

July 31, 2020



Q2 2020
U.S. MACRO OUTLOOK:
HOUSE VIEW AND THE
PANDEMIC

CBRE ECONOMETRIC ADVISORS

CBRE

2020 OUTLOOK - ATTEMPTING TO MOVE ON FROM COVID-19

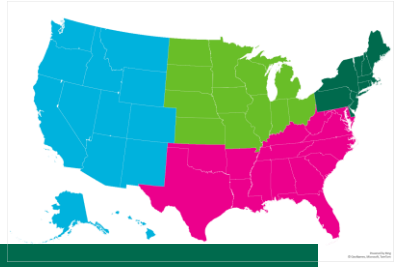
VIROLOGY – NOT THE BUSINESS CYCLE – IS DETERMINING ECONOMIC PERFORMANCE.

- As suspected, the unique nature of this recession caused the U.S. economy to hit a nadir much quicker than previous cycles. Activity bottomed in April and has since shown signs of recovery. In all, it is expected that the U.S. GDP fell by 10% in the second quarter and the unemployment rate remains above 10%. Because of these tough conditions and shrinking state and municipal revenues, many Sunbelt states (where the virus initially had a limited presence) began to reopen in May. The result was a jolt of economic activity that refreshed demand for labor as many hard-hit sectors, such as hospitality and discretionary healthcare, began to bring back furloughed workers.
- Although the re-openings were a boom to a troubled economy, they were paired with a cavalier approach to social distancing that caused COVID-19 cases to quickly escalate across many economically important Sunbelt states, such as Texas and Florida. The escalation in cases now appears to have taken the edge off the recovery in July.

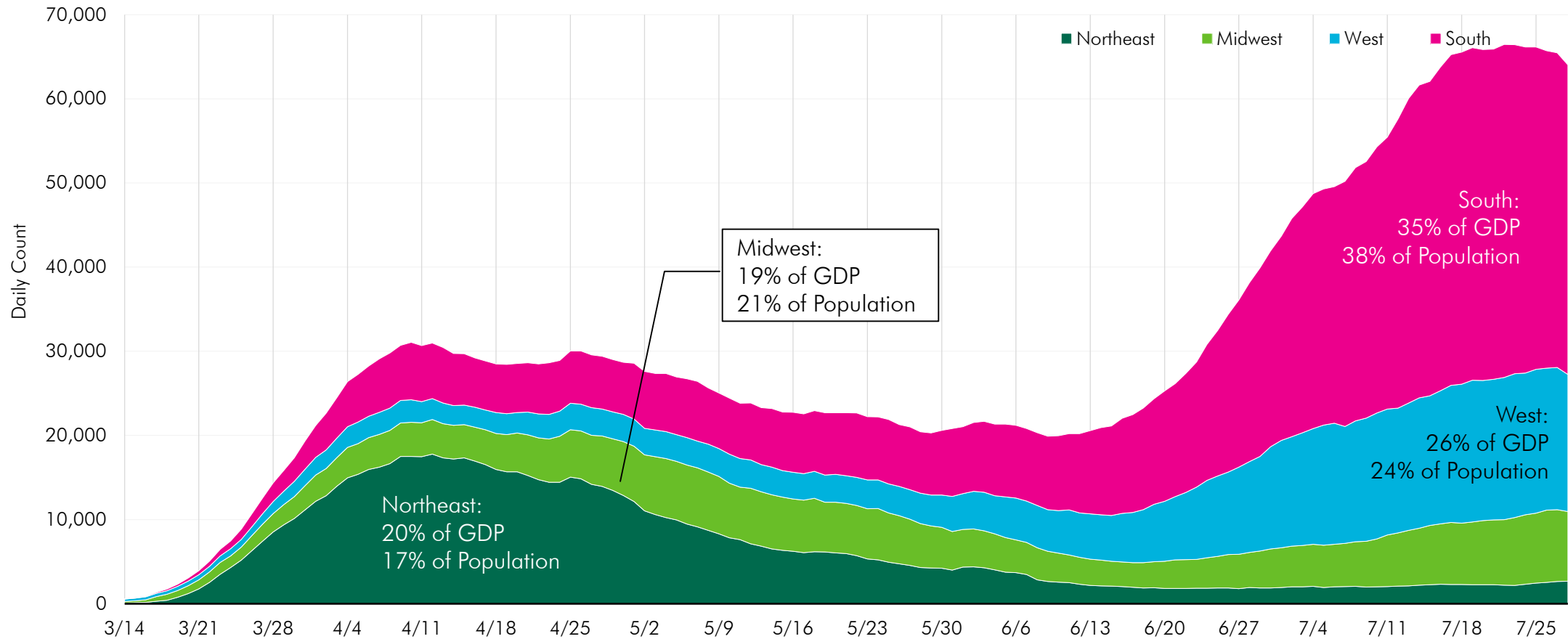
THE UPTICK IN CASES ALONE IS PROBABLY NOT GOING TO TIP THE ECONOMY BACK INTO CONTRACTION

- A return to the devastating economic conditions we saw in April is unlikely. Although the number of new cases appears to be peaking across the U.S., there is little appetite for a return to the strict shelter-in-place orders given in the spring. Although consumer behavior clearly became more guarded in July, activity stalled as opposed to significantly declining. Meanwhile, government stimulus remains significant. The Federal Reserve (Fed) has engaged in an aggressive round of quantitative easing to inject liquidity into the financial system. Congressional action, such as the CARES Act, has distributed \$280 billion in direct payments to individuals; however, at the time-of-writing an extension to this program is being debated. The future of this program will have a significant impact upon consumer confidence. The combination of continued demand for labor, steady consumption and government stimulus should maintain a material recovery in coming quarters.
- COVID-19 will impact various industries differently. The hospitality sector will bear the brunt of the pandemic as high-spending international tourists stay home and business and large-group travel are on hold, with the latter probably not staging a comeback until a vaccine is widely available. Cancelled trips and conferences will translate into a permanent loss in revenue. Relatedly, the mining sector's employment base is expected to decline by 2% annually through 2024. High-technology should continue to lead economic growth in coming years.

U.S. CASES BROKEN DOWN BY REGION



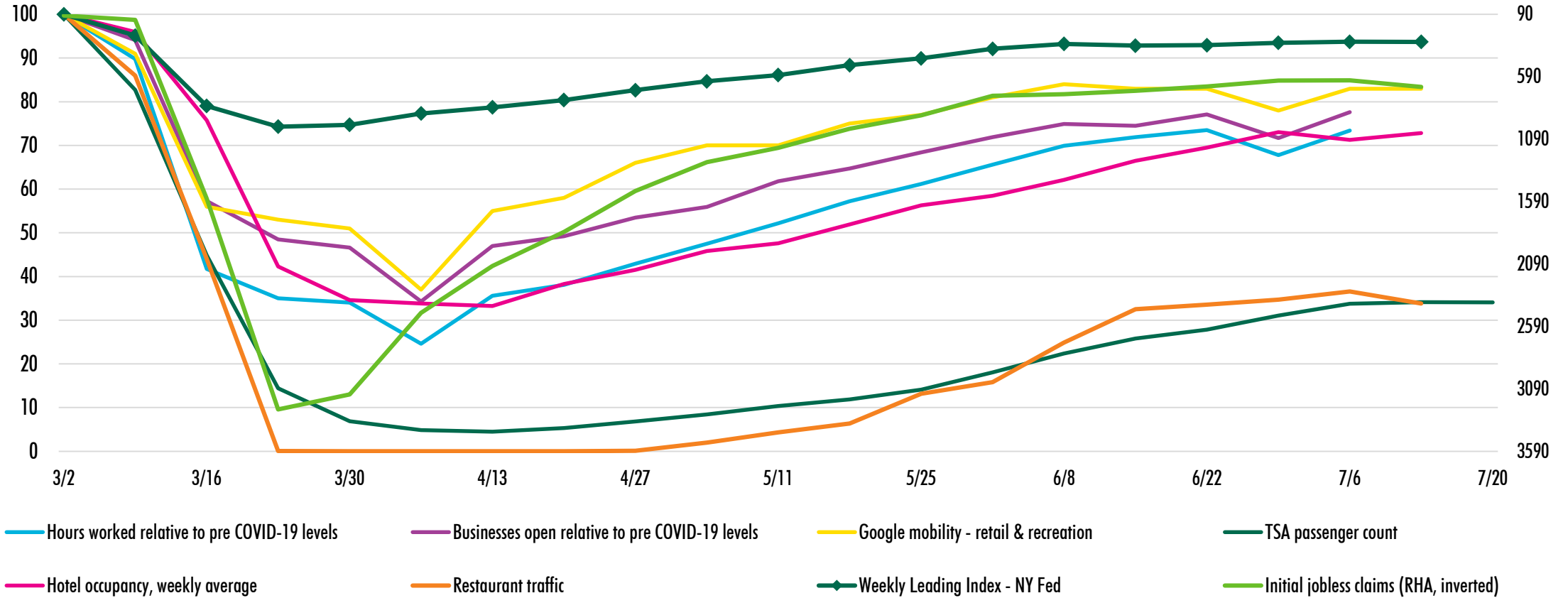
Daily new COVID-19 cases by region, 7-day moving average



Source: COVID Tracking Project, US Census, BEA, CBRE Research, Macrobond, 30 July 2020.
 Note: Regions defined by US Census Bureau

THE RISING CASE COUNT HAS CAUSED ECONOMIC MOMENTUM TO STALL

Week beginning on March 2nd = 100, weekly frequency



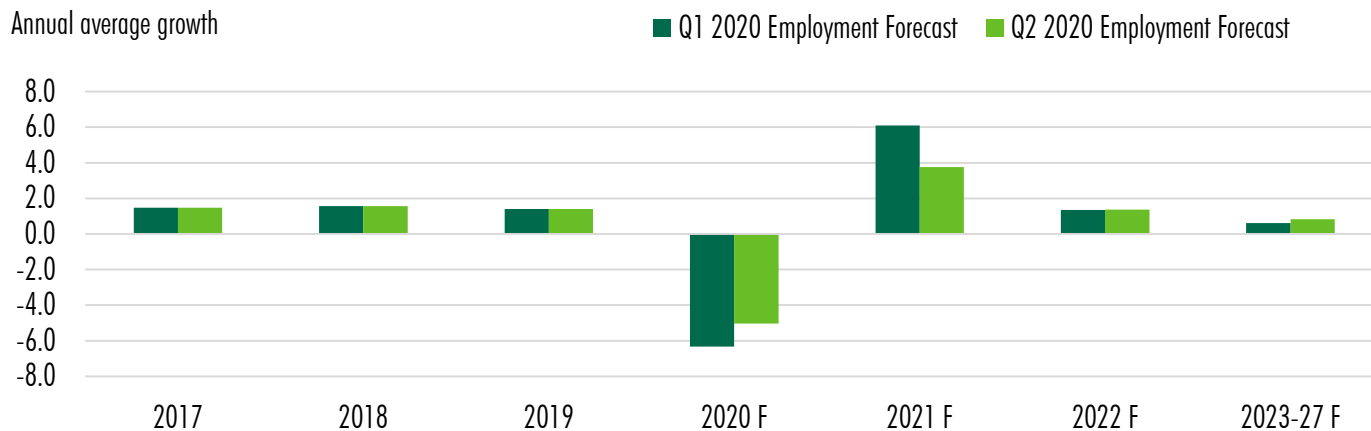
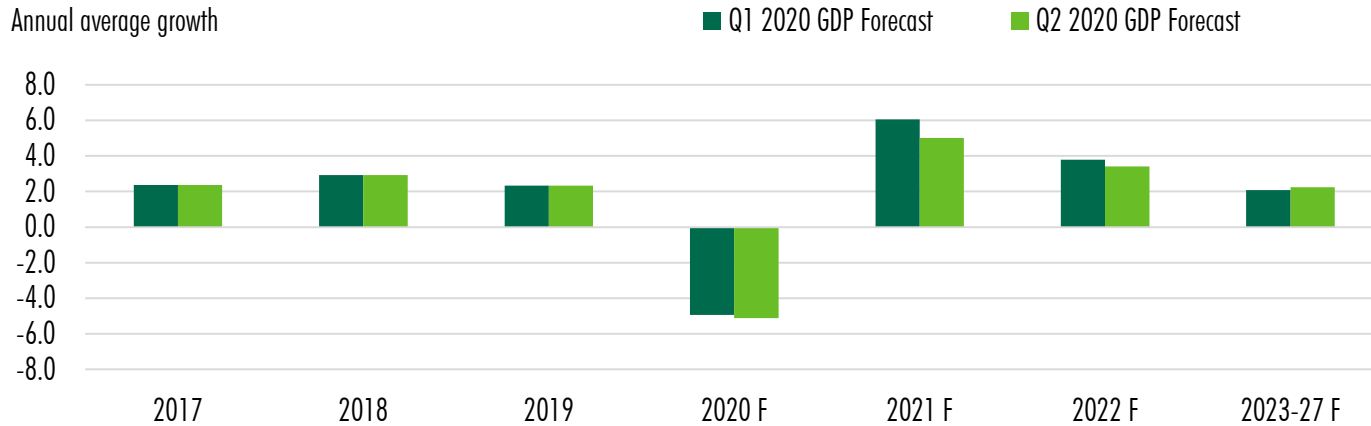
Source: Macrobond.

DETAILED MACROECONOMIC ASSUMPTION THAT DRIVE OUR BASELINE FORECAST

| | Topic | Current Conditions | Key Observations and Forecast Assumptions | Downside Risks |
|------------------------------|-----------------------------|--------------------|---|---|
| Top Line Expectations | US GDP | BOTTOMING | Economic activity bottomed in April. We expect the US economy will contract by a quarterly average of about 5% for the entirety of 2020, followed by 5% growth in 2021. | Failing to extend unemployment benefits would erode household income and cause the broader economy to contract. |
| | US Exports | DECLINING | US trade is roughly a quarter below pre-COVID levels. | Slowdown amongst key US trade partners and/or an escalation of the US/China trade conflict. |
| US Policy | Monetary Policy | AGGRESSIVE | The Fed policy rate will remain near zero through 2022. The Committee will continue with unlimited quantitative easing. | Unlimited QE inflates asset prices beyond sustainable levels. |
| | Congressional Stimulus | UNCERTAIN | Unemployment benefits will continue, albeit the second round of stimulus now be negotiated will likely be less generous than the first. | Government stimulus has had a limited multiplier effect as many of the funds allocated to households and businesses have been used to pay down revolving and bank debt, respectively. |
| Business Sector | Financial Conditions | UNCERTAIN | Many firms are tapping the bond markets to pay down shorter-term bank debt. | A wave of corporate bankruptcies shocks the banking sector. US equities could decline. |
| | Business Sentiment | WEAK | Activity indices are improving but conditions are strained. | Sales volume fails to meet already low expectations. |
| | Business Investment | DECLINING | Business investment is poised to decline by nearly 7% in 2020. | Lack of progress with the virus prevents clarity on business investment decisions. |
| Labor Market and Consumption | Job Growth and Unemployment | IMPROVING | The demand for labor is returning but unemployment remains historically high, at over 11%. Employment increases by 6% in 2021. | Although hospitality companies re-call workers, many corporates begin to cut front-office staff. Many temporary layoffs become permanent. |
| | Consumer Sentiment | WEAK | Sentiment remains very weak and expectations for the next 6 months are very downbeat. | Deterioration in the labor market causes consumers to reign in spending. |
| | Retail Sales | IMPROVING | Sales grew by 7.5% in June, exceeding expectations. A rising case count will likely harm future sales and closure of drinking places is certain to strain near-term activity. | The combination of a weak labor market and stock market correction would curtail high-value discretionary spending. |
| | Housing Market | IMPROVING | Record low mortgage rates are maintaining steady sales activity. | Low for-sale inventory and fragile consumer sentiment threaten the market. |
| Public Health and Response | Case Count | PEAKING | The closure of bars and enactment of mask-wearing rules will pull down the number of new cases in Sunbelt states. No additional lockdowns will be necessary. | Reopening in the Northeast escalates the number of new cases. Case count remains high across the Sunbelt, straining the health system and economic activity. |
| | Local Response | MIXED | States will not return to full, shelter-in-place lockdowns. Northeastern states will continue to reopen their economies. | Large states, such as California and Texas, that account for a sizable share of US GDP struggle to reopen. Schools remain closed, further straining productivity. |

HOW OUR HOUSE VIEW HAS EVOLVED WITH COVID-19

Our current house view relative to late 2019

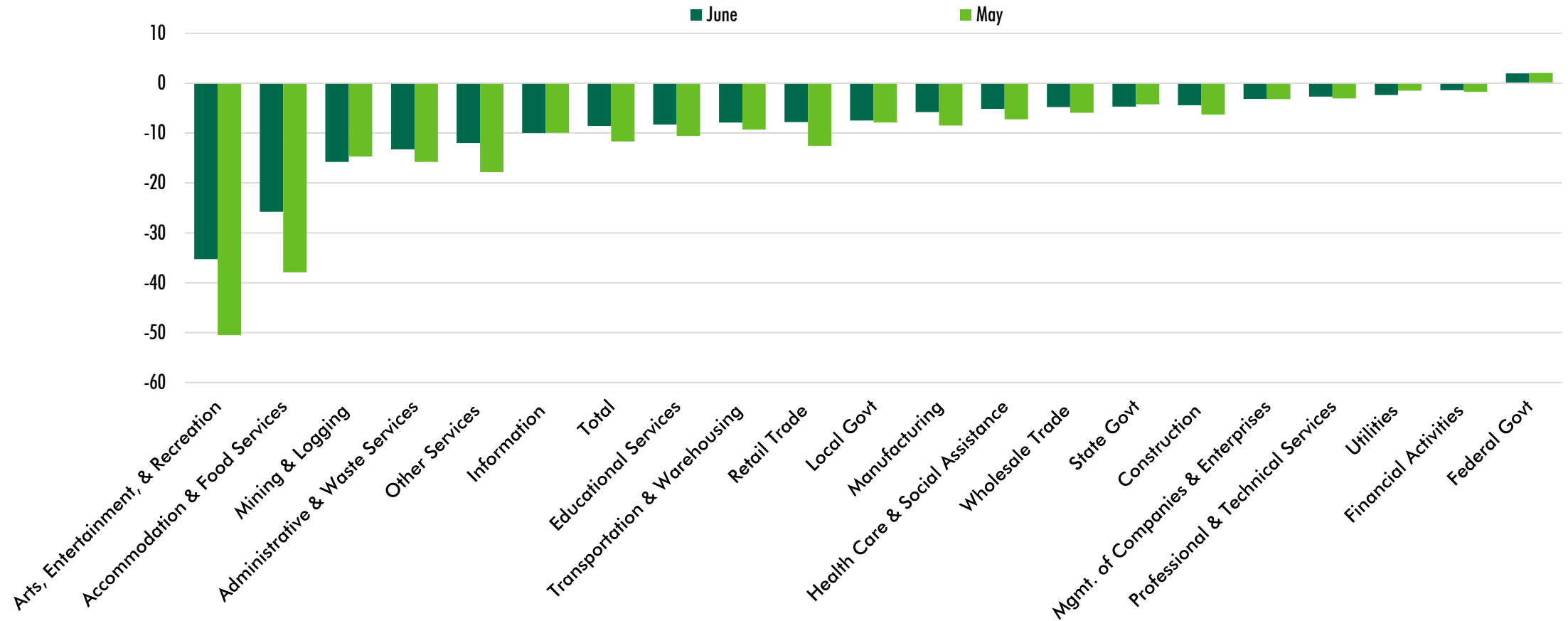


- The figures highlighted in the charts to the left show how we have changed our forecast due to the fluidity of COVID-19 and its impact on the U.S. economy. U.S. GDP will decline by roughly 5% in 2020 as a painful contraction in the first half of the year is followed by a return to growth in H2 2020.
- Compared to other OECD economies, the U.S. should perform relatively well. Although the U.S. had the advantage of being in good shape before the pandemic began, the failure of U.S. policy makers to control the spread of COVID-19 is eroding this relative advantage.
- We expect U.S. economic growth in 2021 to hit 5%, below our Q1 2020 expectation of 6%. We now believe that it will take longer for the economy to fully recover than previous thought, especially as constraints on the travel and hospitality sector linger.
- The labor market should see a draconian net decline this year as firms cancel events and suspend operations. Service workers are most vulnerable to seeing a drop in hours worked and wages. Government stimulus for distressed industries will help maintain some employment. Pent-up demand for services will absorb many laid-off workers back into the labor market in H2 2020. A key downside risk is the likelihood of an increase in bankruptcies and many temporary layoffs become permanent.

Source: BEA, BLS, CBRE Econometric Advisors.

THE LABOR MARKET REMAINS WEAK, ESPECIALLY FOR FACE-TO-FACE SERVICES

Y-o-Y payroll change (%)

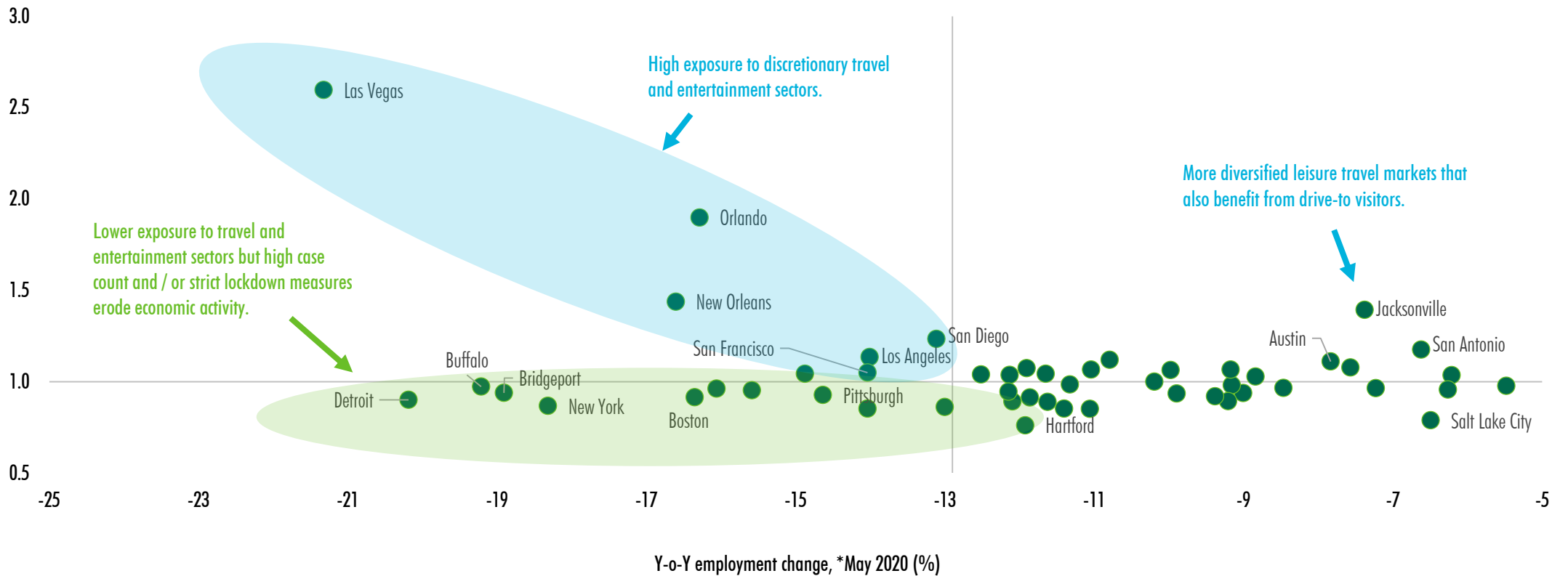


Source: Bureau of Labor Statistics.

METRO JOB LOSSES HAVE BEEN BAD EVERYWHERE, BUT PATTERNS HAVE EMERGED

Leisure travel markets and cities hard hit by COVID-19 saw the greatest job losses

Hospitality and entertainment location quotient

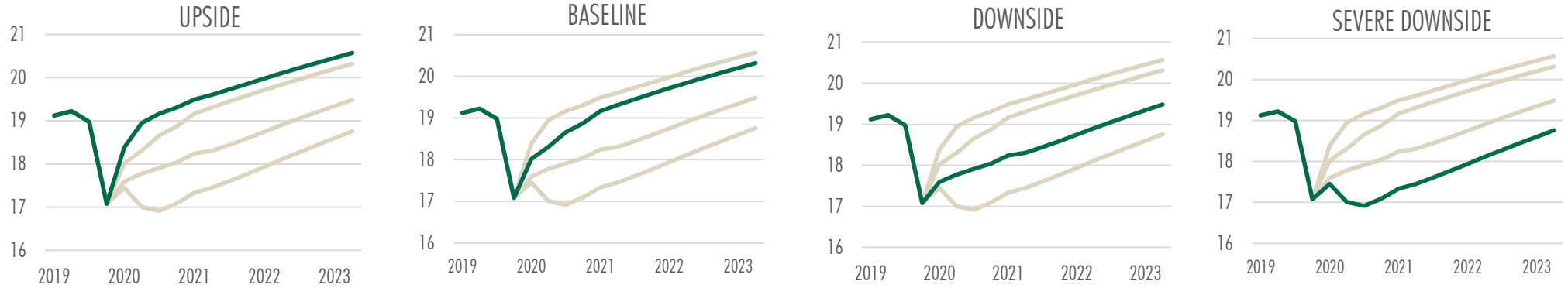


Source: Bureau of Labor Statistics. *Regional employment statistics are released a few weeks after each month's national payroll report.

EA Scenarios

U.S. ECONOMIC SCENARIOS AND UNDERLYING ASSUMPTIONS

GROSS DOMESTIC PRODUCT



| Scenario | Upside | Baseline | Downside | Severe Downside |
|--------------------------------------|---|--|--|--|
| Likelihood | Low | High | High | Low / Medium |
| COVID-19 Situation | Nationwide social distancing measures cause the number of new cases to quickly fall and remain low in Q3. The discovery of an effective therapy or vaccine begins distribution by H1 2021. | Broad compliance with mask-wearing and widespread testing slows the spread of COVID-19 nationwide. An effective therapy or vaccine is ready for distribution by late 2021. | The US is plagued by regional flare-ups of COVID-19 cases that cause many states to delay the pace of reopening their economies. | The virus makes a resurgence in Europe, East Asia and across most US regions in the fall. The US health system is severely strained, and all states go back into 'lock-down' mode for over a month. |
| Time to Full Economic Recovery (GDP) | 5 quarters | 1.75 years | 3.5 years | 4.5 years |
| Economic Impact | A steadily falling case count allows for a broad-based reopening of the economy. Robust government stimulus paired with successful trials of a therapy unleashes a wave of pent-up demand that drives an impressive recovery in H2 2020 and early 2021. | 18.2 million jobs will be lost in Q2 2020, pushing the unemployment rate to over 10% and many firms will not survive the drop in demand. However, aggressive stimulus and a consistent reopening of the economy supports sturdy growth in H2 2020 and into 2021. | The reopening of the economy proves to be a slow process. High bankruptcies and unemployment will prevent a stronger recovery from gaining traction. Pre-virus employment levels are not regained before 2025. | A prolonged, deep recession causes a wave of bankruptcies that severely stresses the financial system. Corporate bankruptcies are not limited to vulnerable sectors, such as retail and oil & gas firms. |

BASELINE SCENARIO

CBRE EA BASELINE FORECAST

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|-------------------|------|------|------|------|------|------|------|
| GDP, % | 2.9 | 2.3 | -5.1 | 5.0 | 3.4 | 2.5 | 2.3 |
| Emp, %. | 1.6 | 1.4 | -5.0 | 3.8 | 1.4 | 1.2 | 1.0 |
| CPI, % | 2.2 | 2.0 | 0.5 | 1.6 | 2.2 | 2.4 | 2.3 |
| 10-yr Treasury, % | 3.0 | 1.8 | 0.9 | 1.3 | 1.6 | 2.0 | 2.2 |

Note: Figures are average annual change—except the 10-year, which is Q4% yield.

Source: BEA, BLS, Federal Reserve, CBRE Econometric Advisors, Q2 2020.

- We believe GDP growth in 2020 will decline by about 5% with the bulk of the contraction concentrated in the second quarter. Positive developments include a rebound in the demand for labor and healthy consumer spending. Further, substantial fiscal and monetary stimulus, including support for important industries, should stabilize the economy.
- A weaker economy will cause the labor market to contract this year. Whilst unemployment is expected to increase significantly for retail, transportation and hospitality workers, it appears that job losses will be less severe for information technology and some professional services sectors. The risk to our 2020 employment outlook is tilted toward the downside, especially with many large corporate balance sheets coming under pressure.
- The Fed has taken aggressive action to combat weakening demand and alleviate financial liquidity concerns caused by COVID-19. Significant rate cuts and revitalizing the quantitative easing program will put downward pressure on interest rates this year. Long-term interest rates should begin to trend upward in 2021 as conditions begin to exhibit a more consistent improvement.

Source: U.S. Congressional Budget Office (CBO); CBRE Econometric Advisors.

UPSIDE SCENARIO

CBRE EA UPSIDE FORECAST

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|-------------------|------|------|------|------|------|------|------|
| GDP, % | 2.9 | 2.3 | -3.8 | 5.7 | 2.7 | 2.4 | 2.2 |
| Emp, %. | 1.6 | 1.4 | -1.7 | 1.8 | 1.2 | 1.1 | 1.0 |
| CPI, % | 2.2 | 2.0 | 1.0 | 1.8 | 2.4 | 2.5 | 2.4 |
| 10-yr Treasury, % | 3.0 | 1.8 | 1.2 | 1.6 | 1.9 | 2.3 | 2.4 |

Note: Figures are average annual change—except the 10-year, which is Q4% yield.

Source: BEA, BLS, Federal Reserve, CBRE Econometric Advisors, Q2 2020.

- This scenario assumes a quick de-escalation of new COVID-19 cases combined with the tailwinds of aggressive government stimulus.
- COVID-19 remains restrained not just in the U.S. but amongst key trade partners, allowing international trade growth to resume.
- Consumer and business confidence are bolstered by the discovery and widespread distribution of a vaccine or therapy beginning in H1 2021.
- While these factors lead to a long expansionary cycle, the economy will see stronger inflation, causing the Fed to reverse course and begin to tighten monetary policy.

Source: U.S. Congressional Budget Office (CBO); CBRE Econometric Advisors

DOWNSIDE SCENARIO

CBRE EA DOWNSIDE FORECAST

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|-------------------|------|------|------|------|------|------|------|
| GDP, % | 2.9 | 2.3 | -6.4 | 1.5 | 3.0 | 3.2 | 3.0 |
| Emp, %. | 1.6 | 1.4 | -7.8 | 1.3 | 1.9 | 1.9 | 1.8 |
| CPI, % | 2.2 | 2.0 | 0.1 | 0.7 | 1.4 | 1.8 | 2.0 |
| 10-yr Treasury, % | 3.0 | 1.8 | 0.6 | 0.1 | 0.4 | 1.1 | 1.6 |

Note: Figures are average annual change—except the 10-year, which is Q4% yield.

Source: BEA, BLS, Federal Reserve, CBRE Econometric Advisors, Q2 2020.

- The United States fails to restrain COVID-19 and the reopening of the economy will happen in fits-and-starts across different regions. The lack of progress in restraining the virus means firms will be forced to operate at well below capacity for an extended period. As a result, economic growth contracts by over 6% for the year and posts a light bounce back in 2021.
- Very weak household consumption and business investment have a severe impact on the labor market, which only drags consumer confidence down further. A prolonged period of weak sales makes it difficult for many firms to service their debt and they seek bankruptcy protection.
- It will take 3.5 years for U.S. GDP to surpass pre-COVID-19 levels.
- The downside scenario also suggests that the U.S. economy will succumb to some long-term structural trends, such as an ageing population and weaker labor force growth. Weak productivity growth will restrain wages and inflation will remain well below target for the foreseeable future.

Source: U.S. Congressional Budget Office (CBO); CBRE Econometric Advisors.

SEVERE DOWNSIDE SCENARIO

CBRE EA SEVERE DOWNSIDE FORECAST

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|-------------------|------|------|-------|------|------|------|------|
| GDP, % | 2.9 | 2.3 | -7.6 | -2.4 | 3.8 | 3.7 | 3.5 |
| Emp, %. | 1.6 | 1.4 | -11.8 | 0.9 | 2.4 | 2.3 | 2.3 |
| CPI, % | 2.2 | 2.0 | -0.4 | -0.1 | 0.7 | 1.3 | 1.7 |
| 10-yr Treasury, % | 3.0 | 1.8 | 0.1 | 0.1 | 0.1 | 0.2 | 1.1 |

Note: Figures are average annual change—except the 10-Year, which is Q4% yield.

Source: BEA, BLS, Federal Reserve, CBRE Econometric Advisors, Q2 2020.

- COVID-19 cases escalate worldwide, and most U.S. states are forced to re-impose strict shelter-in-place orders. A key feature of this scenario is that economy double-dips below April 2020 levels in early 2021.
- Total employment declines by nearly 12% this year but the demand for labor remains very muted in subsequent years. Indeed, the labor market will not regain pre-COVID-19 employment until after 2025.
- A prolonged period of extremely weak consumption and business revenue will cause many firms to fail. The breadth of bankruptcies severely stresses the international financial system. Extraordinary monetary policy responses will have limited effects.
- The severe downside scenario has an extremely low probability, but it offers a useful guide to capital planning under the direct macroeconomic situations.

Source: U.S. Congressional Budget Office (CBO); CBRE Econometric Advisors

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