The last four months of 2018 were the most eventful for the U.S. stock market in years. After peaking on 9/20, the S&P 500 Index declined just shy of 20% by 12/24. This was the largest drop since the financial crisis and led to the first negative calendar year return for the index since the crisis. Other popular U.S. indexes, like the tech-heavy Nasdaq Composite Index and the small-cap Russell 2000 Index, dropped even more from their peaks. As a result, company valuations declined below historical averages, particularly in the growth segment, leading to more attractive investment opportunities.

Valuations Have Declined Below Historical Averages

Price-to-Earnings Ratio as of 12/31/2018 vs. 20-Year Average

	Value	Blend	Growth
Large	12.9 / 14.2	15.1 / 16.7	18.2 / 20.5
Mid	13.1 / 14.6	14.7 / 16.8	17.9 / 21.5
Small	12.0 / 14.8	13.9 / 17.2	16.5 / 20.6

Price-to-Earnings Ratio as % of 20-Yr Average Price-to-Earnings

	Value	Blend	Growth
Large	91%	90%	89%
Mid	90%	88%	83%
Small	81%	81%	80%

Source: The Bank of New York Mellon Corporation using I/B/E/S 1 Year Forecast EPS.

The price-to-earnings ratios for each style box are based on Russell indexes, as follows: for Large Value: Russell 1000 Value Index, for Large Blend: Russell 1000 Index, for Large Growth: Russell 1000 Growth Index, for Mid Value: Russell Midcap Value Index, for Mid Blend: Russell Midcap Index, for Mid Growth: Russell Midcap Growth Index, for Small Value: Russell 2000 Value Index, for Small Blend: Russell 2000 Index, for Small Growth: Russell 2000 Growth Index.

During this period, volatility increased and remained at or around its long-term average for most of the fourth quarter. U.S. trade policy, mixed signals from the Fed, geopolitical considerations, and the U.S. government shutdown spurred uncertainty.

When investors become more uncertain, risk-aversion is exacerbated. Investors seem to focus reactively and emotionally on the downside risk rather than objectively assessing the circumstances. Many tend to look for an immediate fix to remove their uncertainty and, as a result, make rash decisions. This behavior drives market volatility and short-term correlations higher, which is just what we saw happen in December. At the same time, this created attractive investment opportunities for long-term investors.

Under pressure to make a quick decision, many investors default to rules of thumb. For example, "When X goes up, the stock market goes down." or "When the economy does this, stocks do that." Wall Street has plenty of these. However, when complex economic issues are reduced to simple statements of correlation, valuable information may be overlooked.

LINDA MARTINSON
CHAIRMAN, PRESIDENT AND COO

The market is a complicated machine that is driven by a *multitude* of factors and can behave erratically over short periods of time. While investors like to look for patterns to rationalize market movements, there may not always be a pattern to be found. That is why it is virtually impossible to predict the market with consistency. While most investors understand that the market is driven by multiple factors, in times of turbulence it seems they search for a simple explanation and focus on one or two factors.

One such factor in recent years has been interest rates. After an extended period with low rates, many have been trying to figure out what would happen with their investments as rates increase. Certain asset classes, like traditional bonds, are directly affected by interest rates. The intrinsic value of a bond is calculated as the discounted value of its future payments. The higher the discount (interest rate), the lower the value of the bond. As such, when rates increase, bond prices fall.

Similarly, the share price movements of real estate-heavy companies (both REITs and non-REITs), tend to be more sensitive to changes in interests due to two key considerations. First, most real estate companies utilize a high proportion of debt in the capitalization of their companies. When interest rates rise, higher borrowing costs negatively impact earnings growth and real estate values. Second, some real estate companies pay out dividends, notably REITs, which must pay out at least 90% of their taxable income in dividends. When interest rates rise, the relative attractiveness of REIT dividend yields decreases.

For traditional equities, however, the relationship is less straightforward. There is no doubt that interest rates and their changes affect the stock market. After all, many businesses rely on borrowing to fund and grow their activities. Even companies with no debt on their balance sheets can be affected by changing rates, due to the broad impact on the economy. Conventional wisdom dictates that higher interest rates should translate into higher operating costs for companies, thus lower business values and stock prices. Similarly, if we think about the value of a business as the sum of its discounted cash flows, higher rates should lead to lower valuations. While this makes sense, it is not always what happens. The relationship between interest rates and equities is complex, and oversimplifying may lead to misleading advice and negative investment implications.

Letter from Linda

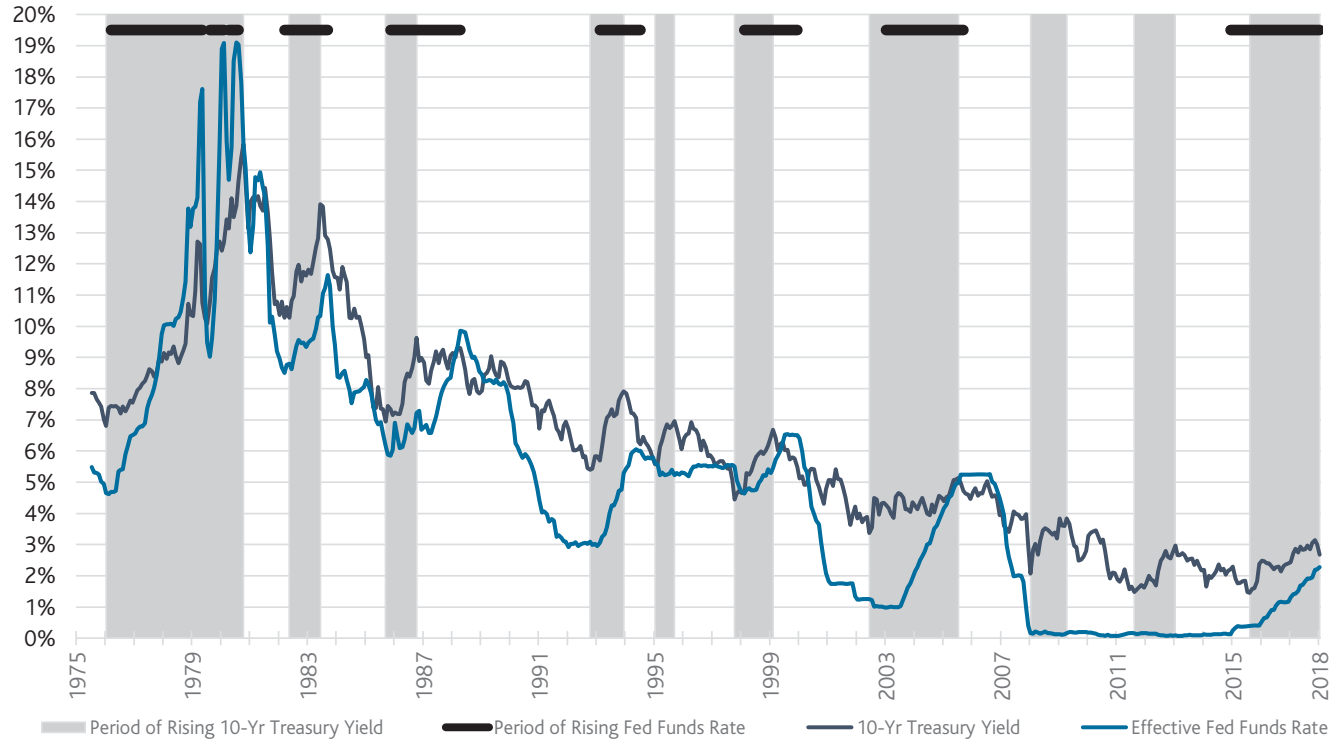
Interest rates are only one of many factors that move company stock prices. Companies will be impacted differently depending on their idiosyncrasies, industry, competitive landscape, and capital structure, among other things. The overall economic environment may also counter or amplify the effects of rising rates. Interest rates could increase at times of improving economic conditions, as a result of higher capital demand. On the other hand, they could increase due to worsening conditions, like higher inflation. Furthermore, rates may rise when equity valuations are high or low, and valuations are an important factor to consider when investing. Just because rates are rising or falling does not mean you should reactively invest or sell.

Even if an investor decides to focus only on the interest rates factor, it is not that simple. There are multiple interest rates to consider. The Fed Funds rate is one choice. It is controlled by the Federal Open Market Committee and is the rate at which depository institutions lend to each other overnight. The rates on various U.S. Treasury securities, like bills (maturities up to one year), notes (maturities between one and 10 years), and bonds (30-yr maturity) are another way to assess rates. The yields on these instruments are determined by market participants in public auctions. Eurodollar rates, swap rates, and corporate bond rates also can be used. Importantly, rates do not necessarily move in lockstep; thus, they may define rising/falling rate environments differently and may correlate with the movements of the stock market differently.

The chart below plots the levels of two of the most popular rates: the 10-year U.S. Treasury Note yield and the Fed Funds rate. The shaded areas represent periods of rising rates for the 10-year Treasury. While both rates have generally trended in the same direction over the long term, they do not always rise or fall together, or change by the same amounts. For example, when the Fed Funds rate started going up at the end of 2015, the 10-year rate kept declining for another few months. Before that, between 2008 and 2015, the Fed Funds rate did not change meaningfully, while the 10-year rate had two notable periods of increases. Looking at the rest of the data, there are more examples of divergence between these two rates. Thus, both rates would define different rising rate environments.

Different Interest Rates Behave Differently

U.S. 10-Year Treasury Yield vs. the Effective Fed Funds Rate



Source: FactSet, Board of Governors of the Federal Reserve System (U.S.).

Many investors choose the 10-year rate to assess the impact of rate changes on the stock market. The table below shows that the S&P 500 Index generated positive returns in 13 of the 15 rising rate periods since 1954, a remarkable record. Based solely on this data, one could easily conclude that rising rates are good for stocks.

Stocks Tend to Increase in Rising Rate Periods

			10-Yr Treasury Rate			S&P 500 Index Return
From	To	Length (months)	Start	End	Change	
4/30/1954	10/31/1957	42	2.25%	3.99%	1.74%	67.94%
4/30/1958	12/31/1959	20	2.83%	4.77%	1.94%	45.99%
5/31/1961	8/31/1966	63	3.68%	5.36%	1.68%	36.93%
3/31/1967	5/31/1970	38	4.50%	7.95%	3.45%	-6.08%
10/31/1971	9/30/1975	47	5.87%	8.48%	2.61%	2.68%
12/31/1976	9/30/1981	57	6.81%	15.84%	9.03%	38.26%
4/30/1983	5/31/1984	13	10.27%	13.91%	3.64%	-3.89%
8/31/1986	9/30/1987	13	6.95%	9.63%	2.68%	31.57%
9/30/1993	11/30/1994	14	5.40%	7.91%	2.51%	2.15%
12/31/1995	8/31/1996	8	5.58%	6.96%	1.38%	7.45%
9/30/1998	1/31/2000	16	4.44%	6.68%	2.24%	39.44%
5/31/2003	6/30/2006	37	3.37%	5.14%	1.77%	39.33%
12/31/2008	3/31/2010	15	2.06%	3.84%	1.78%	33.28%
7/31/2012	12/31/2013	17	1.47%	2.97%	1.50%	38.34%
7/31/2016	12/31/2018	29	1.45%	2.68%	1.23%	21.14%

Source: FactSet, Board of Governors of the Federal Reserve System (U.S.).

Before rushing to this conclusion, let's also look at the returns of stocks when rates fell. As shown below, stocks increased in 12 out of 14 declining rate periods – another remarkable record. The only conclusion we can draw from the data in the two tables is that stocks tend to go up regardless of the direction of the 10-Yr Treasury yield.

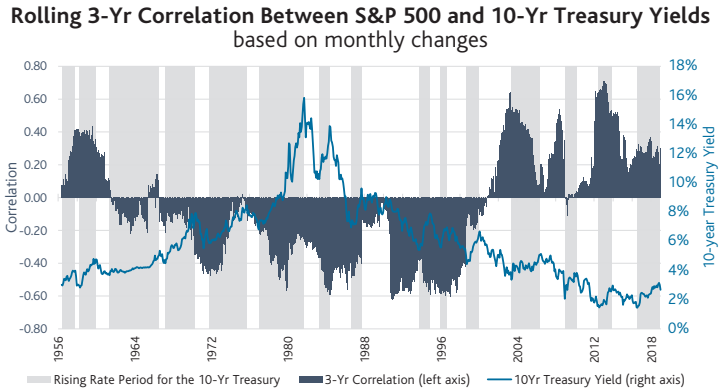
Stocks Tend to Increase in Falling Rate Periods Too

			10-Yr Treasury Rate			S&P 500 Index Return
From	To	Length (months)	Start	End	Change	
10/31/1957	4/30/1958	6	3.99%	2.83%	-1.16%	8.03%
12/31/1959	5/31/1961	17	4.77%	3.68%	-1.09%	16.63%
8/31/1966	3/31/1967	7	5.36%	4.50%	-0.86%	19.31%
5/31/1970	10/31/1971	17	7.95%	5.87%	-2.08%	29.16%
9/30/1975	12/31/1976	15	8.48%	6.81%	-1.67%	34.65%
9/30/1981	4/30/1983	19	15.84%	10.27%	-5.57%	54.25%
5/31/1984	8/31/1986	27	13.91%	6.95%	-6.96%	84.29%
9/30/1987	9/30/1993	72	9.63%	5.40%	-4.23%	74.13%
11/30/1994	12/31/1995	13	7.91%	5.58%	-2.33%	39.62%
8/31/1996	9/30/1998	25	6.96%	4.44%	-2.52%	61.77%
1/31/2000	5/31/2003	40	6.68%	3.37%	-3.31%	-27.51%
6/30/2006	12/31/2008	30	5.14%	2.06%	-3.08%	-25.07%
3/31/2010	7/31/2012	28	3.84%	1.47%	-2.37%	23.76%
12/31/2013	7/31/2016	31	2.97%	1.45%	-1.52%	24.10%

Source: FactSet, Board of Governors of the Federal Reserve System (U.S.).

Equity research from Bank of America Merrill Lynch ("BofA") has similarly concluded (using a different analysis) that "stocks have exhibited a weak and inconsistent correlation with interest rates over time."[1] The chart that follows (inspired by BofA's analysis) shows that the monthly rate of change of the 10-year treasury (i.e., the increase or decrease of the rate during the month, expressed in percentage terms) and the monthly rate of change of the stock market (i.e., the increase or decrease of the stock market during the month, expressed in percentage terms) have not exhibited a consistent correlation over rolling three-year periods. For example, in the most recent rising period, between mid-2016 and the end of 2018, stocks and rates had a small/moderate positive correlation. On the other hand, during two rising rate periods in the mid-90s (late 1993 until end of 1994 and end of 1995 until mid-1996), the correlation was moderate/high negative. Looking at other periods, we can see further inconsistencies in the relationship.

Stocks and Rates Have Had an Inconsistent Relationship



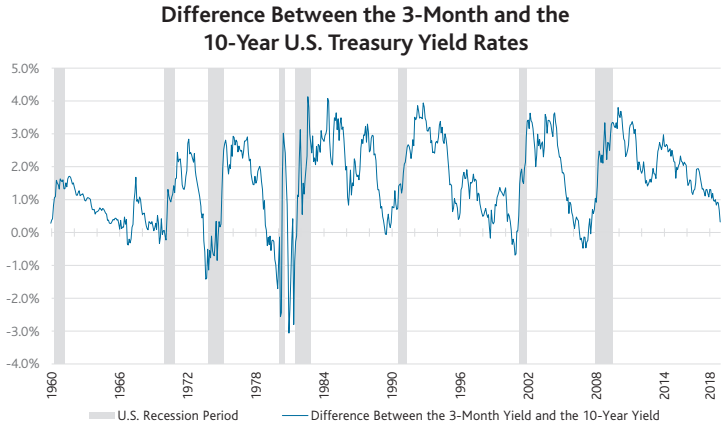
Source: FactSet, Board of Governors of the Federal Reserve System (U.S.), Baron Capital.

Our own analysis confirms BofA's conclusion that there isn't a specific level of the 10-year rate that is bad for stocks, but it is more likely to experience low/negative returns when the rate exceeds 6-7%. Given today's level of around 2.7% and the slow increase in rates, that scenario seems to have a long way to go.

Over very short periods, like a single day, when the 10-year rate changes significantly, the stock market tends to change significantly too. These changes would more often than not tend to be in the same direction, although there have been multiple instances when the rate moves significantly up or down and stocks move in the opposite direction. While a highly skilled (and lucky) day trader may benefit from this, such information should not be relevant to long-term investors as it pertains to market timing rather than investing.

Another popular approach to assess interest rates is to analyze the shape, levels, and movements of the U.S. Treasury yield curve (a graph plotting government bond rates with different maturities). Research has shown that there is a negative relationship between yield curve inversions (short-term rates exceeding long-term rates) and economic recessions. There are multiple combinations of short- and long-term rates to analyze. Researchers have concluded that the 3-month/10-year relationship has been the best predictor of recessions.[2] The chart below shows that every recession over the past 50+ years has been preceded by a negative spread between these two rates. This spread should be analyzed closely, as non-persistent inversions may not necessarily predict a recession. The relationship between inversions and recessions has persisted for decades, yet "no theory establishes a clear connection specifically between yield curve inversions and recessions."[2]

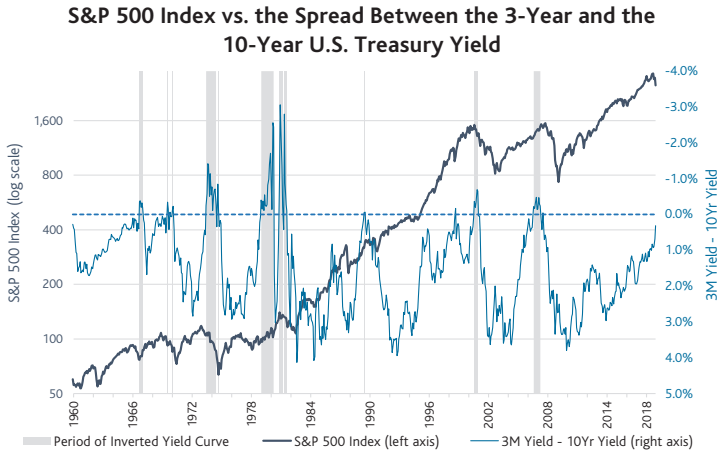
An Inverted Yield Curve Has Consistently Preceded Recessions Since 1960



Source: FactSet, Board of Governors of the Federal Reserve System (U.S.).

While inverted yield curves have been a reliable signal for economic weakness, the time until a recession occurred, and its magnitude have varied substantially. Furthermore, inversions have not been a reliable predictor of stock market downturns. The chart below shows that at times an inversion has preceded/coincided with a declining stock market, but in other periods the market went down without a signal from the yield curve (just like recently happened) or kept going up despite an inversion.

An Inverted Yield Curve Has Not Been a Reliable Predictor of Market Declines



Source: FactSet, Board of Governors of the Federal Reserve System (U.S.).

Clearly, such simplistic analyses between interest rates and stock market movements are inconclusive. We believe higher complexity and other factors are at play.

At Baron, we factor in the potential effects of rates on the stocks we analyze and invest in. However, we believe that for most of the companies on our radar, factors like long-term growth opportunities, sustainable competitive

[1] Bank of America Merrill Lynch, US Equity Strategy in Pictures, 11/7/2018.

[2] Federal Reserve Bank of New York, The Yield Curve as a Leading Indicator: Frequently Asked Questions, A. Estrella, 10/2005

advantages, strong management, and attractive valuations, among others, play a more important role for the prosperity of a business. We do not believe that there is a rule of thumb that is a good substitute for the in-depth research and experience that a skilled active manager can offer. Rules of thumb exist because history rhymes; a skilled active manager realizes that history does not repeat itself and that there are nuances.

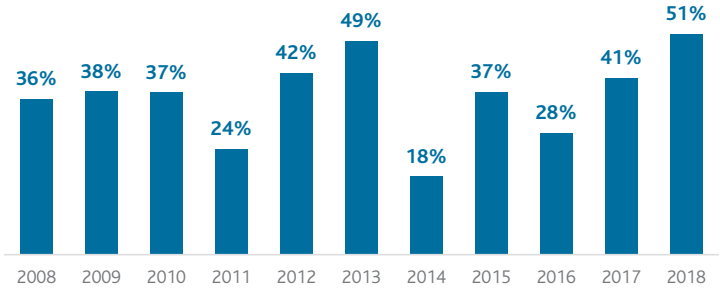
U.S. interest rates have been increasing in the past few years, yet this is unlike other historical rising rate periods. After unprecedented measures by the Federal Reserve, in response to the worst financial crisis in 80 years, interest rates were brought down and artificially kept low for an extended period. In addition, the Federal Reserve has started shrinking its balance sheet after swelling it to uncharted territory with the quantitative easing programs. For these and other reasons, we believe that the current environment can be best described as a period of rate normalization rather than of rising rates. In our opinion, the current conditions are in many ways unique, and it would be unreasonable to compare the current environment to previous rising rate environments.

The uncertainty around rates, among other factors, seems to have created a perfect storm in the last weeks of 2018. Some investors took money out of equities because they got scared, others used the opportunity for tax-loss selling, both of which caused higher volatility. Those who tried to time the market were probably disappointed, as the market quickly recovered part of the losses in the last days of December and in January. As we have done many times, we continue to advise against market timing. We do not know of anyone who has been able to consistently and successfully time the market. At the same time, there are plenty of examples of successful long-term investors.

While outflows hit active equity products across the board, most of the money came out of active growth funds. Notwithstanding, active growth managers had another strong year of performance. Over half of U.S. growth managers outperformed their respective Morningstar category index in 2018[3], the highest rate in at least 10 years. The vast majority of the Baron Funds that are classified in Morningstar's U.S. small, mid, and large growth categories were among the outperforming[4].

Active U.S. Growth Managers Had Another Strong Year

Outperformance Rate of Active U.S. Growth Managers vs. Morningstar Category Indexes[3]



Source: Morningstar Direct, Baron Capital.

Despite the recent market turbulence, we believe that company fundamentals remain solid, and we continue to see attractive long-term growth potential. In our opinion, the recent compression in equity valuations has made stocks even more compelling, especially given low-yielding fixed income alternatives and the likelihood that rates might not go much higher for a while. Through our experience and expertise, we believe we could continue to add value for our investors and we remain committed to this objective.

Sincerely,

Linda S. Martinson
Chairman, President, and COO

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[3] Measured using the performance of each non-index fund share class in Morningstar's US Fund Large Growth, US Fund Mid-Cap Growth, and US Fund Small Cap Growth categories versus the corresponding category index assigned by Morningstar (Russell 1000 Growth Index for US Fund Large Growth, Russell Midcap Growth Index for US Fund Mid-Cap Growth, and Russell 2000 Growth Index for US Fund Small Growth).

[4] All share classes of 8 of the 10 Baron Funds classified by Morningstar in the U.S. growth categories outperformed the category index for the period 12/31/2017 – 12/31/2018. In the US Fund Small Growth category, Baron Discovery Fund and Baron Small Cap Fund outperformed the Russell 2000 Growth Index by 9.94% and 2.18%, respectively. In the US Fund Mid-Cap Growth category, Baron Asset Fund, Baron Focused Growth Fund, Baron Growth Fund, and Baron Partners Fund outperformed the Russell Midcap Growth Index by 4.89%, 8.82%, 2.08%, and 3.00%, respectively, while Baron Wealth Builder Fund underperformed the index by 1.63%. In the US Fund Large Growth category, Baron Fifth Avenue Growth Fund and Baron Opportunity Fund outperformed the Russell 1000 Growth Index by 2.90% and 9.86%, respectively, while Baron Durable Advantage Fund underperformed the index by 5.76%. All performance figures are for the institutional share classes, net of fees.