Yardeni Research

MORNING BRIEFING
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Check out the accompanying chart collection.

(1) The Fairy Godmother is back. (2) Vaccine and Yellen news fuel S&P 500 Energy sector's top performance so far in November. (3) Global oil production cuts and improvement in demand bringing market back into balance. (4) US companies in the Oil Patch cut costs, merge, or go bankrupt. (5) New Biden administration could shepherd in a return of Iranian production and an emphasis on renewables. (6) Solar just makes sense. (7) New materials could make solar panels far more efficient. (8) A solar panel that works on a cloudy day. (9) Miracle molecules.

US Politics: The Fairy Godmother of the Bull Market Is Back. President-elect Joe Biden has picked Janet Yellen to be the US Treasury Secretary. She also happens to be the subject of Chapter 7, titled "Janet Yellen: The Gradual Normalizer," of my book *Fed Watching for Fun and Profit*.

In my book, I wrote: "Early on when Yellen became Fed chair (and even when she was vice chair), I noticed that the stock market often would rise after she gave a speech on the economy and monetary policy. She was among the most dovish members of the FOMC, and she now ruled the aviary, which also included a few hawks. So I remained bullish on the outlook for stocks, anticipating that under her leadership, the FOMC would normalize monetary policy at a gradual pace. Indeed, I often referred to Yellen as the 'Fairy Godmother of the Bull Market.'"

When she was Fed chair, Yellen suggested that Congress should give the Fed the power to buy equities. Now as Biden's Treasury secretary, she will continue to wave her magic wand.

Energy: The Canary Has Left the Coal Mine. Since October 30, the S&P 500 Energy sector has outperformed all other sectors in the S&P 500 in dramatic fashion. The sector is up 32.0% just for the month of November through Monday's close, soundly surpassing the 15.9% return of the next strongest sector, Financials, and trouncing the S&P 500's 9.4% gain over the same period (*Fig. 1*).

The Energy sector's strong November performance has been fueled by the rebound in Brent crude oil futures, which are up 23% so far in November and up 138% since bottoming this year on April 21 (*Fig. 2*). Despite the rebound, both the S&P 500 Energy sector and the price of Brent crude futures have had a miserable 2020, down 37.3% and 30.2%, respectively, ytd. But that's much better than where they stood in the spring. And recent positive vaccine trial results, indicating that life—and oil consumption—might return to normal by late next year, have spurred a rally in the price of crude and in the S&P 500 Energy sector. They've been helped on the supply side by the crude oil production cuts by US oil companies and OPEC+, i.e., the original 13 OPEC nations plus Russia and nine other oil-producing nations. OPEC meets on Monday and Tuesday, when it's expected to extend current production cuts into Q1.

The Energy sector bounce is also positive news for the S&P 500 because the sector has been the most sensitive on the downside—and the upside—to the economic impacts of the Covid-19 pandemic. The top-three-performing industries in November to date among those we follow all are in the Energy sector: Oil & Gas Exploration & Production (43.3%), Oil & Gas Equipment & Services (43.2), and Oil & Gas Refining & Marketing (41.3)—with Integrated Oil & Gas (27.0) not far behind. Bulls should keep in mind that there's plenty of excess crude oil production capacity around the world. Anytime the price of oil rises north of $50 a barrel, we'd assume that producers will turn on the taps again, which should keep a lid on oil prices. Let's take a closer look at why this canary has left the coal mine and started singing once again:

(1) *Production slowing.* In addition to good vaccine news, a reduction in production has helped oil prices. Some of that reduction has come from OPEC+, which first cut output by 9.7mbd, then reduced the cut to 7.7mbd. OPEC producers were expected to increase production at the upcoming meeting, but the second wave of Covid-19 has put the production increases on hold, a November 23 Reuters article explained.

At home, production also has fallen, to 10.8mbd in November, down from 12.7mbd last year (*Fig. 3*). Production fell as US companies responded to low oil prices by slashing capital expenditures, merging, and going bust. The number of US oil rigs has fallen from 670 at the start of 2020 to 231 during the November 20 week. The decline in oil rigs is even more dramatic if you look back to 2018, when there were 888 rigs, or to 2014, when the figure peaked at 1,609 rigs. Only since the number of rigs bottomed in mid-August has it started to increase ever so slightly (*Fig. 4*).

The drop in oil prices has prompted a slew of mergers as companies have looked to cut costs and enjoy the benefits that size brings. The largest deals include Pioneer Natural Resources' deal struck in October to buy Parsley Energy for $4.5 billion, ConocoPhillips' agreement to buy Concho Resources for $9.6 billion, Devon Energy's $2.6 billion planned merger with WPX Energy, and Chevron's acquisition of Noble Energy in October.

"Devon Chief Executive Dave Hager said the move will accelerate plans to ditch the shale industry's old strategy of pursuing rapid production growth at all costs and focus instead on generating income that exceeds drilling expense and returning excess cash to shareholders," a September 28 *WSJ* article reported.

Many of the companies with no dance partners and no access to capital have opted to file for bankruptcy protection. Law firm Haynes and Boone notes that the stress in the oil patch dates back to Thanksgiving 2014, when Saudi Arabia declared it would no longer restrict its production to prop up world oil prices. The price of Brent, then north of $100, has fallen more or less ever since, with Covid-19 being the latest straw. Since Thanksgiving 2014, there have been more than 500 bankruptcies of North American oil producers and oilfield services companies, according to a tally by the law firm. The pace of new filings has slowed to only three in October, but the firm expects bankruptcy filings to continue.

(2) *Watching for signs of demand revival*. US demand for crude oil and related products has improved in some areas since it was decimated by Covid-19. US consumers have returned to the roads since lockdowns were lifted. Demand remains somewhat depressed because of all the folks working from home instead of driving to the office. However, retail sales at service stations jumped to $434.9 billion (saar) in October, up from its low of $312.6 billion in April. October's level is still 15.4% below December's level (*Fig. 5*).

As driving increased and production decreased, gasoline inventories went from excessively oversupplied this summer to more normal levels this fall (*Fig. 6*). What has only modestly improved is demand for jet fuel, with consumers keeping their feet on the ground for the most part. The number of people passing through TSA checkpoints has largely plateaued since rebounding from an April low of 87,534 to the 650,000 area for most of the summer (*Fig. 7*). The number of fliers is spiking for Thanksgiving, with up to 2.4 million expected, but that's still a 48% drop y/y, according to AAA figures cited by a November 22 CNN article.

Put it all together, and world production has fallen from a peak of 102.3mbd in Q4-2018 down to an expected low of 91.0mbd in Q3-2020, according to US Energy Information Administration's November short-term energy outlook. The agency expects world production to rebound to 99.9mbd in Q4-2021.

World consumption has fallen from a peak of 102.4mbd in Q3-2019 to a low of 85.3mbd in Q2-2020. The Energy Information Administration estimates demand will rebound to 96.8mbd by the end of this year and 100.2mbd by the end of next. If those estimates are correct, demand surged past supply in Q3-2020 and is expected to continue to eclipse supply through the end of 2021.

(3) *Keeping an eye on the new administration*. Expected actions by the incoming Biden administration could both increase the supply of oil on the world markets and decrease domestic demand for oil. President-elect Biden is expected to call for the end of fracking on federally controlled lands, push for the US to rejoin the 2015 Iran nuclear agreement, and encourage the development of renewable sources of energy.

The immediate impact of the potential fracking ban on federal lands is limited by the fact that fracking companies aren't expanding their drilling given the depressed price of oil. The US's return to the 2015 Iran nuclear agreement would have a more dramatic effect. The US would require Iran to resume compliance with the agreement and to agree to strengthen and extend the agreement, a November 22 Reuters' article explained. The nuclear deal aimed to limit Iran's nuclear program and prevent the country from developing nuclear weapons in return for easing economic sanctions. If the deal were to be reinstated, Iran would be able to bring a million barrels per day or more of oil production back into the global markets. President Trump abandoned the Iran nuclear deal in 2018, finding fault with the deal's lack of restriction on Iran's ballistic missile program and its militia in Iraq, Lebanon, Syria, and Yemen.

(4) *Keeping the other eye on renewables*. President-elect Biden is also expected to put forward a clean energy agenda that could accelerate the shift to solar energy and electric vehicles, which would reduce demand for natural gas and crude oil products. The global shift to electric vehicles could reduce global oil demand growth by 70% by 2030, according to the Carbon Tracker, a think tank referred to in a November 19 Reuters article. The study assumed that electric vehicles would represent 40% of China's total car sales by 2030 and 20% of India's and other emerging markets' car sales.

In addition to the move toward electric vehicles, a growing movement is exploring the potential of hydrogen energy. Siemens Mobility and Deutsche Bahn have started developing hydrogen-powered fuel cell trains that they plan to test in 2024. They hope the trains can replace diesel engines running on German local rails, a November 22 Reuters article reported. The new trains would be fueled within 15 minutes, have a range of 600 km, and have a top speed of 160 km/hour. European Union and national climate targets require that railroads be decarbonized over the long term. How quickly the world adopts these alternative sources of power will have a large impact on the crude markets and the Energy sector.

(5) *Expectations behind the Energy sector.* The S&P 500 Energy sector's revenues per share have been falling for much of the past seven years (*Fig. 8*). The sector's revenue is again expected to fall by 34.3% in 2020, but then to climb 14.1% next year (*Fig. 9*). Earnings have also been falling in recent years, with the sector expected to post a sharp decline this year of -108.4%, but then to enjoy a sharp rebound next year (*Fig. 10*). In a positive sign, earnings net revisions were positive in the last four months after many years of downward revisions (*Fig. 11*).

While the price of Brent oil may increase, the improvement likely will be capped around $50 a barrel, because anytime it revives beyond that level, producers are likely to flood the market with the additional oil production that's being held back. And if that flood becomes a tsunami, expect the canary to stop singing once again.

Disruptive Technologies: Bright Advancements in Solar. Theoretically, solar energy just makes sense. Sunshine is free and widely available. It doesn't require drilling or mining. No country owns it. And assuming that we figure out soon how to harness it where it is needed, solar energy doesn't need to be transported. To create this utopian solar world, producing solar energy needs to become more efficient and cheaper. Fortunately, scientists are on the job. Here are some of the advancements they're working on:

(1) *Meet perovskites.* Most solar panels are made using silicon, and while they are increasingly affordable, their energy efficiency of only 7%-16% leaves room for improvement. Some of the most advanced silicon solar panels enjoy energy efficiency of 25%-30%.

Enter perovskites, a family of crystals. When made into thin-film photovoltaic panels, the material "can absorb light from a wider variety of wave-lengths, producing more electricity from the same" amount of sunlight, an October 20 OilPrice article reported.

The US Department of Energy's National Renewable Energy Laboratory is working with the Advanced Perovskites Consortium to develop perovskite solar cells. The Department of Energy's Oak Ridge National Lab announced the discovery of "hot-carrier perovskite solar cells" that would push efficiency up to 66% by harnessing the heat that's generated.

Here's how the lab explained its discovery: "When sunlight strikes a solar cell, photons create charge carriers—electrons and holes—in an absorber material. Hot-carrier solar cells quickly convert the energy of the charge carriers to electricity before it is lost as waste heat. Preventing heat loss is a grand challenge for these solar cells, which have the potential to be twice as efficient as conventional solar cells. The conversion efficiency of conventional perovskite solar cells has improved from 3% in 2009 to more than 25% in 2020. A well-designed hot-carrier device could achieve a theoretical conversion efficiency approaching 66%." There was no word on cost or availability of the new solar product. But if its broad adoption is feasible and economical, its promise is great, since it would reduce the number of solar panels needed to generate a given amount of energy.

(2) *Solar panels without the sun.* One of the largest problems with solar energy is how to deal with cloudy days when the sun doesn't shine enough to produce the energy needed. So far, the solution has been to install large batteries to store energy for a cloudy day. But a new invention aims to harness ultraviolet (UV) light that's available whether the sun is shining or not.

Aurora Renewable Energy and UV Sequestration (a.k.a. AuREUS) turns fruit and vegetable crop waste into an organic luminescent material that absorbs UV light. The material is mixed with a resin and lined with a solar film to create glass-like panels, a November 23 *Fast Company* article reported. Unlike traditional solar panels, this material theoretically could be used as the outside coating on walls or windows of an entire building. The resin could also be used in threads to create power-generating fabrics. Now wouldn't that be convenient on the ski slopes: a jacket that creates its own heat?!

(3) *Solving for energy storage.* Scientists from Linköping University in Sweden have developed a new molecule that can absorb energy from sunlight and store it in the molecule's chemical bonds, according to an August 31 report in *Science Daily*. Such a molecule could be used to collect and store solar energy for future use, once the scientists figure out how to release the stored energy. That's what they're working on now.

CALENDARS

US: **Wed:** Real GDP & Price Deflator 33.2%/3.7%, Personal Income & Spending 0.1%/0.3%, Core PCED 0.0% y/y, Consumer Sentiment Index Total, Present Situation, and Expectations 77.7/85.8/71.3, Initial & Continuous Jobless Claims 730k/6.02m, Durable Goods Orders Total & Ex Transportation 1.0%/0.5%, Goods Trade Balance, New Home Sales 970,000, MBA Mortgage Applications, EIA Crude Oil Inventories, EIA Natural Gas Storage, Baker-Hughes Rig Count, FOMC Minutes. **Thurs:** None. **Fri:** None. (DailyFX estimates)

Global: **Wed:** ECB Financial Stability Review, UK 2020 Spending Review, Mauderer, Wuermeling. **Thurs:** Germany Gfk Consumer Confidence -5, France Consumer Confidence 92, Japan Leading & Coincident Indicators 92.9/80.8, ECB Monetary Policy Meeting Account, Schnabel. **Fri:** Eurozone Economic Sentiment 86.5, Italy Consumer & Business Confidence 99.0/93.5, Weidmann, Panetta, Schnabel, Balz. (DailyFX estimates)

STRATEGY INDICATORS

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 previously had been falling at rates paralleling the declines during the 2008-09 financial crisis. Forward revenues is at its highest level since mid-March and is now just 2.5% below its record high in mid-February. Forward earnings is at its highest level since late March and is now 7.8% below its record high in early March. Forward revenues growth of 6.8% is down 0.1ppt w/w from its highest reading since August 2011 and up from 0.2% in April, which was the lowest reading since June 2009. Forward earnings growth of 18.4% was down 0.3ppts w/w and has slipped 0.5ppts in the past two weeks from its highest reading, but since August 2010. Forward earnings growth is up 24.0ppts from its record low of -5.6% at the end of April. Analysts expect revenues to decline 3.1% y/y in 2020 and rise 7.6% in 2021 compared to the 4.3% reported in 2019. Analysts expect an earnings decline of 15.4% y/y in 2020 and a 21.9% gain in 2021 compared to a 1.5% rise in 2019. The forward profit margin of 11.3% was steady w/w at its highest reading since early April. That's up a full point from 10.3% during April and May, which was the lowest level since August 2013. It's still down 1.1ppt from a record high of 12.4% in September 2018. Analysts expect the profit margin to fall 1.4ppt y/y in 2020 to 10.1%—from 11.5% in 2019—and to improve 1.3ppt y/y to 11.4% in 2021. The S&P 500's weekly forward P/E edged down 0.1pts w/w to 21.8, but is up from a six-

month low of 20.6 at the end of October. 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 ticked down 0.01pt w/w to 2.47. That's below its record high of 2.53 at the beginning of September and up from the 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 six of the 11 S&P 500 sectors. Energy and Utilities had both measures decline w/w. These four had both measures rise w/w: Consumer Discretionary, Consumer Staples, Financials, and Tech. Due to the sharp decrease in forward earnings this year, forward P/E ratios for nearly all sectors now are back above their recent record or cyclical highs prior to the bear market. 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. During 2019, just two sectors' margins improved y/y: Financials and Utilities. The forward profit margin rose to 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. In the latest week, Real Estate's forward profit margin continued to edge up from its lowest level since March 2012. Here's how the sectors rank based on their current forward profit margin forecasts versus their highs during 2018: Information Technology (22.3%, down from 23.0%), Financials (15.2, down from 19.2), Utilities (14.3, record high), Communication Services (14.0, down from 15.4), Real Estate (13.0, down from 17.0), S&P 500 (11.3, down from 12.4), Health Care (10.7, down from 11.2), Materials (10.5, down from 11.6), Industrials (8.4, down from its record high of 10.5% in mid-December), Consumer Staples (7.5, down from 7.7), Consumer Discretionary (6.5, down from 8.3), and Energy (2.5, 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 declines. Since then, S&P 500 forward revenues has risen 6.0%, forward earnings has gained 17.1%, and the forward profit margin has risen 1.0pt to 11.3%. Among the 11 sectors, all but Real Estate posted new post-Covid-19 highs last week in either their forward revenues, earnings, or profit margin. The biggest laggards: Energy's revenues and earnings and Real Estate's earnings and profit margin. Energy's forward revenues remains near a 15-year low and is falling from its post-Covid-19 high in July. Real Estate's forward earnings remains near a six-year low, and its profit margin is near an eight-year low. Here's how the 11 sectors rank by their changes in forward revenues and forward earnings since May 28: Consumer Discretionary (forward

revenues up 9.8%, forward earnings up 52.4%), Information Technology (7.9, 10.9), Materials (7.0, 27.2), Industrials (6.9, 22.9), Financials (6.9, 20.5), Communication Services (8.2, 13.3), S&P 500 (6.0, 17.1), Health Care (5.1, 12.6), Consumer Staples (2.9, 7.5), Real Estate (0.4, -8.2), Energy (-0.9, 339.3), and Utilities (-1.9, 1.4).

US ECONOMIC INDICATORS

Consumer Confidence (*link*): Consumer confidence fell this month as coronavirus cases climbed, with Lynn Franco, senior director of economic indicators at The Conference Board, noting: "Heading into 2021, consumers do not foresee the economy, nor the labor market, gaining strength. In addition, the resurgence of COVID-19 is further increasing uncertainty and exacerbating concerns about the outlook." The Consumer Confidence Index (CCI) slipped to 96.1 this month, after climbing 15.1 points during the two months through October, to a seven-month high of 101.4—though virtually all the gain occurred in September (to 101.3 from 86.3 in August); it was at 132.6 in February. Consumer expectations are dragging the CCI lower, sinking 13.4 points during the two months through November to 89.5; it had jumped 16.3 points in September to a three-month high of 102.9. The present situation component of the CCI was little changed at 105.9 this month, retaining nearly all of the 20.4-point gain from 85.8 in August to 106.2 in October. Consumers' assessment of present-day conditions held steady in November: The percentage of consumers claiming business conditions are good (to 17.6% from 18.6%) slipped a bit, while the percentage claiming business conditions are bad (33.5 from 34.4) also moved lower. Consumers' appraisal of the current job market also held steady. The percentage of consumers saying jobs are plentiful was unchanged at 26.7% this month, while the percentage claiming jobs are hard to get (19.5 from 19.6) barely budged. Meanwhile, the consumers' short term outlook deteriorated this month: The percentage of consumers expecting business conditions to improve (to 27.4% from 36.0%) fell 8.6ppts this month, while those expecting business conditions to worsen (19.8 from 15.9) rose 3.9ppts; 52.8% expect things to remain the same—an eight-month high. Consumers' outlook for employment showed the percentage expecting more jobs (to 25.9% from 32.0%) was 6.1ppts lower, while the percentage expecting fewer jobs (20.5 from 19.8) was fractionally higher; 53.6% expected employment conditions to remain the same, also an eight-month high.

Regional M-PMIs (*link*): Four Fed districts now have reported on manufacturing activity for November (New York, Philadelphia, Kansas City, and Richmond) and show the manufacturing sector expanded at a slower though still elevated rate, thanks to continued strong growth in the Philadelphia region. The composite index slipped to 14.7 this month after climbing the prior two

months from 13.2 to 21.2—which was the strongest reading since July 2018; it was at a record low -54.7 in April. Activity in the Philadelphia (to 26.3 from 32.3) region slowed a bit, after accelerating at its fastest pace since February last month, while Richmond's (15.0 from 29.0) expanded at roughly half October's pace, though still was faster than both the Kansas City and New York regions. Growth in the Kansas City (11.0 from 13.0) region held around October's pace, while New York's (6.3 from 10.5) slowed for the second month. The new orders (to 18.2 from 28.2) measure also revealed growth in billings remained at an elevated rate, though not as robust as October's—which was the strongest since the end of 2003. Once again, Philadelphia (to 37.9 from 42.6) saw the strongest growth, with billings not far from October's pace—which was the best since the 1970s—while Kansas City's (19.0 from 26.0) remained relatively strong, though not as strong as last month. Meanwhile, both the Richmond (to 12.0 from 32.0) and New York (3.7 from 12.3) regions saw billings expand at about one-third October's pace. November's employment measure showed factories added to payrolls at roughly the same pace as last month—which was the best since the end of 2018—slipping to 12.7 from 13.0; manufacturers have added to payrolls for five consecutive months following four months of cuts. Philadelphia (to 27.2 from 12.7) manufacturers hired at their best pace since July 2019 last month, while Richmond's (13.0 from 23.0) hired at a slower though still solid rate, and New York 's (9.4 from 7.2) saw their best tally since the end of last year. In the meantime, Kansas City (1.0 from 9.0) manufacturers basically stopped hiring this month after October's hiring flurry, matching the best performance since December 2018.

GLOBAL ECONOMIC INDICATORS

Germany Ifo Business Climate Index (*link*): "Business uncertainty has risen," stressed Clemens Fuest, president of the Ifo Institute, adding that the "second wave of coronavirus has interrupted Germany's economic recovery." Ifo's Business Climate Index declined for the second month to 90.7 this month, after climbing steadily from 75.4 in April to 93.2 by September, led by a drop in expectations. The expectations component sank 5.8 points the past two months, to a six-month low of 91.5 in November, after a five-month surge of 25.7 points (to 97.3 from 71.6) from April through September. Meanwhile, the present situation component was little changed at 90.0 this month, after climbing 11.5 points from 78.9 in May to a seven-month high of 90.4 in October. (The total, expectations, and present situation components were at 95.7, 92.7, and 98.8 before the pandemic hit.) By sector, sentiment among manufacturing companies continued to improve, rising steadily from -42.1 in April to +3.5 in November—its second positive reading since June 2019, October's (+1.5) being the

first. The flash estimate for November's M-PMI (to 57.9 from 58.2) shows growth in Germany's manufacturing sector was close to October's pace—which was the strongest since April 2018. In the meantime, sentiment in the service sector deteriorated for the third month, to -3.1—its first negative reading since June—after climbing from -32.7 in April to +7.6 by August. The flash estimate for the NM-PMI (to 46.2 from 49.5) shows Germany's service sector contracted for the second month in November, following three months of expansion; the reading is considerably below July's 13-month high of 55.6. Sentiment among construction companies (to -0.10) took another step back this month—slipping back below zero after climbing steadily from -17.0 in April to +3.5 by September.

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