Fourth Quarter 2018 in Review
and the Year Ahead

	Close	Total Returns	
	12/31/18	4th Quarter	2018
Standard & Poor's 500 Index	**2,507**	**-13.52%**	**-4.38%**
Dow Jones Industrial Average	**23,327**	**-11.31%**	**-3.48%**
NASDAQ Composite Index	**6,635**	**-17.29%**	**-2.84%**
Dow Jones Global (ex U.S.)	**223**	**-11.93%**	**-16.52%**
Barclays Aggregate Bond Index	**2047**	**+1.64%**	**+0.01%**

Legendary Columbia University professor and investor Benjamin Graham once remarked that "in the short run, the market is a voting machine but in the long run, it is a weighing machine." Starting in October stock investors voted with their feet and ran to cash. By December the exodus became a stampede. The time horizons of investors have shortened with the daily barrage of unsettling news regarding trade disagreements, and European and U.S. political controversies. In this *Outlook*, we will attempt to balance the near term issues with other factors, such as corporate performance, that will affect longer term asset values.

Weighing the Short Term Market Outlook

Financial market participants changed their view of 2019 in the fourth quarter. They decided near term negative risks outweighed potential positive outcomes. On the negative side of the scale the most obvious issues in order of importance to financial markets include:

- CHINA -- on two counts. First, investors have been assuming that there will be a "face saving" trade deal between the U.S. and China. Lately, that has become an increasingly tenuous assumption. Second, the Chinese economy has weakened recently, resurrecting investors' perpetual doubts about the truth of its underlying health.
- The Federal Reserve ("the Fed") continues to hike short term interest rates despite the outlook for slowing economic growth. Financial markets want to make sure the Fed pays closer attention to changes in bond and stock values instead of narrowly focusing on wage increases, which could lead to higher inflation.

- The European economy continues to slow, and politicians are unable to effectively address rising nationalistic, socialist pressures.
- Stock market leaders, such as Apple and Facebook, have been marked down in price due to operating issues. Earnings growth for the broader market could also slow in 2019 due to sluggish global growth and rising labor costs.
- Political tensions in the U.S. are unsettling investors and are only likely to worsen as a new House majority applies more heat to a besieged Trump administration.

On the other side of the scale are several potential positives:

- Due to the slowing economic outlook and lower commodity costs, the Fed is more likely to moderate further rate hikes in 2019. Investors may also come to appreciate that interest rates in the three percent range are actually not that onerous.
- The U.K. and the European Union reach a settlement on Brexit.
- The Chinese economy slows, but no major financial cracks surface.
- The U.S. economy remains relatively strong, and corporate earnings continue to advance. As a result of the market decline in 2018 and the likelihood of further earnings gains in 2019, the stock market valuation has improved significantly.

Finally, if pigs could fly:

- The U.S. and China reach some real trade reform early in the New Year and markets decide the two major economies will compete on more even and open terms going forward.
- Political tensions in the U.S. subside rather than escalate.

The Market Gremlins were Active Again

The fourth quarter was unnerving for many stock market investors. The decline was steeper than even the most pessimistic souls could have imagined. Certainly, many of the issues referenced above account for the downward direction of the market. The magnitude of the decline, however, was exacerbated by other factors not rooted in economic reassessments for 2019. These are the gremlins that exaggerate market volatility in today's stock market. In February, it was so-called "low volatility" products that caused the wild daily swings in stocks. In the fourth quarter, we think computerized and high frequency trading, and the outsized effect of money flows away from firms that actively select securities increased the daily market volatility.

Many years ago the largest money managers, such as Fidelity and T. Rowe Price, attracted assets based on their record of superior security selection. They analyzed individual securities and their huge buying and selling volumes largely determined prices. Money flowed like water into funds like Fidelity's Magellan Fund. Now the largest active managers, like Fidelity, are losing billions of assets to index funds managed by the likes of Vanguard and Blackrock. Even Fidelity is now playing the passive game with no fee index funds. These passive, index managers make no attempt to determine the value of individual securities. As a result, when index investors are selling, the active managers do not have the money to offset the selling pressure. It is a mismatch. Hedge funds use quantitative computer driven "trend following" trading models to try to profit from the directional momentum of markets. This only worsens the impact.

Opportunities are Surfacing

These swings provide opportunities, but they also make for scary headlines. The market can only stabilize once index investors decide the risk and return outlook for the overall market is again positively balanced. We think we are approaching that balance. Last year we foresaw financial markets having to deal with rising interest rates being offset by rising profits. In 2019, the script has flipped. It looks like interest rates, at least on the short end, are peaking but profits may be as well. So, for stock investors, a key question will be to what extent profits soften. As we mentioned previously, the decline in stock prices this year already reflects the more subdued outlook for profits. As a result, we are starting the New Year with the attitude of taking advantage of opportunities as opposed to being in a more defensive crouch.

Individual Investments will also Affect Long Term Results

There is no avoiding the investment reality that macroeconomic factors, as tedious as they are to recount quarterly, will always have major market impacts on financial markets, specific industries, as well as on individual companies and their securities. Reviews of these factors are part and parcel with managing financial assets and communicating with clients. Nonetheless, we construct portfolios with individual company stocks or bonds that we expect will operate and prosper through many economic cycles. A successful investment outcome will depend heavily on the selection of these securities. Traditionally, we have excluded write-ups of individual company investments in the *Outlook* for several reasons including:

- The financial analysis part of our analysis would bore most readers and we could not summarize our entire analysis in a few paragraphs of the *Outlook*.
- Superstition -- money managers are always reluctant to mention just one company -- it is a surefire prelude for something to go wrong soon thereafter. (e.g. take Johnson & Johnson and their recent talc problem).

Nonetheless, we will throw caution to the wind and include one general review in the next few *Outlooks* of a specific company, particularly a company that is not that well known, that we hold in many portfolios. These reviews are intended to provide a background on what we find of interest about the company. They are not our complete analysis of the strengths and weaknesses of each company. We hope that these reviews, which trace the path of how companies evolve over time, will provide more insight into how individual companies navigate changing macroeconomic environments, such as we are currently experiencing.

Tetra Tech, Inc.

This quarter, we have selected Tetra Tech. The company was founded in 1966 in Pasadena, California by four engineers (Tetra being the Greek word for the number four) with expertise in four disciplines -- geophysics, coastal engineering, systems analysis, and research and development. Tetra Tech engineers started off building physical models, such as wave tanks, to test the strength of ports and coastline structures. Using physical models the engineers could test for the effects of tsunami wave impacts, beach erosion, and pollutant dispersion. As computer modeling became more robust, the analysis of different environmental changes could be more easily evaluated. After the formation of the EPA in 1970, Tetra Tech developed quantitative screening processes to analyze pollutants in streams, lakes and estuaries to prioritize cleanup processes and schedules.

Over the years, the company managed its way through a few changes in ownership: they went public in 1977 and were acquired by Honeywell in 1982. Honeywell subsequently sold the engineering division back to company employees who took the company public again in 1991. During this period the company was winning contracts from the U.S. Environmental Protection Agency as well from the U.S. Navy and Air Force. Tetra Tech continued their focus on coastal and marine resources management. Engineers conducted biological sampling, navigational assessments and geophysical surveys to manage operations at ports and offshore locations. Part of the assessments includes emergency preparedness, flood risk assessments, offshore oil spill planning, threatened and endangered species assessments.

Over time, the company has expanded into all major segments of water management centered on drinking water, groundwater, storm water, and wastewater treatment. As a water expert, Tetra Tech provides solutions for complex drinking water problems, particularly providing help to municipal utilities. In addition to their water expertise, the company also has developed expertise in air quality, greenhouse gas, and climate change services for industrial clients such as oil refineries, utilities, airports, and so forth.

Over the past 10 years the company has expanded into more international markets. The following projects highlight just a few of their current endeavors as they work in the U.S. and around the globe:

- Fort Myers, Florida. The company is working to provide design and construction services to replace 90,000 linear feet of water piping and storm water piping.
- San Antonio, Texas. The company is part of a consortium to design a large brackish water desalination plant in an area where the supply of water is threatened by drought and population growth.
- Uganda, Africa. The company is implementing the U.S. Agency for International Development's (USAID) effort to increase household access to sanitation and water services to ensure important hygiene behaviors. Tetra Tech does a lot of work for USAID.
- Sydney, Australia. The company is providing mechanical and electrical design services to improve energy efficiency at a huge office and retail complex called Barangaroo South. The company used an innovative air conditioning system, LED lighting solutions, and other energy savings solutions to achieve a 6 star Green Star rating for their designs.
- Peru, South America. This is the company's most recent contract announced on December 12, 2018. The USAID PRO-BOSQUES $23 million contract is to strengthen forest management in Peru, which is threatened by illegal logging, by providing technical services and monitoring tools, such as electronic timber tracking that documents and monitors timber movement through the value chain.

In brief, Tetra Tech is an example of a relatively young company started in the mid-1960s that has profitably managed through seven economic recessions and nine different periods during which the Fed has increased short term interest rates. And, unlike today when investors are flummoxed by rates going from zero to two and half percent, in the past Tetra Tech managed through rate hikes from four percent to sixteen percent. Through internal initiatives and strategic acquisitions, the company is now ideally positioned to provide consulting, design and implementation services for environmental problems and issues around the world. The company recently reported a record backlog of $2.7 billion. Like most companies in our portfolios, it is built to withstand economic and political challenges that will come their way.

In Summary

The value of a company's stocks or bonds is usually influenced by shorter term issues such as interest rates and economic growth. These moves can be elongated by the inner workings of the market. However, the future value of a well-diversified portfolio is likely to be largely determined by the measurable operating results of companies and less by varying economic and psychological factors. These operating factors are what Dr. Benjamin Graham emphasized that investors needed to analyze. As we roll out some future reviews of other companies in our *Outlooks*, we hope you will better understand the scope of businesses that we own.

HAPPY NEW YEAR!

Bob Milnamow
President and
Chief Investment Officer
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The ***Standard & Poor's 500 Index*** *is an unmanaged broad-based index that is market weighted and used to represent the U.S. stock market. It includes 500 widely held stocks. Total return figures include the reinvestment of dividends. "S&P 500" is a trademark of Standard and Poor's Corporation.*
The ***Dow Jones Industrial Average*** *is a price-weighted average of 30 significant stocks traded on the New York Stock Exchange (NYSE) and the NASDAQ.*
The ***Nasdaq Composite Index*** *is the market capitalization-weighted index of approximately 4,000 common equities listed on the NASDAQ stock exchange. The index includes all Nasdaq-listed stocks that are not derivatives, preferred shares, funds, exchange-traded funds (ETFs) or debenture securities.*
The ***Dow Jones Global (ex U.S.) BMI*** *(Broad Market Index) comprises the S&P Developed BMI and S&P Emerging BMI, and is a comprehensive, rules-based index measuring stock market performance globally, excluding the U.S.*
The ***Barclays Aggregate Bond Index*** *is a market capitalization-weighted index. Most U.S. traded investment grade bonds are represented. Municipal bonds, and Treasury Inflation-Protected Securities are excluded, due to tax treatment issues. The index includes Treasury securities, government agency bonds, mortgage-backed bonds, corporate bonds, and a small amount of foreign bonds traded in U.S.*

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