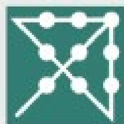
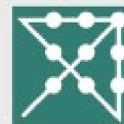
 Yardeni Research 

MORNING BRIEFING
July 28, 2022

The Fed, Earnings, Chips & AI

Check out the accompanying chart collection.

Executive Summary: Investors cheered the Fed's no-surprises announcement of another 75bps hike in the federal funds rate yesterday. Moreover, Q2 earnings reports have been confirming our soft-landing scenario for the economy, and S&P 500 companies' earnings are expected to hold up respectably this year and next. … But Q2 reports revealed pain points for certain industries—e.g., retailers that cater to lower-income consumers felt the brunt of inflation-strained consumer budgets. … Semiconductor makers on Q2 calls addressed worries about customers' inventory buildups. … And: What won't AI be transforming? Today, we look at how AI is facilitating new drug development.

The Fed: No Surprises From Powell. The S&P 500 soared 2.6% yesterday to close at 4023.61, 9.7% above its June 16 bear-market low of 3666.77. It is still 16.1% below its record high on January 3. Yesterday's rally was boosted by Fed Chair Jerome Powell's no-surprises press conference. The Fed hiked the federal funds rate by 75bps as widely expected. Powell reiterated that he believes that the Fed has a path toward moderating inflation without causing a recession.

Joe and I believe that TINAC has been a major contributor to the rebound in the bond and stock markets recently. "TINAC" stands for "there is no alternative country." As the world seems to be spinning out of control, the US looks like a safe haven for global investors.

That explains the strength of the US dollar. Previously, we've observed that monthly net capital inflows data collected by the US Treasury show that foreigners have been big buyers of US fixed-income securities in recent months. That may have helped to stabilize the bond yield around 3.00%, stopping the freefall in valuation multiples in the stock market.

As we note in the next section, the Q2 earnings reporting season so far reflects a slowing economy, but not a recession. Analysts are shaving some earnings estimates, but certainly not slashing them. For now, the market seems to be siding with Powell's view (and ours) that a soft landing is possible.

Earnings: So Far, So Good. Despite all the handwringing about Fed tightening and high energy prices, analysts continue to call for solid earnings growth this year and next. Their

consensus forecasts for S&P 500 companies collectively imply earnings growth of 10.6% this year and 8.2% in 2023 (*Fig. 1*). Granted, the jump in the S&P 500 Energy sector's expected earnings for this year has boosted the S&P 500's projected 2022 earnings growth, but next year the Energy sector will weigh on the broader index's 2023 earnings growth. Excluding the Energy sector, S&P 500 earnings are expected to grow 4.4% in 2022 and 10.6% in 2023.

Higher interest rates and gasoline prices did take a toll on consumer spending in Q2, based on earnings reports this week from Walmart, McDonald's, and Shopify. That pressure won't let up anytime soon given the Fed's federal funds rate increase yesterday. Conversely, corporations have continued spending on technology, but have pulled back on ad spending, if Microsoft's earnings report is any indication.

Here's a quick look at some of the notable Q2 corporate earnings reports from this week:

(1) *Consumers hit speed bump.* Retailers warned that inflation and higher interest rates had started to affect consumers' shopping patterns. Walmart's customers are spending more on necessities like food and less on clothing and electronics because inflation is pinching their pocketbooks, the retailer said as it made a Q2 earnings preannouncement this week that shocked investors.

While Walmart said same-store sales rose 6% in Q2, the shift in consumer spending left the retailer with excess inventory that needed to be aggressively marked down. The retailer lowered its 2022 earnings forecast to a decline of 11%-13%, much greater than the 1% decline it previously signaled. Walmart shares dropped 7.6% on the news Tuesday and are down 15.7% ytd through Tuesday's close. That's actually better than the S&P 500 Consumer Discretionary sector's 31.4% decline ytd.

McDonald's CEO Chris Kempczinski sounded very gloomy in a conference call, noting that war, inflation, and high interest rates are "contributing to weak consumer sentiment around the world and the possibility of a global recession," a July 26 CNBC *article* reported. Lower-income customers are opting for more value offerings, and the company is gaining customers who are trading down from sit-down and fast-casual restaurants. Q2 earnings—excluding charges from the closure of McDonald's business in Russia and other unusual expenses—came in at $2.55 a share, up 8% y/y.

Shopify *warned* that 2022's online sales will "reset to the pre-Covid trend line and is now pressured by persistent high inflation." While Shopify's revenue rose 16% y/y, it posted an

adjusted loss of three cents a share, missing analysts' consensus target and below Q2-2021's adjusted earnings per share of 22 cents. Losses are expected to continue during H2 as well. Shopify, which helps companies set up their e-commerce websites, announced it will cut 1,000 jobs. Its shares have fallen roughly 75% ytd.

(2) *Microsoft saves the day.* In the current economic environment, all tech is not created equal. The shares of many tech companies that rely on advertising like Snap and Meta Technologies are down sharply ytd, as advertising is often the first thing that customers cut during uncertain economic times. With the consumer facing the pressure of higher gasoline prices, higher interest rates, and higher inflation, tech companies selling online to consumers face headwinds as well.

Microsoft does have consumer exposure through its Xbox gaming business, which saw revenue drop 6% in its fiscal Q4 ended June 30. But Microsoft's Azure and other cloud services revenue grew 40% y/y. All in, the company reported a 12.4% y/y jump in Q4 revenue, a 7.5% rise in operating income, and a 2.8% jump in earnings per share despite the war in Ukraine, factory shutdowns in China, and the drag of a strong dollar.

Microsoft's forecast of double-digit currency-adjusted growth in revenue and operating income for fiscal 2023 sent its shares 6.7% higher Wednesday. Despite the current economic turmoil, IT spending will increase because "every business is trying to fortify itself with digital tech to in some sense navigate this macro environment," said CEO Satya Nadella, a July 26 *WSJ* *article* reported.

Technology: Semis Fear Gluts. The S&P 500 Semiconductors industry has had a terrible year, with its stock price index falling 30.8% ytd through Tuesday's close, almost twice the S&P 500's 17.7% decline (*Fig. 2*). Investors are concerned that demand for semiconductors will slow sharply if customers find themselves with excess inventory because they've been double-ordering during the recent shortages. There's also concern that demand could slow if the economy falls into a recession. Already, there are signs that the demand is softening in the consumer technology area, as few consumers need a new computer or phone, having bought new ones during the pandemic.

Despite these fears, demand for chips remains robust in the industrial and automotive segments based on the Q2 earnings calls of NXP Semiconductors and Texas Instruments this week. Let's take a look at what they had to say and the legislation winding its way through Congress that could encourage more chip manufacturers to build fabs in the US of A:

(1) *Semis still selling.* Despite the handwringing, global sales of semiconductors continued to rise in May, by 18.0% y/y to $51.8 billion (using a three-month moving average). Sales were up y/y in all geographies: Americas (36.9%), Japan (19.8), Europe (16.1), Asia Pacific/All other (15.8), and China (9.1) (*Fig. 3*). On a m/m basis, sales were up in most regions: Japan (3.9%), Americas (2.9), China (1.7), Asia Pacific/All Other (1.1), and Europe (-0.7).

Wall Street analysts continue to call for the industry's revenue and earnings to grow. Revenue is expected to climb 17.4% this year and 5.2% in 2023 (*Fig. 4*). Even earnings are expected to increase by 13.2% this year and 3.8% in 2023 (*Fig. 5*).

Despite optimistic expectations, the S&P 500 Semiconductors index's forward P/E has tumbled from a peak of 25.0 last November to a recent 16.0 (*Fig. 6*). The last time the industry faced an extended selloff was in 2009, and it didn't end until analysts started cutting the industry's earnings forecasts sharply and the index's forward P/E spiked. In cyclical sectors, the optimal time to buy is often when earnings have fallen sharply and P/Es have jumped.

(2) *Inventory worries.* NXP Semiconductors batted away concerns about customers' inventory levels on its Tuesday *conference call*. It did confirm that demand has slowed for chips used in low-end Android handset markets; but demand remains hot in the auto and industrial segments. Even though NXP has "gradually and incrementally" increased its supply capabilities, it is still only able to meet 80% of demand from customers and requires customers place non-cancelable, non-returnable orders through 2023.

"When looking at customer inventory, we continue to see a dysfunctional supply chain, which struggles to get the right product mix and complete kits to the correct location in the extended automotive and industrial markets," said CEO Kurt Sievers.

The company, which said it is sold out for 2022, gave Q3 revenue guidance of $3.35 billion to $3.50 billion, a 17%-22% jump y/y and above analysts' consensus forecast of $3.32 billion. NXP's own inventory increased to 94 days, up five days sequentially and close to its target of 95 days. The company was optimistic that car production would pick up from depressed levels, and it noted that the number of semiconductors in cars continues to increase.

Texas Instruments (TI), which sells chips into a broader range of end markets than NXP, noted that Q2 revenue was up y/y in automotive (more than 20%), industrial (high-single-

digits percentage), communications equipment (about 25%), and enterprise systems (mid-teens percentage). The weakest link was personal electronics, which only grew in the low single digits. TI believes weak demand in the personal electronics category will continue in Q3. Nonetheless, the company is forecasting Q3 revenue of $4.9 billion to $5.3 billion and Q3 earnings per share of $2.23 to $2.51. Both targets are above analysts' consensus forecasts of $4.94 billion and $2.26, respectively.

TI has seen clear signs that its customers have been building inventory in recent quarters, but whether they will operate with larger inventories going forward or bring inventories back down remains a question. TI continues to build its own inventory levels, which will be easier as three factories come on online, one each in 2022, 2023, and 2025.

(3) *Washington spends on chips.* On Wednesday, the Senate approved The CHIPS and Science Act of 2022, a $280 billion package of subsidies and funding aimed at boosting US competitiveness in semiconductors and advanced technology, a July 27 *WSJ* article reported. The bill heads to the House of Representatives, where it's expected to be approved.

The bill contains funding to encourage companies to build semiconductor plants in the US to reduce America's dependence on semi production in Taiwan and other countries. Intel, SK Group, and Samsung each have indicated they plan to build plants in the US. The bill also includes funding for scientific research to be conducted primarily by the federal government over the next decade, the WSJ reported.

Disruptive Technologies: AI & Drug Development. Some call it "pharmatech." Others dub it "digital biology" or "medtech." Regardless of the name, the use of huge data sets and artificial intelligence (AI) in drug discovery and development has gone mainstream. Started in the labs of leading universities, AI is now used by startup companies that often partner with the industry's pharmaceutical giants in hopes of developing new drugs faster and more cheaply.

One of the industry's leaders is DeepMind, a unit of Alphabet focused on AI development. DeepMind has developed AlphaFold, an open-source software program that predicts the structure of existing proteins, can develop new proteins, and can find treatments using proteins. Since AlphaFold's software became available to the public last year, scientists have been using it in all manner of research.

Alphabet isn't completely altruistic. Last November, the company announced the creation of

a new company, *Isomorphic Labs*, which plans to use AlphaFold to develop drugs. Like many of the startups in this area, Isomorphic throws together traditional scientists and technology professionals. Its top management team includes a chief science officer, chief technology officer, and a director of machine learning working together to develop drugs.

Here are a few of the industry's other players and their achievements:

(1) *BenevolentAI.* BenevolentAI uses AI to develop drugs with a higher probability of clinical success than if it had used traditional drug development methods. The company has an in-house pipeline of more than 20 drugs, with one for atopic dermatitis in phase two trials. The company says its AI tools were used to search through approved drugs to find one that could treat Covid-19. By focusing on drugs that block the viral infection process, it identified baricitinib, an Eli Lilly drug for rheumatoid arthritis that was ultimately approved to treat Covid as well. BenevolentAI is also collaborating with AstraZeneca to develop drugs for idiopathic pulmonary fibrosis and chronic kidney disease.

BenevolentAI went public through a merger with Odyssey Acquisition on April 22, when the shares traded at €9.90, and they've fallen to €6.50 as of Tuesday's close. The deal gave BenevolentAI access to €225 million, a company *press release* stated.

(2) *Owkin.* Owkin applies AI to the patient data it gathers from 18 academic medical centers across the world to develop new drugs and aid in the treatment of patients. The privately held French company partnered in June with Bristol-Myers Squibb to design and optimize cardiovascular drug trials in a deal that could be valued at $180 million if certain milestones are met. This follows the $180 million deal Owkin struck with Sanofi to collaborate on cancer research, a June 9 *article* posted on Fierce Biotech reported. "In a study published in *2020*, for example, the firm used two deep learning algorithms to build models for predicting the survival of patients with hepatocellular carcinoma treated by surgical resection."

(3) *Exscientia.* Founded in 2012, Exscientia uses AI to design medicines and run experiments rapidly and efficiently. "We trust the algorithms to generate hypothesis, generate ideas and select which molecules we should make and test," *said* CEO Andrew Hopkins. The UK-based, publicly traded company has an oncology drug and a psychiatry drug in phase one trials, along with a number of other drugs in earlier stages of development.

Exscienta, which is expected to lose $0.89 a share this year, has a drug discovery deal with Bristol-Myers Squibb that could pay out up to $1.2 billion or more, a May 19, 2021 Fierce

Biotech *article* stated. The company also works with Bayer, Sanofi, Dainippon Sumitomo, and the Gates Foundation and has raised funding from investors that include Softbank, Bristol-Myers Squibb, and BlackRock. Exscientia's ADRs traded as high as $27.10 on October 1 but since have fallen to $10.05 as of Tuesday's close.

(4) *Insitro & Schrodinger's.* Insitro builds large datasets optimized for machine learning and develops models used in drug development. In 2020, the company entered a five-year collaboration with Bristol-Myers Squibb to develop treatments for amyotrophic lateral sclerosis (ALS) and frontotemporal dementia. Insitro was founded in 2018 by CEO Daphne Koller, who was a Stanford computer science professor, founded the education technology company Coursera, and was the chief computing officer of Calico, an Alphabet healthcare company.

Schrodinger's software allows customers to simulate physical interactions between chemical compounds and molecular targets, making drug development more efficient, explained a June 13 *article* posted on TheStreet.com. The publicly traded company had 20 of the largest pharmaceutical companies as customers last year, and it is also developing drugs to create its own pipeline. Schrodinger, which analysts expect will lose $2.02 a share this year and lose $1.47 in 2023, has watched its shares fall from a high of $110.18 on February 2021 to a recent $31.50.

Calendars

US: Thurs: Real GDP & GDP Price Deflator 0.5%/7.9%; Core PCED 4.4%; Initial & Continuous Jobless Claims 253k/1.375m; Kansas City Manufacturing Index; Natural Gas Storage. **Fri:** Personal Income & Spending 0.5%/0.9%; Core PCED 0.5%m/m/4.7%y/y; Consumer Sentiment Index 51.1; Employment Cost Index 1.2%; Chicago PMI 55.0; Baker-Hughes Rig Count. (Bloomberg estimates)

Global: Thurs: Eurozone Economic Sentiment 102.0; Germany CPI 0.6%m/m/7.4%y/y; France PPI; Spain Retail Sales 1.3%; Spain Unemployment Rate 13.0%; Japan Industrial Production 3.7%; Japan Retail Sales 2.8% y/y; Japan Unemployment Rate 2.5%. **Fri:** Eurozone GDP 0.2%q/q/3.4%y/y; Eurozone CPI Headline & Core 8.6%/3.8% y/y; Germany GDP 0.1%m/m/1.8%y/y; Germany Unemployment Change & Unemployment Rate 15k/5.4%; France GDP 0.2%; France CPI; France Consumer Spending -0.6%; Italy GDP 0.3%q/q/3.7%y/y; Spain GDP 0.4%q/q/5.5%y/y; Spain CPI. (Bloomberg estimates)

Strategy Indicators

Stock Market Sentiment Indicators (*link*): Bulls outnumbered bears this week for the first time since late April. The BBR advanced for the third week this week from 0.76 to 1.17 over the period to its highest reading since early April. It was at 0.60 five weeks ago, which was the lowest since the week of March 10, 2009's 0.56. The BBR has been bouncing around 1.00 since late February. Bullish sentiment rose for the third week this week by 8.4ppts (to 38.9% from 30.5%); it was at 26.5% five weeks ago—which was the fewest bulls since early 2016. Meanwhile, bearish sentiment fell for the fourth time in five weeks by 10.8ppts (33.3 from 44.1), while the correction count slipped for the second week to 27.8% after climbing from 27.1% to 31.0% the previous two weeks. In the meantime, the AAII Sentiment Survey (as of July 21) showed the percentage expecting stocks to rise over the next six months advanced for the second week from 19.4% to 29.6%, a seven-week high. The increase puts optimism back within its typical range of readings for the first time since June 2. (The breakeven point between typical and unusually low readings is currently 27.7%.) Still, bullish sentiment remained below its historical average of 38.0% for the 35th straight week. The percentage expecting stocks will fall over the next six months dropped for the second week to 42.2% after rebounding from 46.7% to 52.8% the prior week—holding above its historical average of 30.5% during 34 out of the past 35 weeks and at an "unusually high level 23 out of the last 27 weeks," according to the report.

S&P 500 Earnings, Revenues, Valuation & Margins (*link*): The S&P 500's forward profit margin fell 0.1ppt w/w at 13.3%, down to its lowest level since October 2021 and from its record high of 13.4% achieved intermittently from March to June. Since the end of April 2020, it has exceeded its prior record high of 12.4% in September 2018. It's now up 2.9ppts from 10.3% during April 2020, which was the lowest level since August 2013. Forward revenues and earnings were both back at record highs after ticking down briefly in early February. They have both been making new highs since the beginning of March 2021 after peaking just before Covid-19 in February 2020. Since the Q2-2021 earnings season came in way better than expected, analysts have been playing catch-up with their lowball estimates from the Covid-19 shutdown period. Prior to this catch-up period, consensus S&P 500 forecasts had been falling at rates paralleling the declines during the 2008-09 financial crisis. Forward revenues growth remained steady w/w at a 19-month low of 7.0%. That's down from a record high of 9.6% growth at the end of May 2021. Still, that's up from 0.2% forward revenues growth during April 2020, which was the lowest reading since June 2009. Forward earnings growth fell 0.2ppt w/w to a six-month low of 8.7%. It remains above its 16-

month low of 8.2% in early December. 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. So far this year, analysts’ revisions to their forecasts for 2022 revenues have outpaced their revisions for 2022 earnings, so the imputed 2022 profit margin estimate that we calculate from those forecasts has ticked down 0.3ppt to 12.9%. They expect revenues to rise 12.0% (up 0.2ppt w/w) in 2022 and 4.2% in 2023 (down 0.2ppt w/w) compared to the 16.4% gain reported in 2021. They expect earnings gains of 10.6% in 2022 (down 0.1ppt w/w) and 8.2% in 2023 (down 0.3ppt w/w) compared to an earnings gain of 50.9% in 2021. Analysts expect the profit margin to drop 0.1ppt y/y to 12.9% in 2022 (unchanged w/w) compared to 13.0% in 2021 and to improve 0.5ppt y/y to 13.4% in 2023 (down 0.1ppt w/w). The S&P 500’s weekly reading of its forward P/E rose 0.7pt w/w to a six-week high of 16.7, up from a 26-month low of 15.8 a month earlier. That’s down from an eight-month high of 21.7 at the end of 2021 and 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 jumped 0.09pt w/w to a six-week high of 2.21, up from a 26-month low of 2.10 during June. That 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*): Last week saw consensus forward revenues rise for two of the 11 S&P 500 sectors, forward earnings gain for one sector, and the forward profit margin move higher for one sector. Just one sector has forward earnings at a record high now. Most of the other sectors are below recent record highs in their forward revenues, earnings, and profit margins. Energy still has forward revenues earnings well below a record high, but its forward earnings and profit margin rose to record highs this week. Utilities’ forward revenues and margin are lagging, and its earnings are a hair below its record several weeks earlier. Only three sectors posted a higher profit margin y/y in 2020: Consumer Staples, Tech, and Utilities. During 2021, all but the Utilities sector posted a y/y improvement. Six sectors are now expected to see margins decline y/y in 2022: Communication Services, Consumer Discretionary, Consumer Staples, Financials, Health Care, and Real Estate. Here’s how they rank based on their current forward profit margin forecasts along with their record highs: Information Technology (25.0%, down from its 25.4% record high in early June), Financials (18.4, down from its 19.8 record high in August 2021), Real Estate (18.0, down from its 19.2 record high in 2016), Communication Services (15.9, down from its 17.0 record high in October), Utilities (13.9, down from its 14.8 record high in April 2021), Materials (13.0, down from its 13.6 record high in early June), S&P 500 (13.2, down from its record high 13.4 achieved intermittently since March), Health Care (10.8, down from its 11.5 record high in early March), Industrials (10.2, down from its 10.5 record high in December 2019), Energy (11.9, down from its 13.0

record high a week earlier), Consumer Discretionary (7.5, down from its 8.3 record high in 2018), and Consumer Staples (7.3, down from its 7.7 record high in June 2020).

US Economic Indicators

Durable Goods Orders & Shipments (*link*): Core capital goods orders and shipments both reached new record highs again in June, as companies have been attempting to boost productivity to compete with high inflation and a tight labor market. Nondefense capital goods shipments excluding aircraft (used in calculating GDP) has climbed every month but one since its April 2020 bottom, rising 0.7% in June and 33.5% over the period. Meanwhile, core capital goods orders (a proxy for future business investment) has advanced during all but four months since April 2020, up 0.5% and 33.0% over the comparable periods. Overall durable goods orders expanded for the eighth time in nine months by 1.9% and 10.4% over the nine months through June—with June's gain boosted by an 80.6% jump in volatile defense commercial aircraft billings and a continued increase in new orders for motor vehicles & parts to yet another record high. Orders for the latter rose 1.8% in June and 18.3% the past nine months. New orders for electrical equipment, appliances & components hit a new record high in June, while orders for fabricated metals and machinery are holding around their record highs. Looking ahead, recent monthly surveys from four Federal Reserve districts—New York, Philadelphia, Richmond, and Dallas—were troublesome, showing orders growth (to -6.0 from -7.8) contracting in July for the third successive month.

Pending Home Sales (*link*): "Contract signings to buy a home will keep tumbling down as long as mortgage rates keep climbing, as has happened this year to date," said Lawrence Yun, NAR's chief economist. "There are indications that mortgage rates may be topping or very close to a cyclical high in July. If so, pending contracts should also begin to stabilize." The Pending Home Sales Index (which tracks sales when a contract is signed but the transaction has not yet closed) tumbled for the seventh time in eight months, by 8.6% in June and 25.7% over the period, to 91.0—the lowest since April 2020. Regionally, pending home sales were a sea of red with sales down in all regions both on a monthly and yearly basis: West (-15.9% m/m & -30.9% y/y), South (-8.9 & -19.2), Northeast (-6.7 & -17.6), and Midwest (-3.8 & -13.4). According to NAR, a home in June was about 80% more expensive than in June 2019, as nearly a quarter of buyers who purchased a home three years ago would be unable to do so now as their income wouldn't qualify them to buy a median-priced home in today's market. NAR expects home sales will be down 13% this year, but ended on a note of encouragement, saying with mortgage rates expected to stabilize and steady job

growth, home sales should start to rise early next year.

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