Economic data over the last month is providing a mixed view of the economy. On one hand, economic fundamentals continue to slow. In the U.S., industrial production was flat last month and has likely peaked. However, despite aggregate softness, certain segments continue to do well. For example, the defense and space equipment sector hit another new high in January, aerospace is up significantly from pre-pandemic levels and other sectors key to the electronics industry are holding up well.

The manufacturing sectors in Europe, the U.S., and China are all signaling contraction according to their respective PMI indexes, but in China and Europe at least, things are looking less bad this month. Despite signs of slowing demand, manufacturers continue to hire. Over the last month, the manufacturing sector in the U.S. added 20,000 new workers. The broader economy added more than 500,000 new jobs, a shocking number in the midst of what many believe is the start of a recession.

Even if the recession is mild and short, it is surprising to see companies hire at such a strong clip. It is true some of those jobs are showing up in parts of the economy, like leisure and hospitality, that are still working to get back to pre-pandemic levels. Other hirings are likely a sign of current demand. Many companies continue to hire because demand is firm and backlogs strong. If the economy does slow, and especially if it slows in a meaningful way, some companies might need to unwind some of these new hires.

January’s report on durable goods also provided a mixed report. New orders for durable goods fell 4.5% for the month. But exclude orders for
commercial aircraft, always a volatile figure, and new orders were up 0.8%. On the surface this feels like a strong result, but much of this growth is likely the result of higher prices which suggests very little change in capital goods orders after adjusting for inflation.

In the last month it does look like many companies are slowing production schedules. At the same time, inventories have been building as demand has been slowing and companies are likely trying to resize the balance between demand and inventories. This adjustment will likely continue to take place over the coming months and will act as a headwind for production output in the near-term.

Inflation news in the most recent revisions to Q4 Real GDP suggest the Federal Reserve still has some work to do. The GDP price index (GDP inflation) was revised up from 3.5% to 3.9%. The labor market remains extremely tight. Last month the unemployment rate fell to 3.4%, the lowest it has been since the early 1950s. The Fed will see the tight labor market as a risk for inflationary pressures. They will also see it as a sign that they can continue to raise interest rates without significantly damaging the labor market and the broader economy.

The futures markets had expected the Fed to raise rates 2 or 3 more times this year and end their rate hiking regime by the end of the year, but expectations have changed sharply in the last month. We believe the Fed will raise rates 4 more times this year, increasing the Federal Funds rate 25 basis points each time.

Despite indications that the global economy continues to slow, we did marginally raise our forecasts for economic growth in the U.S., Europe, and China for 2023.

-4.5%
New orders for durable goods fell 4.5% in December, but orders excluding transportation rose 0.7%

1.8%
Personal consumption expenditures rose 1.8% in January, the largest gain since March 2021.

-0.7%
Existing home sales declined 0.7% in the last month. Sales are down 36.9% over the last year.

0.7%
The Produce Price Index rose 0.7% in the last month. Producer prices are up 6% from a year ago. Energy prices are up 5%.
U.S. OUTLOOK

ECONOMIC GROWTH
Revisions to the fourth quarter U.S. GDP report brought generally negative news. Growth was weaker than expected in Q4 and prices were higher. Real GDP was revised down to two-tenths of a percentage point to 2.7%. The downward revision was the result of weaker consumer spending and lower net exports which more than offset upward revisions to business investment. Consumer spending during the quarter was up 1.4%, down from the previous 2.1%. Net exports contributed 0.5 percentage points to GDP during the quarter but trade flows are weak and both imports and exports fell during the quarter. The one positive bit of news is that business investment was stronger than previously estimated.

<table>
<thead>
<tr>
<th>Country</th>
<th>2023 ECONOMIC GROWTH (GDP % Change)</th>
<th>2024 ECONOMIC GROWTH (GDP % Change)</th>
<th>2023 EXCHANGE RATE (v. USD)</th>
<th>2024 EXCHANGE RATE (v. USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNITED STATES</td>
<td>0.7%</td>
<td>1.2%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>CANADA</td>
<td>0.5%</td>
<td>1.5%</td>
<td>1.32</td>
<td>1.27</td>
</tr>
<tr>
<td>MEXICO</td>
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<td>1.9%</td>
<td>20.26</td>
<td>20.68</td>
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<tr>
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<td>1.4%</td>
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<tr>
<td>CHINA</td>
<td>5.1%</td>
<td>5.0%</td>
<td>6.73</td>
<td>6.48</td>
</tr>
</tbody>
</table>

EMPLOYMENT
The U.S. economy added a whopping 517,000 new jobs in January. This far outpaces the average gains in new jobs of 291,000 over the prior three months. Payroll gains were also revised higher for November and December for a total net gain, including revisions, of 588,000 new jobs. The largest increase in jobs during January were in leisure & hospitality (+128,000), education & health services (+105,000), and professional & business services (+82,000). Manufacturing added 19,000 jobs. The unemployment rate declined to 3.4%, a level last seen in the early 1950s. Total hours worked grew 1.2% and are up 4%.
SENTIMENT
The Index of Consumer Sentiment rose 3.2% in February to 67. Sentiment is up 6.7% over the last year. This is the third consecutive monthly increase. Sentiment has steadily risen off the all-time low bottom of 50 in June 2022, but remains well below historical averages. February’s improvement was driven in part by a 12% increase in the short-run economic outlook. The recent rise in equity prices has also likely contributed to improving sentiment. Consumers with large stock portfolios recorded notably large increases in sentiment over the last month. Consumers appear to be shaking off the fear of a near-term recession.

TRADE-WEIGHTED U.S. DOLLAR INDEX
After falling about 2% in January, the Trade-Weighted U.S. Dollar Index has risen steadily in recent weeks. The index rose 1.2% through the first half of February and is up about 2.8% from a year ago. The dollar value rose on solid economic data that surprised to the upside over the last month. Consumer spending jumped 1.8% last month. Inflation data has also come in stronger than expected. The financial markets had priced in rate cuts in the back half of the year but that has changed in recent weeks and it looks like the Federal Reserve will need to move rates higher and keep them high for longer than many previously anticipated. These developments are all dollar-positive forces which will keep the dollar stronger for longer.

MANUFACTURERS’ SENTIMENT (PMI)
U.S. manufacturing sentiment contracted for a third consecutive month, falling from 48.4 to 47.4 in January. The New Orders Index contracted for a fifth consecutive month and the Production Index contracted for a second consecutive month. Some sectors of the economy are carrying excess inventory and many manufacturers are likely slowing output to better align with demand. The Inventories Index also expanded less quickly this month, suggesting manufacturers are keeping an eye on inventory levels. The Prices Index rose this month, but remains in contractionary territory suggesting prices continue to decline for the majority of manufacturers.
U.S. END MARKETS FOR ELECTRONICS

U.S. industrial production was unchanged in January, but was noticeably weaker than the expected 0.5% increase. The manufacturing sector improved 1% in January, but prior months were revised downward leaving the headline index lower than previously believed. Industrial production has likely peaked, despite January’s rise.

AUTOMOTIVE PRODUCTS
Auto production rose 0.5% during the month while non-auto manufacturing was up 1.5%. Auto production is up 4.7% in the past year, while non-auto manufacturing is down 0.1%.

TRANSIT EQUIPMENT
Transit equipment production fell 0.3% during the month. The sector is up 8% over the last year.

INFORMATION PROCESSING & RELATED EQUIPMENT
Production in the information processing and related equipment sector rose 1.6% during the month. The sector is up 2.3% over the last year.

INDUSTRIAL & OTHER EQUIPMENT
The industrial sector rose 1.7% during the last month. The sector is still up 2.7% over the last year.

DEFENSE & SPACE EQUIPMENT
The defense and space equipment segment rose 1.8% to another new all-time high. The sector is up 10.6% over the last year.
### Business Transit Equipment (Y/Y % Change)

![Graph showing Business Transit Equipment (Y/Y % Change)](image)

- **Recession**
- **Industrial Production: Business Transit equipment (Y/Y % Change)**
- **12 per. Mov. Avg. (Industrial Production: Business Transit equipment (Y/Y % Change))**

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

![Graph showing Information Processing & Related Equipment (Y/Y % Change)](image)

- **Recession**
- **Industrial Production: Information processing and related equipment (Y/Y % Change)**
- **12 per. Mov. Avg. (Industrial Production: Information processing and related equipment (Y/Y % Change))**

### Industrial & Other Equipment (Y/Y % Change)

![Graph showing Industrial & Other Equipment (Y/Y % Change)](image)

- **Recession**
- **Industrial Production: Industrial and other equipment (Y/Y % Change)**
- **12 per. Mov. Avg. (Industrial Production: Industrial and other equipment (Y/Y % Change))**

### Defense & Space Equipment (Y/Y % Change)

![Graph showing Defense & Space Equipment (Y/Y % Change)](image)

- **Recession**
- **Industrial Production: Defense and space equipment (Y/Y % Change)**
- **12 per. Mov. Avg. (Industrial Production: Defense and space equipment (Y/Y % Change))**
Overall capacity utilization slipped marginally from 78.4% to 78.3% in January. Manufacturing capacity rose to 77.7% from 77.1%. Computer and electronic production capacity utilization rose to 68% but from downward revisions to previous months. Electrical equipment, appliances and components utilization rose 1.1 percentage points to 80.8%. Utilization in the auto sector rose 0.4% to 73.3%. Capacity utilization in the aerospace and miscellaneous transportation equipment sector inched up again this month to 75.4%.
ECONOMIC GROWTH

Economic growth in the euro area surprised to the upside in Q4, eking out 0.1% growth in the face of an expected contraction. The EU’s economy remained flat in Q4. Year-over-year, the euro area is up 1.9% while the EU is up 1.8%. Revisions show that Germany’s economy contracted worse during the quarter than previously believed, falling 0.4%. During the quarter, France rose 0.1% and Spain rose 0.2%. Germany has likely entered a short and shallow recession that will end in the first half of 2023. During Q4, Ireland’s economy rose a strong 3.5%. The second highest growth rate during the quarter was recorded by Latvia (+0.3%) which was followed by Spain and Portugal (both +0.2%). Energy prices moderated in the latter part of 2022 which likely provided some relief for the eurozone.

EUROPEAN OUTLOOK

<table>
<thead>
<tr>
<th>Q/Q PERCENTAGE CHANGE</th>
<th>Y/Y PERCENTAGE CHANGE</th>
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<tbody>
<tr>
<td>2022Q1</td>
<td>2022Q2</td>
</tr>
<tr>
<td>EURO AREA</td>
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</tr>
<tr>
<td>EU (27)</td>
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</tr>
<tr>
<td>GERMANY</td>
<td>0.8%</td>
</tr>
<tr>
<td>FRANCE</td>
<td>-0.2%</td>
</tr>
<tr>
<td>ITALY</td>
<td>0.1%</td>
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<tr>
<td>SPAIN</td>
<td>0.0%</td>
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</table>

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</tr>
<tr>
<td>EURO AREA</td>
<td>0.4%</td>
</tr>
<tr>
<td>GERMANY</td>
<td>0.0%</td>
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<tr>
<td>FRANCE</td>
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</tr>
<tr>
<td>NETHERLANDS</td>
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</table>
EMPLOYMENT
The unemployment rate for the euro area was unchanged at 6.6% in December for the third consecutive month. The euro area seasonally-adjusted unemployment rate was down from 7% in December 2021. The EU unemployment rate also held steady at 6.1% in December 2022 for the 9th consecutive month. This is down from 7% last December. Czechia saw its unemployment rate decrease 0.3 percentage points to 2.3% in December, the lowest unemployment rate in Europe. Spain reported the highest unemployment rate at 13.1%. Germany’s unemployment rate declined 0.1 percentage point to 2.9%.

MANUFACTURERS’ SENTIMENT (PMI)
The S&P Global Eurozone Manufacturing PMI moved higher in January, rising from 47.8 to 48.8. The index hit a five month high, but remains in contractionary territory. January’s results could suggest the worst of the slowdown is behind us. Several countries, including France, Italy, and Ireland, all posted expansionary results. Stock of finished goods declined for the first time since May 2022, a sign that manufacturers are working to align inventory with slower demand. Input price inflation slowed to a 26-month low, a further sign of weaker demand, but also that supply chains are healing. January’s results also show that new orders are slowing across both Europe and key export markets.
E.U. END MARKETS FOR ELECTRONICS

Manufacturing output fell in December after a one month increase in November. Output declined 1.4% (month-on-month) and is down 0.9% over the last year.

The electronics industry, which includes categories such as components, loaded boards, computers, communications equipment, and consumer electronics, fell 4.3% (month-on-month) in December. The sector is down 13.5% over the last year.

Motor vehicle manufacturing output rose 7% (month-on-month) during the month. The sector is up 11.5% over the last year.

The air and spacecraft manufacturing sector rose 7.5% in December. The segment is up 15.9% over the last year.
E.U. Manufacture of Computer, Electronic & Optical Products (Y/Y % Change)

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

-13.5%

European Union Manufacture of computer, electronic and optical products (Y/Y % Change)
12 per. Mov. Avg.

European Union Manufacture of air and spacecraft and related machinery (Y/Y % Change)
12 per. Mov. Avg.