NOVEMBER 2020

SHAWN DUBRAVAC, PHD
CHIEF ECONOMIST
shawndubravac@ipc.org

ECONOMIC OUTLOOK

It is, as Charles Dickens might say, the best of times and the worst of times. Across both the United States and Europe, COVID-19 cases have accelerated sharply. This has renewed stay-at-home orders and other restrictions across a number of states in the U.S. and throughout a number of countries in Europe. While these measures are not as severe as they were early in the year, they will still curtail economic activity in the coming months. The degree to which these measures slow economic activity will reverberate into 2021. Some of the fallout is already materializing. For example, European economic growth is expected to decline in the fourth quarter, the proverbial double-dip recession, and modest rise in the first quarter of 2021. While a double-dip recession is not the base-case scenario in the United States, the risk of a double-dip recession has increased to 25 percent or so and could go higher if current conditions turn materially worse.

But the last month hasn't been all bad news. There has been very positive news regarding early vaccine trials from Pfizer and Moderna. Early tests show efficacy rates higher than 90 percent and the likelihood that vaccines will begin to be distributed in the early months of 2021. This news was very welcome for many sectors of the economy, especially the service sector, which is hamstrung by the virus.

We find ourselves caught between very bad news that is negatively impacting the economy right now and very hopeful news that could bring about significant economic activity, but with some delay.

In the U.S., economic activity continued over the last month, but as we've noted in the past, growth is moderating. Jobs increased, and the unemployment rate fell, but the rate of growth is slowing. There are still 3.2 million workers who report they are on temporary layoff. Some, and perhaps many, of these jobs, won't be coming back soon. The manufacturing sector added back another 38,000 jobs in October, after adding back a high of 333,000 jobs in June 2020. The manufacturing sector has now returned roughly 54 percent of jobs lost in the early months of the pandemic, but at this rate, it will take another 16 months to return to the pre-pandemic level.

One concern is the rising risk of structural dislocations in the labor market. Roughly a third of those unemployed have been so for longer than 27 weeks. As workers stay unemployed for longer, skills are lost, and the ability to find new work diminishes.

Europe is experiencing similar decelerations in growth. As already noted, after a strong bounce back in the third quarter, growth will turn negative in the final quarter of the year. In the U.S. and Europe, like much of the world, COVID-19 remains a major risk and the major driver.

China continues to lead the world economy in recovery. China was hit early by COVID-19, but strong lockdown procedures and significant testing mitigated the spread of the virus there. China also implemented aggressive monetary and fiscal stimulus in the aftermath of the outbreak. China's fiscal stimulus response is equal to roughly 4.5 percent of GDP. Containment of the virus has enabled China to largely reopen their economy. The Chinese economy grew 4.9 percent (year-over-year in the third quarter, stronger than the 3.2 percent year-over-year growth recorded in the second quarter, but a bit below expectations. China is on track to expand about 2.5 percent in 2020, the only major economy to record positive growth in 2020.

The manufacturing sector continues to expand throughout much of the world. Manufacturing sentiment, as measured by PMIs, showed expansionary conditions in the U.S., most of Europe, China, India, and Brazil. But the manufacturing sector isn't expanding everywhere. Mexico, Japan, Malaysia, and Russia all show decreases in manufacturing output.

When the pandemic hit, consumers and businesses cut back on consumption. Stimulus measures helped lift consumer spending, positively impacting goods while spending on services remained depressed. This drove demand for manufacturing output, but future growth for manufactured products will be more difficult as stimulus wanes. We are moving from an initial shock and the immediate aftermath of the pandemic to a more traditional recession.

One final thing we continue to monitor is the rise in transportation costs. The relatively quick recovery in demand for goods also helped drive a recovery in international trade. After falling in the early months of the pandemic, trade flows are now positive on a year-over-year basis (up 3 percent). Global trade flows are being largely driven by imports into the U.S. from Asia and imports into Asia from Europe and Latin America.

With the decline in passenger travel, the air freight industry lost about half of its cargo capacity. Airfreight rates have moved off their high from earlier this year but remain 30 to 60 percent above last year's levels. Containerized freight rates have also increased significantly. The rebound in containerized freight is hitting capacity constraints as the industry faces added tightness from port congestion and shortages of 40-foot high cube containers.

-2.5%

After growing 12.7 percent in the third quarter, Europe's economy is set to shrink 2.5 percent in the fourth quarter.

5,400

The U.S. electronics industry added 5,400 jobs in the last month. Industry employment is roughly flat from a year ago.

53

The JPMorgan Global Manufacturing PMI increased to 53 in October, the highest level since May 2018.

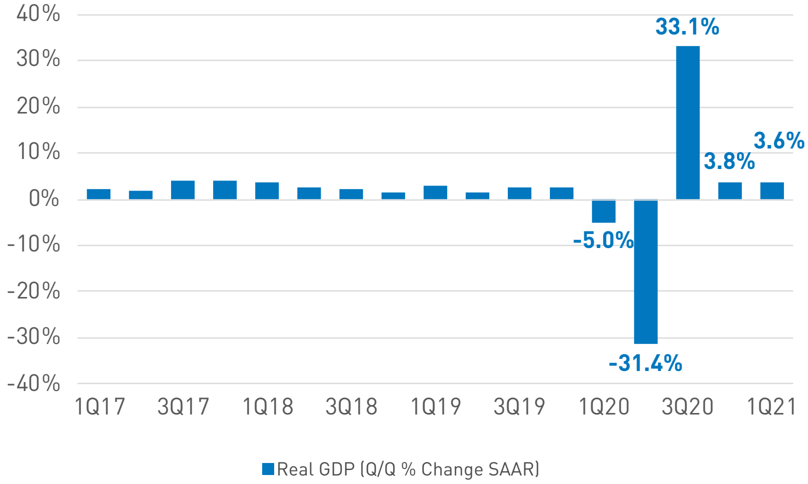
3.8%

The U.S. economy is expected to grow by 3.8% in the final quarter of the year.

U.S. OUTLOOK

ECONOMIC GROWTH

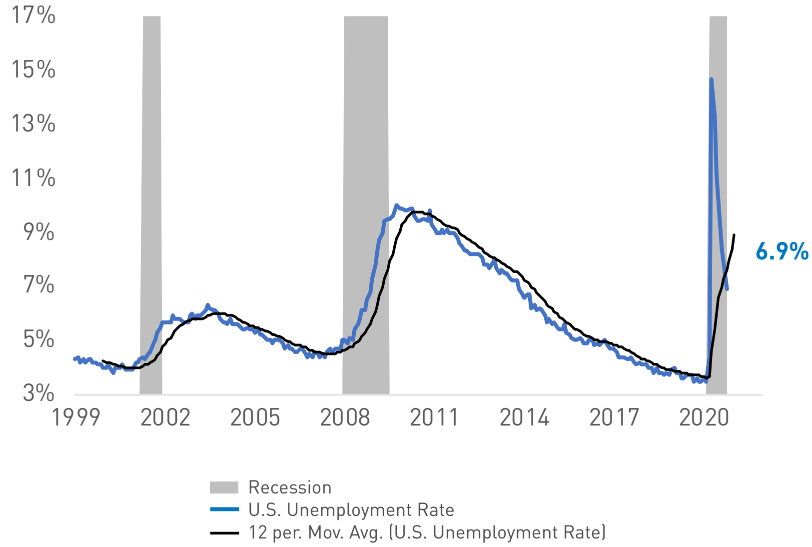
As expected, the economy grew strongly in the third quarter, rising 33.1 percent (annualized). This is record growth on the back of a record decline in the fourth quarter (down 31.4 percent annualized). Consumer spending led the decline in the second quarter (-33.2%) and the recovery in the third quarter (+40.7%). Despite the strong growth in the quarter, real GDP is still down 2.9 percent from a year ago. Expect the economy to expand 3.8 percent in the current quarter. However, numerous states have renewed mandated closures and restrictions, which could in turn, curtail some growth during the quarter. Regardless, the economy will not regain pre-pandemic levels until the second half of 2021.



	2020 ECONOMIC GROWTH (GDP % Change)	2021 ECONOMIC GROWTH (GDP % Change)	2020 EXCHANGE RATE (v. USD)	2021 EXCHANGE RATE (v. USD)
UNITED STATES	-3.7%	4%	N/A	N/A
CANADA	-5.8%	5.1%	1.34	1.33
MEXICO	-9.3%	3.6%	21.65	21.44
EURO AREA	-7.6%	5.3%	1.18	1.22
CHINA	2.0%	8.0%	6.74	6.69

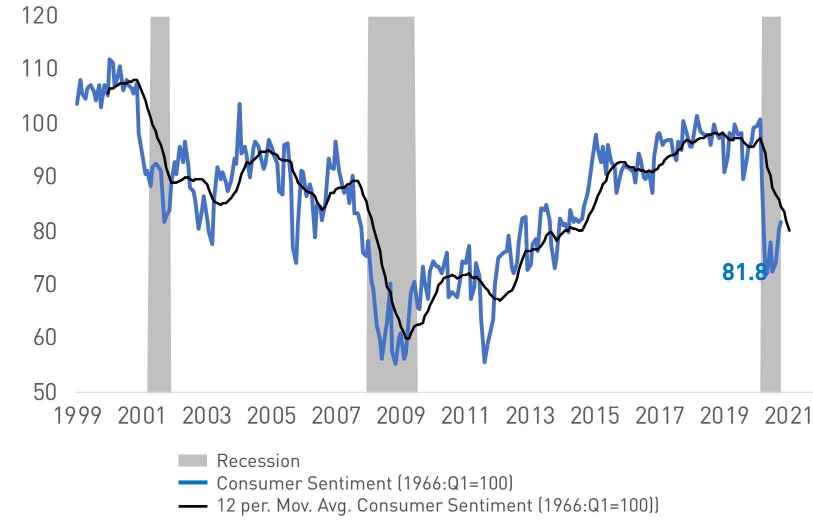
EMPLOYMENT

October marks the sixth consecutive month of employment gains, but as we've noted in recent months, the rate of growth is slowing. Nonfarm payrolls increased by 638,000 jobs. Private-sector payrolls increased 906,000 as government jobs declined by 268,000 (138,000 temporary 2020 Census workers). The largest increases continue to show up where we saw the biggest declines in the early month of the pandemic. Leisure and hospitality added 271,000 jobs, professional and business services added 208,000 (including temp jobs), and retail added 104,000. Manufacturing added 38,000 jobs. Overall employment is about 6.6 percent below pre-pandemic levels, while manufacturing is down 4.8 percent. The unemployment rate fell from 7.9 percent in September to 6.9 percent in October.



SENTIMENT

Consumer sentiment moved marginally higher in October, rising 1.7 points from 80.4 to 81.8. It is down 14.3 percent from a year ago and 15.8 percent below the 2018/2019 average. Despite marginal gains in October, sentiment has slipped lower through the first few weeks of November. Following the presidential election outcome, Republicans reported weaker economic expectations, while Democrats reported no offsetting gains in expectations. Rising COVID-19 infections are also weighing heavily on the outlook. Sentiment will likely be of outsized importance in the final weeks of the year because any downward pressure on sentiment could hurt retail sales and other spending during the ever-important holiday shopping season.

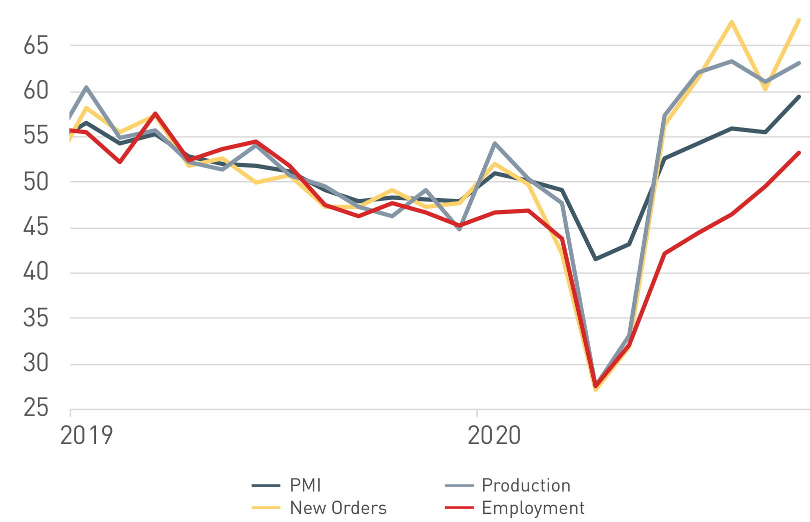


TRADE-WEIGHTED U.S. DOLLAR INDEX

The trade-weighted dollar index fell another 0.5 percent during the month of October and is now down 0.5 percent from a year ago. Core dollar exchange rates have been generally stable this year despite massive uncertainties, a deviation from what we've seen during past economic downturns. Economists Kenneth Rogoff and Carmen Reinhart call this one of the pandemic's great macroeconomic puzzles. All major central banks have implemented monetary policy that has kept interest rates at or near zero. Moreover, it looks like rates will stay at or near zero for an extended period, even as economics improve. This has removed interest rate uncertainty, the single biggest factor influencing exchange rates, which is likely the major reason for the stability in rates that we've seen.

MANUFACTURERS' SENTIMENT (PMI)

The manufacturing sector continues to expand. The PMI increased to 59.3, the highest mark in two years. The New Orders Index increased to 67.9, the Production Index increased to 63, and the Backlog of Orders Index increased to 55.7. Importantly, employment moved into expansion territory for the first time since the summer of 2019. Manufacturers are also reporting that inventory expanded for the first time in several months.

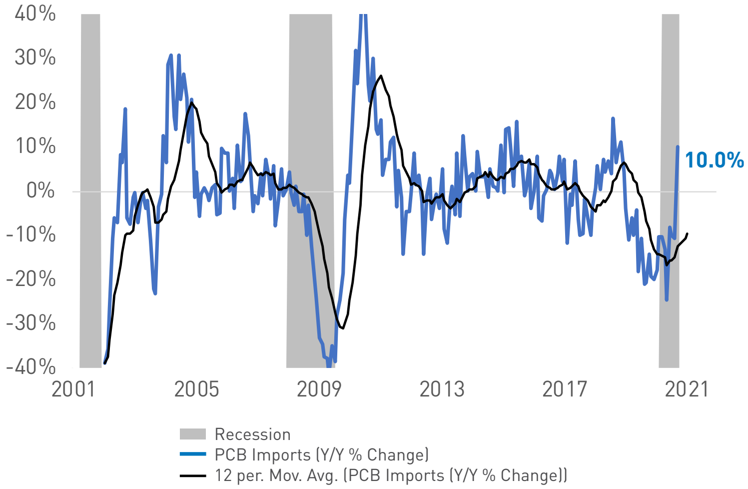


U.S. PCB DEMAND & INDUSTRY EMPLOYMENT

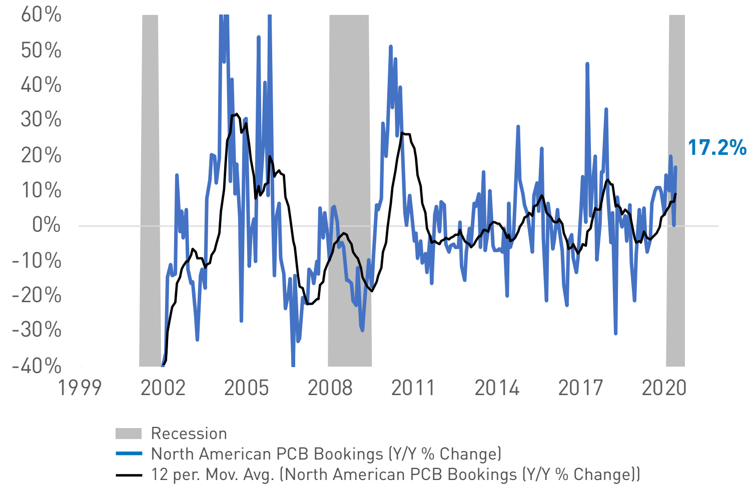
PCB INDUSTRY

After two months of year-over-year declines, the North American PCB market showed solid growth. North American bookings increased 59 percent from the prior month and are up 17.2 percent over the last year. Shipments were also strong in September, rising 21.3 percent from the prior month. Shipments were up 7 percent from last year. Bookings are up 5.7 percent year-to-date, compared with 2019. PCB imports also saw an increase in September, increasing 14.2 percent from the prior month. PCB imports were up 10 percent from a year ago. September was the first month with year-over-year PCB import growth since December 2018.

PCB Imports (Y/Y % Change)



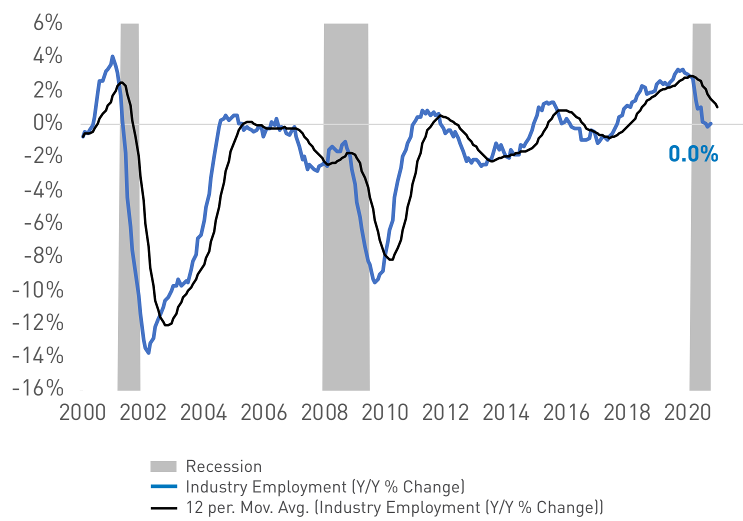
North American PCB Bookings (Y/Y % Change)



INDUSTRY EMPLOYMENT

The electronics industry added 5,400 jobs in October (2,600 on a seasonally-adjusted basis). The industry has shed roughly 12,000 jobs (31,000 on a seasonal basis) since the start of the pandemic in March. Job loss in the industry accounts for about 0.8 percent of total employment (2.1% on an adjusted basis). Overall manufacturing has lost about 5 percent of total employment. The industry also added jobs in October at a faster clip than the overall manufacturing industry. Industry employment accounted for just over 14 percent of all manufacturing jobs added during the month. Industry employment is flat compared to last year due to job gains at the end of 2019.

Industry Employment (Y/Y % Change)



U.S. END MARKETS FOR ELECTRONICS

Industrial production increased 1.1 percent in October and was up 1.7 percent when upward revisions to prior months are included. Manufacturing output increased one percent in the month and was also up 1.7 percent with revisions to prior months. Overall industrial production is down 5.3 percent from a year-ago while manufacturing is off 3.6 percent. Manufacturing is now above March 2020 levels.

AUTOMOTIVE PRODUCTS

Auto production was up 0.8 percent during the month. Auto production is up 11.2 percent over the last year and up 38.6 percent from March 2020.

TRANSIT EQUIPMENT

Transit equipment production increased 2.7 percent last month after similar growth in September. The sector remains down 19.2 percent from last year and 8.9 percent from pre-pandemic levels.

INFORMATION PROCESSING & RELATED EQUIPMENT

Production in the information processing and related equipment sector declined 0.4 percent during the month. The sector is up 0.3 percent over the last year.

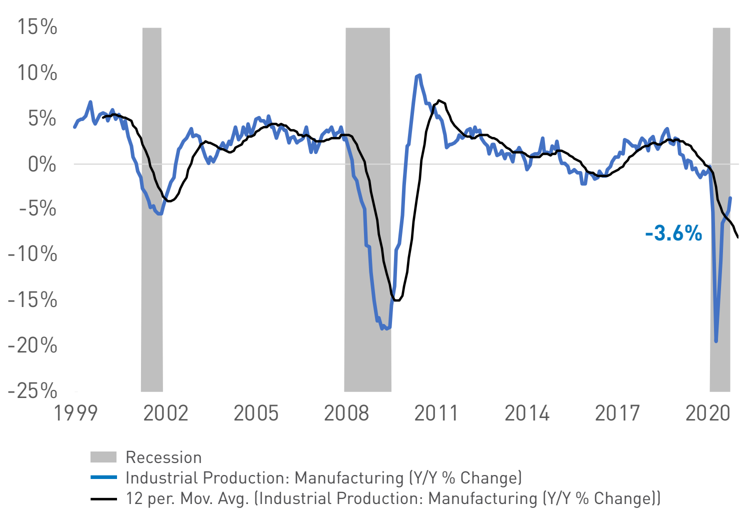
INDUSTRIAL & OTHER EQUIPMENT

The industrial segment grew 0.3 percent during the month, and the prior month's growth was revised higher to 0.8 percent. The sector is down 8.7 percent over the last year.

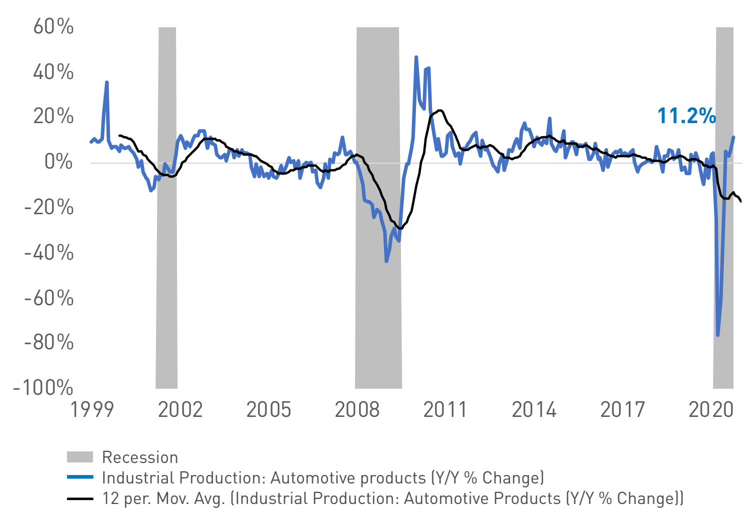
DEFENSE & SPACE EQUIPMENT

The defense and space equipment segment increased 1.4 percent in October and is down 1.2 percent over the last year.

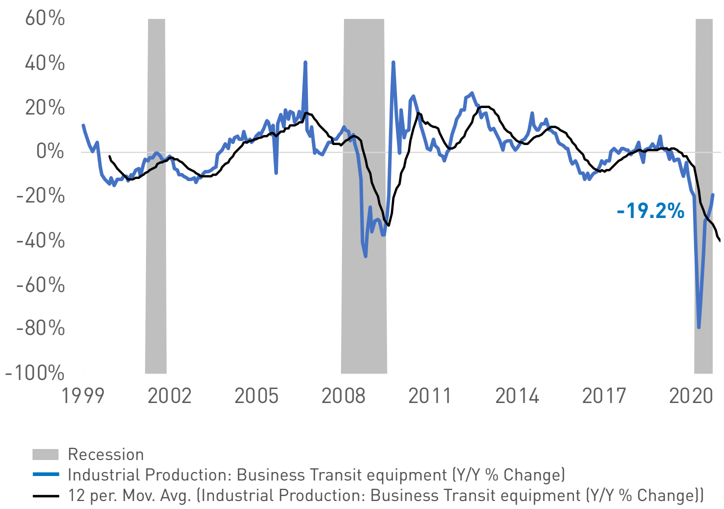
Manufacturing



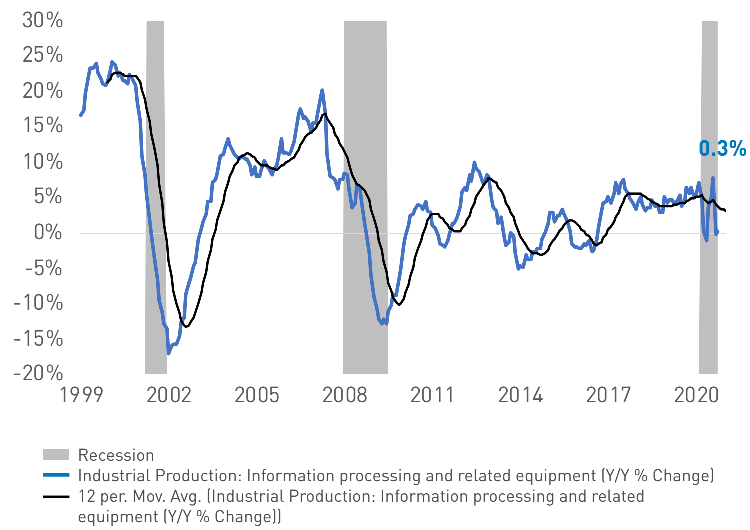
Automotive Products



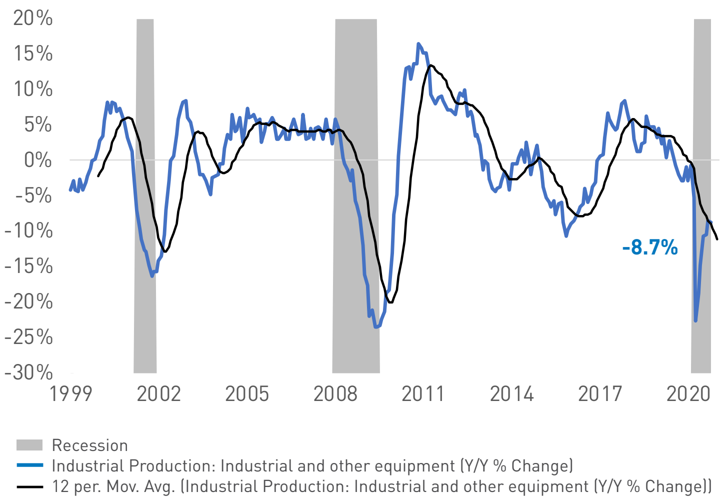
Business Transit Equipment (Y/Y % Change)



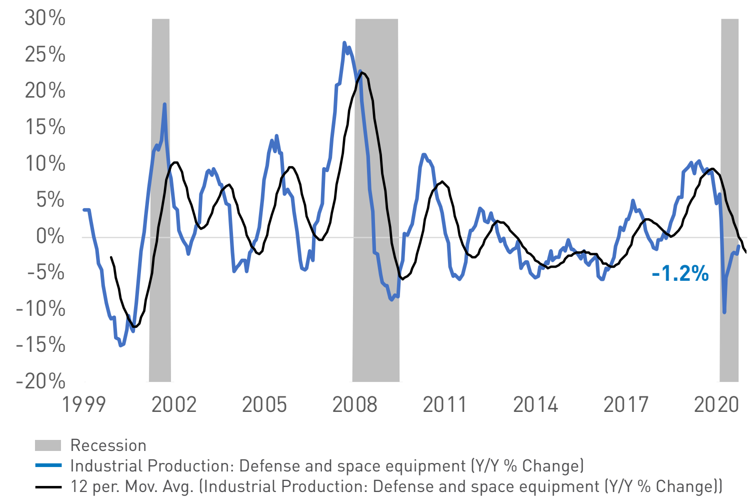
Information Processing & Related Equipment (Y/Y % Change)



Industrial & Other Equipment (Y/Y % Change)



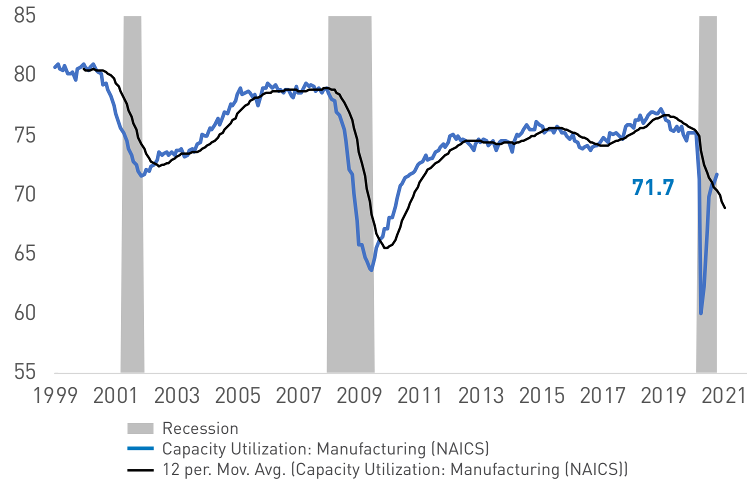
Defense & Space Equipment (Y/Y % Change)



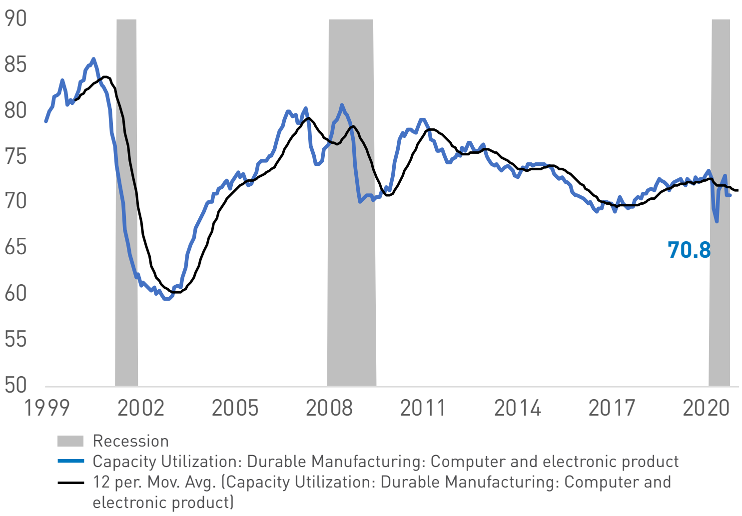
MANUFACTURING CAPACITY UTILIZATION

Overall capacity utilization increased to 72.8 percent in October from 72 percent in September. Manufacturing capacity rose to 71.7 percent, from 70.1 percent. Capacity utilization in Aerospace and Miscellaneous Transportation Equipment and Electrical Equipment, Appliance, and Components both increased during the month. Utilization in Computer and Electronic Product and Motor Vehicles and Parts were relatively flat from the prior month. Capacity utilization across electronics-related sectors is between 86 percent and 96 percent of pre-pandemic capacity.

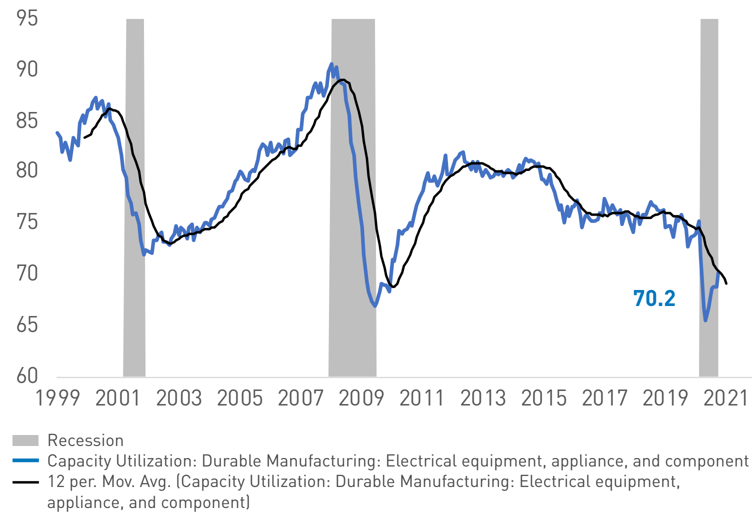
Manufacturing (NAICS)



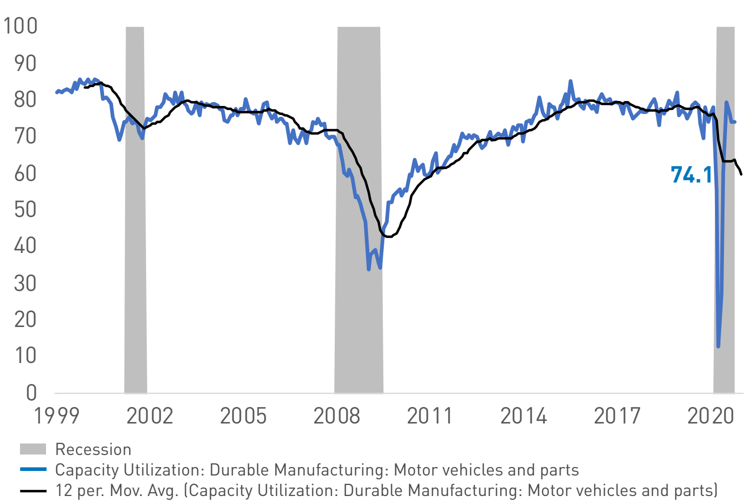
Computer & Electronic Product



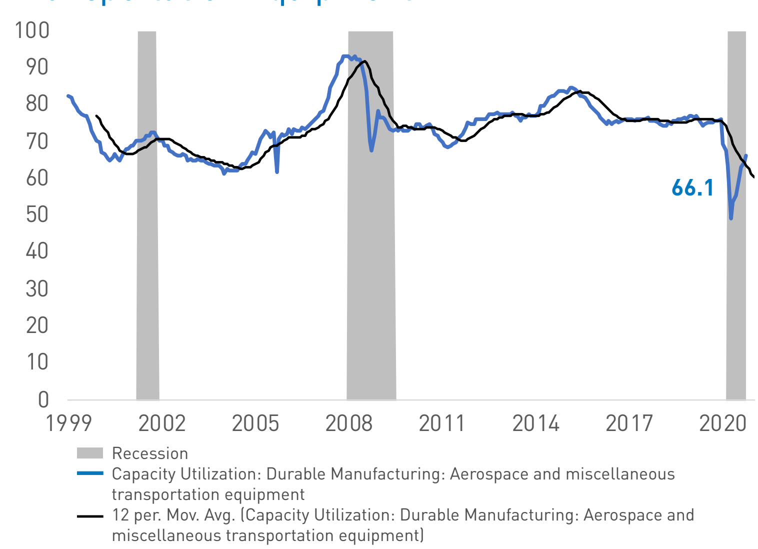
Electrical Equipment, Appliance, & Component



Motor Vehicles & Parts



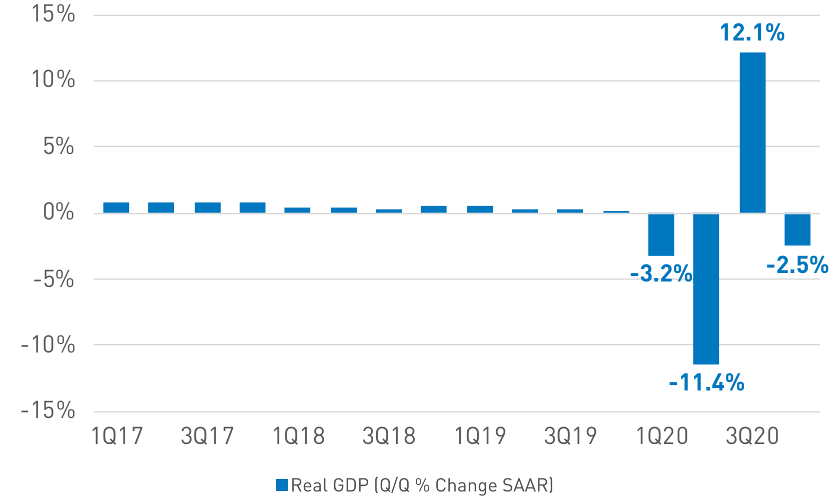
Aerospace & Miscellaneous Transportation Equipment



EUROPEAN OUTLOOK

ECONOMIC GROWTH

Euro area GDP increased 12.7 percent in the third quarter (12.1 percent in the EU), the strongest quarterly growth since records began in 1995. GDP is still down 4.3 percent from the prior year (3.9 percent in the EU). In comparison, the U.S. is roughly 3.5 percent below last year's levels. France saw the strongest jump in the third quarter, rising 18.2 percent. Spain (16.7 percent increase) and Italy (16.1 percent increase) also experienced solid growth. Germany was up 8.2 percent during the quarter and is down 4.2 percent from the prior year. On a year-over-year basis, Spain continues to suffer the worst, down 8.7 percent, highlighting the importance of international tourism to that market.



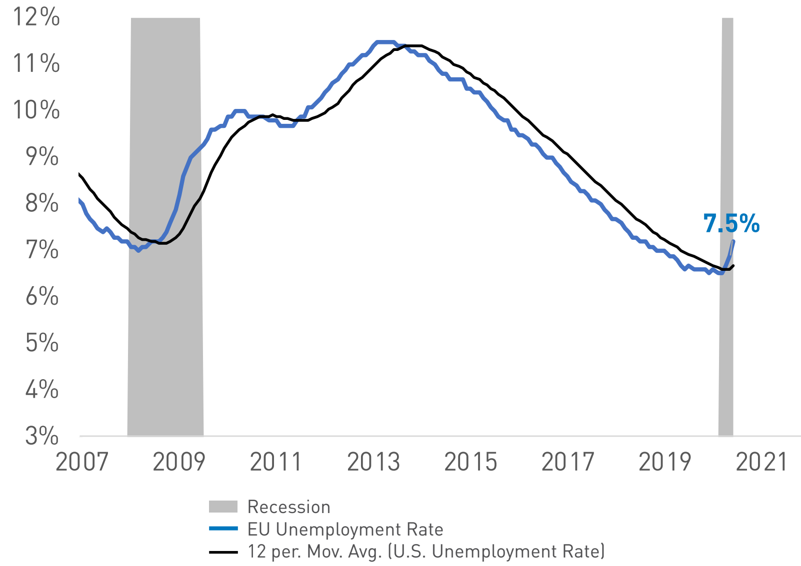
Despite a strong recovery in the third quarter, economic growth in Europe is likely to decline in the fourth quarter. France, Germany, and others have imposed severe lockdown measures as a result of accelerating COVID-19 cases across the continent. For example, French statistical office (INSEE), estimates that France's economic activity fell by almost 10 percent in November compared to the prior month. Growth for the eurozone in the fourth quarter is expected to decline roughly 2.5 percent before rising just under one percent in the first quarter of 2021.

	Q/Q PERCENTAGE CHANGE				Y/Y PERCENTAGE CHANGE			
	2019Q4	2020Q1	2020Q2	2020Q3	2019Q4	2020Q1	2020Q2	2020Q3
EURO AREA	0.0%	-3.7%	-11.8%	-12.7%	1%	-3.3%	-14.8%	-4.3%
EU (27)	0.1%	-3.3%	-11.4%	12.1%	1.2%	-2.7%	-13.9%	-3.9%
GERMANY	0%	-1.9%	-9.8%	8.2%	0.4%	-2.1%	-11.2%	-4.2%
FRANCE	-0.2%	-5.9%	-13.7%	18.2%	0.7%	-5.8%	-18.9%	-4.3%
ITALY	-0.2%	-5.5%	-13%	16.1%	0.1%	-5.6%	-17.9%	-4.7%
SPAIN	0.4%	-5.2%	-17.8%	16.7%	1.7%	-4.2%	-21.5%	-8.7%

	2020 ECONOMIC GROWTH (GDP % CHANGE)	2021 ECONOMIC GROWTH (GDP % CHANGE)
EURO AREA	-7.6%	4.8%
GERMANY	-5.6%	4.0%
FRANCE	-9.7%	6.1%

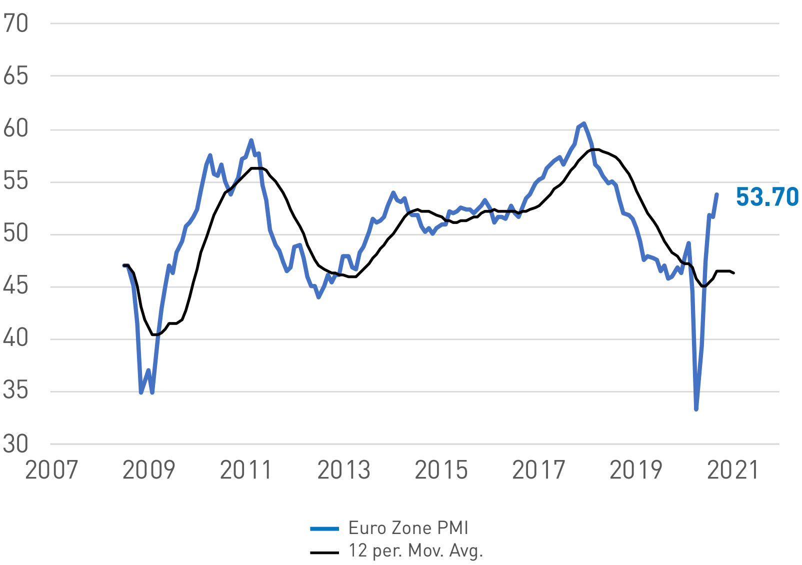
EMPLOYMENT

The unemployment rate for the EU was unchanged in September at 7.5 percent. An estimated 15.99 million are currently unemployed in the EU, an increase of 42,000 in the last month. Germany's unemployment rate remains at 4.5 percent, while France's increased from 7.5 percent to 7.9 percent. Short-time work policies implemented in the eurozone have kept unemployment from running higher. Spain's unemployment rate remains very high at 16.5 percent, largely the result of lost international tourism. Another concern is the rise in youth unemployment. In September 2020, the youth unemployment rate was 17.1 percent in the EU.



MANUFACTURERS' SENTIMENT (PMI)

The eurozone's PMI increased from 53.7 in September to 54.8 in October, suggesting the manufacturing sector continues to expand. This marks the fourth consecutive month of expansion for the European manufacturing sector. Strength in Europe continues to be driven by strong manufacturing activity in Germany. German saw record growth in new orders in October. Manufacturing in France also improved. However, renewed lockdowns threaten a decline in factory output, something the next month will reveal. Similar to the United States, the service sector continues to struggle, while the goods economy is recovering more quickly.



E.U. END MARKETS FOR ELECTRONICS

Manufacturing output in the European Union was flat in September, moving from 100.1 to 100.2. This is down 5.9 percent compared to last year, which is slightly better than August, down 6.3 percent from the year prior.

COMPUTER, ELECTRONIC & OPTICAL PRODUCTS

The electronics industry, which includes categories such as components, loaded boards, computers, communications equipment, and consumer electronics, was roughly flat in October after being down 9.5 percent in August. The sector is now off 13.3 percent from last year.

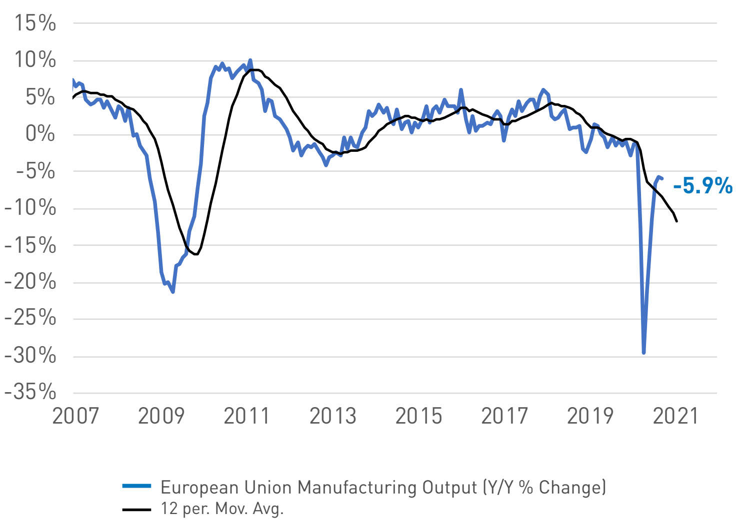
MOTOR VEHICLES

Motor vehicle manufacturing production increased 12.7 percent in September, reversing a 9.8 percent decline in August. Auto production in the EU is off 14.2 percent from a year ago.

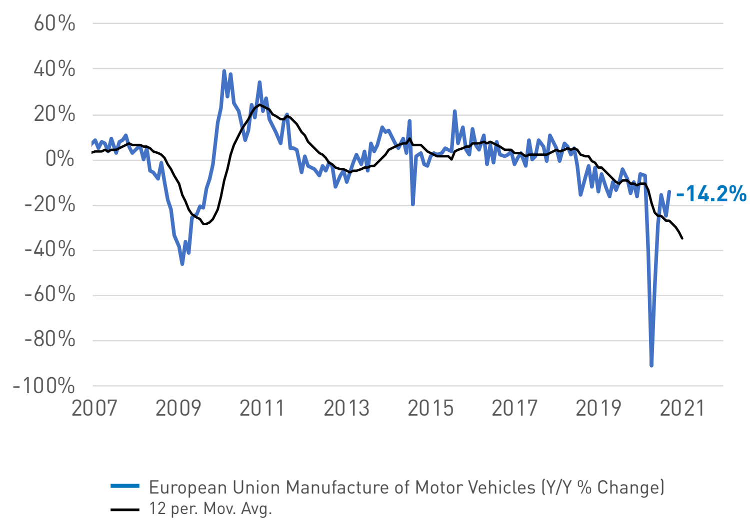
AIR & SPACECRAFT & RELATED MACHINERY

The air and spacecraft manufacturing sector production increased 5.1 percent in September, after increasing 1.7 percent in the prior month. The sector remains down significantly, off 23.6 percent from last year.

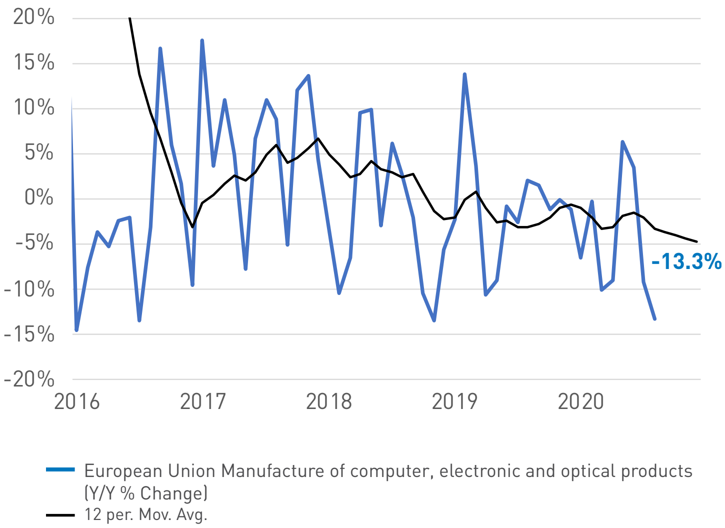
E.U. Manufacturing Output



E.U. Manufacture of Motor Vehicles



E.U. Manufacture of Computer, Electronic & Optical Products (Y/Y % Change)



E.U. Manufacture of Air & Spacecraft & Related Machinery (Y/Y % Change)