MORNING BRIEFING
May 20, 2021

Tapering, Housing & Batteries

Check out the accompanying chart collection.

(1) Fed's April minutes never say "tapering" but imply it's coming. (2) Elevated valuations get a shout-out. (3) Rate hiking could start before mid-2022. (4) Everyone has a housing tale. (5) After a long run, housing stocks pull back. (6) High lumber and steel and copper prices … oh my! (7) Rising construction industry wages add to pressure. (8) Homeowners across the country enjoy double-digit price increases. (9) Watching inventories and mortgage rates. (10) Solid-state electric vehicle batteries could be a game changer. (11) Checking out Harvard, Toyota, QuantumScape, and Solid Power.

The Fed: The T Word. The Fed released the *minutes* of the April 27-28 FOMC meeting yesterday. The word "tapering" didn't appear once, but it was implied.

Melissa and I found 12 references to the phrase "asset purchases" in the minutes. The third occurrence noted that "the Bank of Canada announced a reduction in the pace of its asset purchases and brought forward its forecast of when conditions would be met for an increase in its policy rate." It did so on May 2. In the sixth mention of the phrase, the committee's participants judged that the "current guidance for the federal funds rate and asset purchases was serving the economy well." The tenth instance noted that a number of participants indicated that "it might be appropriate at some point in upcoming meetings to begin discussing a plan for adjusting the pace of asset purchases." That's a euphemism for the much-dreaded T word, i.e., "tapering."

The last mention of "asset purchases" noted that, for now, the Fed's monthly purchases of $120 billion in securities is helping to "foster smooth market functioning and accommodative financial conditions, thereby supporting the flow of credit to households and businesses."

By the way, the V word (i.e., valuation) was specifically discussed four times. To convince us that the Fed isn't totally out of touch with reality, it was stated that "several participants noted that risk appetite in capital markets was elevated, as equity valuations had risen further, IPO activity remained high, and risk spreads on corporate bonds were at the bottom of their historical distribution." In addition, "various participants" noted that "the prolonged period of low interest rates and highly accommodative financial market conditions and the possibility for these conditions to lead to reach-for-yield behavior that could raise financial stability risks." You think?

By the way, the March *minutes* mentioned the T and V words once each. We conclude that the Fed's talking heads are likely to start talking publicly about tapering their asset purchases before they meet again at the June 15-16 FOMC session. At that meeting, we expect that they will discuss doing so at length and start doing so after the July 27-28 meeting of the FOMC. They should announce that they will finish tapering by the end of this year, setting the stage for hiking the federal funds rate before the middle of next year, well ahead of the "dot plot" schedule in the March 17 *Summary of Economic Projections*.

Stocks fell on the news anticipating a possible taper tantrum. But the selloff was minor, suggesting that there's plenty of liquidity to avert any serious correction in stock prices. Joe and I are still targeting 4800 for the S&P 500 by the end of next year.

Also contributing to yesterday's risk-off mood in the stock market was the sharp drop in bitcoin, which was triggered by a move by Chinese regulators early Wednesday to restrict crypto activity. We doubt that the volatile action in the cryptocurrencies will have any significant impact on stocks. We continue to expect that more governments will move to ban them, as we wrote in Tuesday's *Morning Briefing*.

Housing: Bubble 2.0? It's that time again in the housing market. Everyone and their mother seem to have a story about how hot the market is. Jackie reports that a friend's mother's neighbor held an open house on Long Island—without a realtor—and 100 people showed up to take a look. A deal is pending.

Despite tales of insatiable demand, housing stocks have had a tough week. From May 10 through Tuesday's close, the iShares US Home Construction ETF has fallen 9.1% compared to the 1.6% drop in the S&P 500. The pullback comes after the ETF had risen 75.1% y/y versus the S&P 500's 39.7% y/y gain. Let's take a look at what's got housing stocks down:

(1) *Input prices rising fast.* The peak in the housing index occurred just as a number of commodities important to the housing industry hit their highs for the year. Copper futures rose to 477.85 cents on May 11, up 102% y/y (*Fig. 1*). The price of lumber futures hit a record high of $1,686 on May 7 (*Fig. 2*). And following the same pattern, the price of hot rolled steel futures soared to a new record high on May 6 (*Fig. 3*). Since reaching their recent highs, lumber futures have fallen 25.0% and steel futures are 6.4% lower, while copper prices were largely unchanged through Tuesday's close.

(2) *Wages higher too.* Housing investors also may have been spooked by the April employment report released on May 7. While the number of jobs added in April was lower than expected, average hourly earnings increased by a sizable 0.7% m/m to a new record high (*Fig. 4*). We used the monthly percent change for this gauge because the yearly rate was distorted by its "base effect" and therefore hard to measure. Meanwhile, wage gains accelerated 3.8% y/y for all construction workers and 5.3% for construction workers in production and nonsupervisory roles (*Fig. 5*).

The cost of labor represents about 30%-40% of the cost of a typical new home, the Home Builders Institute (HBI) reports. The wage gains corroborate the findings of a HBI *survey* that there was a shortage of 309,000 construction workers in January, and at year-end 2020, 60% of builders reported a worker shortage.

(3) *Housing starts slowing.* Anxiety about the industry grew on Tuesday after it was reported that single-family housing starts dropped 13.4% in April m/m (*Fig. 6*). "Some builders are slowing sales to manage their own supply chains, which means growing affordability challenges for a market in critical need of more inventory," said Robert Dietz, NAHB's chief economist in a May 17 CNBC *article*. "Homebuyers should expect rising prices throughout 2021 as the cost of materials, land and labor continue to rise."

Home prices—both new and existing—have been rising since the market bottomed at the start of 2012, but the gains have accelerated over the past year as Covid-19 has prompted folks to move out of cramped city apartments and into suburban homes (*Fig. 7* and *Fig. 8*). The median price of existing single-family homes rose 18.4% y/y in March. Geographically, the strongest y/y gains in existing single-family homes occurred in the Northeast (24.3%), followed by the West (17.9), South (16.4), and Midwest (14.0) (*Fig. 9*).

Higher prices have resulted in larger mortgages. Last week, the average mortgage loan balance rose to $411,400, the highest since February.

(4) *An eye on demand.* Amazingly strong demand for housing and record-low inventories temper our concern about the housing market. The months' supply of new homes on the market—or the ratio of new homes for sale to new homes sold—was 3.6 in March, near the record low of 3.5 during summer 2003 and November 1998 (*Fig. 10*). The market for existing homes is even tighter, with the months' supply on the market at 2.1 in March, near January's record low of 1.9 (*Fig. 11*). Meanwhile, traffic of prospective new home buyers in May remained near last November's record high (*Fig. 12*).

We'll certainly be watching home mortgage interest rates. If high commodity prices and rising wages cause inflation to surge and send the rate on a 30-year mortgage substantially higher, the housing industry could certainly have a problem (*Fig. 13*). But so far, the average 30-year mortgage rate of 3.12% remains close to its recent low, giving potential buyers just one more reason to look for a new place to live.

(5) *The homebuilders' numbers.* The S&P 500 Homebuilding stock price index is up 27.0% ytd and 70.1% y/y through Tuesday's close even after a recent pullback (*Fig. 14*). Last August, the index surpassed the prior cycle's peak, reached in July 2005. It's now 28% above that high.

While the industry's revenues per share haven't quite surpassed their high of the last cycle, its forward operating earnings per share has hit a new high (*Fig. 15* and *Fig. 16*). Revenue and earnings growth is expected to slow next year but still grow. Revenue is forecast to grow 25.9% this year and 11.4% in 2022, with earnings growth slated to slow from 51.6% this year to 7.7% next year. The industry's forward P/E of 8.7 remains within its trading range over the past five years (*Fig. 17*).

Disruptive Technologies: Battery Battles. We've long thought that the company that can produce the electric vehicle (EV) battery offering the longest range and fastest recharging at the most economical price will become the EV market leader. So far, Tesla continues to reign supreme in the US. And while more competitors are entering the market, only a few have what it takes to go toe-to-toe with Elon Musk's creation.

Two of Ford's Mustang EV models are contenders, with a range of 300 miles or more and a base sticker price just north of $50,000. Fisker says it will offer in November 2022 a car with a 350-mile range and a sticker price of $37,000. After that, the cars offering a range of more than 300 miles also come with hefty price tags. The Lucid Air, expected to hit the market later this year, will offer 406 miles of range at a cost of almost $77,400. The BMW iX XDrive 50, which is set to arrive next year, will have a 300-mile range and a $85,000 price tag, while the Mercedes 2021 EQS will have a 350-mile range and a starting price just under $100,000 this summer.

All of these EV players will need to watch the advancements in solid-state battery technology, because they could dramatically improve the performance of EVs. One of our wise readers recently shared news about a solid-state battery developed at Harvard University. Solid-state batteries theoretically would give cars 400-500 miles of range, last for more than 10 years, charge in 10-15 minutes, be less flammable, and cost far less than today's liquid batteries.

Success is far from guaranteed, and a final product may not hit the market for years. Earlier this year, Fisker threw in the towel on its efforts to develop a solid-state battery. And instead of developing a solid-state battery, Tesla is working with Panasonic on the 4680 lithium-ion battery cell, which is expected to store more energy and cut the cost of production in half, allowing Tesla to offer a $25,000 EV—if problems with overheating can be fixed.

Nonetheless, the brains at Harvard, Toyota, Solid Power, and QuantumScape all are focused on finding the holy grail of solid-state batteries. Here's a look at what they're doing:

(1) *A Harvard breakthrough.* Today's liquid batteries are essentially two poles separated by a liquid. When a battery is charging, lithium ions move from one pole, the cathode, through a liquid to the second pole, the anode. Over time, dendrites grow on the lithium anode until they pierce the barrier separating the anode and cathode. When that happens, the battery shorts or catches fire.

Researchers at Harvard University have designed a solid-state battery that eliminates the liquid used in today's batteries and solves the dendrite dilemma. A May 12 *article* in The Harvard Gazette explains: "To overcome this challenge, [Xin] Li and his team designed a multilayer battery that sandwiches different materials of varying stabilities between the anode and cathode. This multilayer, multimaterial battery prevents the penetration of lithium dendrites not by stopping them altogether but rather by controlling and containing them." Li, an associate professor of materials science at the Harvard John A. Paulson School of Engineering and Applied Science, said the battery could last for 10-15 years in a car.

(2) *Toyota's working on it too.* Last December, Toyota announced that it's developing solid-state batteries together with other industry participants and the government of Japan. The company aims to introduce a prototype EV with a solid-state battery this year that will run a car for more than 300 miles and charge in 10 minutes. Toyota holds more than 1,000 patents involving solid-state batteries, according to a December 10 *article* in NikkeiAsia.

Japanese suppliers are ramping up to manufacture the materials used in solid-state batteries. "Mitsui Mining and Smelting, commonly known as Mitsui Kinzoku, will start up a pilot facility that will make solid electrolytes for the batteries. ... Oil company Idemitsu Kosan is installing solid electrolyte production equipment at its Chiba Prefecture site with the aim of beginning operation next year. … Sumitomo Chemical is developing material as well," the Nikkei article reported.

Sony and Panasonic have pioneered lithium-ion battery technology; but since the late 2000s, Chinese companies have become the world's largest suppliers in that market. The Japanese government is raising a $19.2 billion fund to support decarbonization technology, including solid-state batteries that it hopes will be manufactured in Japan.

(3) *QuantumScape's bubble deflates.* QuantumScape was one of the go-go EV-related stocks that came public last fall through a reverse merger. The company has no earnings and no product on the market, but it too is developing solid-state batteries and boasts Volkswagen as an investor.

QuantumScape's shares rallied from $10.00 in September to a high of $131.65 on December 22 only to tumble in the following months to $30.57 as of Tuesday's close. Last month, the shares came under pressure after activist short-seller Scorpion Capital described the company as a "pump and dump SPAC scam by Silicon Valley celebrities, that makes Theranos look like amateurs." Scorpion claimed in a *presentation* that the company hasn't allowed outsiders to verify its data and quoted anonymous insiders and former employees doubting the company's progress.

QuantumScape continues to stand by its goal of introducing solid-state batteries by the middle of this decade and recently met some technical goals that resulted in another $100 million being invested in the company by Volkswagen. VW owned 26% of QuantumScape's class A common stock and 12% of its class B common as of year-end 2020, an April 1 Barron's *article* reported.

(4) *Ford backs Solid Power.* Ford and BMW have been invested in Solid Power since 2012. Earlier this month, the two participated with others in another $130 million funding round. Solid Power will use the funds to expand its manufacturing capabilities and positions. "Under the new agreement, Ford and BMW will receive automotive-capable battery cells from Solid Power for testing and integration into its future vehicles starting next year," a May 3 CNBC *article* reported. Ford's chief product platform and operations officer Hau Thai-Tang told CNBC that he believes the industry will start transition from lithium-ion batteries to solid-state batteries over the next decade.

Calendars

US: Thurs: Leading Indicators 1.4%, Initial & Continuous Jobless Claims 450k/3.65m, Philadelphia Fed Manufacturing Index 43, EIA Natural Gas Inventories. **Fri:** M-PMI & NM-PMI Flash Estimates 60.2/64.5, Existing Home Sales 6.09mu, Baker-Hughes Rig Count. (DailyFX estimates)

Global: Thurs: UK Gfk Consumer Confidence -12, Japan Machinery Orders 6.4%m/m/-2.6%y/y, PBoC Interest Rate Decision, Lagarde, Cunliffe. **Fri:** Eurozone, Germany, and France C-PMI Flash Estimates 55.1/57.1/53.7, Eurozone, Germany, and France M-PMI Flash Estimates 62.5/65.9/58.5, Eurozone, Germany, and France NM-PMI Flash Estimates 52.3/52.0.53.0, UK C-PMI, M-PMI, and NM-PMI Flash Estimates 60.0/60.7/60.1, UK Headline & Core Retail Sales 4.5%/4.2%.(DailyFX estimates)

Strategy Indicators

Stock Market Sentiment Indicators (*link*): The Bull/Bear Ratio (BBR) fell this week for the third time in four weeks, to 3.17 from 3.81 four weeks ago, as bullish sentiment fell 9.2ppts (to 54.5% from 63.7%) over the period. Most of the bulls moved to the correction camp, which rose 8.7ppts (to 28.3% from 19.6%) over the period. Meanwhile, bearish sentiment was unchanged this week at 17.2%, fluctuating in a narrow range between 16.5% and 17.2% the past six weeks. The AAII Ratio continued its up-and-down pattern (prevalent since early March), falling to 57.5% last week after rising the prior week from 62.3% to 65.7%. Bullish sentiment fell from 44.3% to 36.5% last week, while bearish sentiment rose from 23.1% to 27.0%.

S&P 500 Earnings, Revenues, Valuation & Margins (*link*): The S&P 500's forward profit margin remained steady this week at a record high of 12.7%. That exceeds its prior record high of 12.4% during September 2018 and is up 2.4ppts from 10.3% during April 2020, which was the lowest level since August 2013. Forward revenues and earnings rose again and have been making new record highs since the beginning of March and for the first time since February 2020. Since the Q2-2020 earnings season came in way better than expected, analysts have been playing catch-up with their lowball estimates from the Covid-19 shutdown. Consensus S&P 500 forecasts had been falling at rates paralleling the declines during the 2008-09 financial crisis. Forward revenues growth rose 0.1ppt w/w to another record high of 9.4%. That's up from 0.2% during April 2020, which was the lowest reading since June 2009. Forward earnings growth gained 0.2ppt w/w to 22.9%. The 23.9% reading at the end of April had been its highest since June 2010 and up substantially from its record low of -5.6% at the end of April 2020. Analysts continue to boost their 2021 growth forecasts. They now expect revenues to rise 11.7% in 2021 and 6.7% in 2022 compared to the 2.2% decline reported in 2020. They expect earnings gains of 35.9% in 2021 and 12.0% in 2022 compared to a 13.3% decline in 2020. Analysts expect the profit margin to rise 2.2ppts y/y in 2021 to 12.4%—from 10.2% in 2020—and to improve 0.6ppt y/y to 13.0% in 2022. Valuations fell for a third straight week. The S&P 500's weekly forward P/E was down 0.6pt to a 28-week low of 20.8 and compares to 23.1 in early September, 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 price-to-sales ratio lost 0.07pt to a seven-week low of 2.65 and is down from a record high of 2.77 in late April, which compares to its 49-month low of 1.65 in March 2020.

S&P 500 Sectors Earnings, Revenues, Valuation & Margins (*link*): Last week saw consensus forward revenues and earnings rise w/w for nine of the 11 S&P 500 sectors. During 2019, just two sectors' margins improved y/y: Financials and Utilities. Consumer Staples, Tech, and Utilities were the only sectors with an improved profit margin in 2020. For 2021, all but Real Estate and Utilities are expected to improve y/y. Back in 2018, the forward profit margin was at record highs for 8/11 sectors, all but Energy, Health Care, and Real Estate. Now, only three sectors are at record highs, down from five a week earlier. Here's how the sectors rank based on their current forward profit margin forecasts versus their highs during 2018: Information Technology (24.2%, a record high), Financials (19.2, matches its prior record high), Communication Services (15.8, down from its 15.9 record high a week earlier), Utilities (14.4, down from its 14.8 record high a week earlier), Real Estate (14.8, down from 17.0), S&P 500 (12.7, a record high), Materials (12.5, a new record high), Health Care (11.0, down from 11.2), Industrials (9.3, down from its record high of 10.5% in mid-December), Consumer Staples (7.6, down from 7.7), Consumer Discretionary (7.3, down from 8.3), and Energy (6.1, down from 8.0).

S&P 500 Sectors Forward Revenues and Earnings Recovery from Covid-19 Trough (*link*): The S&P 500's forward revenues and earnings as well as its implied forward profit margin bottomed at cyclical lows on May 28, 2020 after 14 weeks of Covid-19-related declines. Forward revenues and earnings have risen 12.7% and 39.9%, respectively, since then to new record highs. The forward profit margin has risen 2.6ppt to 12.7%, which now exceeds its prior record high of 12.4% in late 2018. During the latest week, all 11 sectors posted gains to new highs in either their forward revenues, earnings, or profit margin. Communication Services has been particularly strong in recent weeks and has moved up in the forward revenues performance leaderboard. Here's how the 11 sectors rank by their changes in forward revenues and forward earnings since May 28: Materials (forward revenues up 20.2%, forward earnings up 70.5%), Communication Services (18.6, 40.7), Information Technology (18.4, 31.7), Energy (17.6, 1143.8), Industrials (15.4, 47.1), Financials (13.6, 62.0), S&P 500 (12.7, 39.9), Health Care (11.3, 22.1), Consumer Staples (6.5, 13.7), Consumer Discretionary (6.3, 66.6), Real Estate (4.9, 9.2), and Utilities (-1.7, 2.2).

Global Economic Indicators

European Car Sales (*link*): New car registrations, a proxy for sales, soared 218.6% y/y this April after Covid-19 caused a collapse in sales last April. Still, despite the rebound in sales this April, volume is still nearly 300,000 below the April 2019 level. Italy (3,276.8% y/y) recorded the biggest jump in sales of the major markets versus last April, followed by Spain (1,787.9). France (568.8) and Germany (90.0) also posted big gains, though paled in comparison to Italy and Spain. During the first four months of this year, sales are up 24.4% y/y from the comparable 2020 period, led by

Italy (68.4) and France (51.0). Positive April results boosted the year-to-date comparison for Spain (18.8) and Germany (7.8) into positive territory, versus the comparable period a year ago, for the first time this year.

Eurozone CPI (*link*): April's CPI headline rate accelerated to a two-year high, while the core rate slowed for the third successive month. April's rate climbed to 1.6% y/y, up from 1.3% in March, and a recent low of -0.3% all three months of Q4. The core rate eased for the third month to 0.7% y/y after accelerating sharply to 1.4% in January—which was the highest since October 2015—following record low readings of 0.2% from September through December. Looking at the main components, energy (to 10.4% from 4.3%) swung further into positive territory, after moving above zero in March for the first time since January 2020, while the rate for non-energy industrial goods ticked up to 0.4% y/y after slowing from 1.5% in January to 0.3% by March. Inflation rates for both services (to 0.9% from 1.4% in January) and food, alcohol & tobacco (0.6 from 1.5) eased for the third straight month. Of the top four Eurozone economies, rates for Germany (2.1% y/y) and Spain (2.0) were above the headline rate of 1.6%, while France's rate matched it and Italy's (1.0) was below.

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