The Top 10 Most Frequently Asked Questions of 2018

Introduction

Last year may have been a year of investment nirvana. The trifecta of low interest rates, low inflation, and low volatility created a supportive backdrop for global equity market gains. But maybe not so this year. We might call 2018 the Led Zeppelin market—one that requires heavier mettle since the trifecta of 2017 reversed course. Interest rates are higher, inflation is on the rise, and market volatility, though largely back in line with historical averages, is substantially above its record lows of last year. Also, some new variables were added to the mix this year, such as:

- a revolving door at the White House;
- tariffs and protectionism;
- the blocking of merger and acquisition transactions/shifting regulatory focus;
- geopolitical concerns; and
- the upcoming midterm elections.

With this as a backdrop, in this edition of *Strategy Insights* we answer 10 frequently asked questions. It's a wide-ranging list of topics, which speaks volumes about the complexity of issues the market and investors continue to wrestle with this year. We hope you find this quarter's report useful, timely, and insightful.

1. With the midterm elections in November, how is the political environment affecting the market?

The market has had to contend with many policy-driven issues in 2018. In our view, these issues have been major distractions, preventing the market gains that might be expected with the fundamental positives associated with solid global economic growth and the highest earnings growth rates in over eight years. Geopolitics (Brexit, North Korea, Russia, Syria, and Iran), escalating trade tensions, and potential regulatory challenges in the Information Technology sector have affected market sentiment this year. Simply put, with headline risks at the fore, investors have begun reevaluating what they are willing to pay for each dollar of earnings.

These issues have been detrimental to 2018 performance, and the uncertainty generated by such variables is unlikely to subside by year end. This backdrop, coupled with the presumption of rising inflation and tighter monetary policy, is not typically associated with expanding market multiples. Therefore, we believe the trajectory of earnings growth will be the most critical driver of equity market returns.

Of the risks listed, we believe trade negotiations with China are having the largest impact on the markets. Some investors believed President Donald Trump would look for a quick political victory. However, he already turned down China's offer to buy an additional $70 billion of U.S. goods, which could have been a quick win. Although we believe a negotiated solution will ultimately be reached before the economic consequences become dire (no trade war, but no trade peace either), the risks of a negative outcome are mounting the longer this drags on. The key concern for us is whether this will affect business and investor confidence in a significant way.

Even including the potential for an additional 10% tariff on $200 billion worth of Chinese goods, the effect on U.S. GDP still appears to be manageable; economists estimate it will be in the 0.1–0.2% range. We expect the market to remain focused on any sign of further deterioration in trade negotiations. Also, we anticipate market attention will be on certain knock-on effects related to business confidence, a stronger dollar, and supply chain disruptions that could negatively affect U.S. exporters that use imported parts.[1] China is somewhat limited in terms of its ability to retaliate with additional tariffs, given the amount China imports from the United States. But other possible responses

[1] Cornerstone Macro Research, "Tariff Wars—The Phantom Menace," June 21, 2018.

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include making it more difficult for U.S. companies to do business in China and weakening the yuan/dollar to support Chinese exporters. Yuan weakness is a real threat to the value of other emerging market (EM) currencies. Further EM currency weakness would be a major headwind for both stocks and bonds across the region, as well as for multinational U.S. equities.

Turning to the upcoming midterm elections, Republicans could lose as many as 22 seats in the House according to the historical relationship between generic ballot polling and House seats won/lost.[2] So the House majority looks like a toss-up as of this writing, with the Democrats needing 23 additional seats to take control. Republicans seem to have a better hold on the Senate majority to date, but we would not be surprised if seats were lost.

Regardless of the outcome, midterm election years often prove to be volatile for stocks. Markets do not typically react well to uncertainty, and instability in Washington has often been a recurring source of angst. According to research from Strategas, the S&P 500® experiences an average correction of 19% during midterm election years, with the summer months particularly challenging. A correction of this magnitude is usually precipitated by some sort of policy misstep. For example, today that could come in the form of trade/protectionist policies negatively affecting earnings expectations. Although there are a number of policy actions in motion this year, we note that a 19% correction is *not* our base-case forecast.

On a positive note, despite the potential headwinds from midterm election years, the subsequent year typically posts above-average equity market performance. In fact, the S&P 500 has not declined in the 12 months following a midterm election since World War II. With continued strong economic/earnings fundamentals helping to support a continuation of this cycle and fiscal policy a near-term tailwind, we think the ultimate impact of the 2018 midterms could be more muted relative to history.

2. Have earnings peaked? What does this mean for markets?

Corporate earnings growth in first-quarter 2018 was nothing short of exceptional, in our view. Earnings per share (EPS) for the S&P 500 grew more than 24% year over year. This handily outpaced the consensus expectation by more than 700 basis points (bps). The first-quarter growth rate was the strongest since third-quarter 2010, and analysts are forecasting roughly 20% earnings growth for the full year. Yet the market's reaction to such strong numbers appears to have been muted, leaving many investors searching for answers. The idea of "peak earnings growth" has been a common explanation. Perhaps this is as good as it gets…and the market knows it.

We think it is reasonable to assume earnings growth has peaked given some of the one-time boosts associated with the Tax Cuts and Jobs Act. The more critical question, in our view, is how the market responds to earnings still growing but at a slower pace. Research shows that when earnings growth slows, market returns in the following year are mixed. There have been 15 instances when S&P 500 earnings growth exceeded 2018's estimated growth rate (Table 1, page 3). In the following year, even as the rate of growth slowed, market performance was positive in 11 of the 15 occurrences. We would therefore characterize "peak" earnings growth as an unreliable market signal.

Fundamentals remain sound, and we expect the economic expansion to continue next year. This scenario is supportive of continued corporate profit growth. According to Strategas Research, while there have been *earnings* recessions without economic recessions (including the five quarters from second-quarter 2015 through second-quarter 2016 in the United States), there has never been an economic recession when earnings are still growing.

3. I've been stuck hearing about TINA (There Is No Alternative) for too long. With the volatility in stocks this year, are they still expensive?

It depends on your point of view and, to some degree, your time horizon. On a forward-earnings basis, the S&P 500 is back to its 30-year average of 17.1x. But other metrics, more backward-looking in nature, suggest stocks still look rather expensive (Table 2, page 3).

The tax cut and other fiscal measures enacted since December 2017 are skewing some valuation metrics in the short run. For instance, looking at a stock's price-

[2] Strategas Research Partners, "Short-term Trade Policy Risks Are Growing," June 19, 2018.

Table 1

S&P 500 Performance in Years When Earnings Growth Is Greater than 2018's Expected Growth Rate

Year	Earnings Growth	Following Year Return	Year	Earnings Growth	Following Year Return
1947	51.9%	5.4%	1976	24.5%	-7.2%
1948	42.2%	23.6%	1993	23.3%	1.3%
1939	40.6%	-9.6%	1992	23.1%	10.1%
2010	40.3%	2.1%	1950	22.4%	23.8%
1988	35.7%	31.7	2004	21.0%	4.9%
1936	34.2%	-34.7	1987	20.9%	16.6%
1955	30.7%	6.5%	1979	20.5%	32.5%
1973	27.1%	-26.5%	2018	19.9%	??

Source: Strategas Research

to-earnings (P/E) ratio on a *trailing* basis (20.7x) does not account for the potential earnings benefits from the corporate tax cut. On a price-to-sales ratio basis, however, the market still looks expensive at 2.1x. This seems logical to us since this has been one of the longest expansions on record, yet it has also been one of the weakest in terms of growth.

The cyclically adjusted P/E ratio (CAPE) is a valuation measure that uses inflation-adjusted EPS over a 10-year period to smooth out fluctuations in corporate profit margins that occur over different periods of a business cycle. The CAPE at roughly 32.5x today is about 6.5 multiple turns above its long-run average of 26x. This makes it hard to argue the S&P 500 is anything other than expensive by this metric alone.

By most valuation metrics we track, the market still appears fully valued, though perhaps not quite as extended as prior to the tax cut. In our view, valuations are a useful guide for performance expectations and are not to be used as a precise timing tool. Even with some of the headroom created by the tax package, earnings multiples in the current range still indicate returns are likely to be subdued over the longer term. Indeed, our own 10-year capital market projections for most equity asset class returns are low relative to history. We project the S&P 500 to generate only a 6.75% expected return on a nominal basis over the next 10 years. In real terms, that equates to a sub 5% return.

Table 2

S&P 500 Valuations

Through June 30, 2018

Metric	Current	20-Year Average	Above/Below
Forward P/E	17.1x	17.3x	Below
Cyclically Adjusted P/E	32.5x	26.0x	Above
Price/Book	3.3x	2.9x	Above
Price/Sales	2.1x	1.6x	Above
Return on Capital	8.3x	5.8x	Above
Return on Equity	14.3x	13.3x	Above
Free Cash Flow Yield	4.5x	5.2x	Below

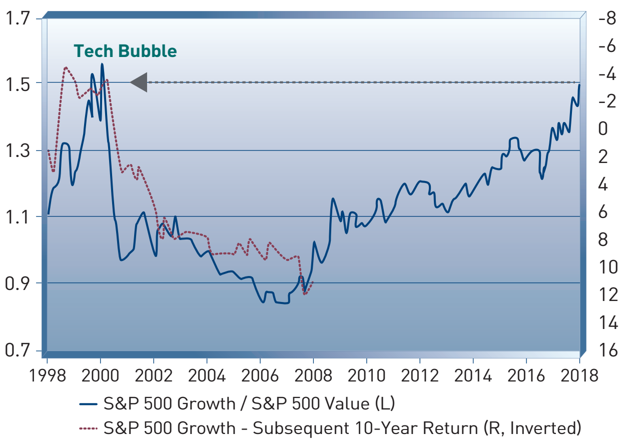
Source: Bloomberg L.P., PNC

4. Will Value ever overtake Growth?

Market style rotations can be difficult to predict, and markets have seen long periods of lopsided style leadership before. Year to date, the S&P 500® Growth Index is up 7.0% while the S&P 500® Value Index is down 2.4%. That is the widest performance differential since 2000. (Please see our second-quarter 2018 *Strategy Insights, Is Growth the New Value?*, for an in-depth discussion of the performance drivers of Growth and Value.) We believe it is unlikely Growth will be able to replicate its relative outperformance from the past 10 years over the next 10-year period. We think Value will reassert itself, and over the very long term Value investing will command a performance premium.

Chart 1 (page 4) plots the relative price of S&P 500 Growth/Value indexes versus the subsequent 10-year average annual return of the Growth index. For example, at Growth's peak versus Value during the Tech Bubble, the dotted red line at that point in time represents

Chart 1
S&P 500 Growth/Value: Large Cap



Source: FactSet Research Systems Inc., PNC

Table 3
S&P 500 Growth and Value Indexes—Trailing P/E

	Current	9/30/08	3/31/00
S&P 500 Growth	24.6x	18.2x	44.8x
S&P 500 Value	17.5x	21.3x	18.5x

Source: Bloomberg L.P., PNC

the average annual return of the Growth index over the following 10 years. So if the S&P 500 Growth Index was purchased at the peak, one would have realized about a 3% average annual decline on that investment from 2000 to 2010. Conversely, as Value trounced Growth leading into the financial crisis, the subsequent 10-year average annual return of Growth was strong at 11.8%.

It can be seen in Table 3 that the spreads for trailing P/Es between Growth and Value are wide. But they are far from the levels experienced during the dot-com bubble that peaked in 2000. In contrast, Value outperformed Growth leading up to the financial crisis to the point that valuations climbed higher than Growth. That has been a rare occurrence over the last 30 years.

Not surprisingly, there tends to be a solid relationship between the relative performance of Growth and Value and subsequent 10-year returns. Large performance differentials lead to large valuation differentials, which can sometimes manifest in quite significant relative performance divergences over longer time horizons. When Growth is scarce, as it has been since the financial crisis, the Growth investing style tends to lead to Value. This is particularly true in the later innings of economic cycles when economic growth can wane. It's hard to predict when Growth will hand the baton back to Value. But we find it hard to overweight portfolio exposure to Growth equities at this stage in the expansion.

5. Is the next recession near?

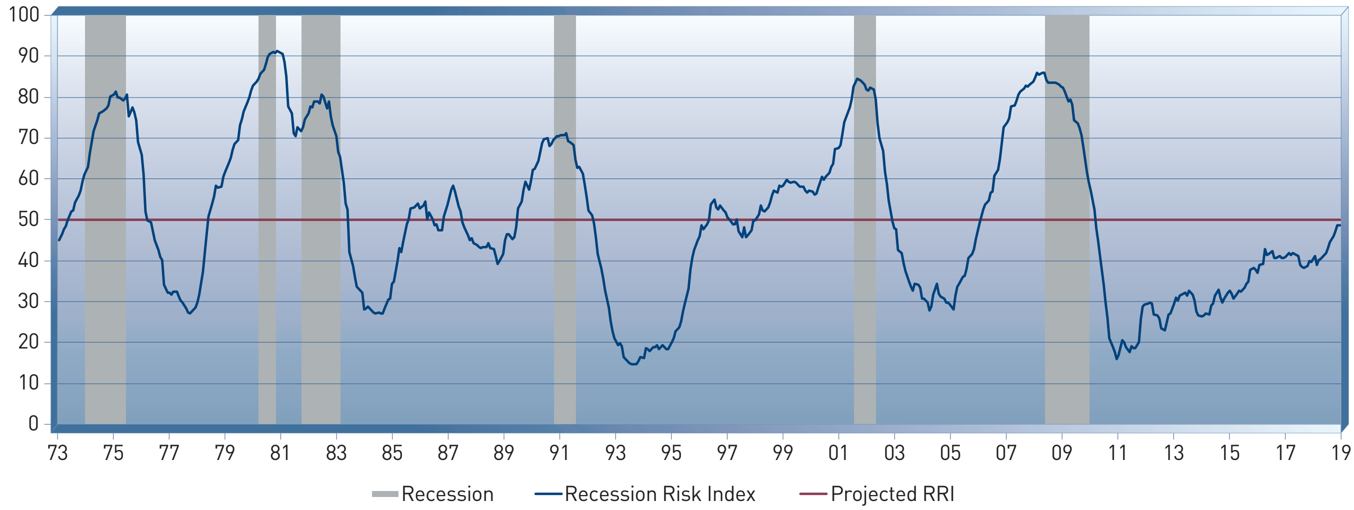
As of May 2018, the current expansion became the second longest in history dating back to 1857—it has been 108 months (and counting) through June. Interestingly, however, the economy has only managed to achieve annualized real GDP growth of 2.3%, also making it the slowest expansion in history. As a comparison, 1991–2001 was the longest expansion on record (120 months) and posted annualized GDP growth of 3.6%. In our view, the business cycle may be aging, but there is still time before the next recession.

Unfortunately, no single metric can be a perfect predictor of the economy's future. Each economic cycle has different characteristics, making certain variables more important than others, depending on the prevailing backdrop. For example, leading up to the financial crisis, household debt to disposable income levels reached all-time highs. The severity of the housing market decline led to significant cutbacks in consumer spending. In contrast, the Federal Reserve's (Fed's) monetary policy actions to suppress inflationary effects from the 1979 oil crisis unintentionally paved the way for a sharp recession in 1980.

As a result, we consider a wide variety of both economic and financial market variables when making judgments about the timing, pace, and age of business cycles. Chart 2 (page 5) illustrates this collection of variables into one indicator we call the Recession Risk Index (RRI).

Dating back to the 1970s, our analysis indicates that once the RRI crosses definitively above 50, a recession occurs eight quarters later, on average. Currently, the RRI level is 48.6, and we forecast it will reach 50 during third-quarter 2018. This suggests to us that we are not likely to experience a recession in 2018 or 2019 if the eight-quarter lead time holds. That may also be true if we are not faced with an exogenous shock to the system that might not be captured in the variables we

Chart 2
Aggregate Recession Risk Index



Source: PNC

track, such as geopolitics or policy error. Based on our analysis, we think an economic contraction becomes more probable in mid-2020. Today, several indicators we track are above 50, including:

- labor slack (tightening);
- falling output gap;
- historically high corporate profit levels, indicating peak;
- narrowing 10-year to 3-month Treasury spread;
- pick up in the Energy Consumer Price Index year over year, led by crude oil;
- consumer interest expenses approaching historically high level; and
- rising global 10-year yields.

According to our backtests, the average RRI at the start of a recession is 76.7. The lowest the index has ever been at the start of a recession is 62.9 and the highest, 85.6. The longest "false positive" (indicator above 50 then moving back below 50) is 10 months (late 1985–early 1986). However, during that period the indicator never rose above 54.

We will be watching the tightening labor market (the unemployment rate has fallen to its lowest level in 17 years) and how that affects wage inflation, which could ultimately force up prices in the broader economy. At the same time, elevated oil prices could have a similar effect. For now, we've seen little wage pressure, with average hourly earnings growth of 2.7% year over year. Within our RRI, wage growth levels in the mid-3% range are considered to be a "contractionary" force.

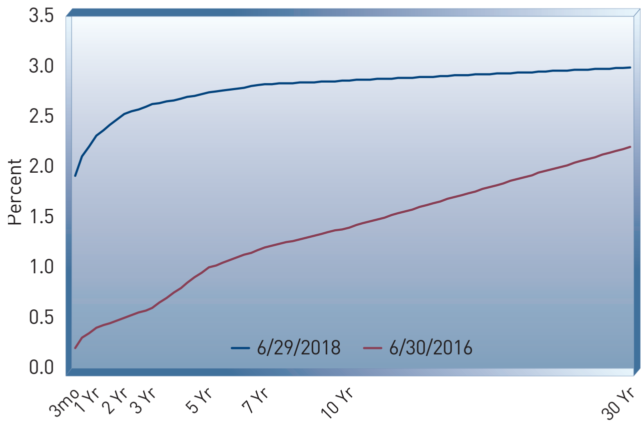
It's helpful to gauge when the next recession might ultimately occur via quantitative methods. Empirical evidence has shown that the major shifts in a market cycle are typically responsible for the overwhelming majority of a portfolio's performance. But there is no replacement for good old-fashioned fundamental research, judgment, and intuition. Translation: We take a qualitative and quantitative approach to all investment decisions.

Clearly, exogenous risks stemming from a trade policy error or a significant slowdown in international growth could have a negative impact on the U.S. business cycle. However, given what we believe to be a strong fundamental base, bolstered by stimulative fiscal policy, the U.S. economic expansion will likely continue well into 2019.

6. Are we worried about rising rates or inflation? If not, when would we be?

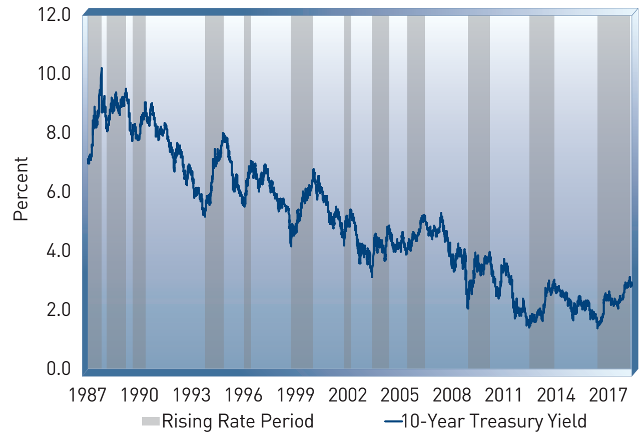
The Fed is two and a half years into an interest rate tightening cycle. Based on recent meeting minutes and speeches, it appears likely it will follow through with additional rate hikes in 2018. A fresh dose of fiscal stimulus this year should continue to support

Chart 3
U.S. Yield Curve
As of 5/30/18



Source: Bloomberg L.P., PNC

Chart 4
Historical Cyclical Rises in Interest Rates
As of 5/30/18



Source: Bloomberg L.P., PNC

domestic economic growth, interest rates have risen (for the right reasons, in our view), commodity prices are rebounding, and inflation is on the rise on a year-over-year basis. All that said, should investors be worried?

Because bond prices fall as rates rise, fixed income investors may be worried that higher interest rates will negatively affect their bond portfolios. This concern may have merit in the short run. But as long as the holding period of the investment is longer than its duration,[3] we would expect bondholders to benefit from higher rates in the long run. Interest rates have already significantly increased across the U.S. yield curve since bottoming in mid-2016 (Chart 3). While some may believe such a dramatic shift is a signal of a painful bond bear market, history suggests such adjustments are more common than expected.

Over the past three decades, there have been 13 occurrences, including the most recent, where the 10-year Treasury yield rose at least 125 bps in a time period of less than two years (Chart 4). The roughly 175 bps rise from July 2016 to May 2018 is in line with the 185 bps average increase during these historical periods.

We believe the speed at which yields climb is more important for the markets than the absolute level. For example, the Taper Tantrum of 2013, when Treasury yields surged 100 bps in two months, was a challenging period for the markets. However, if interest rates are rising because they reflect better future growth expectations, that is a good thing for the markets. It is also a good thing for valuations because it would likely be accompanied by additional earnings growth.

With GDP growth accelerating over the last three years, and likely to experience solid growth into 2019, we think a 3% yield on the 10-year Treasury is more of a psychological barrier for the markets. However, there are some longer-term secular headwinds that appear likely to constrain interest rates and inflation, including:

- elevated global government debt burdens;
- aging demographics and low birth rates;
- globalization and access to resources; and
- technological advancements, including e-commerce.

We believe the majority of the move higher in interest rates has likely already occurred. Current interest rate levels now imply the market is pricing in three to four total benchmark interest rate hikes in 2018, in line with recent Fed guidance. A roughly 3.0% yield on the U.S. 10-year Treasury note may not be high by historical standards, compared to a roughly 0.40% German 10-year yield or 0.04% Japanese 10-year yield. However, it seems more generous than

[3] Duration is a measure of the sensitivity of the price — the value of principal — of a fixed-income investment to a change in interest rates and is typically measured in years.

worrisome, in our view. Further, the 10-year Treasury yield should be equal to investor expectations for the average federal funds rate over the next 10 years, plus a term premium. Given the market is pricing in a terminal federal funds rate of only 3.25% for this cycle and global rates are likely to keep the term premium compressed, longer-term U.S. rates should remain near current levels. Also, futures traders have accumulated a record net short position in 10-year U.S. government bonds. Such extreme positioning tends to be a reliable contra-indicator and may pressure rates in the near term.

Commodity-driven cyclical rises in inflation tend to be temporary, particularly when fueled by a rise in oil prices. Easy midyear comparables in commodity prices are likely to push headline inflation higher over the summer. But unless crude oil also moves higher, these year-over-year comparisons begin to be less inflationary as time goes on (Chart 5). The PNC Economics team expects only modest upside to crude oil over the next couple of years. We anticipate inflation anxieties may ease as we move into 2019.

We would not describe our current feelings toward rising interest rates and inflation as worrisome. However, there are potential scenarios that could raise concerns. More specifically, should the current rise in inflation be more pronounced and persistent than we anticipate, it could have negative economic consequences. This scenario would likely result in a more hawkish Fed. Materially higher inflation could result in demand destruction, which would be a rather typical precursor to a potential economic slowdown. It's important to note that this scenario is not our base case currently.

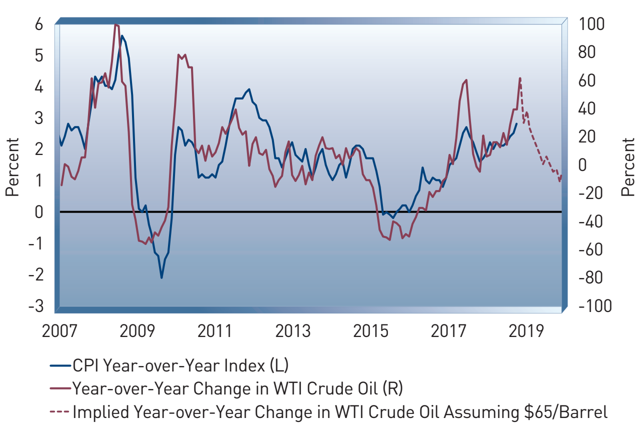
7. Should investors fear a flattening yield curve?

Yield curve inversions have a near-perfect track record of occurring prior to recessions. But the variability of timing (that is, when an inversion occurs and when the next recession ultimately takes place) is significant. The curve often starts to steepen again just before a recession actually hits. In terms of timing, it was almost three years in the late 1990s from inversion to recession, but only 10 months in the early 1980s (Chart 6). On average, the lead time between inversion and recession is about 20 months with a standard deviation of nine months (Table 4, page 8).

Interestingly, the stock market has *always* appreciated between an inversion and the actual recession. This makes some intuitive sense to us, since missing out on the "last hurrah" of a bull market cycle can be quite painful for investors (Chart 7, page 8).

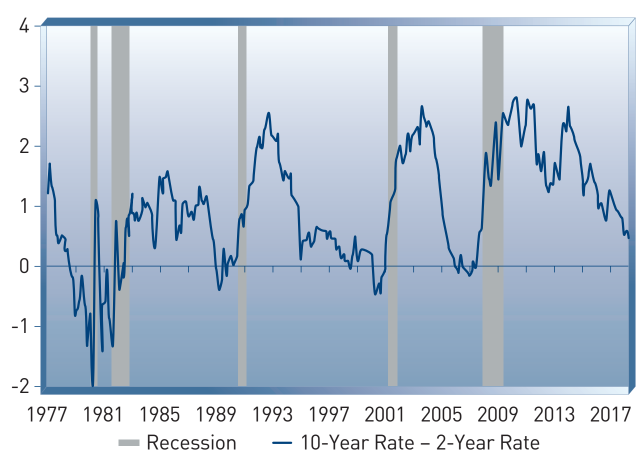
The Fed is the primary driver of yield curve inversions. The Fed tightens short-term interest rates when trying to contain inflation during the later stages of a business cycle. When long-term interest rates don't move up as much as short-term rates, the yield curve experiences a flattening effect. The Fed has far more influence over the shorter end of the yield curve since longer rates are influenced by other factors. When the Fed tightens short-term rates to the degree that long-term debt instruments have a lower yield than

Chart 5
Crude Oil and Headline Inflation
As of 5/30/18



Source: Bloomberg L.P., PNC

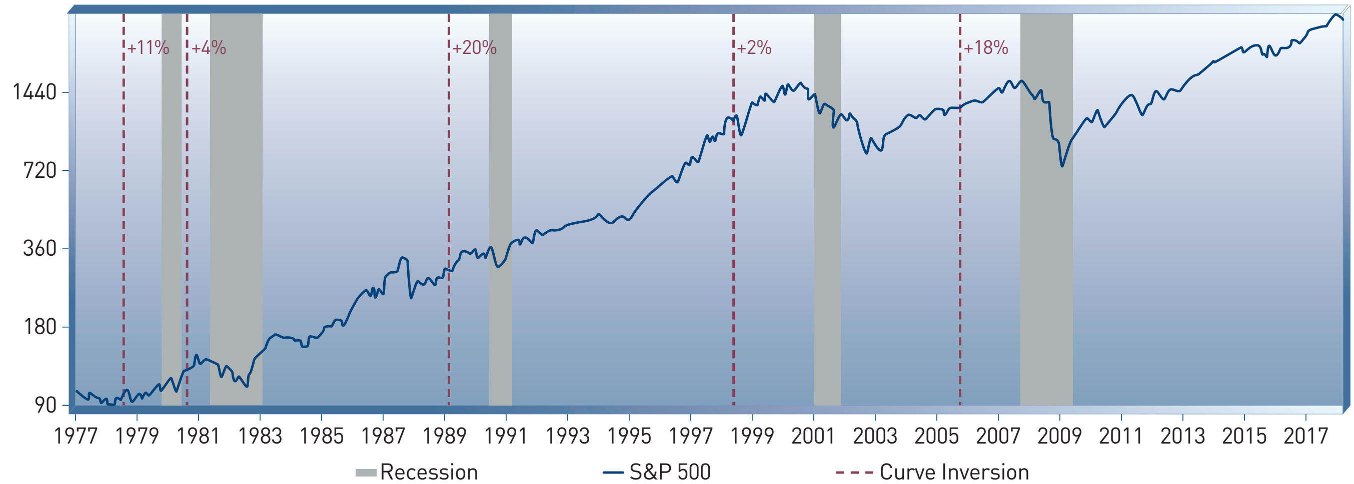
Chart 6
Yield Curve Inversions



Source: Bloomberg L.P.

Chart 7

S&P 500 Performance Post-Yield Curve Inversions



Source: Cornerstone Macro

Table 4

Lead Times between Inversion and Recession

Recession	Curve Inverted	Recession Started	Lead Time
1980	August 1978	January 1980	1 year, 5 months
1981-82	September 1980	July 1981	10 months
1990-91	January 1989	July 1990	1 year, 6 months
2001	June 1998	March 2001	2 years, 9 months
2007-09	December 2005	December 2007	2 years

Source: Bloomberg L.P.

short-term debt instruments of the same credit quality (such as U.S. Treasuries), an inversion occurs. It is important to understand that the inverted curve is not *causing* economic issues. Rather, it is just a reflection of central bank policy toward the end of business cycles.

What is keeping long rates under pressure today? Is it a sharp drop in growth expectations, or is it simply a compression of the term premium? Long-term interest rates = inflation expectations + growth expectations + term premium. We have done some analysis to derive each component of the 10-year Treasury. For now, even as the curve has flattened, growth expectations have remained on a steady trend higher. Chart 8 (page 9) shows a sharp drop in growth expectations before the economy begins to contract.

8. What is our opinion on cryptocurrencies?

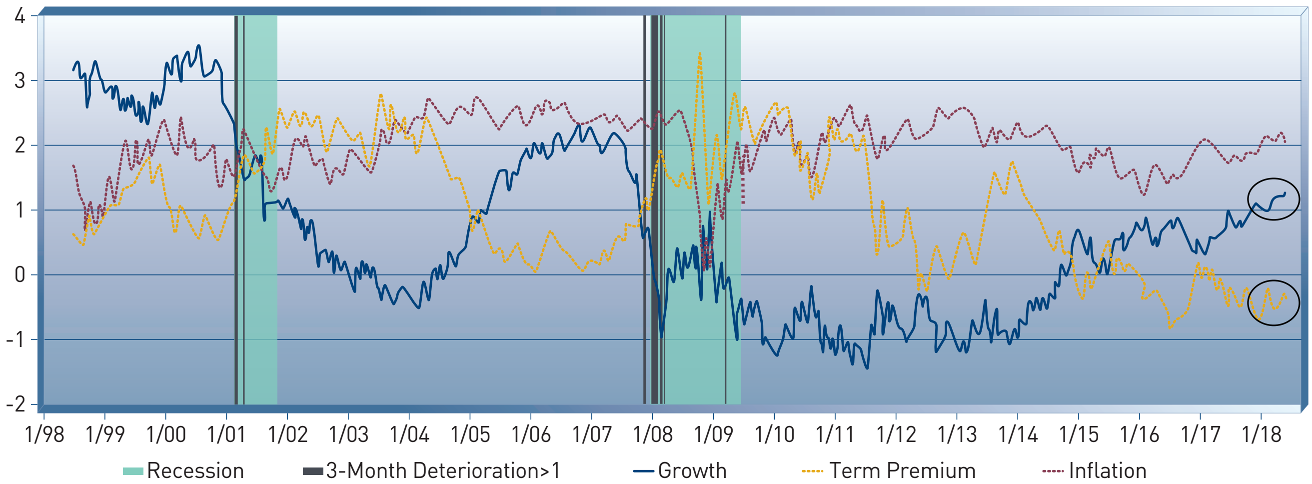
We first remind prospective owners that cryptocurrency markets are relatively new and therefore highly speculative. We firmly believe the industry lacks the stability, transparency, and safeguards of more traditional asset classes, despite the recent focus on increasing regulatory efforts by the U.S. and other international governments. Bitcoin's meteoric advance in 2017 (1,313%) outpaced the asset bubbles of Japanese equities in the 1980s, technology stocks in the 1990s, and the U.S. housing crisis in the 2000s. Bubbles eventually burst, as investors have observed during each of those periods. Just look at Bitcoin. Its 51% year-to-date decline (–65% from the December 2017 peak) is a clear illustration of just how volatile such trades can be. We believe more clarity around the Securities and Exchange Commission's regulations could have an immense bearing on how the industry will be governed.

Financial institutions are dealing with their own set of concerns. Can banks accept cryptocurrencies as deposits and collateral? If so, should they? Should asset management firms trade cryptocurrencies for their clients, even if it is permitted by existing laws? There are still numerous unknowns related to the regulatory and legal hurdles, including:

- meeting the custodial prerequisites if assets are held on a blockchain network;
- fulfilling the anti-money laundering obligations;

Chart 8

Growth Outlook in 10-Year Yields and 3-Month Recession Signal



Source: FactSet Research Systems Inc., PNC

- protecting against cyberthreats; and
- appropriately assessing counterparty risk.

New structures may be necessary to measure and manage the market, credit, and operational risks before companies can widely offer cryptocurrency-based products and services.

We remain cautious on cryptocurrencies themselves, particularly from an investment standpoint. But we have a much more favorable outlook on the blockchain technology underpinning these digital currencies. This technology has already proven to be a disruptive force far beyond just enabling the creation of cryptocurrencies. Blockchain technology has the potential to transform business models, conventional market strategies, and current regulatory practices. Corporate leaders across different industries have made it a priority to explore the merits and risks of blockchain to help determine whether it can be effectively integrated into existing operational processes. Financial institutions in particular have voiced their support of the technology as a means to improving transactional networks, offering new opportunities for innovation and growth while helping to reduce risk and costs.

As a general rule, we do not invest in purely currencies. “A currency has no long-term expected return because, although it is a risk exposure, it is not an economic asset for which a long-term risk premium exists. Investors do not invest in currencies to capture a risk premium; instead, they invest in international assets *denominated* in a foreign currency.”[4] Given this strategic viewpoint, we will continue to monitor the development and proliferation of both cryptocurrencies and blockchain technology applications, with an eye toward better understanding how these might reasonably fit into a multiasset class portfolio context. But we are nowhere near convinced to the point where we would make a tactical recommendation to allocate to either one.

9. What asset class is facing the most near-term challenges?

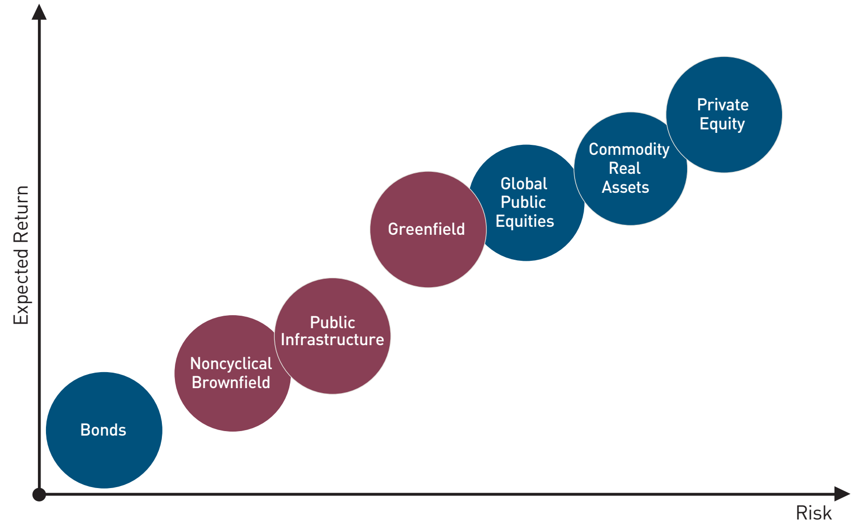
After a strong 2017, with 37% total return, EM equities have started to show some weakness. They have given back nearly all of their relative outperformance versus both U.S. and developed international equities year to date. This is not meant to condemn the asset class over the longer term. In fact, we think EMs are likely to outperform the developed world over the next 5–10 years. However, after such strong performance last year, we would not be surprised if recent underperformance continued, especially considering some of the mounting headwinds facing the region, namely:

- a stronger dollar;
- slowing economic growth; and
- trade/protectionist concerns.

[4] https://www.commonfund.org/news-research/blog/is-currency-an-asset-class/

Chart 9

Infrastructure Risk-Return Expectations Compared to Other Asset Classes and within Infrastructure Subsectors



Source: PNC

We believe a strengthening dollar has served as the key catalyst for a reversal in performance by exposing some lingering problems with EM fundamentals. If the dollar continues to appreciate versus EM currencies, EM debt stress will likely mount. After all, it's harder to service debt denominated in dollars when your local currency is depreciating. Table 5 shows that since 1996, companies in EMs have dramatically increased their ratio of foreign debt as a percentage of GDP.

On the trade front, if Chinese exports slow, other Asian EMs tied to Chinese supply chains are at increased risk. About one-third of China's exports to the United States represent value created outside of China (imported from elsewhere and re-exported to the United States). If trade tensions escalate, this poses an additional headwind to EM growth, which already appears to be downshifting. If the current slowdown persists, credit spreads may continue to widen and additional pressure may be felt across EM equity indexes.

Table 5

EM Private Sector Foreign Exchange Debt: 1996 versus Today

	As a Percentage of GDP	
Country	1996	As of January 1, 2018
Chile	19.9%	63.0%
Malaysia	27.7%	63.7%
South Africa	10.9%	45.2%
Brazil	10.5%	37.1%
Turkey	13.7%	69.3%
Russia	12.5%	34.8%
Peru	10.5%	31.4%
Mexico	14.0%	38.9%
South Korea	24.2%	26.0%
Thailand	59.1%	30.9%
Colombia	10.5%	38.9%
Philippines	16.9%	24.0%
India	6.5%	23.6%
Indonesia	26.0%	36.6%
China	9.3%	12.9%

Source: Bank for International Settlements

10. What asset class looks most attractive today?

We think global infrastructure may be an option for yield-seeking investors looking for investments that can help achieve their long-term return objectives. While a relatively new investment solution to a broad base of U.S. investors, asset flows into infrastructure investments suggest demand is far from outpacing the supply of global projects. Furthermore, projects dedicated to clean energy and water provide a unique opportunity to act as both a long-term income-generating asset and an impact investment to help potentially fulfill the needs of responsible investing investors—a win-win, in our view (Chart 9).

Key merits of infrastructure investments include:

- consistent income/cash flow generation;
- low correlation to traditional asset classes;
- less cyclical/more defensive behavior across market cycles;
- global diversification/exposure; and
- inflation-linked revenue streams.

Key risks include:

- heterogeneous reward/risk potential;
- slower long-run growth profile than other equity asset classes;
- less upside capture in rapidly rising public equity markets;
- potential vulnerability to rising costs of capital/interest rates; and
- currency translation for U.S.-based investors.

We believe infrastructure investing may be well positioned for the later innings of the business cycle, supported partly by rising global demand for the asset class. Further, we think there are secular forces at play (for example, low productivity growth and global monetary policy crosscurrents) that may continue to weigh on interest rates for some time. Therefore, investors may be compelled to look for consistent income generation coupled with capital appreciation potential. The asset class offers attractive cash flows relative to most fixed income asset classes and relatively less volatility than broader equity markets. As such, we believe infrastructure should be considered a viable portfolio option in today's market. (For an in-depth look at our global infrastructure investment thesis, please see our fourth-quarter 2017 *Strategy Insights, If They Build it, Will Investors Come?)*

Hawthorn Asset Allocation Playbook
As of 7/1/2018

Asset Class	Sub Asset Class	Change	Favorability							Points of View
			-			Neutral			+	
Equities						●				
U.S.	Large Cap						●			Relative valuation causes us to narrowly favor large over small. Small caps have outperformed year to date as investor concerns related to trade and, more recently, a stronger dollar have driven them to seek protection from less exposed small cap stocks. Smaller companies may also benefit from positive tax reform-related forward guidance; however, valuations remain quite expensive at 22.5 times on a forward earnings basis. 30% of small-cap indexes like the Russell 2000® still have no earnings, so be selective when investing in the asset class.
	Mid Cap					●				
	Small Cap					●				
Non-U.S.	Intl. Large/Mid Cap					●				Valuations appear relatively more attractive versus domestic equities, potentially creating attractive long-term opportunities in many international markets. Still largely accommodative monetary policy by global central banks and solid earnings momentum should also provide additional support. However, political risk is again elevated and economic momentum has weakened versus what we are seeing in the United States.
	Intl. Small Cap					●				
	Emerging Markets	▼		●						Although we like EM for the long term given current valuations, we believe the rally to be overextended. The shorter-term bear case for EM equities rests mainly on tightening in China, as well as the newfound strength in the dollar. Year to date, EM has underperformed both developed international and U.S. markets.
Fixed Income					●					
U.S.	Short Muni Fixed Income				●					Although interest rates may drift higher given solid economic momentum, we believe we may have already seen the bulk of the move higher in rates for this business cycle. Therefore, we favor positioning fixed income portfolios in the intermediate part of the curve.
	Core Muni Fixed Income	▲					●			
	U.S. High Yield				●					The credit cycle is aging, and valuations should become an increasing headwind for below-investment-grade bonds. Leveraged loans, although more senior in the capital structure, have seen issuance balloon in recent years while covenants have weakened. Given our view on interest rates, credit risk may be starting to outweigh the protection from higher rates.
	U.S. Leveraged Loans	▼			●					
	U.S. TIPS	▼			●					Less value in Treasury Inflation-Protected Securities (TIPS) with breakeven inflation rates now around 2.20%. We prefer to hedge inflation over the long term via our equity exposure.
Non-U.S.	Global Bond	▼			●					Although we are not overly negative on credit given the strength of the economy, we do believe slowly shifting to higher-quality areas of fixed income is sensible given the level of spreads. Unconstrained funds have reached for yield in lower-rated credits.
	Unconstrained Bond					●				
	Emerging Market Bond				●					

Asset Class	Sub Asset Class	Change	Favorability							Points of View
			-			Neutral			+	
Alternatives							●			
Private	Private Real Estate	▼				●				Key drivers include a still relatively constrained supply backdrop, modest leverage levels, and the fact that capital flows into the asset class are becoming increasingly global (that is, investor demand is quite robust).
	Private Debt	▼				●				Middle-market lending in the corporate sector is still quite constrained, continuing to create opportunities for private debt investors. Some banking deregulation may open this space up to more traditional bank lending, however.
	Private Equity	▼				●				Opportunity in new/less efficient markets, and a more diverse investable opportunity set, for example, via secondaries and "co-investment" options. That said, as with public markets, valuations are extended.
Hedge Funds	Equity Long/Short						●			A transition from a primarily macro-driven market environment to a more fundamentally driven one will be positive for these alpha-generating strategies. Central banks now appear more committed to a steady normalization of interest rates than they have been in years past. We believe differentiated return streams can add value in today's market versus a traditional equity/bond portfolio.
	Event Driven						●			
	Relative Value						●			
	Directional						●			
Cash						●				
Tactical Allocations							●			
Tactical	Master Limited Partnerships						●			Performance has suffered after a strong start to the year. Markets penalized the sector after a potentially unfavorable tax ruling; however, we believe the overall impact will be small. Stronger fundamentals and rising energy prices could spur investor interest given currently depressed valuations and underweight energy positioning among equity portfolio managers.
	Infrastructure						●			Defensive qualities and income potential that we like in this market.
	Currency Hedged Europe	▲					●			Stable economic conditions, improving earnings growth, and relatively attractive valuations put European equities in a good position despite recent political volatility. The currency hedge has been additive to 2018 performance.
	Currency Hedged Japan						●			Valuations are attractive, earnings growth is strong, and consumer confidence is high. We still like the currency hedge as the Bank of Japan remains easy relative to the Fed and yen positioning (now net long) is no longer supportive of a move higher.
	Energy	▲						●		With higher and more stable oil prices, better capital discipline, and attractive relative valuations, we believe Energy sector equities can outperform the broad market on a tactical basis.
	U.S. Banks							●		We think valuations, the regulatory backdrop, and the continuation of this business cycle are compelling reasons to tilt toward U.S. banks within value allocations. Banks are historically correlated with increases in capital expenditures which we believe will continue this year.
	Structured Note (Drawdown)	▼				●				Ability to earn a coupon while waiting for a more attractive entry point into equities can be an attractive strategy. However, cash has become more palatable given the rise in short-term interest rates.

HAWTHORN
PNC Family Wealth

Contact us at 1.888.947.3762

Baltimore
One East Pratt Street
Baltimore, MD 21202

Cincinnati
201 East Fifth Street
Cincinnati, OH 45202

Cleveland
1900 E. Ninth Street
Cleveland, OH 44114

Dallas
200 Crescent Court
Dallas, TX 75201

Delaware
300 Delaware Avenue
Wilmington, DE 19801

Great Lakes
120 North Washington Square
Suite 650
Lansing, MI 48933

Naples
Newgate Center
5150 Tamiami Trail North
Suite 101
Naples, FL 34103

Philadelphia National Headquarters
1600 Market Street
Philadelphia, PA 19103

Pittsburgh
The Tower at PNC Plaza
300 Fifth Avenue
Pittsburgh, PA 15222

Washington, D.C.
800 17th Street NW
Washington, DC 20006