PERKINS
CAPITAL
MANAGEMENT, INC.

January 18, 2019

Dear PCM Clients and Friends:

We often talk about the weather on the first page of these letters. This year we also have the difficult stock market weather to discuss: December's Perfect Stock Market Storm. Just as the weather is uncertain and can change abruptly, so can the stock market "weather" change. In the markets, uncertainty is perceived as negative and often translates to selling. The perfect storm we had in December, which was more than we had expected, was a reaction to uncertainty: starting with the effect of rising interest rates, the recession question, Federal Reserve policy and, in our polarized country, the exaggerated responses, both positive and negative, to our President Donald Trump. We will expand on this in the section titled "A Perfect Storm."

The weather here in Minneapolis has been very mild for this time of year with very little snow for Christmas. So, our reputation as the nation's icebox and having snow as deep as a giraffe is tall is fading. The snowplows were parked waiting for that inevitable blizzard. As in the stock market, change did come quickly to our weather. We have now had that perfect storm, that is if you want snow, rain, and ice all together. This is what happened: light snow, rain, freezing temps turning highways into skating rinks with cars spinning in every direction. The picture shows what it was like for autos, but similar for people, who fell with nearly every step. The Perfect Winter Storm in Minnesota did produce a beautiful winter scene, with snow clinging to all the trees. We have also experienced the January thaw with warm temperatures of 40-44 degrees. This is the thaw with fog we wrote about in our January 17, 2018 letter which is called "case" weather, because it enables the Wisconsin cigar tobacco farmers to strip the tobacco stalks and get the leaves in the case in good shape.

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INVESTMENT MANAGEMENT

MESSSAGE FROM PERK

December's stock market storm was about more than just uncertainty. It was likely exacerbated by computer trading. Describing this are excerpted comments from the December 28, 2018 *Wall Street Journal* article on computer trading titled "Behind the Market Swoon: The Herdlike Behavior of Computerized Trading." As the authors state, behind the broad, swift market slide of December 2018 is an underlying new reality: Roughly 85% of all trading is on autopilot—controlled by machines, models, or passive investing formulas, creating an unprecedented trading herd that moves in unison and is blazingly fast. Since peaking in late September, the S&P 500 index of U.S. stocks had fallen 19.8% by year end. The S&P was down 15% through December 24 alone making December the worst December since the Great Depression. And it wasn't just stocks. Crude oil stood above $75 a barrel in October. By Christmas Eve it was below $43. Monday was the worst Christmas Eve for the Dow Jones Industrial Average in its history.

To many investors, the sharp declines are symptoms of the modern market's sensitivities. Just as cheery sentiment about the future of big technology companies drove gains through the first three quarters of the year, so too have shifting winds brought the market low in the fourth quarter. Today, quantitative hedge funds, or those that rely on computer models rather than research and intuition, account for nearly 29% of trading in the stock market. They now trade more than retail investors, and everyone else. Add to that passive funds, index investors, high-frequency traders, market makers, and others who aren't buying because they have a fundamental view of a company's prospects, and you get to around 85% of trading volume. Behind the models employed by quants are algorithms, or investment recipes, that automatically buy and sell based on pre-set inputs. Lately, they're dumping stocks, say traders and investors. Among the traders today are computers that buy and sell on models, and passive funds that seek only to hold the same securities as everyone else does. Meanwhile, bankers and brokers, once a steady source of buying and selling, have retreated. Today, when the computers start buying, everyone buys; and when they sell, everyone sells. The "herd" is now automated.

The Markets were remarkably placid in recent years, even as machine trading came to dominate, suggesting that these approaches didn't cause problems during the bull market, or even contributed to the market's extended calm. One reason the dynamic might have changed is that many of the trading models use momentum as an input. And when markets turn south, they're programmed to sell. And if prices drop, many are programmed to sell even more. So, the bouts of automated selling have landed in a market ill-prepared for it, and signs of diminishing liquidity can be found all across the markets. All of this volatility confuses the investing public who do not understand how this comes to be. It is frightening to see these extreme price changes and get whipsawed; although the percentage changes are not more than the past. The numbers are just bigger and do sound bigger in the news.

There's been a lot of change since I started in this business 60 years ago. Back then we had the telephone and a chalkboard for price changes in the Piper Jaffray trading area!

THE MARKET SCOREBOARD

Well, the market featured large-caps for both the 4th quarter and the year. The small-caps were among the worst performers for the year and the 4th quarter. Only one average, the Russell 1000, was up for the year, and none for the 4th quarter. Pretty dismal performance. 2018 was the first year in 50 years that no major asset class rose over 5% (Source: Ned Davis Research).

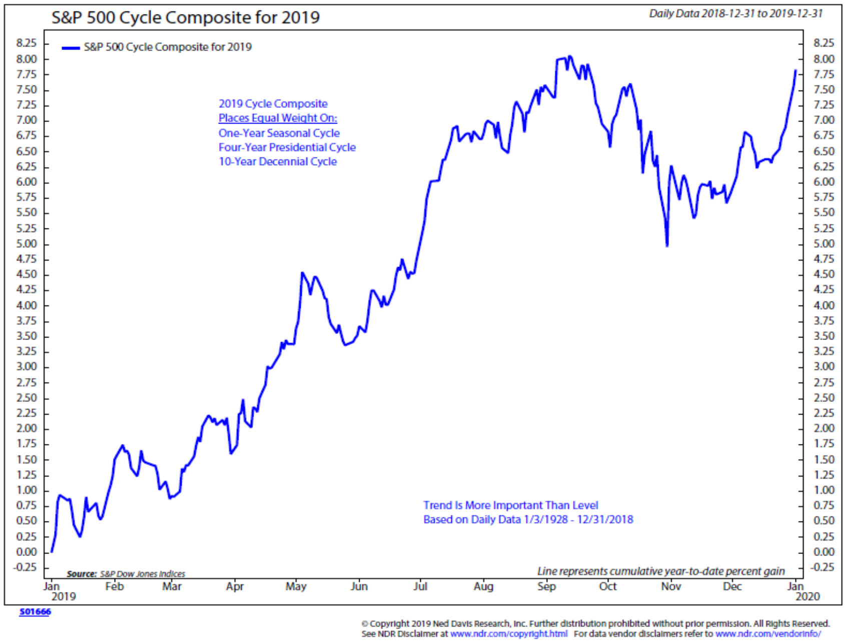
Ranked by YTD Return Indexes	% Return YTD 2018
Russell 1000 Total Return	4.78
NASDAQ Composite	-3.88
S&P 500 Total Return	-4.38
Russell 3000 Total Return	-5.24
Dow Jones Industrial Average	-5.63
Wilshire 5000	-7.36
S&P Small-Cap 600 Total Return	-8.48
Russell 2000 Total Return	-11.01
NYSE Composite	-11.20
Value Line Composite	-15.99

Ranked by Q4 Return Indexes	% Return Q4 2018
Dow Jones Industrial Average	-11.83
NYSE Composite	-13.06
S&P 500 Total Return	-13.52
Russell 1000 Total Return	-13.82
Russell 3000 Total Return	-14.30
Wilshire 5000	-14.90
NASDAQ Composite	-17.54
Value Line Composite	-18.96
S&P Small-Cap 600 Total Return	-20.10
Russell 2000 Total Return	-20.20

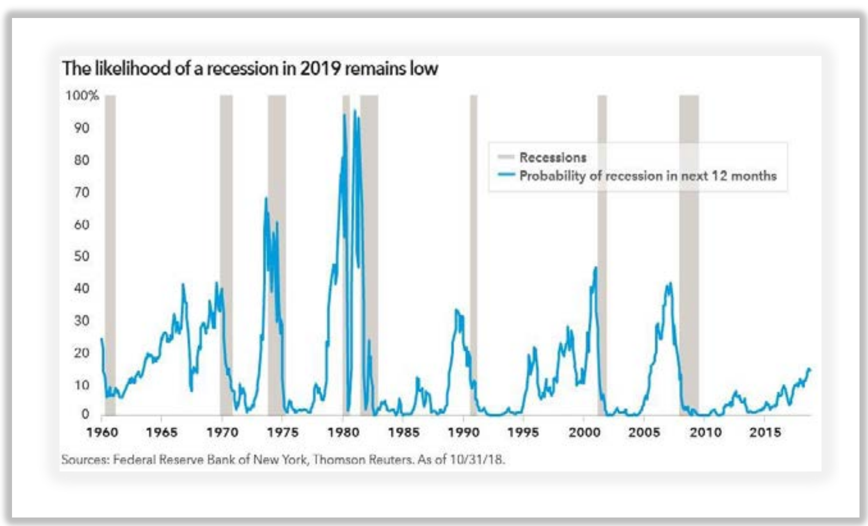
A PERFECT STORM

We ended our October 18, 2018 letter with a paragraph which stated: "Despite the robust economy and the message from Federal Reserve Chairman Powell, in which he recently said that "This historically rare pairing of steady, low inflation and very low unemployment is a testament to the fact we remain in extraordinary times." It would be unrealistic for us to expect the market not to have a correction from time to time. We appear to be in a bull market correction at this time, not the start of a bear market. "How could the 4th quarter 2018 decline, from peak to year end, a decline of 15% to 20% depending on which "average" one looks at, be only a correction and not be a bear market? The answer is a matter of semantics and, yes, the 4th quarter/December 2018 decline did reach the minimum percentage decline area, essentially 20%, which would be expected for a bear market; yet, so far this correction has not been sufficiently different in time or price than the three prior corrections since the 2009 bottom to be considered more than a tough correction. The three corrections since 2009 were in 2010, 2011, and 2015 with a decline of 16% in the 2010 correction, 19.4% in the 2011 drop and 14% in the 2015 decline. The media has focused on the current drop as a bear market, but the decline of 2018 is so far consistent with these past corrections. The same is true for the broader Russell 2000 and its 25.8% drop; where this 2018 decline was more consistent with the prior declines of 20.5% in 2010, 24.6% in 2011 and 26.4% in 2015.

As in prior years, we have referred to the Ned Davis Research Cycle Composite which projects what the next year, 2019, might look like in terms of an average market trend by combining with an equal weight the One-Year Seasonal Cycle with the Four-Year Presidential Cycle and the ten-Year Decennial Cycle. Last year's Composite was, as in prior years, remarkably predictive until, of course, December when it projected the market to go up not down into year end. Only the passage of time will reveal the future. At this time, it feels to us that we are in the process of completing a correction which was expected to occur in 2018 but, certainly, was a greater % decline in one month than expected. New bull market highs have followed the lows in each of the previous three corrections since 2009 by an average of about 4.5 months. So, in summary the current market looks like prior corrections, not the early stage of a bear market.



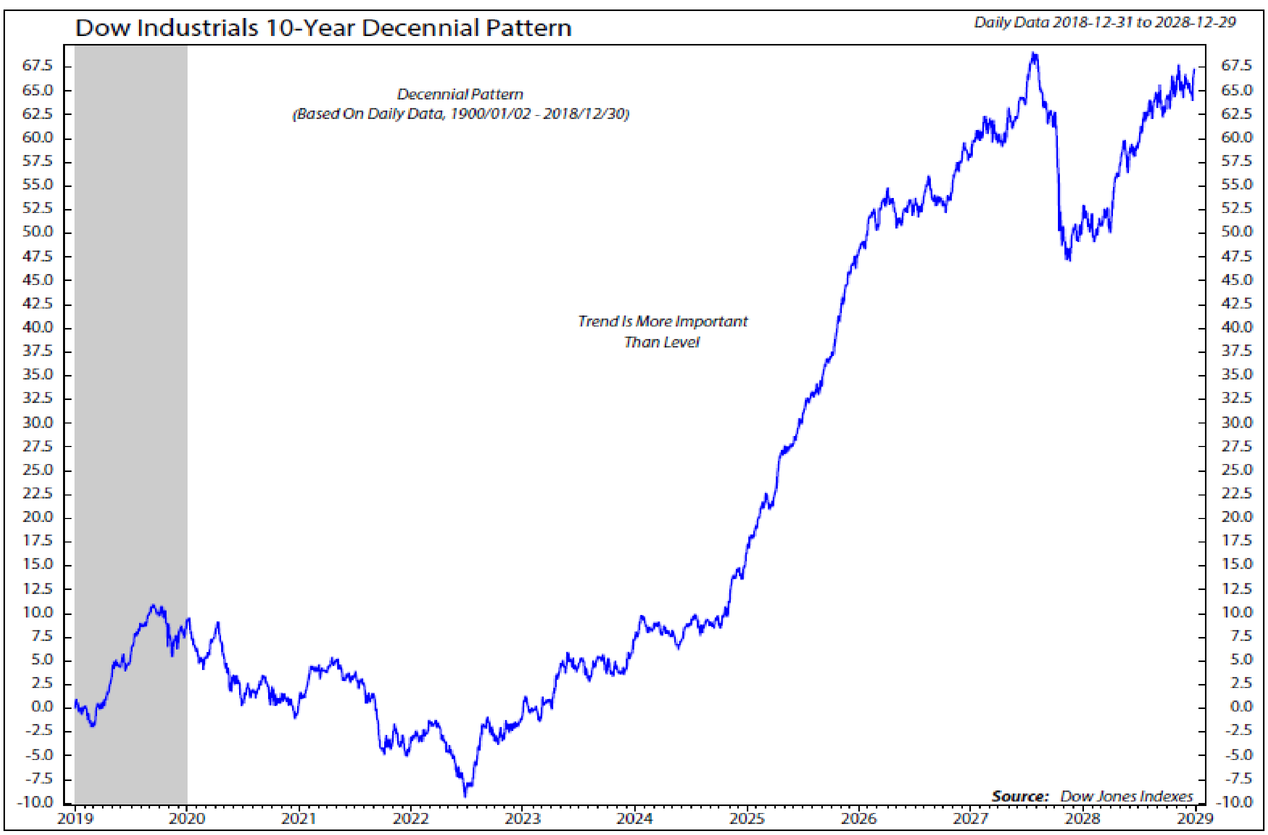
We noted earlier that concerns over interest rates, the recession question, Federal Reserve policy, and Trump had shifted as being perceived as generally positive realities to negative concerns which created enough uncertainty concerning the future among investors to have caused the market to have its long-awaited correction. In addition to these four issues, we could have mentioned any number of other issues from foreign trade war tariff negotiation concerns (China) to the slowing of international economies (Europe, Brexit and now China) as other uncertainties that the markets are worried about. There are many negative concerns today; as well as much to be positive about. Much of this is just noise. We will discuss and address some of these issues in future letters. To answer the question: Is this a correction or the start of a



bear market? What about 2019 or 2020? We feel the key, most important question to answer is whether we will or will not have a recession in 2019. Since January 2014 when meeting with clients in our office, we have stated in a one-pager that we did not anticipate a greater than 20% decline until we have a recession, which we did not expect in any of the past five years since January 2014 and do not expect in 2019. We have also stated, though, that we DO expect normal volatility: 4% to 20% at any time, within a typical range of small 4% to 8% corrections and some every few years at 10% or greater. This is what we believe has occurred twice in 2018 with the late January into early February correction of -10.2% and now the 4th quarter correction of -13.52% in the S&P 500.

Despite being "long in the tooth" which brings daily worry and consternation in the business news media about a late-cycle economy, in the end, we believe the U.S. economy will continue to enjoy positive growth in 2019. The numbers point to U.S. growth slowing from around 3% in 2018 back to 2% or so in 2019. At this time real GDP, income, certainly employment, industrial production and retail sales all appear to be increasing and at least modestly strong; not the falling economic activity needed for the textbook definition of a recession. The plow horse returns and continues plowing for a bit longer in 2019.

Our readers know that we are great believers in cycles and have included the Ned Davis 10-Year Decennial Pattern chart of the Dow Industrials in our letters frequently including both last October and January; we include it here again. With this chart it is very important

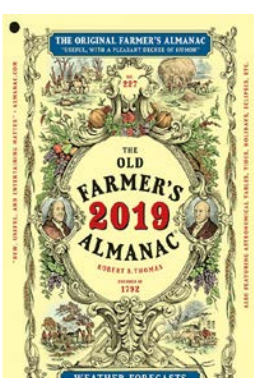


to note the comment within it which states: "Trend Is More Important Than Level." The lines or trends which form patterns or cycles in the Decennial Pattern are not necessarily predicting a certain percentage change; rather a turn in trend or direction and which years or periods of several years have been better or worse in trend than other years during different years in a decade. What is interesting at this point in time is that after a rise well into 2019, a Decennial Pattern top is predicted which leads to a significant multi-year trend change into mid-2022. This pattern is interesting in that it coincides nicely with the upcoming presidential election cycle; another 4-year cycle we have discussed in the past. We know that with the fall 2018 election completed and all the political disagreement in our country that we are in for an extremely bitter and contentious political period ahead throughout 2019 and much further into the presidential election in November of 2020; the results of which we cannot know today. What we can predict is that there is very likely to be considerable – too much political disagreement and negativity during this period. Lots of noise.

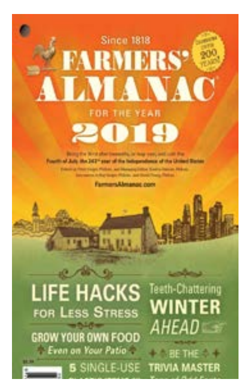
In our October 19, 2017 letter, we featured on page five a chart from Louise Yamada of the 4-, 20- and 40-year cycle of the Dow Jones Industrial Average and will likely feature this important cycle again later this year. What is interesting is that the very long 20- and 40-year economic cycles and these cycles in the Dow Jones are coming together with the Decennial Pattern for a bottom in 2022. As shown in the Decennial Pattern, a decline into a 2022 bottom could also form the completion of the last "tough" years in the 20- and 40-year cycles; leading to a very long up cycle period beginning in 2022.

In summary, what we see for 2019 and into the next several years is for now quite similar to what we have seen during the past couple years: an economy which continues to roll along and a generally positive market for individual companies who can show positive growth. This is what some people have referred to as a "stock pickers" market, a period where active rather than passive investment management succeeds. Unfortunately, at this time, being realistic, we must also acknowledge that we are very much in a "Is the glass half full or half empty" environment. What we mean by this is that we are living in a time when the facts all around us can be viewed either positively or negatively; up or down, depending on one's outlook on life or even political persuasions.

THE REAL WEATHER FORECAST



We have wondered for many years why there are two Almanacs, one titled *The Old Farmer's Almanac* and one called *Farmer's Almanac*. We got the answer in a December 28 article in *The Wall Street Journal*. It turns out that back in 1818 the *Farmer's Almanac* had threatened *The Old Farmer's Almanac* which was first published in 1792. Today *The Old Farmer's Almanac* is larger, distributing 3.3 million print copies and 1.8 million followers on social media. It makes predictions as much as eighteen months out using solar activity



and historical weather repeats. In contrast the *Farmer's Almanac* distributes 1.7 million hard copies and has 1.3 million online followers. It makes forecasts two years out using a secret mathematical formula utilizing sunspot activity. This year they are in disagreement as to the severity of the winter, with the *Farmer's Almanac* predicting a warm winter, but *The Old Farmer's Almanac* is looking for a cold winter. And so it goes!

With all the changes taking place in the financial planning area, we thought the cartoon below summed it up.

Sincerely,

Richard W. Perkins, C.F.A.
President
Senior Portfolio Manager

Richard C. Perkins, C.F.A.
Executive Vice President
Portfolio Manager

Daniel S. Perkins, C.F.A.
Executive Vice President
Portfolio Manager

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JOKE PAGES FOLLOW →

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THE DOG ATE MY HOMEWORK

At Yale University, there were four sophomores taking chemistry and all of them had an "A" so far. These four friends were so confident that the weekend before finals, they decided to visit some friends and have a big party. They had a great time but, after all the hearty partying, they slept all day Sunday and didn't make it back to Old Eli until early Monday morning.

Rather than taking the final then, they decided that after the final they would explain to their professor why they missed it. They said that they visited friends but, on the way back, they had a flat tire. As a result, they missed the final. The professor agreed they could make up the final the next day. The guys were excited and relieved. They studied that night for the exam.

The next day the Professor placed them in separate rooms and gave them a test booklet. They quickly answered the first problem worth 5 points. Cool, they thought! Each one in separate rooms thought this was going to be easy, and then they turned the page. On the second page was written . . . For 95 points: Which tire? _________.

THINK BEFORE YOU ACT

The Arcelor-Mittal Steel Company felt it was time for a shakeup and hired a new CEO. The new boss was determined to get rid of all of the company slackers. On a tour of the facilities, the CEO noticed a guy leaning against a wall. The room was full of workers and he wanted to let them know that he meant business. He asked the guy, "How much money do you make a week?" A little surprised, the young man looked at him and said, "I make $400 a week. Why?"

The CEO said, "Wait right here." He walked back to his office, came back in two minutes, and handed the guy $1,600 in cash and said, "Here's four weeks' pay. Now leave and don't come back." Feeling pretty good about himself, the CEO looked around the room and asked, "Does anyone want to tell me what that goofball did here?"

From across the room a voice said, "He was the pizza delivery guy."

AN EVENING OUT

A couple were going out for the evening. They got ready – showered, all dressed up, cat put out, etc. The taxi arrived but as the couple left the house, the cat shot back in. They didn't want the cat shut in the house on its own while they were out, so the wife went out to the taxi while the husband went back inside and followed the cat upstairs to chase it out. The wife didn't want the taxi driver to know the house would be empty, so she told him, "My husband's just going upstairs to say goodbye to my mother." A few minutes later, the husband came out and got into the cab saying, "Sorry I took so long, the stupid old thing was hiding under the bed and I had to poke her with a coat hanger to get her to come out."

NO WORRIES

Fifteen minutes into a flight from Kansas City to Toronto, the captain announced, “Ladies and gentlemen, one of our engines has failed. There is nothing to worry about. Our flight will take an hour longer than scheduled, but we still have three engines left.”

Thirty minutes later the captain announced, “One more engine has failed and the flight will take an additional two hours. But don’t worry, we can fly just fine on two engines.”

An hour later the captain announced, “One more engine has failed and our arrival will be delayed another three hours. But don’t worry, we still have one engine left.”

A young blonde passenger turned to the man in the next seat and remarked, “If we lose one more engine, we’ll be up here all day!”

THE NEW FERRARI

A young investment banker goes out and buys the car of his dreams. On his drive home he stops for a red light, and an old man on a moped stops next to him. The old man looks over at the Ferrari and asks, “What kind of car ya got there, Sonny?” The young man replies, “A Ferrari GTO. It cost half a million!” “Ooowee . . . that’s a lot of money,” says the old man as he tucks his thumbs up against his suspenders. “Why does it cost so much?” “Because this car can do up to 320 miles an hour!” states the young banker proudly.

The elderly moped driver asks, “Mind if I take a look inside?” “No problem,” replies the proud new owner. The old man pokes his head in the window and looks around at all the bells and whistles lining the dashboard. Sitting back on his moped, the old man whistles and says, “That's a pretty nice car, all right . . . but I’ll stick with my moped!”

Just then the light changes, and the young banker decides to show the old man just what his car can do. He floors it and within 30 seconds, the speedometer reaches 160 mph, then 250 mph! Suddenly, he notices a yellow dot in his rearview mirror getting closer to him! He slows down to see what it could be, and the old man on the moped blows by him! He then floors the accelerator and takes the Ferrari up to 275 mph, but still sees the old man on the moped. Dumbfounded, the banker floors the Ferrari all the way up to the 320 mph! Not ten seconds later, the moped is bearing down on him again! Suddenly, the moped plows into the back of his Ferrari. The young man stops and jumps out, he runs up to the old man and says, “Oh my God! Is there anything I can do for you?” The old man whispers . . . "Unhook . . . my . . . suspenders . . . from . . . your . . . sideview mirror.

TRAFFIC ACCIDENT

A policeman arrives at the scene of an accident, in which a car smashed into a tree. The officer rushes over to the vehicle and asks the driver, “Are you seriously hurt?” “How do I know?” replied the driver, “I’m not a lawyer!”