MORNING BRIEFING
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Banks, Tech & Batteries

Check out the accompanying chart collection.

Executive Summary: SVB wasn't last week's only bank run: Two crypto-friendly banks that served as the major gateways to the crypto world also succumbed to depositors deciding to take their money and run. Jackie performs brief autopsies and looks at their impact on the crypto markets and the banks positioned to take their place. … Also: Counterintuitively at this time of economic uncertainty, the Technology sector has been outperforming the broader index since its February 2 peak. … And our Disruptive Technologies focus today is on the quest to build a better EV battery.

Financials: Cryptos Lose Banking Partners. The recent demise of Silvergate Capital and Signature Bank have jolted the crypto world. Silvergate Exchange Network (SEN) and Signature's Signet were the platforms that crypto players used to exchange crypto currencies for dollars and vice versa, 24/7. Since they went poof, investors have been scrambling to find new onramps and offramps to the crypto currency world.

Let's take a look:

(1) *Silvergate: First man down.* With $11 billion of assets, Silvergate Capital was the first to go belly up on March 8. Its demise occurred about a week after Silvergate announced it was delaying its 10-K report due to questions from independent auditors and warned about its ability to be a going concern. Were that not enough, the bank was also facing inquiries from bank regulators and the Department of Justice about its relationship with FTX.

The bank's problems started last year with the demise of FTX, Sam Bankman-Fried's cryptocurrency exchange, which held about $1 billion of deposits at Silvergate in Q4. FTX's unraveling and fears of potential fraud led Silvergate's customers to pull deposits from the bank and/or exit the crypto market. Crypto-related players were Silvergate's primary customers, accounting for about 90% of the bank's total deposits, which peaked at $14 billion at the end of 2021. By the end of last year, deposits had fallen to $3.8 billion. To cover Q4 withdrawals, the bank sold $5.2 billion of debt and borrowed $4.3 billion from the Federal Home Loan Bank.

Silvergate's plans to liquidate occurred less than a week after it shut down Silvergate

Exchange Network (SEN). The bank "has said that $1 trillion has changed hands on its network since the bank first allowed crypto businesses to deposit their dollars at its bank," noted a wide ranging *article* in Intelligencer on January 24. "It was one of the biggest gateways from the banking system to the crypto business," said Porter Collins, portfolio manager of Seawolf Capital, according to the article.

Silvergate has provided services to more than a dozen crypto companies that ended up under investigation, shut down, fined, or in bankruptcy, the Intelligencer article claims. Both customer count and deposits boomed in recent years—from 804 customers with $1.2 billion of total deposits in 2019 to 1,381 with $14.1 billion in 2021, according to the company's 2021 *annual report*. Customers included digital currency exchanges such as Coinbase and Galaxy Digital, and investors in the bank included Citadel Securities and BlackRock.

Silvergate's deposits were very concentrated. Its 10 largest depositors accounted for $6.3 billion in deposits, or about 45.3% of the bank's total deposits in 2021. And 99.5% of deposits were non-interest bearing. Its loans were also concentrated, with its 10 largest borrowing relationships accounting for about 60.1% of its total loans held for investment in 2021.

Silvergate was known for being a crypto-friendly bank, but it was an old-fashioned run on its deposits that brought the bank down.

(2) *Signature: Bigger but not better.* Signature Bank, with $110.4 billion of assets, was shut down by state regulators on March 12. Like Silvergate, Signature was considered a crypto-friendly bank because it too offered crypto players a real-time, 24/7 payment service, Signet, which could exchange dollars for crypto.

After the collapse of FTX in November, Signature Bank tried to reduce its crypto exposure. It severed ties with Binance, the biggest crypto exchange, and shed up to $10 billion of deposits from crypto clients, which was more than a fifth of its deposit base at the time.

But those moves weren't enough to appease customers spooked by the sudden collapse of Silicon Valley Bank. Signature Bank's customers withdrew more than $10 billion of deposits on Friday, a substantial amount relative to the $88.6 billion of deposits it held at year-end, a March 13 CNBC *article* reported. Regulators took control of the bank on Sunday, guaranteeing customers' access to deposits and uninterrupted service as it tries to sell the bank.

The Department of Justice "was examining whether the New York bank took sufficient steps to detect potential money laundering by clients—such as scrutinizing people opening accounts and monitoring transactions for signs of criminality, the people said. The Securities and Exchange Commission also was taking a look," a March 14 Bloomberg *article* reported. It is unclear whether the investigation had anything to do with regulators' seizure of the bank.

(3) *Who's open for crypto business?* The demise of two of the friendliest crypto banks presumably has made it tougher to get into and out of crypto trades and has left crypto players scrambling to find banking services. A March 14 Cointelegraph *article* listed some traditional banking players that have opened themselves up to crypto business. Whether other banks will jump in with offerings may be determined by regulators, who have been wary of US banking exposure to the cryptocurrency markets.

Circle Internet Financial, issuer of USD stable coin (USDC), was caught with 8% of its reserves at Silicon Valley Bank last week. Since then, Circle has turned to BNY Mellon and Cross River Bank. BNY Mellon launched on October 11 a digital custody platform for institutional clients to own bitcoin and ether. Cross River Bank also works with Coinbase.

Customers Bank offers instant payments for business-to-business transactions and instant settlement for cryptocurrency trading firms, institutional investors, and others on its TassatPay platform, the Cointelegraph *article* reported. Axos Bank began offering its commercial banking clients access to TassatPay in May 2022. And London-based BCB Bank has a SEN-like network that processes euros, British pounds, and Swiss francs. It said it would accelerate its plans to add US dollar payments.

Strategy: Tech Holding Up on a Tough Tape. Usually bad news comes in threes. This week, it came in fours. The troubles of Silvergate Capital, Signature Bank, and Silicon Valley Bank were followed yesterday by escalating concerns about Credit Suisse Group's solvency. The European bank's shares tumbled more than 20%, dropping below $2 a share, before Swiss regulators said they were ready to offer the bank liquidity if needed. The shares bounced back above $2 on the news.

The recent selloff has left the S&P 500 up 1.4% ytd through Wednesday's close and eroded the 8.9% gain achieved from the start of the year through its peak on February 2. During the market's selloff, traditionally defensive S&P 500 Consumer Staples and Health Care sectors have outperformed, as one would expect. More surprising is the outperformance of the S&P 500 Information Technology sector, which is typically more sensitive to the economy but may be benefitting from the recent drop in Treasury yields.

While the DJIA fell 0.9% yesterday, the Nasdaq rose 0.1%. Among the few stocks in positive territory on Wednesday were Advanced Micro Devices, Alphabet, Intel, Meta Platforms, Microsoft, and Netflix.

Here's the performance derby for the S&P 500 and its sectors from the recent market peak of February 2 through Tuesday's close: Information Technology (-2.4%), Consumer Staples (-2.5), Industrials (-4.1), Utilities (-5.1), Health Care (-5.2), Energy (-5.8), S&P 500 (-6.2), Materials (-8.1), Consumer Discretionary (-10.0), Communication Service (-10.7), Real Estate (-11.8), and Financials (-12.1) (*Table 1*).

Let's take a look at what's driving some of the results:

(1) *Tech leading in a down market.* For such a depressing tape, it's interesting that the S&P 500 Technology sector and many of its industries have been leading the market. Only 12 S&P 500 industries have positive returns from the index's February 2 peak through Tuesday's close, and three are in the Tech sector: Communications Equipment (1.5%), Semiconductors (1.2), and Technology Hardware, Storage & Peripherals (0.6), with Systems Software (-2.2) not far behind.

Arista Networks is the standout member of the Communications Equipment industry: Its shares have risen 17.3% since the S&P 500's February 2 peak. The networking equipment company counts cloud providers as its biggest customers and recently reported adjusted Q4 earnings of $1.41 a share, beating Wall Street analysts' consensus estimate by 20 cents, a February 13 *Barron's* *article* reported.

Overall, the Communications Equipment industry is expected to post revenue growth of 10.0% this year and 4.9% in 2024 (*Fig. 1*). Its earnings growth is forecast to be a solid 12.5% this year followed by 8.3% in 2024 (*Fig. 2*). The industry's profit margin is forecast to improve slightly to 25.4% in 2023, up from 24.8% in 2022, and analysts' net earnings revisions have been solidly positive since last July (*Fig. 3* and *Fig. 4*). The industry also has a forward P/E of 14.3, well below the S&P 500's 17.7 forward multiple (*Fig. 5*).

(2) *Some industrials holding up.* The Industrials sector is home to the S&P 500's top performing industry: Construction & Engineering is up 5.3% since the S&P 500's February peak through Tuesday's close. Not far behind are Environmental & Facilities Services (3.8%), Aerospace & Defense (0.4), Agricultural & Farm Machinery (-1.0), and Electrical

Components & Equipment (-1.7).

The sole constituent of the Construction & Engineering industry is Quanta Services, a provider of contracting services for construction projects in the electric power, oil and gas, and communications industries. Quanta has grown earnings quickly: 25.4% in 2021 and 28.5% last year. Its growth is forecast to slow a bit this year, to 11.3%, and next year, to 14.1% (*Fig. 6*). Its success is no secret to investors: The Construction & Engineering stock price index is up 109.7% since year-end 2020 versus the S&P 500's 4.3% rise (*Fig. 7*). The industry also has an above-market forward P/E of 22.2 (*Fig. 8*).

(3) *Financials flounder.* Given the bank failures in recent days, it's not surprising that Financials is the S&P 500's worst performing sector since the index's February peak and that Regional Banks is its second worst performing industry, down 38.3% since February 2. Not far behind are the sector's Investment Banking & Brokerage (-15.7%), Asset Management & Custody Banks (-15.6), Life & Health Insurance (-15.1), Consumer Finance (-11.6), and Diversified Banks (-11.5) industries.

Conversely, the outperformance of the Reinsurance industry is eye catching. It's the S&P 500's second best performing industry since the index's February 2 peak, up 5.0%. The Property & Casualty Insurance industry also has held up well, having fallen only -3.2% over the same period. The Reinsurance industry's earnings have fluctuated sharply in recent years between gains and losses. But analysts are optimistic that the industry will grow earnings a hearty 76.4% this year and 14.7% in 2024 (*Fig. 9*). The industry's profit margins have rebounded sharply from their 2020 lows, and more improvement is expected this year and next (*Fig. 10*). Meanwhile, the Reinsurance industry's forward P/E has remained low at 7.9 (*Fig. 11*).

(4) *One eye on Materials.* When the S&P 500 was rallying from its October low to the February high, the Materials sector was its top performing sector, rising 24.1%, and Copper was the S&P 500's third best performing industry, up 51.6%. The Steel industry was in eighth place (up 44.8%) and Gold (up 25.1%) a bit further back.

The winds have shifted since the S&P 500's February 2 peak, however: Materials has lost its leading role and has lagged the overall S&P 500. Likewise, Gold (-14.4%), Copper (-13.0), and Steel (-10.3) are among the bottom half of performers.

The nearby futures price of copper remains 25% above its 2022 low, but it has lost 5% from its February 21 recent high (*Fig. 12*). The decline in the Steel industry's stock price index is surprising given that the price of Midwest domestic hot-rolled coil steel remains near its recent high, up 65% from its low last year (*Fig. 13*). Likewise, the gold spot price remains near the top of its trading range over the past three years (*Fig. 14*). The price of palladium has crashed, falling 50% from its March 8, 2022 high (*Fig. 15*).

Disruptive Technologies: Searching for Better Batteries. It's the Holy Grail: A battery made of inexpensive, easily available materials that are lightweight, energy dense, and can hold a charge longer than today's lithium-ion batteries. This perfect battery would eliminate the current reliance on costly nickel and cobalt, which comes from mines tarnished by alleged human rights abuses. Several alternative materials look promising, including sulfur, iron, silicon, and sodium; funding from the US government's Inflation Reduction Act may accelerate advancements.

Here's some recent news on the electrifying subject:

(1) *Studying sulfur.* A lithium-sulfur battery could theoretically be made less expensively and store more energy than today's lithium-ion batteries. A lithium-sulfur battery could power an electric vehicle (EV) twice as far as today's batteries.

A March 7 *article* in GreenBiz cited several examples of progress in this arena: Argonne National Laboratory has developed a lithium-sulfur battery that can charge and discharge on par with today's batteries. Korea's LG Energy Solution plans to commercialize a lithium-sulfur battery by 2025. German startup Theion plans to bring a lithium-sulfur battery to market soon, and US startup Lyten is adding graphene to its battery to hold the sulfur together and act as a conductor.

(2) *Evaluating silicon.* Using silicon instead of lithium-ion batteries' graphite anode, Sila Nanotechnologies has increased battery energy density by 20%-40% as well as improved charging speed. Mercedes plans to offer the Sila technology in its new electric EQG in 2025, a July 16 CNET *article* reported. Group14 is also examining the use of silicon in batteries and partnering with Porsche.

(3) *Looking at sodium.* Pacific Northwest National Lab recently announced that its sodium-ion battery technology, which uses less cobalt than lithium-ion batteries, improves battery temperature management, allowing batteries to charge many times without degrading. But its energy density needs improvement, currently it's less than that of today's lithium-ion batteries, CNET reported. China's CATL and Natron are also reportedly experimenting with the chemistry.

(4) *Ford to use iron.* Ford Motor plans to produce lithium iron phosphate batteries for its EVs to be produced starting in 2026. These batteries, which don't use cobalt or nickel, can be produced faster and cost 20% less than lithium-ion batteries while storing the same amount of energy, a February 17 *MIT Technology Review* *article* reported. The technology—known as "lithium ferrous phosphate" (LFP)—is popular in China and is being developed by Ford in conjunction with Chinese battery company CATL. Tesla imports LFP batteries from China for some models, and Ford plans to use it in its Mach-E and F-150 Lightning models.

Among the startups involved in LFP are: ICL-IP America and American Battery Factory, planning to produce LFP batteries by 2025 and 2026; Form Energy, *developing* an iron-air battery that uses a water-based electrolyte and stores energy using reversible rusting; and ESS, with yet another type of iron battery in the works.

(5) *Batteries getting solid.* Solid-state batteries use tightly compressed hard materials instead of the electrolytes today's batteries use. Under development for many years, solid-state batteries aim to deliver greater energy density, faster charging, a longer life cycle, and little chance of igniting, the CNET article explained. Solid Power is developing solid-state batteries for Ford and BMW, while QuantumScape has backing from VW. Toyota and ProLogium are working on solid-state batteries as well.

Calendars

US: **Thurs:** Import & Export Prices -0.2%/-0.1%; Philadelphia Fed Composite Index -15.6; Housing Starts & Building Permits 1.31mu/1.34mu; Initial & Continuous Claims 205k/1.715k; Reserve Balance with Federal Reserve Banks; Natural Gas Storage. **Fri:** Leading Indicators -0.3%; Consumer Sentiment Headline, Current Conditions, and Expectation 67.0/70.0/64.5; Headline & Manufacturing Industrial Production 0.2%/-0.2%; Capacity Utilization 78.4%; Baker-Hughes Rig Count. (Bloomberg estimates)

Global: **Thurs:** Japan Industrial Production -4.6%; Italy CPI 0.2%m/m/9.9%y/y; ECB Interest Rate Decision & Deposit Facility Rate 3.50%/3.00%; Lagarde. **Fri:** Eurozone Headline & Core CPI 0.8%m/m/85%y/y & 0.8%m/m/5.6%y/y; Eurozone Labor Cost Index. (Bloomberg estimates)

Strategy Indicators

Stock Market Sentiment Indicators (*link*): The Bull-Bear Ratio fell to 1.45 this week, after jumping from 1.33 to 1.83 last week; it was at 1.89 during the February 7 week—which was highest since early January 2022. *Bullish* sentiment sank to 40.3% this week after rising from 38.4% to 45.2% last week; it was 48.6% during the February 7 week—which was the highest percentage since the first week of 2022. Bulls outnumbered bears for the 17th consecutive week. Meanwhile, *bearish* sentiment climbed to 27.8% after falling from 28.8% to 24.7% last week—which was the fewest bears since January 2022. Recent readings are well below the 44.1% reading in early October of last year. The *correction count* rose to 31.9% this week after falling from 32.8% to 30.1% last week—remaining well below its late September 2022 peak of 40.3%. Turning to the *AAII Sentiment Survey* (as of March 9), bearish sentiment fell but remained unusually high, while bullish sentiment rose but remained unusually low. Meanwhile, neutral sentiment extended its streak of above-average readings to 10 consecutive weeks. The *percentage expecting stock prices to rise* over the next six months climbed for the second week by a total of 3.2ppts to 24.8%, after plunging 15.9ppts (to 37.5% from 21.6%) the prior two weeks. Optimism was unusually low for the third straight week, and for the 43rd time in the past 62 weeks, with bullish sentiment below its historical average of 37.5% in 66 of the past 68 weeks. The *percentage expecting stocks to fall* over the next six months fell to 41.7% after climbing 19.8ppts the prior three weeks, to 44.8% from 25.0%—which was the lowest percentage since November 11, 2021's 24.0%. Pessimism is at an unusually high level for the second successive week and the 41st time in the past 62 weeks. It's above its historical average of 31.0% in 63 of the past 68 weeks. The *percentage expecting stock prices will stay essentially unchanged* over the next six months rose to 33.4% after falling from 39.8% to 31.8% the prior week. It's the 10th successive week of above average readings—the longest streak of above-average readings since a 22-week stretch between August 2019 and January 2022. The historical average for neutral sentiment is 31.5%.

S&P 500 Earnings, Revenues, Valuation & Margins (*link*): The S&P 500's forward profit margin remained steady during the March 9 week at a 23-month low of 12.4%. That's down 1.0ppts from its record high of 13.4% achieved intermittently in 2022 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 improved 0.3% w/w to a record high during the March 9 week. Forward earnings rose 0.2% w/w to 5.2% below its record high during the June 16, 2022 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 remained steady w/w at 2.6%, barely above its 33-month low of 2.3% during the February 23 week. 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 of 4.2% was also unchanged w/w, but not much above its 31-month low of 3.5% in mid-February. 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 (unchanged w/w) and 4.8% in 2024 (unchanged w/w) compared to a revenue gain of 12.2% in 2022. They expect earnings gains of 0.3% in 2023 (unchanged w/w) and 11.9% in 2024 (unchanged w/w) compared to an earnings gain of 7.1% in 2022. Analysts expect the profit margin to drop 0.2ppt y/y to 12.1% in 2023 (unchanged w/w) compared to 12.3% 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 0.2pt w/w to 17.7, but is down 0.8pt from a 43-week high of 18.5 during the February 16 week. 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 0.02pt w/w to 2.19 and is down from a 24-week high of 2.29 during the February 16 week. That's up from a 31-month low of 1.98 in mid-October and 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, the March 9 week saw consensus forward revenues and earnings rise for six sectors and fell for five. The forward profit margin similarly rose w/w for six sectors and fell for five. Two sectors have forward revenues at a record high: Industrials and Utilities. Among the remaining nine sectors, only three are more than 2.5% below their post-pandemic highs: Energy, Materials, and Tech. Consumer Staples is the only sector with forward earnings at a record high. Among the remaining 10 sectors, just three have forward earnings that have remained relatively strong, down less than 1.5% from their post-pandemic highs: Financials, Industrials, and Utilities. Since mid-August, all sectors have seen forward profit margins retreat from their record highs. Those of Industrials and Tech remain closest to their post-pandemic highs. Energy and Industrials were the only two sectors to have their profit margin improve y/y for full-year 2022, and these five sectors 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 (24.1%, unchanged w/w and down from its 25.4% record high in June 2022), Financials (17.5, unchanged w/w at a 22-month low and down from its 19.8 record high in August 2021), Real Estate (16.6, down 0.1pt w/w to a 44-week low and down from its 19.2 record high in 2016), Communication Services (14.4, unchanged w/w and down from its 17.0 record high in October 2021), Utilities (13.3, down 0.2pt w/w to a 34-month low and from its 14.8 record high in April 2021), S&P 500 (12.4, unchanged w/w at a 21-month low and down from its record high of 13.4 achieved intermittently in 2022 from March to June), Energy (11.9, up 0.1ppt w/w and down from its 12.8 record high in November), Materials (11.0, unchanged w/w at a 25-month low and down from its 13.6 record high in June), Industrials (10.1, unchanged w/w and down from its 10.5 record high in December 2019), Health Care (9.6, unchanged w/w at a record low and down from its 11.5 record high in March 2022), Consumer Staples (7.1, unchanged w/w at a 56-month low and down from its 7.7 record high in June 2020), and Consumer Discretionary (7.1, unchanged w/w at 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 7.8% to 12.4% through the March 9 week. All sectors are down since the peak, with the S&P 500's drop paced by five of the 11 sectors. Here's the sector performance since the June 9 peak: Energy (down 0.5% to 11.9%), Consumer Staples (down 2.7% to 7.1%), Industrials (down 2.8% to 10.1%), Utilities (down 3.9% to 13.3%), Information Technology (down 5.1% to 24.1%), Real Estate (down 7.1% to 16.6%), S&P 500 (down 7.8% to 12.4%), Financials (down 7.9% to 17.5%), Consumer Discretionary (down 8.7% to 7.1%), Communication Services (down 10.6% to 14.4%), Health Care (down 12.3% to 9.6%), and Materials (down 18.9% to 11.0%). These are the best performing industries since the June 9 peak: Wireless Telecommunication Services (up 70.2% to 11.5%), Oil & Gas Refining & Marketing (up 65.6% to 5.6%), Casinos & Gaming (up 61.4% to 3.6%), Airlines (up 29.7% to 5.3%), Reinsurance (up 22.1% to 14.3%), and Oil & Gas Equipment & Services (up 19.1% to 11.0%). The worst performing industries since the June 9 peak: Alternative Carriers (down 76.1% to 2.1%), Commodity Chemicals (down 42.2% to 5.9%), Home Furnishings (down 39.0% to 5.4%), Copper (down 36.8% to 12.2%), Housewares & Specialties (down 35.5% to 5.4%), and Publishing (down 30.7% to 2.5%).

US Economic Indicators

Producer Price Index (*link*): February's *headline PPI* unexpectedly declined 0.1%, following a downwardly revised gain of 0.3% (from 0.7%) in January, which followed a 0.2% downtick in December. The yearly rate has been in a freefall since peaking at a record-high 11.7% last March, falling to 4.6% this February—which was the lowest since

March 2021. *Core prices*—which excludes food, energy, and trade services—edged up 0.2% last month, less than half January's 0.5% gain, with the yearly rate holding at 4.4% in February, down from last March's record high 7.1%. *Final demand goods* fell for the second time in three months, falling 0.2% in February following a 1.2% gain and a 1.4% loss the prior two months. Over 80% of February's decline was attributed to a 36.1% drop in prices for chicken eggs. The yearly rate eased further to 5.4% from 7.6% in January; it was at a record high of 17.6% in mid-2022. In the meantime, *final demand services* fell 0.1% for the second straight month in February, with January's 0.4% gain revised to a slight decline. The yearly rate slowed to a 23-month low of 3.8% after peaking at a record high of 9.4% last March. The PPI for *personal consumption* was unchanged in February, following a revised 0.3% increase in January (from 0.7%) and a 0.2% decline in December. The yearly rate has eased steadily from last March's 10.4% record high, slowing to 4.4% by January—the lowest since March 2021. The yearly rate for *personal consumption excluding food & energy* eased to a 22-month low of 4.2%, down from last March's record high of 8.1%. Looking at *pipeline prices*, the yearly rate for intermediate goods prices slowed to a 26-month low of 2.1% from a cyclical high of 26.6% during November 2021, while the crude goods rate was negative for the first time since October 2020, falling 10.9% in February, down from its recent peak of 50.3% last June.

Retail Sales (*link*): Retail sales slumped 0.4% in February following an upwardly revised gain of 3.2% in January (from 3.0%) to a new record high. Meanwhile, *core retail sales*—which excludes autos, gasoline, building materials, and food services—rose 0.5% last month after jumping a revised 2.3% in January (from 1.7%), reaching a new record high. This measure correlates closely with the consumer spending component in GDP. Adjusted for inflation, headline retail sales fell 0.8% in February, while core retail sales edged up only 0.1%. Of the 13 nominal retail sales *categories*, eight fell last month while five rose. Here's a snapshot of the 13 categories' *February sales performance versus that of a year ago*: furniture & home furnishings (-2.5%m/m & 0.1y/y), food services & drinking places (-2.2 & 15.3), motor vehicles & parts (-1.8 & -0.2), miscellaneous store retailers (-1.8 & 4.8), clothing & accessories stores (-0.8 & 4.3), gasoline stations (-0.6 & -1.9), sporting goods & hobby stores (-0.5 & 3.9), building materials & garden equipment & supplies (-0.1 & 0.6), electronics & appliance stores (0.3 & -2.8), general merchandise stores (0.5 & 10.5), food & beverage stores (0.5 & 5.5), health & personal care stores (0.9 & 8.0), and nonstore retailers (1.6 & 8.5).

Business Sales & Inventories (*link*): *Nominal business sales* in January remained stalled around last June's record high, while real sales in December held around its record high at the start of 2022. Nominal sales jumped 1.5% in January after falling 1.8% the final two months of last year, placing within 0.5% of last June's record high. Sales were up 5.0% y/y. Meanwhile, *real business sales* rebounded 1.5% during December, more than reversing the 1.1% drop during the two months ending November, to within 0.4% of January's record high. In the meantime, the real inventories-to-sales ratio in December slipped to 1.47 from November's recent high of 1.49—which was the highest since mid-2020. The nominal ratio in January dipped to 1.34 from December's 25-month high of 1.36.

Regional M-PMIs (*link*): The New York Fed has provided the first glimpse of manufacturing activity for March and showed a sharp contraction in activity, and firms expect little improvement over the next six months. March's *composite index* continued to contract, deteriorating to -24.6 this month after a 27.1-point positive swing in February to -5.8 from -32.9 in January—which was the weakest since May 2020. *New orders* (to -21.7 from -7.8) posted a steep decline this month, while *shipments* (-13.4 from +0.1) were also a major drag; inventories (-1.9 from 6.4) were relatively steady. Meanwhile, *delivery times* (-7.6 from -9.2) shortened for the second straight month, suggesting that supply availability improved. As for the labor market, *employment* (-10.1 from -6.6) contracted for the second month, at the fastest pace since April 2020, after adding jobs for 31 straight months, while *hours worked* (-18.5 from -12.1) fell for the fourth month. Turning to *prices*, both the prices-paid (41.9 from 45.0) and prices-received (22.9 from 28.4) showed a slight slowing in pricing during the month, though are down sharply from their record highs of 86.4 and 56.1, respectively, during April and March 2022. Looking ahead, the *index of future business conditions* moved back toward the breakeven point of zero, falling from 14.7 in February to 2.9 this month, with both new orders and shipments expected to increase only modestly, while employment is expected to be only somewhat higher. Both the prices-paid (31.4 from 49.5) and prices-received (27.6 from 38.5) continued to ease, slowing from their record highs of 76.7 and 62.1, respectively, last January.

NAHB Housing Market Index (*link*): "Although high construction costs and elevated interest rates continue to hamper housing affordability, builders expressed cautious optimism in March as a lack of existing inventory is shifting demand to the new home market," noted Robert Dietz, NAHB's chief economist. Homebuilders' confidence increased for the third straight month in March, climbing 13 points over the period, to 44, after sliding 53 points during the 12 months ending December 2022 to 31—which was the lowest since mid-2021 (excluding a drop to 30 at the height of the pandemic). Over the three-month period, the current sales (+13 to 49) component posted the biggest gain, followed by future sales (+12 points to 47) and traffic of prospective home buyers (+11 to 31). They were at record highs of 96, 89, and 77, respectively, during November 2020.

Global Economic Indicators

Eurozone Industrial Production (*link*): Headline production, which excludes construction, climbed 0.7% in January—nearly double the consensus estimate of 0.4%—after contracting 1.1% and rising 1.4% the prior two months. *During January*, among the main industrial groups, only intermediate goods (1.5%) output posted a gain, while production of consumer nondurable goods (-2.1), energy (-0.8), consumer durable goods (-0.7), and capital goods (-0.2) were all in the red. *Compared to a year ago*, headline production was up 0.9%, led by capital goods (8.2) and consumer nondurable goods (3.2) production, while energy (-7.6), intermediate goods (-5.3), and consumer durable goods (-0.6) output were below year-ago levels. Production data are available for the *top four* Eurozone economies and show only Germany (1.8) posted a gain, while output was down in France (-1.9), Spain (-0.9), and Italy (-0.7). Over the 12 months through January, production was in the plus column in Italy (1.4), while output in France (-2.5), Germany (-1.5), and Spain (-0.7) were below year-ago levels.

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