Yardeni Research

MORNING BRIEFING
February 11, 2021

Onshoring & Charging

Check out the accompanying chart collection.

(1) Optimism about S&P 500 Q1 earnings growth on the rise. (2) S&P 500 Energy & Real Estate sectors enjoy the biggest Q1 upward earnings estimate revisions. (3) Only Utilities' and Industrials' estimates get cut. (4) Shortages of masks and semis highlight importance of domestic supply chains. (5) Taiwan Semi building in Arizona, while Samsung scouts for a location. (6) "Green" technology companies building new manufacturing capacity too. (7) Many capital goods orders on the rise. (8) Norway, world's EV leader, tries wirelessly charging taxi batteries. (9) Nio swapping batteries in China. (10) UK ponders how to charge cars parked on the street.

Strategy: Scrambling Analysts. Punxsutawney Phil, the prognosticating groundhog, saw his shadow last week. That means that there will be six more weeks of winter. However, the Q4 season's results to date suggest we may not have to wait until spring to see a return to positive revenues and earnings growth for the S&P 500. Consider the following:

(1) *Q4-2020.* Aggregating the results of the S&P 500's Q4 reporters to date by sector, we see that revenues growth is positive y/y for eight of the 11 S&P 500 sectors, and earnings growth is positive y/y for nine sectors. Only Energy and Industrials have missed the positive-growth bar on both revenues and earnings counts, while Utilities has a mixed result.

That's an improvement from the seven and four sectors rising y/y during Q3-2020, and the two and three doing so in Q2-2020. Here's the growth tally for Q4-2020 so far: S&P 500 (2.9% y/y revenue growth, 5.6% y/y earnings growth), Communication Services (12.6, 18.2), Consumer Discretionary (15.8, 12.8), Consumer Staples (6.2, 7.9), Energy (-34.3, -110.2), Financials (2.6, 17.0), Health Care (13.6, 13.4), Industrials (-10.3, -44.1), Information Technology (11.1, 18.9), Materials (3.4, 20.7), Real Estate (1.6, 14.1), and Utilities (-0.1, 3.8) (*Fig. 1* and *Fig. 2*).

(2) *Q1-2021.* During each earnings season, analysts adjust their future earnings forecasts after taking into account the newly reported results and management's guidance. Upward revisions to quarterly forecasts are very unusual, and typically occur coming out of a recession. Indeed, in the 79 quarters from Q1-2001 to Q2-2020, forecasts dropped during 68 of the quarters, or

nearly 90% of the time. For the 79 quarters, the quarterly estimate fell an average of 2.6% in the seven weeks after the start of the quarter. That's not happening now.

Analysts' collective reaction to the Q4 earnings season so far has been to boost their Q1-2021 earnings-per-share estimate for the S&P 500 by 4.2% since the start of the quarter (*Fig. 3*). This phenomenon of raising estimates for the following quarter partway through earnings season is actually a trend that started several quarters ago, during the Q2-2020 earnings season. Analysts collectively had raised their Q3-2020 estimate 3.2% by a similar point in that earnings season as we're at now. During the Q3-2020 season, the Q4-2020 estimate moved 2.7% higher over a similar time period.

Only two of the S&P 500's 11 sectors have bucked this trend, experiencing decreasing Q1-2021 earning-per-share estimates so far this quarter—i.e., from December 31, 2020 through February 4 (*Fig. 4*). Here's how the sectors rank by magnitude of estimate change ytd: Energy (63.7%), Real Estate (12.6), Financials (10.3), Materials (7.9), Tech (5.9), Communication Services (5.8), S&P 500 (4.2), Health Care (3.0), Consumer Discretionary (0.5), Consumer Staples (0.0), Utilities (-1.6), and Industrials (-15.8).

Prior to the Great Virus Crisis (GVC), the last time that analysts raised forecasts for the quarter following the one then being reported was during the Q4-2017 earnings season, when the Q1-2018 estimate moved 4.9% higher. And prior to that, analysts had not done so since just after the Great Financial Crisis, during six of the seven quarters between Q4-2009 and Q2-2011.

Industrials: Coming to America. Covid-19 drove home the importance of domestic manufacturing to our health and national security. US healthcare workers scrambled to obtain personal protection equipment, and shortages of paper goods made hoarders of us all. One year later, we have plenty of PPE and toilet paper, but we're repeating the lesson. A shortage of semiconductors is forcing the closure of many auto manufacturing plants around the world. And there's a good chance that the shortage could extend beyond autos to slow the production of consumer electronics and airplanes.

The semiconductor shortage is occurring for many reasons. A surge of computer and electric equipment purchasing in spring 2020 to enable working and learning from home strained the supply of semis. Demand was further amplified when urbanites fled the cities and needed to buy cars to get around the suburbs and countryside.

Chip demand also increased unexpectedly after the Trump administration announced sanctions that prohibited the sale of US technology to Huawei Technologies. The news prompted the company and China to start stockpiling chips and semiconductor equipment, a February 3 Bloomberg article reported. Chinese imports of computer chips climbed to almost $380 billion last year, up 14% y/y, and Chinese companies bought almost $32 billion of equipment to make semiconductors, a 20% y/y jump, according to Bloomberg.

President Joe Biden also appears ready to emphasize the importance of domestic manufacturing. The President "will issue an executive order requiring the government to review critical supply chains, in an effort to ensure that the US is not too reliant on other countries, including China, for technology and materials," a February 2 *FT* article reported. The reshoring that started to pick up last year looks likely to accelerate this year.

Let's take a look at the plans of manufacturers coming to America as well as American companies that have decided to keep their manufacturing close to home:

(1) *Chip giants building US plants.* Taiwan Semiconductor Manufacturing, the world's largest contract chipmaker, agreed in May to build a $12 billion manufacturing plant in Arizona and Samsung Electronics is looking for a US location to build a $17 billion semiconductor plant. Taiwan Semi's plant, which is expected to produce 12-inch wafers using 5-nanometer technology, is expected to hit volume production in 2024, a December 22 Reuters article reported.

Samsung is also eyeing the Phoenix area as site for a new plant, as well as Texas, upstate New York, and Korea. It's seeking combined tax abatements of $805.5 million over 20 years from Travis County and the city of Austin, Texas among other breaks, according to a February 4 CNBC article. If Austin is selected, Samsung would break ground in Q2 with the goal of the plant being operational in Q3-2023. Samsung, which already has a plant in Texas, said the new facility would create 1,800 jobs.

Taiwan Semi's move could create a large ripple effect; many of its suppliers are considering moving production to the US as well, a January 28 *Taiwan News* article reported. Those considering setting up a US outpost include: Chang Chun Group (a petrochemical supplier to Taiwan Semi), Marketech International (a semiconductor facility builder and supplier to Taiwan Semi), Mirle Automation Corp., United Integrated Services, TOPCO, and Taiwan Specialty Chemicals Corporation.

LCY Chemical, a producer of chemicals used in making semiconductors, plans to build a new plant in in Arizona. Shipping the chemicals from Taiwan took 45 days and made it more complex to "maintain the quality of the chemical," a company official said in a February 9 Nikkei Asia article.

Arizona Governor Doug Ducey expects that the Taiwan Semi plant "will create over 1,600 new high-tech jobs and generate thousands of additional jobs in the state for suppliers and other companies within the semiconductor industry." If these projects come to fruition, it would be a nice reversal from the disaster that was Foxconn. The semiconductor company promised to build out factories to create jobs in Wisconsin that never materialized.

(2) *New tech needs new plants.* Companies and entrepreneurs are coming up with all sorts of ways to "go green" and ditch fossil fuels. New plants—funded by a bull market in stocks—are being built to produce electric cars, electric trucks, batteries, and hydrogen power. Let's review the news on some of the new plants being built.

Plug Power raised about $1 billion in an equity offering last year to fund the development of "green" hydrogen production facilities to supply vehicles that use hydrogen fuel cells. The company also plans to build a gigafactory to expand the production of fuel cells and electrolyzers, a November 24 Green Tech Media article reported. Nikola is building a $600 million electric truck assembly plant in Coolidge, Arizona.

SK Innovation is building two battery plants in Georgia. The first, a $1.7 billion plant to manufacture lithium-ion batteries for hybrid electric vehicles (EVs), will start production this year, the second in 2023, an Athens Banner-Herald September 23 article reported. The South Korean company supplies Ford and Volkswagen EV manufacturing plants in the US.

Tesla is also building a $1.1 billion plant that will produce both batteries and electric cars but in Texas.

German auto supplier GEDIA Automotive Group started building a plant in Georgia to make EV body-part components for Mercedes-Benz. This is GEDIA's second site in the US.

TEKLAS—a Turkish manufacturer that supplies hoses and tubes for EV fluid systems to General Motors, Volkswagen, and Daimler Mercedes—plans to invest $6.5 million to open its

first North American facility and headquarters in Georgia. The plant, which is scheduled to open in the spring, is expected to create 120 jobs, a November 30 article in the Atlanta Business Chronical reported.

(3) *Plants of all varieties on the way.* You name it, and there's a factory being built to produce it. Nestle Purina PetCare will spend $550 million to build a new pet food factory in Ohio—its first new factory built from the ground up since 1975. SmileDirectClub is spending $34 million on a new manufacturing facility in Columbia, TN to make clear aligners. Knoxville, TN based mattress manufacturer MLILY is expected to open its second US factory in Phonix this year.

A joint venture between Mazda and Toyota is building a $1.6 billion SUV manufacturing plant in Alabama that will start production in April. When it's fully up and running, it will employ 4,000 people and indirectly result in the creation of as many as 24,000 jobs that will exist because of the plant, a September 17, 2019 article in Advanced Local Media noted.

Merck is constructing a new manufacturing facility in North Carolina to expand production of its treatment for certain bladder cancers. Precision Castparts plans to invest $128 million for the construction of a manufacturing and office complex in Mason, Ohio. Continental Automotive Systems plans to invest $110 million for the construction of an office and manufacturing facility in Texas. Ball Corp. is building a new aluminum beverage packaging plant in Pennsylvania that is scheduled to begin production in mid-2021 and will create 230 jobs, a company press release stated. Gruppo Fanti, an Italian metal packaging manufacturing company, will invest $30 million to open its first US plant in West Virginia.

We could go on, but we won't. We will, however, note that orders for nondefense capital goods excluding aircraft rose 0.7% in December; shipments of them also climbed 0.7%, and exports jumped 4.6% (*Fig. 5*). New orders of motor vehicles and parts are near 20-year highs; orders for computers & electronic products have risen apace for the past four years; and orders for all other durable goods spiked this year (*Fig. 6*). Orders for industrial, metalworking, and material handling machinery are also at or near decade highs (*Fig. 7*). Construction spending on manufacturing facilities was approaching a 20-year high at the start of 2020 but since has fallen 17% through December (*Fig. 8*).

Disruptive Technology: Building the EV Backbone. Europe and China lead the US when it comes to adopting EVs and developing the necessary infrastructure. Of the roughly one million EV charging points in the world, roughly half are in China, according to Bloomberg data in an

August 13 NextWeb article. The Netherlands' charging network has grown the fastest, by 162.4% from 2017 through 2020, followed by China's (158.1%), France's (125.1), the UK's (114.2), and Norway's (100.3). The US lags, with a 65.4% growth rate. Let's look at some of the infrastructure successes and hurdles the early adopters have faced:

(1) *Norway tries wireless charging.* Norway leads the world in EV adoption, with EVs representing 54% of new cars sold. General Motors tipped its hat to the country in a Super Bowl advertisement featuring the ever-funny Will Farrell, who encouraged the US not to be out "EVed" by Norway.

How did the Scandinavian country do it? By appealing to consumers' pocketbooks. The country provides EV owners with tax exemptions, free toll-road access, free charging, and free parking, a February 9 article in Canada's National Observer reported. A gasoline-powered Golf costs €36,600, while the e-Golf is available for just €25,300, as it comes without import tax, emission fees, or 25% VAT, a June 5, 2020 Wallbox article stated.

The country also offered subsidies to encourage the installation of EV chargers. Several Norwegian municipalities offered grants to support EV charging in housing cooperatives. And Norway is rolling out wireless charging for taxis. Charging pads are being installed in the streets below taxi waiting areas. While waiting for a fare, taxis that roll over the charging pad for 15 minutes will add 50 miles to the car's range.

The taxi's battery may never be fully charged, but it will always have enough power to get where it needs to go, in a scheme referred to as "grazing rather than guzzling." It's the first commercial application of the technology developed by Malvern, PA-based Momentum Dynamics, an August 13 *NYT* article reported. Norway wants all taxis in Oslo to have zero emissions by 2023 and all new cars to be zero emissions by 2025.

(2) *Swapping batteries in China.* EV startup Nio is a proponent of swapping out your car's drained battery for another fully charged battery. It has about 170 stations in China and plans to have 500 swapping stations by year-end. Drivers pull into a charging station, where a device under the car automatically swaps out the battery without human assistance, according to this December 2 Bloomberg video.

Cars that use these swapping stations lease their batteries instead of buying them. Doing so brings down the purchase price of the car and allows owners to upgrade their car battery with

the latest technology, which typically increases the car's driving range on a full charge. That said, Tesla tested battery swapping in 2013 but ended the program after deciding that swapping was too cumbersome and consumer interest too scant.

(3) *Overcoming street charging.* In the UK, 10% of new vehicles sold last year were either battery-operated EVs or hybrid cars that plug in to charge. But that percentage is expected to rise quickly, as the UK government has banned the sale of new gas-powered cars starting in 2035.

One of the major hurdles is that a third to half of all cars in the UK belongs to folks without driveways. Those car owners could go to charging stations at supermarkets, hotels, or pubs, a January 18 *FT* article reported. But more likely, they will wait to buy until local governments find solutions like plugging into lampposts, rolling over induction pads, plugging in at work, or swapping out batteries.

Some deep pockets have entered the country's charging market: Royal Dutch Shell acquired Ubitricity, the UK's largest charging network, in January for an undisclosed amount. It has 13.1% of the UK's on-street charging points, followed by BP Pulse with 12% and Tesla's supercharger at 2.9%, a January 25 Electrek article reported. Shell already had 1,000 charging points offered at Shell's 430 retail stations.

CALENDARS

US: Thurs: Initial & Continuous Jobless Claims 757k/4.49m, EIA Natural Gas Storage, Fed Monetary Policy Report. **Fri:** Consumer Sentiment Index Total, Present Situation, and Expectations 80.8/88.0/75.7, Baker-Hughes Rig Count, Williams. (DailyFX estimates)

Global: Thurs: Guindos, Nakamura. **Fri:** UK GDP 1.0%m/m/0.5%3-month avg/-8.1%y/y, UK Headline & Manufacturing Industrial Production -3.8%/-3.3% y/y, UK Goods Balance -- £15b. (DailyFX estimates)

STRATEGY INDICATORS

Stock Market Sentiment Indicators (*link*): The Bull/Bear Ratio (BBR) fell for the second week to 3.20 this week after rising from 3.60 to 3.71 two weeks ago—which was only the third increase since the week of December 22. Still, the BBR has remained above 3.00 since the week of November 10. The correction count this week declined 2.4ppts (to 23.1% from 25.5%),

with two-thirds joining the bearish (18.3 from 16.7) camp; bullish sentiment edged up to 58.6% from 57.8% last week. The AAII Ratio rose to 51.2% last week after falling from 66.5% during the December 23 week to 49.6% during the final week of January—which was the lowest since mid-October. Both bullish and bearish sentiment declined last week, with bullish sentiment falling steadily from 43.6% during the December 23 week to 37.4% last week—representing the fewest bulls since late October—and bearish sentiment dipping to 35.6% after climbing from 22.0% to 38.3% the prior five weeks

S&P 500 Earnings, Revenues, Valuation & Margins (*link*): The rapid pace of Covid-19 estimate cuts has turned into a V-shaped recovery as analysts continue to play catch-up from their lowball estimates prior to the better-than-expected Q2 and Q3 earnings seasons. Consensus S&P 500 forecasts had been falling at rates paralleling the declines during the 2008-09 financial crisis. Forward revenues is now at its highest level since early March and is just 0.6% below its record high in February 2020. Forward earnings is at its highest level since mid-March and is now 1.1% below its record high in early March. Forward revenues growth remained steady w/w at 8.4%, its highest reading since April 2010. That's up from 0.2% in April, which was the lowest reading since June 2009. Forward earnings growth dropped 1.0ppt w/w to 21.8%. A week earlier, it had been at its highest level since July 2010 and up substantially from its record low of -5.6% at the end of April. Analysts expect revenues to decline 2.6% y/y in 2020 and rise 9.0% in 2021 compared to the 4.3% reported in 2019. Analysts expect an earnings decline of 13.0% y/y in 2020 and a 24.3% gain in 2021 compared to a 1.5% rise in 2019. The forward profit margin rose 0.1pts w/w to 11.9%; that's the highest reading since early March and up 1.6ppts from 10.3% during April, which was the lowest level since August 2013. It's still down 0.5ppt from a record high of 12.4% in September 2018. Analysts expect the profit margin to fall 1.2ppt y/y in 2020 to 10.3%—from 11.5% in 2019—and to improve 1.4ppt y/y to 11.7% in 2021. Valuations were mixed last week. The S&P 500's weekly forward P/E dropped remained steady at an 11-week low of 21.8. That 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 mid-March. The S&P 500 price-to-sales ratio rose 0.02pt w/w to 2.60. That's down from a record high of 2.65 during the 1/21 week and compares to its 49-month low of 1.65 in mid-March.

S&P 500 Sectors Earnings, Revenues, Valuation & Margins (*link*): Last week saw consensus forward revenues and earnings rise w/w for all 11 of the S&P 500 sectors. Forward P/E ratios for nearly all sectors now are back above their record or cyclical highs prior to the Covid-19 bear market. During 2019, just two sectors' margins improved y/y: Financials and

Utilities. Consumer Staples, Tech, and Utilities are the only sectors expected to have an improved profit margin in 2020, whereas back in early March eight sectors were expected to see margins improve y/y. For 2021, all but Real Estate are expected to improve y/y. The forward profit margin was at record highs during 2018 for 8/11 sectors, all but Energy, Health Care, and Real Estate. Since 2018, it has moved lower for nearly all the sectors. The forward profit margin rose for nine sectors in the latest week, most notably for Communication Services, Energy, Materials, and Real Estate. Real Estate has been improving in recent weeks from its lowest level since January 2012 and Energy from its record low. Here's how the sectors rank based on their current forward profit margin forecasts versus their highs during 2018: Information Technology (23.0%, down from 23.1%), Financials (17.1, down from 19.2), Communication Services (14.6, down from 15.4), Utilities (14.5, a new record high), Real Estate (13.5, down from 17.0), S&P 500 (11.9, down from 12.4), Materials (11.2, down from 11.6), Health Care (10.9, down from 11.2), Industrials (8.6, down from its record high of 10.5% in mid-December), Consumer Staples (7.6, down from 7.7), Consumer Discretionary (6.9, down from 8.3), and Energy (4.1, 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 after 14 weeks of Covid-19-related declines. Since then, S&P 500 forward revenues has risen 8.0%, forward earnings has gained 25.6%, and the forward profit margin has risen 1.7pt to an 11-month high of 11.9%. Among the 11 sectors, all but Industrials and Consumer Discretionary posted new, across-the-board, post-Covid-19 highs during the latest week in either their forward revenues, earnings, or profit margin. The major laggards from their pre-Covid-19 highs: Energy, Consumer Discretionary, and Industrials. Among those three sectors, all but Industrials appear to be on an upswing now. Here's how the 11 sectors rank by their changes in forward revenues and forward earnings since May 28: Information Technology (forward revenues up 13.2%, forward earnings up 20.0%), Communication Services (12.8, 23.1), Materials (10.6, 41.0), Industrials (9.9, 29.1), Financials (9.5, 38.8), Health Care (8.1, 17.8), S&P 500 (8.0, 25.6), Consumer Staples (4.6, 10.9), Energy (4.5, 657.0), Consumer Discretionary (1.8, 49.9), Real Estate (1.6, -3.5), and Utilities (-0.8, 3.3). Tesla's addition to the S&P 500 on December 21 caused revenue and earnings forecasts to fall for the index and the Consumer Discretionary sector. Before then, S&P 500 revenues were up 7.1% and earnings 19.6%. The similar readings for Consumer Discretionary then were 11.2% and 39.7%, which would have ranked the sector first in the revenues derby instead of near the bottom.

S&P 500 Q4 Earnings Season Monitor (*link*): With nearly 65% of S&P 500 companies finished reporting revenues and earnings for Q4-2020, revenues have beaten the consensus forecast by a well-above-trend 3.2%, and earnings have beaten estimates by 17.7%. The large surprises result from a lack of financial guidance from the companies that analysts follow during an economic rebound. At the same point during the Q3 season, revenues were 2.6% above forecast and earnings beat by 19.9%. For the 322 companies that have reported through mid-day Wednesday, aggregate y/y revenue and earnings growth have improved from their Q3 measures, but the percentage of companies reporting a positive revenue and earnings surprise has ticked down. The Q4 reporters so far collectively have 2.9% y/y revenue growth and a y/y earnings gain of 5.6%. Those results mark a big recovery from Q2-2020, which was the worst quarter for growth since Q1-2009 during the financial crisis. A whopping 85% of the Q4 reporters so far has reported a positive earnings surprise, and 77% has beaten revenues forecasts. Slightly more companies have reported positive y/y earnings growth in Q3 (64%) than positive y/y revenue growth (62%), which bodes well for profit margins. Excluding the FAANGM stocks, the earnings surprise drops to 14.8% from 17.7%, and the revenue surprise falls to 2.6% from 3.2%; earnings would decline 2.7% y/y without the FAANGMs instead of rising 5.6%, and revenues would be down 0.8% instead of up 2.9%. These figures will continue to change as more Q4-2020 results are reported in the coming weeks, but we expect the positive results seen so far to continue.

US ECONOMIC INDICATORS

Consumer Price Index (*link*): January's core CPI was flat for the second month after rising 0.2% in November and 0.1% in October. The CPI had rebounded 1.3% over the four months through September after Covid-19 had caused record declines in apparel and transportation services prices during the three months ending May. The core CPI rose only 1.0% (saar) during the three months through January, slowing from August's 4.5%, which was the highest since September 1991. The yearly rate slowed to 1.4% y/y in January after accelerating from a nine-year low of 1.2% y/y in May and June to 1.7% in August and holding at that rate through September; it was at 1.6% y/y during the each of the final three months of 2020. Here's a ranking of the 12-month core rates on a January-over-January basis, from lowest to highest for goods: apparel (-2.5% y/y), medical care commodities (-2.3), new vehicles (1.4), alcoholic beverages (2.4), tobacco & smoking products (6.7), and used cars & trucks (10.0). The yearly decline in apparel prices is slowing as these prices soared 15.3% (saar) during the three months through January—posting a record monthly increase of 2.2% last month. In the

meantime, the price of used cars & trucks contracted 12.5% (saar) during the three months through January after accelerating a whopping 57.6% during the three months through September, while prices for new vehicles dropped 0.7% (saar) over the three-month period, slowing from a recent peak rate of 4.2% in July. Here's the same drill for the core services rates: airfares (-21.3% y/y), motor vehicle insurance (-3.7), owners' equivalent rent (2.0), rent of primary residence (2.1), hospital services (2.7), physicians' services (3.4), and motor vehicle maintenance & repair (3.5). The yearly rates for both shelter components remain on steep decelerating trends—with costs during the three months through January slowing to 1.2% and 1.4% (saar), respectively, for rent of primary residence and owners' equivalent rent—the lowest since October 2010 and June 2011. Meanwhile, the yearly rate for hospital services continued to drift lower, while the rate for physician services spiked to its highest rate since February 2017. The headline CPI rate held at 1.4% y/y in January, up from 1.2% during October and November. It had accelerated steadily from 0.1% (lowest since mid-2015) in May to 1.4% by September.

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