MORNING BRIEFING
December 20, 2017

Creative Destruction in 2018 and Beyond

The next* Morning Briefing *will be sent on January 3.
We wish you all the best during the holidays and the year ahead.

See the collection of the individual charts linked below.

(1) The year of living disruptively. (2) 2017 saw sea changes in how we shop, relax, store energy, and think of money. (3) Winds of change have buffeted sector leadership. (4) Change is the only constant, so expect more of same. (5) Next year's game- and life-changers: AI, robotics, genetic engineering. (6) May 2018 bring tidings of comfort as innovations make life easier and joy as investment opportunities abound.

The Great Disruption. The end of one year and start of the next is the perfect time to reflect and resolve to change for the better. At the start of this year, the most popular resolutions involved the typical fare: the desire to get healthy, get organized, live life to the fullest, learn a new hobby, spend less or save more, travel and read more.

Philosophers like to wax poetic about change. Nuggets of wisdom include: "The only thing that is constant is change." There's also: "The more things change the more they stay the same." And for the deep thinkers in the crowd: "No man ever steps in the same river twice, for it's not the same river and he's not the same man." Thank you, Heraclitus.

Change—and the resulting disruption—has buffeted many S&P 500 industries this year. Sometimes, the change began many years ago, but momentum seemed to pick up and reach a tipping point this year. For example, the Internet has been widely used for almost two decades, but this year, hundreds of bricks and mortar retailers shut their doors as competition from Internet and off-price retailers caused the likes of Sears, Macy's, and others to shrink in bid for survival.

Likewise, the battery has been around since the 1800s, but improvements in energy storage are making solar and wind energy generation viable alternatives to gas- and coal-powered electric plants. Batteries may also be on the verge of driving major changes in transportation. Blockchain, artificial intelligence, and genetic engineering may be new advancements, but there's no doubting they will shake up the status quo for years to come.

Change isn't necessarily a bad thing. The stock market is having a banner year. Here's the performance derby for the S&P 500 sectors ytd through Monday's close: Tech (39.7%), Health Care (21.7), Consumer Discretionary (21.5), Financials (20.7), Materials (20.4), S&P 500 (20.2), Industrials (17.8), Utilities (12.0), Consumer Staples (10.5), Real Estate (8.6), Telecom Services (-6.0), and Energy (-7.5).

Jackie and I have been writing about the Great Disruption during most of 2017. Let's review some of this year's biggest disruptions as we're about to start a new year:

(1) *The Internet*. We've been surfing the 'net for almost 20 years now, but people are still figuring out

ways to use it to change just about everything. Book, electronic, and clothing retailers have been facing intense competition—and shuttering storefronts—for years. But 2017 will go down as the year store closures accelerated despite a strong economy and competition invaded the grocery aisles.

Deborah Weinswig, an analyst at Fung Global Retail & Technology, tracks announcements of the openings and closures of a set number of US retailers. She reports that closure announcements increased by 229% ytd in 2017, bringing the total number of stores to be closed to 6,985. The most recent casualty: Charming Charlie, which sells inexpensive jewelry and novelty items, filed for bankruptcy protection and announced plans to shut 100 of its roughly 370 stores by yearend.

The biggest store closures in 2017 came from RadioShack (1,470 stores), Payless (700 stores), and rue21 (400 stores). Conversely, announcements of store openings rose 50%, to 3,433 stores, with the largest expansions coming from Dollar General (1,285 stores), Dollar Tree (650 stores), and Aldi (400 stores).

Competition in the grocery business hit a frenzied pitch this year as Amazon acquired Whole Foods in August, following Walmart's purchase of Jet.com in September 2016. Throw in the US expansion of German grocers Aldi and Lidl, and you've got an intensely competitive market that has kept a lid on consumers' food prices and squeezed margins.

"Higher prices for vegetables, beef and eggs helped push the food portion of the producer-price index up 3.5% annually in November, according to the Labor Department. Meanwhile consumers paid just 0.6% more for groceries that month than a year earlier, the department said on Wednesday. The spread between producer and retail prices is the widest in more than three years," a 12/17 *WSJ* article reported, referring to data from Barclays.

The disruption has also put pressure on food companies, leading many of them into marriages. The latest deals were announced this week: Campbell Soup plans a $6.1 billion acquisition of Snyder's-Lance, and Hershey offered $1.6 billion to buy Amplify Snack Brands.

The market seems to have decided that Amazon, Walmart, and Costco can co-exist. Their shares are up 57.8%, 41.6%, and 20.1% through Monday's close. They've helped power the S&P 500 Internet & Direct Marketing Retail index 49.6% higher ytd and the S&P 500 Hypermarkets & Supercenters index 35.0% higher (*Fig. 1* and *Fig. 2*).

Investors should be aware that both industries have P/E multiples near 15-year highs. The Internet Retail industry, which also contains highflier Netflix, is expected to grow earnings 37.0% over the next 12 months, but boasts a 71.8 forward P/E (*Fig. 3* and *Fig. 4*). The Hypermarkets & Super Centers industry is only expected to grow earnings by 6.9% over the next 12 months, which makes its forward P/E of 23.2 look equally pricy (*Fig. 5* and *Fig. 6*).

Meanwhile, the S&P 500 Food Retail industry, with Kroger its sole constituent, has fallen 0.3% ytd, and the S&P 500 Packaged Foods & Meats industry has lost 0.8% ytd (*Fig. 7* and *Fig. 8*). The Food Retail industry has a much lower forward P/E of 13.5, but its earnings are forecasted to fall by 2.5% over the next 12 months (*Fig. 9* and *Fig. 10*). The Packaged Foods industry's forward earnings are expected to grow 7.1%; however, its forward P/E is 18.0 (*Fig. 11* and *Fig. 12*). Maybe it's time to stay away from all of the above until valuations—or growth prospects—look more attractive.

(2) *Certainly entertaining*. Streaming television shows and movies over the Internet to televisions, computers, and cell phones existed in years past, but 2017 seemed to be the year that hit shows from Netflix and Amazon attracted large enough audiences to make even the industry's titans take notice.

Disney's $52.4 billion acquisition of 21st Century Fox's assets was undoubtedly a reaction to changes in the industry. The deal gives Disney more content to stream directly to customers, instead of relying on Netflix for distribution. The added heft should also help Disney in future negotiations about the distribution of its content with cable and wireless companies now that the Trump administration has rolled back net neutrality.

Change has not been kind to the S&P 500 Movies & Entertainment index, which is up only 5.1% ytd. With Disney, Fox, Time Warner, and Viacom as members, the industry has suffered from downward earnings revisions, and it's expected to grow earnings by 6.5% over the next 12 months (*Fig. 13* and *Fig. 14*). However, not much enthusiasm is priced into the shares now that the industry's forward multiple has fallen to 15.3 (*Fig. 15*).

The S&P 500 Cable & Satellite industry index has fared better, returning 12.8% ytd, while the S&P 500 Broadcasting stock price index has fared worse, falling 5.2% ytd. Despite fears of losing eyeballs, the Broadcasting industry is expected to grow earnings by 10.9% over the next 12 months and has a forward P/E of only 11.4 (*Fig. 16* and *Fig. 17*). Meanwhile, the forward P/E of the S&P 500 Cable & Satellite industry, at 21.6, is lofty relative to its expected forward earnings growth of 12.8% (*Fig. 18* and *Fig. 19*).

(3) *Old dog, new tricks*. The lowly battery is having a renaissance. The ability to make more powerful batteries that can last longer has meant they can now be used to power cars and trucks and to store vast quantities of power generated by wind and solar farms. The developments have had wide impact on the auto industry, utilities, GE, Siemens, and even commodities.

Elon Musk is, of course, the poster child for the battery's evolution, renowned for his Gigafactory in the Nevada desert and Tesla cars. Despite the company's lack of profits, Tesla's stock is up 58.6% ytd, dwarfing GM's 21.0% advance and Ford's 4.4% gain.

The S&P 500 Automobile Manufacturers (Ford and GM) index is up 12.9% ytd, and while it has a forward P/E of only 7.5, earnings are expected to fall by 10.5% over the next 12 months (*Fig. 20* and *Fig. 21*). In this cyclical industry, a low P/E may indicate peak earnings.

The use of batteries to store electricity made by solar and wind farms has reduced the need to build new electric plants. And as we discussed in the 11/28 *Morning Briefing*, fewer plants has meant less demand for the giant generators produced by GE and Siemens. However, it has also meant increased demand for lithium. One of the largest producers of lithium, Albemarle, has seen its shares climb 53.4% ytd, which has helped push the S&P 500 Specialty Chemicals industry stock index up 31.0% ytd (*Fig. 22*).

(4) *Building on blockchain*. While we haven't been fans of bitcoin or other cryptocurrencies, we have tracked with interest the many new uses that various industries are finding for blockchain, the system that tracks cryptocurrencies transactions. Transactions are monitored by multiple computers so that data can be tracked, verified, and hopefully not hacked. Multiple users can safely access data that is constantly updated.

Cargill is testing blockchain as a way to track turkeys as they move from the farm to the grocery store, a 10/25 *WSJ* article reports. The food industry hopes using blockchain will help it improve food safety and reduce waste. The real estate industry is evaluating how to use blockchain to record property titles.

Some of the highest hopes for the technology are centered on using it in the financial industry. It could be used to track the clearing and settlement of many different types of loans and securities. "In the US, DTCC is working with IBM, R3 and Axoni to shift post-trade clearing of single-name credit default swaps on to a blockchain system by the end of next year. If this goes well, the plan is to do the same with other derivatives processed by the giant US clearing house," reported a 10/16 *FT* article.

Central banks could shift their payments systems onto blockchain or use it as the foundation for their own cryptocurrencies, the *FT* article continued. Blockchain could be used in trade finance, the verification of customers, and loan syndication. The rollout of this new technology undoubtedly will hurt some businesses, causing layoffs in some areas, but also will cut costs and create new jobs in other areas.

This is by no means an exhaustive list of the changes that we've tracked this year or that we expect to follow in the coming months. Artificial intelligence, robots, and genetic engineering appear to be in the first inning of fascinating nine-inning games. May 2018 contain plenty of changes that make all of our lives better and provide many investment opportunities.

CALENDARS

US. Wed: Existing Home Sales 5.520mu, MBA Mortgage Applications, EIA Petroleum Status Report. **Thurs:** GDP & PCE 3.3%/2.3%, GDP Price Deflator 2.1%, Corporate Profits. Leading Indicators 0.4%, Philadelphia Fed Manufacturing Index 21.8, Chicago Fed National Activity Index 0.20, Jobless Claims 234k, FHFA Price Index 0.4%, Weekly Consumer Comfort Index, EIA Natural Gas Report. **Fri:** Personal Income & Consumption 0.4%/0.5%, PCED Total & Core 1.8%/1.5% y/y, Consumer Sentiment Index 97.0, Durable Goods Orders, Total, Ex Transportation, and Core Capital Goods 2.0%/0.6%.0.3%, New Home Sales 650k, Kansas City Fed Manufacturing Index, Baker-Hughes Rig Count. (*Wall Street Journal* estimates)

Global. Wed: Carney. **Thurs:** Eurozone Consumer Confidence 0.2%, UK Gfk Consumer Confidence -12, Canada Headline & Core CPI 2.0%/1.7% y/y, Canada Retail Sales Total and Ex Autos 0.3%/0.4%, BOJ Rate Decision, Kuroda. **Fri:** Germany Gfk Consumer Confidence 10.7, France GDP 0.5%q/q/2.2%y/y, Canada GDP 3.5% y/y. (DailyFX estimates)

STRATEGY INDICATORS

S&P 500 Sectors Net Earnings Revisions (*link*): The S&P 500's NERI was positive for an eighth straight month in December, its longest positive streak since the 26-month string ending August 2011. NERI improved to a five-month high of 4.2% from 2.6% in November, but is down from a six-year high of 6.2% in June. NERI improved m/m for 9/11 sectors in December and was positive for 7/11 sectors (compared to six improving and five positive in November). Tech topped all sectors in December for a fifth month in a row and has the longest positive NERI streak of 17 months, the best since August 2011 when its 28-month streak ended. Financials has the next best positive streak at 15 months, followed by Materials (3). Consumer Discretionary has the worst recently, with five straight months of negative NERIs, followed by Real Estate (4). Telecom has been negative in 19 of the past 20 months. Here are the sectors' December NERIs compared with their November readings, ranked in descending order: Tech (16.3% in December, down from an 88-month high of 16.9% in November), Energy (12.2 [11-month high], 6.5), Financials (7.6, 4.6), Materials (6.8 [77-month high], 4.6), S&P 500 (4.2, 2.6), Industrials (3.2, -0.3), Consumer Staples (2.9 [17-month high], -0.8), Utilities (1.3, 0.8), Health Care (-2.0 [8-month low], -1.7), Consumer Discretionary (-5.0, -5.7), Real Estate (-6.1 [nine-month low], -4.4), and Telecom (-14.9, -16.2).

AC World ex-US MSCI (*link*): This index is up 22.5% ytd in dollar terms after rising 1.7% in 2016. In local-currency terms, the index has risen a lower 15.0% ytd compared to its 4.1% gain for all of 2016. Local-currency forward revenues has risen 7.4% from a five-year low in March 2016 to near its highest level since November 2015. Forward revenues has been more stable longer term and is down just 3.6% from its October 2014 record high. Local-currency forward earnings has performed better, with a 22.6% rise from its six-year low in March 2016 to its highest level since October 2008, but remains 4.6% below its September 2008 record. Revenues are expected to rise 7.7% in 2017 and 5.0% in 2018 following a 1.1% decline in 2016, and earnings are expected to rise 18.9% (2017) and 8.6% (2018) after rising 3.5% (2016). Analysts are forecasting STRG of 5.1%, down from a seven-year high of 6.8% in March and up from a cyclical low of 2.3% in March 2016. Their STEG forecast of 9.5% is down from a four-year high of 14.1% in March, but up from their 6.3% forecast in January 2016, which was the lowest in seven years. The implied profit margin is expected to rise to 7.8% in 2017 from 7.1% in 2016 before improving to 8.1% in 2018. The forward profit margin forecast of 8.1% is at a nine-year high now. NERI was positive in December for a third straight month as it improved to 1.6% from 1.3%, but is down from a 76-month high of 2.7% in May. That compares to a 51-month low of -11.3% in March 2016. The P/E of 14.2 in December is down from a 15-month high of 14.5 in October, which compares to a 16-month low of 12.4 in February 2016 and a six-year high of 15.3 in April 2015. The index's 13% discount to the World P/E matches the record-low 13% discount of early March.

EMU MSCI (*link*): The EMU's MSCI price index has gained 26.0% ytd in dollar terms after falling 1.2% in 2016. In euro terms, the price index is up a lower 12.6% ytd following a 1.8% gain for all of 2016. Euro-based forward revenues has improved 3.8% from its six-year low in May 2016 to 0.5% below its cyclical high (August 2015) and 7.3% from its record high (September 2008). Euro-based forward earnings had stalled from 2011 to 2016—but is now 8.5% above its prior cyclical high in September 2015 to near its highest level since September 2011. It remains 21.8% below its record high in January 2008, but has improved 16.0% from its 23-month low in June 2016. Analysts expect revenues to rise 4.9% and 3.8% in 2017 and 2018, respectively, after falling 2.0% in 2016, but think earnings will rise 10.2% in 2017 and 9.3% in 2018 following a 4.3% increase in 2016. Forecasted STRG of 3.8% is down from a six-year high of 5.0% in April, but up from 2.0% in May 2016. Forecasted STEG of 9.4% is down from a 78-month high of 21.0% in February, which compares to a seven-year low of 5.7% in April 2016. STEG had been higher than LTEG (currently 13.1%) from July 2016 to May 2017, but is trailing now. The forward profit margin was steady at a six-year high of 7.5% in December, up from a cyclical bottom of 6.2% in May 2013. The implied profit margin is expected to improve to 7.1% in 2017 from 6.8% in 2016 before rising another 0.4ppt to 7.5% in 2018. NERI was negative in December for a fifth month following eight straight positive readings, rising to -2.8% from -3.9%. Those readings are the lowest among the world's regions and down from a 131-month high of 8.1% in May, which compares to a 24-month low of -13.2% in April 2016. The P/E of 14.6 is up from 14.5 in November, which compares to a 13-year high of 16.4 in April 2015 and a 30-month low of 12.2 in February 2016. That represents an 11% discount to the World MSCI's P/E now, up from a record-low 25% discount during 2011. But the current reading is still well below the 1% premium during April 2015—the post-euro-inception record high.

Emerging Markets MSCI (*link*): The EM MSCI price index is up 30.1% ytd in US dollar terms after rising 8.6% in 2016. In local-currency terms, EM has gained a lower 25.0% ytd compared to a 7.1% gain in 2016. Local-currency forward revenues is up 8.2% from a four-year low in June 2016 to 8.9% below its November 2014 record. Local-currency forward earnings has fared substantially better, rising to a fourth straight monthly record high for the first time since January 2014; it has improved 29.5% from April 2016's six-year low. Revenues are expected to rise 10.7% in 2017 and 8.6% in 2018 following a 2.3% gain in 2016, leading to earnings gains of 22.6% (2017) and 13.2% (2018) following a 7.7% rise in 2016. Forecasted STRG of 8.6% is back on an uptrend since early 2016, but is down from a four-year high of 9.6% in late January. STEG of 13.0% is down from 13.4% in November, and is below LTEG (22.3%) again. The implied profit margin is expected to improve to 7.0% in 2017 from

6.3% last year before edging up to 7.3% in 2018. The forward profit margin of 7.3% is the highest since January 2013 and up from a record low of 6.0% in February 2016, but remains 3ppts below its 10.3% record high in December 2007. NERI was positive for a second month in December after 80 months of negative readings through October, but was steady at 1.7%. That compares to an 83-month low of -10.2% in March 2016. Emerging Markets' valuation has been more stable recently than that of the rest of the world, but fell to 12.2 in December from November's eight-year high of 12.8. The index is trading at a 25% discount to the World MSCI P/E, up from a 10-year-low 30% discount in August 2016.

MSCI World & Region Net Earnings Revisions (*link*): Analysts' recent earnings revisions through December point toward improving optimism about profits across the world as the United States led all regions and several emerging markets weakened slightly m/m. The AC World MSCI's NERI was positive for an 11th month and for the first time since June 2011, improving 0.7ppt to a six-month high of 2.5% from 1.9% in November, but is down from a 74-month high of 3.3% in May. The AC World Ex-US was positive for a third month as it improved 0.3ppt to a seven-month high of 1.6% from 1.3%, which compares to a 76-month high of 2.6% in May. Emerging Markets' NERI was positive for a second month following 80 straight negative readings, as it edged up to an 83-month high of 1.7%. EM Latin America remained negative for a 17th month despite rising 1.2ppts to a 15-month high of -0.8%; EM Asia was positive for a third month as it edged down 0.1ppt to 2.0% from an 82-month high of 2.1%; EM Eastern Europe weakened 0.5ppt to 4.3% from a 93-month high of 4.8%; Europe (-1.8%) was negative for a fifth month following 10 positive readings; EAFE (1.5%) was positive for a 13th month; EMU (-2.8%) was the weakest and negative for a fifth straight month following eight positive readings. December's scores among the regional MSCIs: United States (4.7% in December, up from 3.1% in November), EM Eastern Europe (4.2, 4.8), AC World (2.5, 1.8), EM Asia (2.0, 2.1), Emerging Markets (1.7, 1.7), AC World ex-US (1.6, 1.3), EAFE (1.5, 0.9), EM Latin America (-0.8, -2.0), Europe ex-UK (-1.7, -2.6), Europe (-1.8, -2.1), and EMU (-2.8, -3.9).

MSCI Countries Net Earnings Revisions (*link*): NERI was positive for 23/44 MSCI countries in December, the most since July. That's up from 22/44 in November, 16/44 in October, and 12/44 in September, which was the lowest since July 2016, and compares to 29/44 in June, which was the highest since June 2010. NERI improved m/m in December for 28/44 countries compared to 28/44 rising in November, but that's still down from 32/44 in May, which had been the most since June 2016. Austria's NERI was at a 148-month high in December, followed by Switzerland's at a 97-month high, Brazil (91), Singapore (83), Thailand (66), Argentina (47), and India (38). On the flip side, Mexico's was at a 32-month low, followed by those of United Kingdom (20), Italy (15), South Africa (15), and Hong Kong (12). The 21-month positive NERI streak for Hungary is the best, followed by those of Austria (19), China (16), Hong Kong (14), Poland (14), Turkey (14), and Japan (13). South Africa's NERI has been negative for 43 straight months, followed by the negative streaks for New Zealand (19), Mexico (14), and Pakistan (13). NERI turned positive in December for two countries: India (first time in 38 months) and Australia (first time in eight months).

US ECONOMIC INDICATORS

Housing Starts & Building Permits (*link*): Housing starts rose for the second month in November as homebuilders broke ground on the most single-family homes in 10 years! Total housing starts climbed 3.3% last month, and 11.9% the past two months, to 1.297mu (saar), the highest in just over a year. Single-family starts jumped 5.3% and 11.8% over the comparable periods to 930,000 units—the highest since September 2007, while single-family permits climbed for the third month, by a total of 7.8%, to 862,000 units (saar)—its highest reading since August 2007! Regionally, single-family starts in the West and South rose 11.4% and 8.4%, respectively, to their highest readings since July 2007; single-family starts were unchanged in the Northeast, while the Midwest saw an 11.1% drop. Volatile multi-family starts slipped 1.6% last month to 367,000 units (saar) after a two-month surge of 23.9%, while multi-family permits fell 6.4% to 436,000 units (saar) after a 15.9% surge and a 14.8% plunge the prior two months. Meanwhile, NAHB's gauge of home-builder confidence for December rose 5 points to 74—the highest level in more than 18 years, on expectations of a stronger economy. The index's three components—buyer traffic (+8 points to 58), current sales (+4 to 81), and sales expectations (+3 to 79) all moved higher.

GLOBAL ECONOMIC INDICATORS

Germany Ifo Business Climate Index (*link*): "German businesses are full of festive spirits," according to Ifo. The Ifo business climate index did dip to 117.2 this month from 117.6 last month—but that was the highest in the history of the survey, going back to 1991. December's present situation component climbed from 124.5 to 125.4, only fractionally below July's record high of 125.8. Meanwhile, the expectations component slipped to 109.5, holding near November's seven-year high of 111.0. Ifo's expectations component correlates closely with German factory orders and production; the overall index tracks exports more closely. Recent Ifo data continue to support a continued acceleration in German activity.

Contact us by email or call 480-664-1333.

Ed Yardeni, President & Chief Investment Strategist, 516-972-7683
Debbie Johnson, Chief Economist, 480-664-1333
Joe Abbott, Chief Quantitative Strategist, 732-497-5306
Melissa Tagg, Director of Research Projects & Operations, 516-782-9967
Mali Quintana, Senior Economist, 480-664-1333
Jackie Doherty, Contributing Editor, 917-328-6848
Valerie de la Rue, Director of Institutional Sales, 516-277-2432
Mary Fanslau, Manager of Client Services, 480-664-1333
Sandy Cohan, Senior Editor & Webmaster, 570-775-6823