.0	2.2	-3.5	7.7	4.5	1.9	1.5	1.6	1.6	1.5	1.5
Inflation	Level	2.4	1.8	1.2	3.8	2.5	2.5	2.2	2.1	2.0	2.0	2.0
Unemployment rate	Level	3.9	3.7	8.1	5.2	4.0	3.6	3.5	3.5	3.5	3.5	3.5
House Price Index	% year	6.3	5.2	7.8	12.4	5.0	4.0	4.1	4.0	3.7	3.5	3.3
Stock Price Index	% year	12.1	6.1	10.5	26.1	1.3	0.8	1.2	1.8	1.6	1.5	1.2
10-year Govt. Bond	Level	2.9	2.1	0.9	1.7	2.3	2.5	2.5	2.6	2.6	2.7	2.7
Disposable Income, real	% year	3.6	2.2	6.0	3.2	-1.9	1.4	1.4	1.5	1.5	1.6	1.6
Upside - 15th Percentile												
GDP	% year	3.0	2.2	-3.5	8.4	6.6	2.4	1.6	1.6	1.6	1.4	1.5
Inflation	Level	2.4	1.8	1.2	4.0	3.8	3.2	2.0	2.0	2.1	2.0	2.0
Unemployment rate	Level	3.9	3.7	8.1	4.8	3.4	3.4	3.4	3.4	3.4	3.4	3.4
House Price Index	% year	6.3	5.2	7.8	12.9	8.4	8.8	7.3	4.0	3.5	3.3	3.1
Stock Price Index	% year	12.1	6.1	10.5	27.9	8.9	5.4	3.6	1.7	1.3	1.2	0.9
10-year Govt. Bond	Level	2.9	2.1	0.9	1.8	2.8	3.2	3.2	3.2	3.2	3.2	3.1
Disposable Income, real	% year	3.6	2.2	6.0	3.4	-1.9	1.2	1.8	1.8	1.8	1.8	1.8
Downside - 85th Percentile												
GDP	% year	3.0	2.2	-3.5	5.8	2.1	1.8	1.4	1.7	1.7	1.6	1.6
Inflation	Level	2.4	1.8	1.2	3.3	0.6	2.0	2.5	2.0	1.8	2.0	2.0
Unemployment rate	Level	3.9	3.7	8.1	6.1	6.8	7.1	7.2	6.9	6.7	6.4	6.2
House Price Index	% year	6.3	5.2	7.8	11.6	1.2	-1.1	0.3	4.0	4.0	3.8	3.6
Stock Price Index	% year	12.1	6.1	10.5	23.3	-8.8	-4.8	-2.0	2.1	2.1	2.0	1.7
10-year Govt. Bond	Level	2.9	2.1	0.9	1.6	1.7	1.7	1.9	2.0	2.1	2.3	2.4
Disposable Income, real	% year	3.6	2.2	6.0	2.6	-2.9	1.0	0.8	1.3	1.5	1.5	1.6

Note: The base case is the mode of the distribution whereas the 50^{th} percentile is the median. The mode will equal the median when the distribution has no skew. In the case where the distribution is skewed, the mode will be close to but not exactly the same as the 50^{th} percentile. In the above skewed distributions, the base case is within a couple of percentiles of the 50^{th} percentile in all time periods and therefore it does not materially affect the probability on the scenario. All other scenarios are a function of their percentiles.

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