REGIONAL ECONOMIC MAPS
Research Report—December 2020

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IMF NOW EXPECTS THE GLOBAL ECONOMY TO SHRINK BY 4.4% IN 2020 AND THEN REBOUND BY 5.2% NEXT YEAR

— The global economy’s long climb back to pre-pandemic levels of activity remains vulnerable to setbacks.

**U.S. economic recovery to remain on track**

— In just six months, the unemployment rate has been cut in half from its April peak of 14.7%, while the economy has regained over half of the 22.2 million jobs lost in March and April.

— The economy grew at a record pace in the third quarter—increasing 7.4% over the prior quarter and at a 33.1% annual rate—recovering about two-thirds of the ground it lost earlier in the coronavirus pandemic.

— Wall Street forecasters now expect an unemployment rate of 6.7% at the end of this year and GDP to contract 2.7% this year, measured from the 4th Quarter 2019.

— Retail sales have bounced back above their February level, with the pandemic boosting demand for goods complementing life at home, including cars, furniture and electronics.

— The housing market has been resilient through the pandemic. Home sales and residential construction picked up soon after stay-at-home orders were lifted in the spring, providing a boost to local economies.

— Congress and the White House remained locked in negotiations to provide more fiscal help, though economic damage from a potential second wave is raising pressure for stimulus.

**Second lockdown dampening the mood**

— The European economy bounced back more quickly than expected during the third quarter of the year. According to Eurostat, GDP rose by 12% during the three months to the end of September.

— Many countries have now reintroduced national or regional lockdowns to contain a second wave of coronavirus. This will very likely slow growth during the final months of 2020.

— With the support of various types of furlough and other temporary supports, unemployment has not risen as sharply as originally feared. Nonetheless by September total E.U. unemployment was 16 million, up from 14 million a year earlier.

— Central banks have continued to provide additional support across much of Europe. With Eurozone inflation falling to -0.3% in October, and demand expected to remain weak for some time, there is unlikely to be much pressure to reverse course.

— While much uncertainty remains about the outlook for GDP growth, our central expectation is that economic activity will pick up strongly next year, as current restrictions on life and business are reduced.

**Diverging recovery outlook in Asia Pacific**

— Divergence in economic outlook across the region with infection cases under control in advanced economies but climbing in India and some Southeast Asian economies.

— Successful virus containment measures in China and other advanced economies have allowed gradual easing of restriction measures and reopening of businesses, enabling a pickup in economic activity since the second half of 2020.

— Asian governments and central banks have acted decisively this time around with significant fiscal support packages and monetary easing, as well as targeted measures to support household expenses and job retention amid the pandemic.

— IMF’s October outlook sees a -2.2% economic contraction in 2020, followed by a strong growth recovery of 6.9% in 2021.

— Nonetheless, economic output is expected to remain below pre-COVID-19 levels for some time due to challenges from global trade uncertainties, continued social distancing measures and labor market distortions.
UNITED STATES REGIONAL ECONOMIC MAP

December 2020

REGIONAL ECONOMIC HIGHLIGHTS AND PERSPECTIVE

- After a 31.4% plunge in the second quarter, U.S. GDP growth surged at a 33.1% pace in the third quarter that puts the economy about 3.5% smaller than at the end of last year, before the pandemic hit.
- Increased consumption along with sold gains in business investment and housing fueled the third quarter rebound.
- Though the U.S. economy added a stronger than expected 638K jobs in October, it was the unemployment rate that had the most surprising move, tumbling by 1% from 7.9% to 6.9%, and far below the 7.6% expected.
- As of September, one in six restaurants had closed long-term or permanently in the U.S.
- Home prices beat expectations, rising 6.6% annually in September, up from 5.3% in August, according to the S&P CoreLogic Case-Shiller as strong demand and a limited supply of homes have caused home price gains to accelerate.

EMPLOYMENT GROWTH: 2021 – 2022F

- **San Francisco:** High population density and a greater reliance on public transportation has facilitated SF’s stubbornly high infection rates that are hindering the recovery.
- **San Jose:** With fewer job losses in its outsized tech sector, SJ is positioned to lead the other harder-hit Bay Area metros out of the economic fallout from COVID-19.
- **Los Angeles & Las Vegas:** At 13.6%, LA’s unemployment rate for September was the 2nd highest of large U.S. metros behind LV’s 14.8% rate.
- **Riverside:** The Inland Empire’s giant logistics industry has seen heavy demand for workers to handle warehousing and deliveries for fast-growing online shopping businesses.
- **San Diego:** The race to develop a vaccine to COVID-19 has helped to accelerate growth in SD’s life science market.
- **Phoenix:** With 11.4% y/y growth, September was the 18th consecutive month in which Phx home prices rose more than those of any other U.S. city.
- **Dallas-Ft Worth:** Early October data from Kastle Systems supports the premise that DFW office workers are returning to their workplaces at a faster clip, and in greater numbers, than other urban office markets.
- **Austin:** The city is quickly emerging as a destination of choice for tech startups, as many of the nation’s top technology companies have a significant presence in Silicon Hills.
- **Salt Lake City:** After hitting 11.2% in April, SLC’s jobless rate has fallen to just over 5% in September – the lowest rate among large western metros.
- **Denver:** Supported by a diverse mix of high-skill services, Denver’s economy is showing more signs of a recovery.
- **Chicago:** Chicago continues to struggle with poor population trends and extraordinary pressure on the state and local governments.
- **Boston:** VC spending in Boston’s life science industries has fueled the recent surge for research & development related to COVID-19 vaccines and as demand for medications holds up.
- **New York:** The economy of NYC, which was the epicenter of the COVID-19 pandemic at its onset, has been hit harder than the rest of the U.S. thus far.
- **Washington D.C.:** Northern Virginia remains the world’s largest hub for internet traffic with more new data center capacity coming online in the first half of 2020 than anywhere else around the globe.
- **Raleigh:** Business costs are 15% below the U.S. average which should spur investment.
- **Charlotte:** The large financial services industry remains a strength as the outlook for finance and insurance turns positive.
- **Nashville:** U.S. auto sales have bounced back since hitting a pandemic-fueled bottom in April, lifting Nashville’s manufacturing sector which should help keep the economy on the right track.
- **Atlanta:** Atlanta’s film industry is back as Hollywood returns to Georgia to resume filming. Orlando: As the major theme parks re-opened during the summer, Orlando’s unemployment has fallen from 21.1% in May to just under 10% in Sept. Sources: DWS, U.S. Dept. of Commerce, U.S. Census Bureau, U.S. Dept. of Labor, U.S. Bureau of Economic Advisors, U.S. Conference Board, Moody’s Analytics, Wall Street Journal, S&P CoreLogic Case-Shiller’s National Composite Index, Reuters, CNBC, USA Today, GlobeSt, The Maritime Executive, Nat’l Assoc of Restaurants, CBRE, Bisnow, bizjournals.com, Crains New York. As of December 2020. F- forecast. This information is a forecast and due to a variety of uncertainties, and assumptions made in our analysis, actual events or results or the actual performance of the markets covered may differ from those represented. Past performance is not indicative of future results. No assurance can be given that any forecast or target will be achieved. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation.
EUROPEAN REGIONAL ECONOMIC MAP
December 2020

REGIONAL ECONOMIC HIGHLIGHTS AND PERSPECTIVE

- Following a COVID-19 induced collapse in activity during the second quarter, GDP in the European Union jumped by 12% in the third quarter, as lockdown conditions eased over the summer.
- E.U. unemployment has gradually increased over the year, rising to 7.5% in September, 100 basis points up on the same point in 2019. Renewed lockdowns are likely to lead to further job losses.
- In the current environment there is clearly a high degree of uncertainty about the future. However with signs of a vaccine emerging, growth is projected to accelerate in 2021, returning output to 2019 levels by 2022.

EMPLOYMENT GROWTH: 2021 – 2022F:

<table>
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<th>Lagging European Average</th>
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<th>Leading European Average</th>
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<td>Latest</td>
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<tr>
<td>Latest</td>
<td>6m Ago</td>
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EUROPEAN REAL GDP GROWTH (% P.A)

Source: Oxford Economics, DWS, October 2020

London: The City of London has stated an aim to reinvent itself over the coming 5 years with a more diverse occupier base, including smaller and creative businesses.

Regional UK: The NatWest UK Regional PMI for October showed the renewed negative impact of lockdowns in regions such as Scotland and Northern Ireland.

Regional France: French job losses continued to mount during the third quarter, reaching a two year high. With a new lockdown in November this is unlikely to soon reverse.

Dublin: Ireland went back into lockdown in late October. Including those claiming temporary CV-19 payments, Irish unemployment rate was around 20% in October.

Madrid and Barcelona: The unemployment rate in Spain was close to 17% by the middle of 2020. The return of international travel will be important for the large tourist sector.

German Top 7: Germany unemployment unexpectedly fell in October as the economy continued to recover. Concerns are growing over the reintroduction of a partial lockdown.

Benelux: According to UWV the Dutch economy lost 125,000 jobs to the end of July due to the pandemic. Most jobs were lost in business services and hospitality.

Stockholm: Despite fewer restrictions, the economy has not been immune. By September the unemployment rate was above 9%, up from 7% a year earlier.

Other Nordics: Nordic countries continue to do relatively well during the second wave. Though spare a thought for 17 million Danish mink, all due to be culled due to CV-19.

Warsaw: Having avoided the worst of the epidemic during early 2020, Poland and other CEE countries have been hit far harder by the second wave.

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ASIA PACIFIC REGIONAL ECONOMIC MAP
December 2020

REGIONAL ECONOMIC HIGHLIGHTS AND PERSPECTIVES

- Regional economic activity was affected significantly by COVID-19, though Asia Pacific is expected to recover faster than other regions.
- China remains one of the few major global economies with positive GDP growth expectations at 2%.
- Japan’s economy experienced its worst quarterly decline, 10% (year-on-year) in the second quarter of 2020. Full-year GDP is expected to contract by around 6%, before recovering from the second quarter of 2021 onwards.
- While South Korea is viewed as successful in containing the pandemic without lockdowns, GDP is forecasted to decline by 1.0% in 2020, worse than the Global Financial Crisis recession, though more resilient than other global peer countries.
- Australia’s GDP growth is expected to shrink by 3.4% in 2020, before rebounding to 2.4% growth in 2021. Government investment is expected to partially offset weaker private investment and consumer spending.

EMPLOYMENT GROWTH: 2021 – 2022F

- **Beijing**: With more workers resuming work and production, China’s surveyed urban unemployment rate fell to 5.4% in September, down from the Feb peak of 6.2%.
- **Hong Kong**: The unemployment rate rose to 6.4% in September, the highest since 2005. The labour market remains under severe pressure particularly in the retail and travel-related sectors.
- **KL**: Political instability and rising infection cases have contributed to the uncertain economic outlook in the country.
- **Singapore**: Local employment has been supported by government wage subsidies, but restrictions have tightened on foreign labor which could slow the jobs recovery.

Shanghai: Commercial activities and retail stores have experienced increasing volumes amid the recovery in foot traffic and domestic tourism.

Seoul: Owing to the country’s success in avoiding a full-scale lockdown even at the peak of the local pandemic, the unemployment rate of South Korea fell from 4.5% in June to 3.6% in September 2020.

Tokyo: Core CPI fell from 0.6% in February 2020 to -0.3% in September, and is expected to trend down further reflecting weak gross demand. The unemployment rate remained tight at 3.0%, though higher than the historical low of 2.2% in December 2019.

Osaka: The hotel and retail sectors in Osaka are severely affected by the absence of international tourist arrivals, though they gradually started to attract domestic travelers and consumers with government policy support.

Sydney: Forward looking indicators, including ANZ job advertisements rose for the sixth straight month in October although the total number of job advertisements remain 13.5% lower than the February level.

Melbourne: Population growth, a major economic driver, is expected to be impacted in the medium term with net interstate and overseas migration unlikely to return to prior levels for some time.

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## Office Locations

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<tr>
<th>Location</th>
<th>Address</th>
<th>City</th>
<th>Country</th>
<th>Telephone</th>
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<tbody>
<tr>
<td>Chicago</td>
<td>222 South Riverside Plaza 34th Floor</td>
<td>Chicago</td>
<td>IL, USA</td>
<td>+1 312 537 7000</td>
</tr>
<tr>
<td>San Francisco</td>
<td>101 California Street 24th Floor</td>
<td>San Francisco</td>
<td>CA, USA</td>
<td>+1 415 781 3300</td>
</tr>
<tr>
<td>Frankfurt</td>
<td>Taunusanlage 12 60325 Frankfurt am Main</td>
<td>Frankfurt</td>
<td>Germany</td>
<td>+49 69 71909 0</td>
</tr>
<tr>
<td>London</td>
<td>Winchester House 1 Great Winchester Street 26th Floor</td>
<td>London</td>
<td>EC2A 2DB, UK</td>
<td>+44 20 754 58000</td>
</tr>
<tr>
<td>New York</td>
<td>875 Third Avenue 26th Floor</td>
<td>New York</td>
<td>NY, USA</td>
<td>+1 212 454 3414</td>
</tr>
<tr>
<td>Singapore</td>
<td>One Raffles Quay South Tower 20th Floor</td>
<td>Singapore</td>
<td>Singapore</td>
<td>+65 6538 7011</td>
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<tr>
<td>Tokyo</td>
<td>Sanno Park Tower 2-11-1 Nagata-cho Chiyoda-Ku 18th Floor</td>
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- Adverse changes in law and regulation including environmental laws and regulations, zoning laws and other governmental rules and fiscal policies;
- Environmental claims arising in respect of real estate acquired with undisclosed or unknown environmental problems or as to which inadequate reserves have been established;
- Changes in the relative popularity of property types and locations;
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