MORNING BRIEFING
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Bank Earnings, CO2 & The Oceans

Check out the accompanying chart collection.

Executive Summary: Three big banks have produced Q3 earnings surprises, beating consensus expectations and allaying fears about nonperforming real estate loans, declining deposits, and the pace of consumer spending. Jackie summarizes the key takeaways from the conference calls of JPMorgan, Bank of America, and PNC Financial Services, including what proposed Basel III Endgame regulations might mean for each. … And in our Disruptive Technologies segment: The ocean may hold the key to slowing climate change. Researchers in startups and academia are finding ways to ramp up the ocean's CO2 absorption capacity.

Financials: So Far, Not Bad. Bank earnings started rolling in over the past week with a wave of relief that so far some of the worst fears have not come to pass. Many earnings reports beat Wall Street analysts' consensus estimates. Real estate write-offs were lower than expected. Deposits are declining, but slowly enough that the banks can adjust. And the economic outlook at many banks has improved as the consumer has kept on spending.

Some of the biggest complaints in quarterly conference calls came from JPMorgan Chase executives concerned about proposed changes to reserve requirements that could force the bank to raise billions in capital. Investors, on the other hand, didn't have much to complain about, as the three biggest banks beat Wall Street analysts' consensus estimates. Here are the actual and forecasted Q3 earnings for Bank of America ($0.90, $0.83), JPMorgan Chase ($4.33, $3.95), and PNC Financial Services Group ($3.60, $3.10).

Let's take a look at some of the themes in the earnings conference calls held by the managements of Bank of America (BAC), JPMorgan (JPM), and PNC over the past week:

(1) *Real estate losses underwhelm.* FDIC-insured institutions have been increasing their provision for loan and lease losses relatively sharply in the past nine quarters (*Fig. 1*). The provision increases have paid off. After all the handwringing, the real estate portfolios of the three banks performed as expected. The losses on loans that went bad were already reflected in reserves. The modest increases in loan loss provisions that did occur were generally attributed to increases in credit card loans outstanding and a return to more normal default rate expectations in those portfolios.

Consumer credit card debt outstanding dipped briefly during the pandemic but began rising again in 2021 (*Fig. 2*). After initially spiking, credit card delinquency rates fell sharply through mid-2022. Delinquency rates since have risen to more normal levels and remain relatively low historically (*Fig. 3*).

JPM saw a “trickle” of office real estate charge-offs, but they were already factored into the bank’s allowance for losses. The bank’s Q3 provision for credit losses was $1.4 billion, down slightly y/y and down sharply from $2.9 billion in Q2. The bank’s $1.5 billion of net charge-offs were primarily in credit cards, and the $301 million in net reserve build in credit cards due to loan growth was offset by a reserve release of $250 million in home lending, driven by the increase in home prices. The net reserve build related to commercial real estate was only $37 million and reflected updated pricing variables.

BAC’s commercial loan net charge-offs in Q3 declined from the Q2 level, driven by a reduction in office loan write-downs. Office loans represent 2% of the bank’s total loans, and they are “adequately reserved against the current conditions,” said CFO Alastair Borthwick. In total, the bank’s net charge-offs of $931 million increased by $62 million from Q2 due to credit card losses. Its credit card loss rate of 2.72% last quarter was up slightly from 2.60% in Q2 but still below the pre-pandemic rate of 3.03% in Q4-2019. BAC’s provision for credit losses was $1.2 billion, including a $303 million reserve build that reflects the bank’s expectation that the unemployment rate will rise above 5% in 2024.

PNC’s nonperforming real estate loans jumped 11% q/q to $210 million, but the increase wasn’t more than expected by the bank’s reserves. In the commercial real estate portfolio, total criticized loans remained flat q/q at 23%. Some loans within that category became non-performing loans. “Ultimately, we expect future losses on this portfolio, and we believe we have reserved against those potential losses accordingly. As of September 30, our reserves on the office portfolio were 8.5% of total office loans,” said PNC CFO Rob Reilly.

The bank’s provisions for credit losses actually declined to $129 million in Q3, down from $146 million in Q2 and $241 million in Q3-2022. PNC’s net loan charge-offs of $121 million fell from $194 million in Q2 due to lower commercial real estate net loan charge-offs. The amount was up a smidge from $119 million in Q3-2022.

(2) *Deposits shrink, but slowly.* Total deposits at commercial banks spiked during the pandemic and since have gradually been falling back to more normal levels (*Fig. 4*).

At PNC, average deposits decreased by $3.2 billion, or 1%, to $422.5 billion due to a decline in consumer deposits that was somewhat offset by a growth in commercial deposits. Non-interest-bearing deposits were 26% of deposits, down from 27% in Q2 and expected to stabilize in the mid-20% range. The cost of interest-paying deposits has risen to 2.26% in Q3, up from 1.96% in the prior quarter.

"We're going to have repricings of fixed-rate assets fighting reprices of our liabilities. At some point, that's going to cross, and banks are going to grow NII at high percentages. I just can't tell you when that is yet," said PNC CEO Bill Demchak.

At JPM, average deposits of $2.4 trillion declined 4% y/y and 1% q/q. Total deposits at BAC rose slightly q/q, from $1.875 trillion on June 30 to $1.886 trillion on September 29. Just as importantly, the bank didn't have to raise rates very high to keep deposits: The rate paid on all deposits was 1.55%, up only 0.31 from last quarter thanks to many low- and no-interest paying consumer checking accounts.

(3) *Economic growth slows.* JPMorgan's economists raised their economic growth forecast in Q3 to modest real GDP growth of around 1% for the next few quarters up from the 0.5% decline in GDP in Q4-2023 and Q1-2024 they previously had expected.

Bank of America economists predict a soft landing with a mid-2024 trough. The slower growth is reflected in consumers' spending, which has slowed to about 4% increase y/y in Q3 and in October, down from 10% y/y spending growth earlier this year and in 2022. The current pace of spending returns consumer activity to the pre-pandemic levels of 2016-19.

The folks at PNC expect a mild recession starting in the first half of 2024, with real GDP contracting by less than 1%. They expect the federal funds rate to remain unchanged at 5.25%-5.50% through mid-2024, when they expect the Fed to start cutting rates. However, CEO Demchak said, "Personally I think the Fed is higher for longer even higher for longer than the market expects."

(4) *Proposed regulations irk JPM.* Regulations proposed in July by the Fed, Office of the Comptroller of the Currency, and the FDIC would increase the capital the banks need to hold against their risk-weighted assets. The proposed rules —known as "Basel III Endgame"—would standardize the way firms approach their credit, market, and operational risk exposures, and they'd apply to firms with at least $100 billion in total assets as well as to smaller firms with significant trading activities. If approved, they'd go into effect in 2025.

Of the three banks, JPM appears likely to face the biggest capital shortfalls under the proposed rules. The bank estimates that its risk-weighted assets will increase by 30%, or $500 billion, which increases the firm's required capital by about 25%, or $50 billion. The bank also would have to increase its capital by $30 billion to meet new requirements regarding capital reserved for operational risk.

The proposed rules require a fourfold increase in the risk-weighted assets held against tax-advantaged investments in the solar and wind industries. It also ups the capital that needs to be held against mortgages and housing loans. If these requirements go through, banks presumably would adjust the pricing on those loans, making them more expensive for borrowers, which would seem counter to the Biden administration's goals. JPM CFO Jeremy Barnum said that the rule changes might cause the bank to exit certain business lines, like the renewable energy tax credit investment business.

"The current proposal exacerbates existing features to discourage beneficial scale and diversification. If it goes through as written, there will likely be significant impacts on pricing and availability of credit for business and consumers. In addition, the ongoing and persistent increase in the regulatory cost of market-making for banks suggests that the regulators want dramatic changes to the current operation of the US capital markets," said JPM's Barnum. Needless to say, JPM will continue to "engage and forcefully advocate during the comment period and beyond."

While Bank of America's CEO Brian Moynihan also expressed hope that the proposed rules will be changed, he noted that they'd have limited impact on the bank. The firm's risk-weighted assets would increase about 20% to $1.95 trillion. BAC would be required to keep $195 billion in capital against those assets, or 10% of the total. The bank has $194 billion of capital currently, and it should be able to raise the minimal shortfall from the capital generated by the bank's operations.

Executives at PNC continued to pause the bank's share repurchase activity while the regulatory changes are under consideration. PNC falls short of the required risk-weighted assets-to-long-term debt ratio requirement and would need to raise $9 billion of debt to be in compliance. It expects to raise those funds under the bank's current funding plans. If other banks decide to sell assets to meet the proposed requirement, PNC would be interested in taking a look.

Disruptive Technologies: Absorbing CO2 from the Oceans. Looking to reverse climate change, scientists are experimenting with various ways to pull carbon dioxide (CO2) out of the atmosphere. Some have turned to the oceans for a solution. The oceans absorb about

30% of the CO_2 produced each year. If CO_2 can be wrung out of their waters, the oceans would be able to absorb more CO_2 from the atmosphere.

Taking CO_2 out of the ocean is arguably more efficient than taking it out of the air, requiring less energy and expense for the same amount of gas removed. That's because the CO_2 in the ocean is 150 times more concentrated than the CO_2 in the air and doesn't need to be captured; the ocean has already done so.

Here are a few different approaches that scientists at UCLA, Caltech, MIT, and the University of Pittsburgh are using to help the Earth:

(1) *Turning CO2 into seashells.* Marine organisms form seashells from calcium and carbonate ions created after CO_2 from the atmosphere dissolves in the oceans. So Dante Simonetti, an assistant professor of chemical and biomolecular engineering at the UCLA Samueli School of Engineering, started testing new ways that would speed up the process of turning CO_2 into minerals. He helped develop a machine that electrically charges seawater, triggering a reaction that turns the CO_2, calcium, and magnesium in the water into limestone and magnesium—essentially a shell-like dust—in addition to hydrogen, which can be sold as a green fuel. The remaining water can be pumped back into the ocean, where it once again absorbs CO_2, or the water can be used on the land, a June 3, 2021 *Fast Company* *article* reported.

The technology was spun out of UCLA into a startup called *Equatic* (formerly known as "SeaChange"). Equatic has entered into agreements with Boeing and Fintech company Stripe to remove CO_2 from the ocean. The Boeing deal, struck earlier this year, includes a pre-purchase option agreement for "62,000 metric tons of CO_2 removal and 2,100 metric tons of 'carbon-negative' hydrogen that Boeing sees as feedstock for cleaner jet fuel," according to a May 31 Axios *article*.

Equatic has been moving its operations beyond the lab. It's in the process of building two plants, in Los Angeles and Singapore. It will take 1,800 of the devices to capture 10 billion metric tons of CO_2 each year—less than a third of the 37 billion tons of CO_2 emitted each year.

(2) *Capturing bubbly.* Captura is another startup that also electrolyzes a small amount of seawater to "rearrange the molecules into an acid and a base. When the acid is added back into [a larger amount] of the seawater, it reacts with the carbon to release CO_2," a May 4 *article* on The Verge reported. Captura either stores the CO_2 or sells it as a product. The

CO2-depleted water is released back into the ocean, where it can absorb CO2 again. The captured CO2 could be sold to companies that produce concrete or carbon fiber. Or Captura could build its plants on retired offshore oil and gas platforms and pump the captured CO2 underground into the deserted oil and gas wells.

The company, which was founded by Caltech researchers, is setting up a pilot project in the Port of Los Angeles. Critics worry that the company's filters won't be fine enough to ensure that small ocean creatures, like plankton, aren't trapped. And if the CO2 is pumped underground, skeptics fear it will leak and emerge above ground over time.

(3) *MIT & UPitt on the job, too.* At MIT, researchers likewise are electrolyzing the water to separate the CO2; a second step removes the acidity and collects the CO2. The university believes its approach is less expensive than other researchers' proposed solutions, and the process could be performed by merchant ships as they are sailing, so that their CO2 collections offset their CO2 emissions, a February 27 *article* in the *Scientific American* reported. Additionally, other ships could be deployed as "scrubbers of the oceans."

At the University of Pittsburgh's Swanson School of Engineering, researchers have developed two systems to capture carbon dioxide. One uses microencapsulated solvents made of sodium carbonate, and the other uses hollow fiber membrane contactors containing sodium hydroxide. As water flows over the systems, CO2 is captured. When the sodium capsules are placed in steam at a temperature of 100-120 degrees Celsius, the CO2 can be removed and stored so that the sodium capsules can be reused, as Inside Climate News *reported* on September 2.

Calendars

US: Thurs: Leading Indicators -0.4%; Philadelphia Fed Manufacturing Index -6.4; Existing Home Sales 3.89mu; Initial Jobless Claims 213k; Natural Gas Storage; Powell; Barr; Harker; Logan; Goolsbee; Jefferson; Bostic. **Fri:** Baker-Hughes Rig Count; Harker; Mester. (FXStreet estimates)

Global: Thurs: France Business Survey 99; UK Gfk Consumer Confidence -20; China PBoC Loan Prime Rate 3.45%. **Fri:** Germany PPI 0.4%m/m/-14.2%y/y; UK Headline & Core Retail Sales -0.1%m/m/0.0%y/y & -0.4%m/m/0.0%y/y; Canada Core Retail Sales -03%; McCaul. (FXStreet estimates)

Strategy Indicators

Stock Market Sentiment Indicators (*link*): The *Bull-Bear Ratio* moved up for the second week to 2.32 this week after falling during the prior three weeks from 2.25 to 1.77; it was at 3.07 11 weeks ago. *Bullish* sentiment climbed for the second week, by 9.1ppts (to 51.4% from 42.3%), after falling over the prior three weeks by 8.4ppts (42.3% from 50.7). It was at 57.1% during the August 1 week—which was the most bulls since November 2021, when the reading reached a danger level of 57.2%. Meanwhile, *bearish* sentiment fell for the second month by 1.7ppts (to 22.2% from 23.9%)—with the 23.9% reading the highest percentage since the end of May. The *correction count* dropped for the second week by 7.4ppts to 26.4% after rising the prior three weeks by 7.0ppts (to 33.8% from 26.8%); it was 24.3% 11 weeks ago, which was the lowest since mid-January. Turning to the *AAII Sentiment Survey* (as of October 12), optimism climbed to its highest level in five weeks, while pessimism fell, though remains above average. The *percentage expecting stock prices to rise over the next six months* rose for the second week by 12.2ppts (to 40.0% from 27.8%)—with the 27.8% reading the lowest since May 25. Optimism is above its historical average of 37.5% for the second time in six weeks. The *percentage expecting stocks to fall over the next six months* fell by 5.1ppts to 36.5% after rising during the prior three weeks by 12.4ppts (to 41.6% from 29.2%). Despite the recent decline, pessimism was above its historical average of 31.0% for the sixth time in eight weeks. The *percentage expecting stock prices will stay essentially unchanged over the next six months* pulled back by 12.9ppts (to 23.5% from 36.4%) over the past four weeks. It was below its historical average of 31.5% for just the third time in nine weeks.

S&P 500 Earnings, Revenues, Valuation & Margins (*link*): The S&P 500's forward profit margin was steady w/w at 12.7% during the October 12 week, but remains 0.1pt below its 11-month high of 12.8% during the September 21 week. That's up from a 24-month low of 12.3% during the March 30 week, but is down 0.7pt from its record high of 13.4% achieved intermittently in 2022 from March to June. It's now 2.4pts above its seven-year low of 10.3% during April 2020. Forward revenues rose less than 0.1% w/w to a new record high. Forward earnings ticked down less than 0.1% w/w and remains 0.9% below its record high during the September 21 week, which had been its first since the June 16, 2022 week nine months ago. Both had been steadily making new highs from the beginning of March 2021 to June 2022; prior to that, they peaked just before Covid-19 in February 2020. The consensus expectations for forward revenues growth rose 0.1pt w/w to an 11-month high of 4.6% and is now up 2.3pts from 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 was unchanged w/w at a 23-month high of 10.4%, and is now 6.9pts 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 2.2% in 2023 (down 0.1pt w/w) and 4.9% in 2024 (up 0.1pt w/w) compared to a revenues gain of 12.4% in 2022. They expect an earnings gain of 1.0% in 2023 (unchanged w/w) and an 11.6% rise in 2024 (unchanged w/w) compared to an earnings gain of 7.2% in 2022. Analysts expect the profit margin to fall 0.1ppt y/y to 12.0% in 2023 (unchanged w/w), compared to 12.1% in 2022, and to rise 0.8ppt y/y to 12.8% in 2024 (up 0.1pt w/w). The S&P 500's weekly reading of its forward P/E rose 0.5pt w/w to 18.3 from a 29-week low of 17.8, but is down from a 17-month high of 19.8 during the July 20 week. That's still up from a 30-month low of 15.3 in mid-October of 2022. It also compares to 23.1 in early September 2020, which was the highest level since July 2000, and to a 77-month low of 14.0 in March 2020. The S&P 500 weekly price-to-sales ratio was up 0.06pt w/w to 2.32 from an 18-week low of 2.26 and compares to a 15-month high of 2.46 during the July 27 week. That's up from a 31-month low of 1.98 in mid-October and 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 S&P 500 sectors, the October 12 week saw consensus forward revenues rise for five of the 11 sectors and forward earnings rise for three sectors. The forward profit margin moved higher for two sectors. Three sectors have forward revenues at post-pandemic or record highs this week: Health Care, Industrials, and Utilities. Among the remaining eight sectors, only Energy and Financials have forward revenues more than 5.0% below their post-pandemic highs, while Materials is rising now after nearly falling into that doghouse. None of the sectors have forward earnings at a record high this week, as these five sectors have eased from that mark over the past several weeks: Communication Services, Consumer Discretionary, Industrials, Information Technology, and Utilities. Among the remaining six sectors, only Energy and Materials have forward earnings down more than 10.0% from their post-pandemic highs, while Financials exited that club in the previous week. Among the 11 sectors, only Industrials has weathered a broad margin retreat from post-pandemic or record highs. Now nearly all of the sectors are showing signs of recovering from their early 2023 lows. None of the sectors had a forward profit margin at a record high this week. That's down from these three sectors in that club several weeks earlier: Consumer Discretionary, Industrials, and Information Technology. The forward profit margins of Communication Services, Financials, and Real Estate remain close to their post-pandemic highs. Energy and Materials are surging higher now off their lows in July, but Consumer

Staples and Health Care remain at or close to their record lows. Energy and Industrials were the only two sectors to have their profit margins improve y/y for full-year 2022. Forward profit margins are expected to be flat y/y in 2023 for Consumer Staples and Financials, but these five sectors are expected to see them improve: Communication Services, Consumer Discretionary, Industrials, Information Technology, and Utilities. Here's how the sectors rank based on their current forward profit margin forecasts along with their record highs: Information Technology (25.2%, down from its 25.7 record high several weeks earlier), Financials (18.2, down from its 19.8 record high in August 2021), Real Estate (17.2, down from its 19.2 record high in 2016), Communication Services (16.5, down from its 17.0 record high in October 2021), Utilities (13.1, down from its 14.8 record high in April 2021), S&P 500 (12.7, down from its record high of 13.4 achieved intermittently in 2022 from March to June), Energy (11.3, down from its 12.8 record high in November), Materials (11.0, down from its 13.6 record high in June 2022), Industrials (10.7, down from its record high 10.8 a week earlier), Health Care (9.2, a record low and down from its 11.5 record high in February 2022), Consumer Discretionary (8.2, down from its 8.4 record high a week earlier), and Consumer Staples (6.8, down from its 7.7 record high in June 2020).

S&P 500 Sectors & Industries Forward Profit Margin Since March 30 Bottom (*link*): The S&P 500's forward profit margin was unchanged at 12.7% during the October 12 week, but remains just shy of its 11-month high of 12.8% during the September 21 week. It's now up 0.4ppt from a two-year low of 12.3% during the March 30 week. Seven of the 11 sectors' margins have improved since then, with the S&P 500's gain paced by five sectors. It's still down 5.7%, or 0.7ppt, from its record-high 13.4% during the June 9, 2022 week, as seven of the 11 sectors' margins are down since then, with the S&P 500's drop paced by three of the 11 sectors. Here's the sector performance since the S&P 500's forward profit margin bottom on March 30: Communication Services (up 13.4% to 16.5%), Consumer Discretionary (up 11.6% to 8.2%), Information Technology (up 7.9% to 25.2%), Industrials (up 4.5% to 10.7%), Real Estate (up 3.3% to 17.2%), S&P 500 (up 3.0% to 12.7%), Consumer Staples (up 1.5% to 6.8%), Materials (up 0.2% to 11.0%), Utilities (down 0.5% to 13.1%), Financials (down 1.5% to 18.2%), Health Care (down 3.7% to 9.2%), and Energy (down 3.7% to 11.3%). These are the best performing industries since the March 30, 2023 bottom: Casinos & Gaming (up 91.1% to 7.3%), Publishing (up 25.0% to 3.0%), Wireless Telecommunication Services (up 19.8% to 13.7%), Personal Care Products (up 18.3% to 10.0%), Homebuilding (up 18.1% to 12.6%), Interactive Media & Services (up 17.2% to 23.4%), Semiconductors (up 16.9% to 31.2%), Brewers (up 16.5% to 9.3%), and Hotels, Resorts, & Cruise Lines (up 15.5% to 13.4%).

S&P 500 Q3 Earnings Season Monitor (*link*): With 53 companies having reported Q3 results through mid-day Wednesday, the Q3-2023 earnings season is now nearly 11% complete, and the early indications suggest a similar earnings surprise as in Q2-2023 but a weaker revenues surprise. On a positive note, y/y earnings growth is outpacing revenues growth for the first time in seven quarters, resuming the normal pattern (y/y earnings growth has trailed y/y revenues growth in only 16 quarters—six of them consecutive through Q2-2023—over the past 58 quarters). Revenues are ahead of the consensus forecast by 0.7%, and earnings have exceeded estimates by 8.7%. At the same point during the Q2 season, revenues were 1.5% above forecast, and earnings had beaten estimates by 8.9%. Just 62% of the 53 companies has reported a positive revenues surprise, while 85% has reported an earnings beat. That's on pace for the weakest revenues surprise reading since Q1-2020; but the percentage with positive earnings surprises would be the highest since Q2-2021 if it holds to the end of the season. (For some historical perspective on earnings surprise data, as recently as Q4-2022 it was quite negative: That quarter, the earnings surprise was the lowest since Q4-2008, and the revenue surprise the smallest since Q1-2020. Furthermore, the earnings surprise failed to outpace the revenue surprise in Q4-2022 for the first time since we began tracking that data in Q1-2009.) Among the 53 reporters so far, the aggregate y/y revenues and earnings growth rates have ticked down from their Q2-2023 readings: to 6.2% from 7.8% for revenues growth and to 7.5% from 11.4% for earnings growth. Earnings growth should continue to outpace revenue growth in Q3-2023, as the Energy sector becomes less of a drag on overall results. While we expect y/y revenues growth rates to remain positive yet again in Q3 and for a 12th straight quarter, earnings growth will be positive on a y/y basis for the first time in four quarters. Slightly fewer companies have been reporting positive y/y earnings growth in Q3 (66%) than positive y/y revenues growth (70%). These figures will continue to change as more Q3-2023 results are reported in the coming weeks.

US Economic Indicators

Housing Starts & Building Permits (*link*): Housing starts rebounded in September, led by multi-family units, while building permits contracted. Housing starts jumped 7.0% to 1.358mu (saar) last month after plunging 12.5% in August, continuing its up-and-down pattern, with starts flat ytd. *Multi-family* starts soared 17.6% to 395,000 units (saar) in September after plunging during five of the prior six months by a total of 44.1%, to its lowest level since May 2020. Meanwhile, *single-family* starts rose 3.2% to 963,000 units (saar), after falling in two of the prior three months by 7.8%, though are up 8.6% ytd—helped by a 19.5% jump in May. *Building permits* sank 4.4% in September to 1.473mu (saar) after climbing in three of the prior four months by a total of 8.8%. *Single-family permits* haven't posted a decline so far this year, climbing 1.8% in September and 29.0% ytd to 965,000 units (saar). Meanwhile, *multi-family permits* plunged 14.3% in September to 508,000 units (saar)—the lowest level since October 2020. *Homebuilders' confidence* fell in October for the third month, sinking 16 points over the three-month period to 40. That puts it further below the key breakeven measure of 50, with the recent weakness coinciding with the jump in mortgage rates above 7%. Confidence had jumped 25 points over the first seven months of this year to 56.

Global Economic Indicators

Eurozone CPI (*link*): The CPI rate for September slowed to 4.3% y/y—the lowest since October 2021; it peaked last October at a record-high 10.6%. Looking at the main components, *energy* fell 4.6% y/y, its sixth negative reading in seven months, up from July's -6.1%, which was the weakest since December 2020. It posted double-digit yearly gains from April 2021 through February of this year. It peaked at a record high of 44.3% last March. The rate for *food, alcohol & tobacco* eased for the sixth month to 8.8% y/y after accelerating steadily from June 2021's 0.5% to a record high of 15.5% this March. The rate for *non-energy* industrial goods slowed for the seventh month to 4.1% y/y from February's record-high 6.8%. Meanwhile, the *services* rate eased for the second month, to 4.7% y/y, from 5.6% in July—which was the highest since fall 1992. Of the *top four Eurozone economies*, Italy's (5.6% y/y) and France's (5.7) inflation rates were above the Eurozone's 4.3% rate, while Spain's (3.3) was below. Germany's matched the Eurozone's 4.3% rate. Here are the record-high inflation rates and months they were achieved for the four countries: Germany (11.6%, October 2022), Italy (12.6%, October & November 2022), France (7.3%, February 2023), and Spain (10.7%, July 2022).

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