Yardeni Research

MORNING BRIEFING
February 16, 2023

Industrials, Chinese Spies & MIT's Picks

Check out the accompanying chart collection.

Executive Summary: Three pieces of recent legislation incentivize manufacturers to produce their goods on US soil, and the amount being spent on the construction of new factories has risen sharply, presumably in response. Jackie examines the projects planned by three such companies—a solar panel maker, a semiconductor manufacturer, and Ford Motor. … Also: We recap the DOJ's recent efforts to stop Chinese spies intent on stealing US technology and defense secrets. … And: A look at several innovations on MIT's short list of life-changing new technologies.

Industrials: Government-Fueled Manufacturing Boom. Tax and other incentives in the Infrastructure Investment and Jobs Act, the Inflation Reduction Act, and the CHIPS and Science Act are having the desired effect: Companies are making plans to manufacture more of their goods in the US. This is particularly true for companies that manufacture semiconductors or "green things"—like solar components, batteries, and electric vehicles—and that process lithium and green hydrogen.

It's early days, but the new projects may already be having an impact. The amount spent on the construction of manufacturing facilities has risen sharply, to $122.2 billion in December (saar), up from $80.2 billion in December 2019 (*Fig. 1*). Spending on commercial construction has also jumped, to $122.4 billion in December (saar) up from $83.9 billion in December 2019 (*Fig. 2*). The jump in nonresidential construction is helping to offset the drag from the decline in residential construction (*Fig. 3*).

Payrolls in construction and manufacturing are also rising. Construction payrolls are near all-time highs. Manufacturing payrolls are far from the levels during the 1970s boom years, but they have bounced back from their Covid-affected lows and are at their highest level since November 2008 (*Fig. 4* and *Fig. 5*).

This week brought more news from manufacturers and investors planning to develop new US manufacturing plants. I asked Jackie to take a look at what they had to say:

(1) *Making US solar panels.* SolarEdge Technologies manufactures and sells solar panels and batteries to individuals and companies around the world. During its Q4 earnings

conference call on February 13, the company announced it will move forward with plans to manufacture inverters and optimizers in the US through a combination of contract manufacturing and manufacturing in company-owned facilities.

“We expect [the] first products to be manufactured in the third quarter of 2023 and are aiming for the majority of the [Inflation Reduction Act] credited residential and commercial products for the U.S. market to be manufactured domestically by the second half of 2024. Some of the details of this plan are still dependent on the impending clarifications from the Treasury,” said CEO Zvi Lando. The company is also ramping up manufacturing in Mexico of its products for the US residential market.

Ironically, SolarEdge has experienced a slowdown in the US market—Q1 sales are only expected to be flattish y/y in North America—because of higher interest rates and a new rule in California that sharply reduces the credit homeowners receive when they sell solar-generated electricity to utilities. But SolarEdge sees a silver lining in the new rule: It should encourage homeowners to purchase the company’s solar panels and battery systems, as they provide homeowners with the option either to store excess electricity produced to use themselves at a later time or to sell it back to the utility at a time when it garners top dollar.

Company officials are optimistic that the California market will adjust to the new rule. “We have seen such transitions happen in the past in Europe, in countries like the U.K., Germany, and Belgium. And while it takes the market time to adjust to the new reality, we typically experienced significant growth in PV-plus-battery installation rates following such tariff transition,” said Lando.

Meanwhile, demand in Europe exceeds the company’s ability to produce and deliver the products demanded. There’s also a shortage of installers, which is “becoming a significant bottleneck for growth.” SolarEdge forecasts 20%-30% y/y growth in Europe this year.

(2) *US bricks, Chinese technology.* Ford Motor is the latest company to announce the construction of a battery plant in the US. It’s investing $3.5 billion to build a plant in Michigan, and it will license the battery technology from China’s Contemporary Amperex Technology (CATL). “Ford considered sites for the battery plant in Mexico and Canada, but ultimately settled on Michigan in part because of the federal subsidies available under the [Inflation Reduction Act],” a February 13 *WSJ* *article* reported. CATL employees will be at the factory, and some of the materials will be shipped from China, but Ford will control the plant’s operations.

(3) *New financing methods.* Intel will tap into the incentives provided by the CHIPS and Science Act when building its giant new semiconductor fab in Arizona. But to provide additional funding, it turned to Brookfield Infrastructure Partners LP. Brookfield committed $15 billion of funding—$2 billion of equity and $13 billion of debt—a February 2 Bloomberg *article* reported.

Funding the construction of a semiconductor plant is a first for Brookfield Infrastructure Partners, which normally provides funding for the construction of projects that are affiliated with utilities, transportation, midstream energy, or data centers. Semiconductor plants may involve more risk than its traditional infrastructure projects because the plant's technology can quickly become obsolete. Intel provided Brookfield with some downside loss protection; and if the plant is more profitable than expected, the benefits will accrue to Intel, Bloomberg reported.

The novel deal structure has received attention from governments, companies, and other investments funds that are evaluating whether the structure can finance the construction of manufacturing plants that produce semiconductors, batteries, or other items, said CEO Samuel Pollock on Brookfield Infrastructure's February 2 *conference call*. It's a deal structure he thinks Brookfield "should be hopefully doing a lot more [of]."

There's a huge demand for capital to fund the construction of new and refurbishment of old infrastructure. The "infrastructure super cycle is creating long-term investment opportunities that will require trillions of dollars. This is generating large-scale opportunities for well-capitalized players that can invest in growing operating platforms or be a partner of choice for government or corporate entities that have less access to the capital markets," said Pollock. And Uncle Sam is providing a lot of funding to make sure that infrastructure is built in the USA.

China: Balloons & Spies. The wayward balloons shot down by the US military and questions surrounding their origin (Chinese?) and purpose (spy craft or weather research?) prompted us to check the Department of Justice's (DOJ) efforts to charge those spying on behalf of Chinese government or Chinese companies. The pace of press releases seems to have slowed from a few years ago, when the agency brought numerous cases against US professors with mixed results. But new DOJ cases indicate the Chinese government hasn't ended—or even slowed down—its Cold War efforts to illegally obtain information about US technology and defense. Here are some recent DOJ reports:

(1) *Spies sentenced.* Ji Chaoqun was sentenced in January to eight years in prison after

being convicted by a jury in the Northern District of Illinois for acting as an agent of the People's Republic of China (PRC) and making false statements to the US Army. Ji was providing biographical information on individuals for possible recruitment by a Chinese state security agency. The targeted individuals were working as engineers and scientists in the US. Some of them were Chinese nationals, and some worked for US defense contractors. The Chinese security arm was looking to "obtain access to advanced aerospace and satellite technologies," a January 25 DOJ *press release* states. Ji enlisted in the US Army Reserves and hoped to gain US citizenship and join the CIA, FBI, or NASA in areas that would give him access to their databases.

Ji's Chinese "handler" was also arrested and sentenced to 20 years in prison for espionage crimes and attempting to steal commercial and military trade secrets, a November 16 DOJ *press release* states. Yanjun Xu worked in China as an intelligence officer and used aliases to recruit US aviation employees to travel to China under the guise that they were traveling to give a presentation to a university. While there, Chinese security personnel would enter the US target's hotel room and hack or copy the contents of that person's computer. Xu also recruited insiders in a French aircraft engine manufacturer's facility in China who were willing to plant malware in a French employee's work computer to infiltrate the company's computer network in France.

(2) *American caught.* Shapour Moinian was a US Army helicopter pilot from 1977 through 2000 and then worked for several defense contractors cleared to work on projects handling classified information. He was sentenced to 20 months in prison for accepting thousands of dollars from representatives of the Chinese government in return for aviation-related information from his defense contractor employers, a November 7 DOJ *press release* states.

He was contacted by an individual in China who claimed to be working for a technical recruiting company but who Moinian subsequently knew was employed by or working with the PRC. Moinian provided information to his handlers via a thumb drive and a cell phone. Money was paid in multiple transactions through Moinian's stepdaughter's South Korean bank account and via cash that Moinian and his wife smuggled back into the US.

(3) *Charges pending.* In three separate cases, the DOJ alleges that 13 people acted on behalf of the PRC to steal information or to force a Chinese national residing in the US to return to China. Two PRC intelligence officers attempted to bribe a US government employee with $41,000 of bitcoin to provide information about an ongoing federal criminal investigation and prosecution of a global telecommunications company based in China.

Charges were also brought against four Chinese nationals attempting to recruit individuals to act on behalf of the PRC in the US by providing information, materials, equipment, and assistance to further China's intelligence objectives, an October 24 DOJ *press release* states. The recruitment efforts targeted professors at universities, a former federal law enforcement and state homeland security official, and others.

One individual was given an all-expenses-paid trip to China and while there was recruited by two Chinese intelligence officers charged by the DOJ. The indictment reads like a spy novel: The Chinese intelligence officers and others requested that the individual "provide sensitive fingerprint technology, information and assistance with stopping planned protests along the 2008 Olympic Games torch route in the United States" which would embarrass China. The individual was also "requested to sign a contract for purported consulting services with a Chinese company" with the goal of building sources and channels by which to collect security information.

Disruptive Technologies: MIT's Tech Picks. *MIT Technology Review* kicked off 2023 by *picking* 10 breakthrough technologies its editors think will have a big impact on our lives. Some of these—like AI technology that makes images and the James Web space telescope—are already in operation. Others are still under development. Three technologies in particular caught our attention: CRISPR that cures high cholesterol, royalty-free semiconductors, and unlimited organs for transplant. Here's what's notable about each:

(1) *CRISPR cures high cholesterol.* Gene-editing technology CRISPR has been used to edit genes and cure rare diseases. Now it's set to have a much wider impact. It was used last year to treat and permanently lower a woman's cholesterol.

Verve Therapeutics developed a treatment using base editing, or CRISPR 2.0. "It's a more targeted approach—instead of simply making cuts to shut off specific genes, scientists can now swap a single DNA base for another. In theory, this should be safer because you're less likely to cut an important gene by mistake, and you can avoid potential errors that may occur when DNA repairs itself after being cut," a January 9 *MIT Technology Review* *article* reported. Another form of CRISPR—Prime editing—allows scientists to add parts of DNA into a genome. Scientists hope these new versions of CRISPR editing could cure ailments that affect far more people, but that might not happen for another decade.

(2) *Open standards come to semis.* Companies have long paid to license chip designs from semiconductor companies such as Intel and ARM Holdings. But now an open standard has been developed, called "RISC-V," that makes it easy for anyone to program a chip, *MIT*

Technology Review reports.

China's Alibaba Group Holding is using RISC-V chips in its data centers and is selling versions of it, a January 11, 2021 *WSJ* article reported. Alibaba's chip isn't cutting-edge, but it's much less expensive than traditional chips because no royalty payments are owed. Western companies have experimented with the chip too. Qualcomm and Samsung Electronic have used RISC-V in some smartphone chips, and Western Digital has used it as well.

Developed by the University of California, Berkeley with some backing from the Defense Advanced Research Projects Agency, RISC-V originally was envisioned as a way for academics to work on projects without paying royalties. The global body overseeing the standard relocated from the US to Switzerland to ensure that it wouldn't fall under US export restrictions. The goal, the *WSJ* article states, is to have the standard used by chips in high-end computers in roughly five years.

That likely would be very bad news for today's chip manufacturers—perhaps jeopardizing their investments in plants they're planning to build in the US.

(3) *Organ manufacturing.* Scientists are trying to make more organs available for transplants. One strategy they're working on is editing the genes of pigs and other animals so that their organs don't have sugars on the surface that cause humans' immune systems to reject the animals' organs. Some researchers are also experimenting with 3D-printing to create scaffolds in the shape of lungs to use in artificial lung transplants. Others are using stem cells to cultivate "organoids," *MIT Technology Review* reports.

Just last month, a 3D-printed ear made of human cells was transplanted onto a patient with microtia, a condition in which people are born with an underdeveloped or absent ear. 3DBio Therapeutics took cells from the woman's existing ear tissue to grow additional cells in the lab and used them as "bio-ink" to 3D print a new ear, according to a January 18 *article* in the UK's *Daily Star*. The company is conducting clinical trials with another 11 patients and hopes the process can be used to print other replacement body parts, such as spines, noses, and ultimately vital organs.

Calendars

US: Thurs: Headline & Core PPI 0.4%m/m/5.4%y/y & 0.3%m/m/4.9%y/y; Philadelphia Fed

Manufacturing Index -7.4; Housing Starts & Building Permits 1.36mu/1.35mu; Initial & Continuous Jobless Claims 200k/1.695m; Natural Gas Storage; Bullard; Cook; Mester. **Fri:** Leading Indicators -0.3%; Import & Export Prices -0.2%/-0.2%; Baker-Hughes Rig Count; Bowman. (Bloomberg estimates)

Global: **Thurs:** ECB Economic Bulletin; De Guindos; Panetta; Lane; Nagel; Pill Lowe. **Fri:** Eurozone Current Account; Germany PPI -1.6%m/m/16.4%y/y; France CPI 0.4%m/m/6.0%y/y; UK Headline & Core Retail Sales -5.5%/-5.3% y/y. (Bloomberg estimates)

Strategy Indicators

Stock Market Sentiment Indicators (*link*): The Bull-Bear Ratio slipped for the first time in six weeks, to 1.68 this week, after climbing the prior five weeks from 1.08 to 1.89—which was the highest since early January 2022. *Bullish* sentiment fell to 45.1% this week after a two-week climb of 3.5ppts (to 48.6% from 45.1%) to its highest percentage since the final reading of 2021. Bulls outnumbered bears for 13th consecutive week. Meanwhile, *bearish* sentiment rose to 26.8% this week after retreating the previous five weeks by 8.1ppts (25.7% from 33.8%), which was the lowest since early February 2022 and far below the 44.1% reading in early October last year. The *correction coun*t climbed to 28.1% after holding at 25.7% last week, remaining well below its late September 2022 peak of 40.3%. Turning to the *AAII Sentiment Survey* (as of February 9), optimism about the short-term direction of the stock market jumped to its highest level in over a year, while neutral sentiment also moved higher; pessimism fell during the week. The *percentage expecting stock prices to rise* over the next six months jumped 7.6ppts to 37.5%, its highest percentage since December 30, 2021's 37.7%—the first time in 58 weeks it was at or above its historical average of 37.5%. The *percentage expecting stocks to fall* over the next six months sank 9.6ppts, from 34.6% to 25.0%—the lowest since November 11, 2021's 24.0%. Pessimism was below its historical average of 31.0% for just the fourth time in the past 64 weeks. The *percentage expecting stock prices will stay essentially unchanged* over the next six months rose from 35.5% to 37.5% during the latest week, above its historical average of 31.5% for the sixth straight week—the longest streak of above-average neutral sentiment since a seven-week stretch in December 2021 and January 2022.

S&P 500 Earnings, Revenues, Valuation & Margins (*link*): The S&P 500's forward profit margin fell 0.1ppt last week to a 21-month low of 12.4%. That's down 1.0ppts from its record high of 13.4% achieved intermittently from March to June. It's now up 2.1pts from

10.3% during April 2020, which was the lowest level since August 2013. Forward revenues fell 0.3% w/w from its first record high since the October 13 week. Forward earnings dropped 0.7% w/w to 5.7% below its record high during the June 16 week. Both had been steadily making new highs from the beginning of March 2021 to mid-June; prior to that, they peaked just before Covid-19 in February 2020. The consensus expectations for forward revenues growth fell 0.3ppt w/w to a 2.7% from a 33-month low of 2.3%. That's down from a record high of 9.6% growth at the end of May 2021 and compares to 0.2% forward revenues growth during April 2020, which was the lowest reading since June 2009. Forward earnings growth fell 0.6ppt w/w to 3.9% from a 31-month low of 3.3%. That's down from its 23.9% reading at the end of April 2021, which was its highest since June 2010 and up substantially from its record low of -5.6% at the end of April 2020. Analysts expect revenues to rise 1.7% in 2023 (down 0.4ppt w/w) and 5.2% in 2024 (up 0.5ppt w/w) compared to a revenue gain of 11.7% in 2022. They expect earnings gains of 0.3% in 2023 (down 1.0ppt w/w) and 11.8% in 2024 (up 0.7ppt w/w) compared to an earnings gain of 7.6% in 2022. Analysts expect the profit margin to drop 0.2ppt y/y to 12.2% in 2023 (down 0.1ppt w/w) compared to 12.4% in 2022 and to rise to 13.0% in 2024 (unchanged w/w). The S&P 500's weekly reading of its forward P/E rose 0.1pt w/w to a 42-week high of 18.3. That's up from a 30-month low of 15.3 in mid-October. It also compares to 23.1 in early September 2020, which was the highest level since July 2000 and up from a 77-month low of 14.0 in March 2020. The S&P 500 weekly price-to-sales ratio rose 0.01pt w/w to a 24-week high of 2.27, up from a 31-month low of 1.98 in mid-October. That's down from a four-month high of 2.38 in mid-August and also compares to a record high of 2.88 at the end of 2021 and a 49-month low of 1.65 in March 2020.

S&P 500 Sectors Earnings, Revenues, Valuation & Margins (*link*): Looking at the 11 S&P 500 sectors, last week saw consensus forward revenues rise for four sectors but forward earnings fall for all 11 sectors. The forward profit margin rose w/w for two sectors and fell for five. All sectors have forward earnings and profit margins below their record highs, but four still have record-high forward revenues: Consumer Staples, Financials, Health Care, and Industrials. These four sectors have forward earnings down less than 5% from their record highs: Consumer Staples, Financials, Industrials, and Utilities. Energy's has fallen 8.3% since its record high in October. Since mid-August, all sectors have seen forward profit margins retreat from their record highs. Those of Energy and Industrials remain close to their post-pandemic highs. Energy and Industrials were the only two sectors to have their profit margins improve y/y for full-year 2022, but these five sectors' margins are expected to improve y/y in 2023: Communication Services, Consumer Discretionary, Financials, Industrials, and Utilities. Here's how they rank based on their current forward profit margin forecasts along with their record highs: Information Technology (23.8%, unchanged w/w at a 21-month low and down from its 25.4% record high in June 2022), Financials (17.6, down 0.1ppt to a 22-month low and from its 19.8 record high in August 2021), Real Estate (17.2, unchanged w/w and down from its 19.2 record high in 2016), Communication Services (14.3, up 0.1ppt w/w and 0.3ppt from a 25-month low of 14.0 in late January and down from its 17.0 record high in October 2021), Utilities (13.8, unchanged w/w and down from its 14.8 record high in April 2021), Energy (12.3, up 0.2ppt w/w from a three-month low and down from its 12.8 record high in November), S&P 500 (12.4, down 0.1ppt to a 21-month low and down from its record high of 13.4 achieved intermittently in 2022 from March to June), Materials (11.1, down 0.1ppt w/w to a 24-month low and down from its 13.6 record high in June), Industrials (10.0, unchanged w/w at an 18-month low and down from its 10.5 record high in December 2019), Health Care (9.7, down 0.2ppt w/w to a record low and down from its 11.5 record high in March), Consumer Staples (7.1, down 0.1ppt w/w to a 56-month low and down from its 7.7 record high in June 2020), and Consumer Discretionary (7.1, down 0.2ppt w/w to a 21-month low and down from its 8.3 record high in 2018).

S&P 500 Sectors & Industries Forward Profit Margin Since Peak (*link*): Since the S&P 500's forward profit margin peaked at a record-high 13.4% during the June 9 week, it has fallen 7.6% to 12.4% through the February 9 week. The drop has been paced by four of the 11 sectors, though all but the Energy sector is down since the peak. Here's the sector performance since the June 9 peak: Energy (up 3.2% to 12.3%), Utilities (down 0.6% to 13.8%), Consumer Staples (down 2.8% to 7.1%), Industrials (down 3.8% to 10.0%), Real Estate (down 4.3% to 17.2%), Information Technology (down 6.4% to 23.8%), Financials (down 7.3% to 17.6%), S&P 500 (down 7.6% to 12.4%), Consumer Discretionary (down 8.2% to 7.1%), Health Care (down 11.3% to 9.7%), Communication Services (down 11.4% to 14.3%), and Materials (down 18.0% to 11.1%). These are the best performing industries since the June 9 peak: Wireless Telecommunication Services (up 65.8% to 11.2%), Oil & Gas Refining & Marketing (up 65.1% to 5.6%), Casinos & Gaming (up 48.1% to 3.3%), Airlines (up 25.8% to 5.1%), Oil & Gas Equipment & Services (up 17.6% to 10.8%), and Reinsurance (up 16.4% to 13.6%). The worst performing industries since the June 9 peak: Alternative Carriers (down 64.0% to 3.1%), Commodity Chemicals (down 44.0% to 5.7%), Home Furnishings (down 36.4% to 5.7%), Copper (down 33.7% to 12.8%), Homebuilding (down 29.8% to 10.6%), and Household Appliances (down 29.3% to 4.7%).

US Economic Indicators

Retail Sales (*link*): Retail sales began 2023 on a high note, posting its biggest monthly gain in nearly two years, rebounding 3.0% in January (topping the 1.9% consensus estimate) to a new record, after falling 2.2% the final two months of 2022. January's performance was led by a jump in spending at restaurants, and healthy gains in car dealerships, appliance stores, and furniture stores. Sales rose in every single major category, except gasoline stations, where sales were flat. Here's a snapshot of the 13 categories' January sales performance versus that of a year ago: food services & drinking places (7.2% m/m & 25.2% y/y), motor vehicles & parts (5.9 & 2.8), furniture & home furnishings (4.4 & 3.8), electronics & appliance stores (3.5 & -6.3), general merchandise stores (3.2 & 4.5), miscellaneous store retailers (2.8 & 6.7), clothing & accessories stores (2.5 & 6.3), health & personal care stores (1.9 & 3.6), nonstore retailers (1.3 & 3.0), building materials & garden equipment & supplies (0.3 & 1.1), sporting goods & hobby stores (0.2 & 6.9), food & beverage stores (0.1 & 6.2), and gasoline stations (0.0 & 5.7).

Business Sales & Inventories (*link*): Nominal business sales in December remained stalled around its record high of June, while real sales in November held around its record high at the start of 2022. *Nominal sales* fell 0.6% in December, following November's 1.2% shortfall, placing it 2.0% below last June's record high. Sales were up 6.4% y/y. Meanwhile, *real business sales* fell for the second successive month in November, by a total of 0.5%, 1.4% below its record high posted at the start of the year. In the meantime, the real inventories-to-sales ratio in November climbed back up to its recent high of 1.48 recorded in June—which was the highest since mid-2020. The nominal ratio in December moved up to a 25-month high of 1.37.

Regional M-PMIs (*link*): The New York Fed has provided the first glimpse of manufacturing activity for February and showed growth continued to decline, but at a much slower pace than January's collapse. Meanwhile, firms expect conditions to improve somewhat over the next six months. February's *composite index* continued to contract, though there was a big positive swing of 27.1 points this month—to -5.8 from January's 21.7-point drop to -32.9. It was at 4.5 last November, which was the first reading in positive territory in seven months. New orders (to -7.8 from -31.1) contracted at a much slower pace this month, while shipments (0.1 from -22.4) held steady and inventories (6.4 from 4.5) accumulated at a slightly faster pace. Meanwhile, delivery times (-9.2 from 0.9) posted its first significant negative reading since before the pandemic. As for the labor market, employment (-6.6 from 2.8) contracted for the first time since early in the pandemic, and the average workweek (-12.1 from -10.4) was shortened for a third successive month. Both the prices-paid (45.0 from 33.0) and prices-received (28.4 from 18.8) measures picked up, but remained significantly below their record highs of 86.4 and 56.1, respectively, during April and March of last year. Looking ahead, the *index of future business conditions* improved for the third straight month, by 6.7 points in February and 20.8 points over the period, to a nine-month high of 14.7. New orders (10.0 from 10.4) and shipments (10.9 from 16.9) are expected to rise somewhat, while delivery times (-10.1 from 0.9) are expected to shorten. Employment (1.5 from 9.7) is not expected to increase in the months ahead. Both the prices-paid (49.5 from 45.5) and prices-received (38.5 from 33.9) remain in volatile flat trends around recent lows. The prices-paid and prices-received measures were at record highs of 76.7 and 62.1, respectively, last January.

Industrial Production (*link*): Output in January was flat, as a record drop in utilities output (going back to 1939) offset gains in manufacturing and mining production. *Headline* production was unchanged in January after a 1.6% drop during the final two months of 2022, as a 9.9% drop in utilities output held back overall production, reflecting unusually warm weather in January. In the meantime, *manufacturing* production rebounded 1.0% last month after contracting 2.6% during the two months through December, while mining output jumped 2.0% in January after declines of 1.2% and 1.4% the prior two months. By market group: *business equipment* production rebounded 1.2% after a two-month decline of 3.2%, boosted by noticeable gains in industrial & other equipment (1.7%) and information processing equipment (1.6%), while transit equipment production dropped for the third successive month, by 0.3% in January and 4.5% over the period. *Consumer goods* production continues to drift lower, sliding 1.4% the past three months and down 2.5% from last April's cyclical high. Consumer durable goods production advanced 0.7% in January, though has declined six of the nine months since reaching a new record high last April, down 4.8% over the period. Consumer nondurable goods production fell 1.1% in January, more than reversing the 0.9% gain during the three months through December, and is down 1.8% from last April's cyclical high.

Capacity Utilization (*link*): The *headline* capacity utilization rate moved lower in January for the fourth month, from 79.9% in September to a 16-month low of 78.3% in January. January's rate was 1.3ppts below its long-run (1972-2021) average. The *manufacturing* utilization rate moved up to 77.7% in January after falling four of the prior five months, from 79.1% in July to 77.1% in December—which was the lowest since mid-2021. January's rate is 0.5ppt below its long-term average. Meanwhile, the *utilities* rate in January plunged 7.7pts to its lowest percentage on record, 68.6%, substantially below its long-run average. The capacity utilization rate for mining moved up to 89.0 last month, 2.7ppts above its long-run average; January's result followed a three-month slide from 89.9% in September to 87.4% by December.

NAHB Housing Market Index (*link*): "While the HMI remains below the breakeven level of

50, the increase from 31 to 42 from December to February is a positive sign for the market," noted Robert Dietz, NAHB's chief economies. He went on to say, "Even as the Federal Reserve continues to tighten monetary policy conditions, forecasts indicate that the housing market has passed peak mortgage rates for this cycle." *Homebuilders' confidence* posted its first back-to-back gain in 14 months in February, climbing 11 points over the period, to 42, after sliding 53 points during the 12 months ending December 2022 to 31—which was the lowest since mid-2021, excluding its drop to 30 during the height of the pandemic. All three components of the confidence measure improved for the second month, with the future sales (+13 points to 48) component posting the biggest move up over the period, followed by current sales (+10 to 46) and traffic of prospective home buyers (+9 to 29). They were at record highs of 89, 96, and 77, respectively, during November 2020.

Global Economic Indicators

Eurozone Industrial Production (*link*): Headline production, which excludes construction, fell a steeper-than-expected 1.1% in December after rising three of the prior four months by 2.3%. *During December*, only energy (1.3%) posted a gain with intermediate (-2.8), consumer durable (-1.4), consumer nondurable (-1.0), and capital (-0.4) goods production all in the red. *Compared to a year ago*, headline production was down 1.7%, with energy (-9.3% y/y) posting the biggest yearly decline, followed by intermediate (-6.9), and consumer durable (-1.3) goods production, while consumer nondurable (7.9) goods output increased from a year ago, and capital goods output was flat. Production data are available for the *top four* Eurozone economies and show only Germany (-2.1) contracted, while output was up in Italy (1.6), France (1.1), and Spain (0.7). Over the 12 months through December, production was in the plus column in France (1.1% y/y), Spain (0.9), Italy (0.1) while Germany (-2.9) output was below a year ago.

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