



GLOBAL MARKET OBSERVATIONS

Quarterly Economic & Market Commentary
Q4 2018

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RAYMOND JAMES

DOMESTIC MARKETS



The ghosts of past trade and monetary policy, which had long beleaguered markets around the globe, seemed to have finally come back to visit domestic markets. The collateral damage caused by tariffs and a heavy-handed Federal Reserve seem to have finally caught up with American stocks.

Ghost of Market Past...
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DEVELOPED MARKETS



UK Prime Minister Theresa May has suffered yet another stunning (though unsurprising) setback in her bid to formalize Britain’s exit from the European Union. In spite of the certainty of the vote, the path forward remains as uncertain as ever. Yet, Europe now faces a much more pervasive threat: slowing economic growth.

May-Day
Page 5

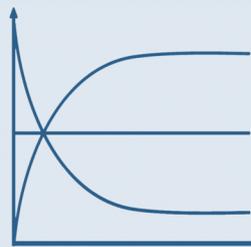
EMERGING MARKETS



Throughout the year, emerging markets have been facing the collateral consequences of hawkish Federal Reserve policy and the trade war between the U.S. and China. Since the U.S. government announced its first round of tariffs in February, share prices across the emerging world have come under significant pressure, particularly those in China.

Collateral Consequences
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CREDIT MARKETS



As volatility gripped the markets at the end of the year, investors fled from equities and flocked to government bonds. The Federal Reserve has raised its benchmark interest rate four times throughout 2018, which has flattened the yield curve substantially. While hawks have previously prevailed, it appears that a dovish détente has come home to roost.

Dovish Détente?
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Returns for Key Indices – Trailing 12 Months and the Fourth Quarter of 2018 – Ranked in Order of Performance (Best to Worst)

Broad Asset Class Total Returns		Domestic Equity Total Returns		S&P 500 Equity Sector Total Returns		International Equity Total Returns		Fixed Income Total Returns	
T12	Q4	T12	Q4	T12	Q4	T12	Q4	T12	Q4
Cash & Cash Alternatives 1.86	U.S. Fixed Income 1.64	Large Growth -1.51	Large Value -11.72	Health Care 6.47	Utilities 1.36	EM Eastern Europe -4.36	EM Latin America 0.36	T-Bill 1.86	Treasury 2.57
U.S. Fixed Income 0.01	Cash & Cash Alternatives 0.57	Mid Growth -4.75	Large Blend -13.82	Utilities 4.11	Real Estate -3.83	U.S. Large Cap -4.38	EM Eastern Europe -6.86	Short-Term Bond 1.60	MBS 2.08
Blended Portfolio -4.03	Global Real Estate -5.01	Large Blend -4.78	Mid Value -14.95	Cons Disc 0.83	Cons Staples -5.21	EM Latin America -6.57	Emerging Markets -7.47	Agency 1.34	Agency 1.90
U.S. Equity -5.24	Blended Portfolio -6.82	Large Value -8.27	Mid Blend -15.37	Info Tech -0.29	Health Care -8.72	Pacific ex-Japan -10.30	Pacific ex-Japan -7.94	Municipal 1.28	Municipal 1.69
Global Real Estate -6.37	Commodities -9.41	Mid Blend -9.06	Large Growth -15.89	Real Estate -2.22	Materials -12.31	Japan -12.88	EM Asia -9.29	MBS 0.99	Aggregate Bond 1.64
Commodities -11.25	Non-U.S. Equity -11.46	Small Growth -9.31	Mid Growth -15.99	S&P 500 -4.38	Financials -13.11	Developed Markets -13.79	United Kingdom -11.78	Treasury 0.86	Short-Term Bond 1.18
Non-U.S. Equity -14.20	U.S. Equity -14.30	Small Blend -11.01	Small Value -18.67	Cons Staples -8.38	Comm. Serv. -13.19	United Kingdom -14.15	Developed Markets -12.54	Aggregate Bond 0.01	Global Bond ex-U.S. 0.91
		Mid Value -12.29	Small Blend -20.20	Comm. Serv. -12.53	S&P 500 -13.52	Emerging Markets -14.58	Europe ex-UK -13.08	U.S. Tips -1.26	Long-Term Bond 0.78
		Small Value -12.86	Small Growth -21.65	Financials -13.03	Cons Disc -16.42	Europe ex-UK -15.14	U.S. Large Cap -13.52	High Yield -2.08	T-Bill 0.57
				Industrials -13.29	Industrials -17.29	EM Asia -15.45	Japan -14.23	Credit -2.11	Credit 0.01
				Materials -14.70	Info Tech -17.34			Global Bond ex-U.S. -2.15	U.S. Tips -0.42
				Energy -18.10	Energy -23.78			Long-Term Bond -4.68	Emerging Mkt Bond -0.66
								Emerging Mkt Bond -5.33	High Yield -4.53

Assume all asset classes are U.S. unless otherwise noted | Data as of 12/31/2018 | Ranked in order of performances (best to worst)

All investing involves risk and you may incur a profit or a loss. Past performance is not a guarantee of future results. This material is for informational purposes only and should not be used or construed as a recommendation regarding any security. Indices are unmanaged and cannot accommodate direct investments. An individual who purchases an investment product which attempts to mimic the performance of an index will incur expenses such as management fees and transaction costs which reduce returns. Returns are cumulative total return for stated period, including reinvestment of dividends. Dividends are not guaranteed and a company's future ability to pay dividends may be limited. Source: Morningstar Direct

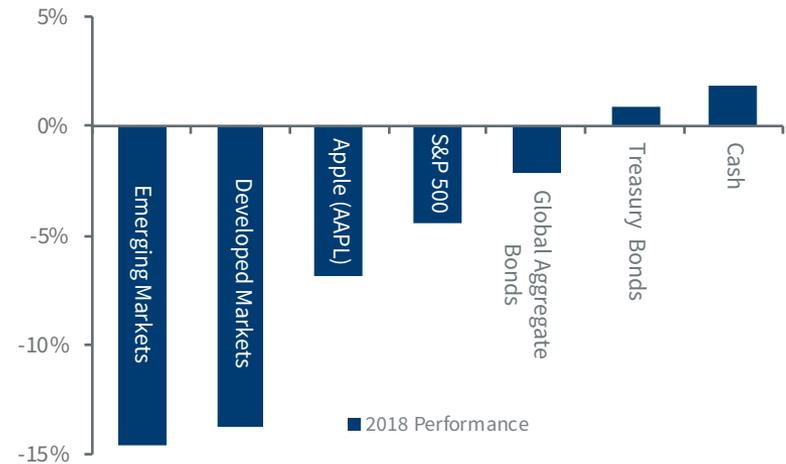
GHOST OF MARKETS PAST...

'Twas the night before Christmas, as investors were confronted with a clatter and a rush to see what was the matter. Alas, it was neither a visit from St. Nick nor a dusting of snow, but a bruising bout of volatility for global stock markets that saw the S&P 500 fall 65 points on Christmas Eve, closing at its lowest level since April 2017. The fall, which began in October and crescendoed in December, wiped out 2018 market gains across the board and dragged down nearly every asset class with the exception of cash and government bonds (see charts). Given that December has traditionally been a relatively reliable month for positive market momentum (December 2018 proved to be the worst December for stock market returns since 1931), it is little surprise that end-of-year cheer was in short supply. As they woke up on Christmas morning, bewildered investors wondered who stole the Santa rally.

The ghosts of past trade and monetary policy, which had long beleaguered markets around the globe, seemed to have finally come back to visit domestic markets. The collateral damage caused by tariffs and a heavy-handed Federal Reserve (see *Dovish Détente*, p. 7) seem to have finally caught up with American stocks. Despite the volatility it faced at the beginning of 2018, the S&P 500 index appeared to possess an air of invulnerability relative to its global index peers as it marched higher through October. No longer. As noted and anticipated by every edition of this commentary throughout 2018, markets continue to be bridled by the ongoing fallout of protectionist trade policy and the dangerous duel between China and the U.S. Though both nations are engaged in renewed trade talks under the guise of a temporary truce brokered in the wake of the recent G20 summit (which postponed an increase in U.S. tariffs from January to March), much uncertainty remains.

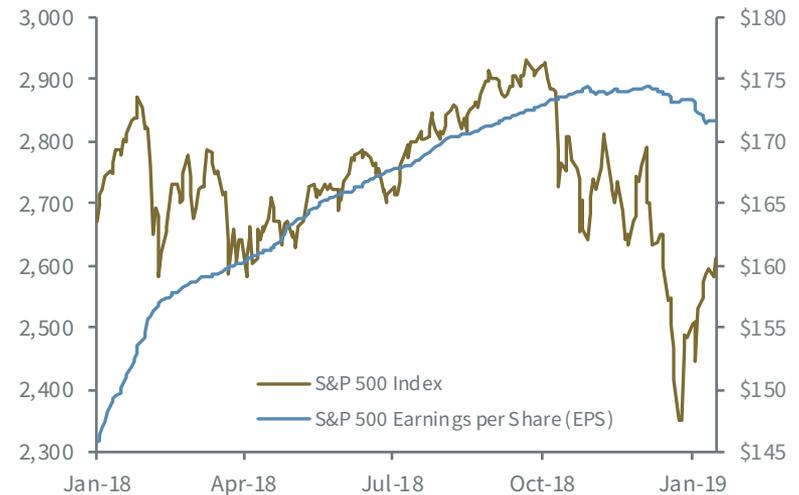
Such uncertainty is now manifest in falling key economic data (see *Collateral Consequences*, p. 6), prompting fears of a worldwide economic slowdown. Even Apple, easily one of the most dominant technology titans, was felled amidst the turmoil. Though it was briefly the world's first publicly traded company valued at \$1 trillion and has long buoyed markets with its performance, it too was no longer impervious. Apple's most recent quarterly earnings report lowered its future sales estimates, citing both the trade war and the subsequent economic slowdown as causes. Although U.S. tax cuts had broadly boosted corporate earnings growth, their one-time effect is waning (see chart). Given that markets are priced on forward looking expectations rather than present circumstances, future returns will be dependent upon certainty surrounding trade policy and its economic impact.

PRESENT...



Source: Morningstar Direct as of 01/15/2019

YET TO COME...?



Source: FactSet as of 01/15/2019

MAY-DAY

UK Prime Minister Theresa May has suffered yet another stunning (though unsurprising) setback in her bid to formalize Britain’s exit (Brexit) from the European Union (EU). On 15 January, Parliament delivered a resounding rejection of May’s beleaguered Brexit deal. 230 members of parliament (MPs) voted down the proposal (118 from May’s own Conservative party). While the margin of defeat was noteworthy (it was the widest suffered by a sitting prime minister in modern British history), the result was not. The vote was widely expected to fail, which was confirmed by the rather muted market reaction in the immediate aftermath of the result. In spite of the certainty of the vote, the path forward remains as uncertain as ever.

Barring an extension of the current deadline, Britain will exit the EU on 29 March, with or without a deal. Without one, the effects of leaving are widely considered to be catastrophic to the British economy. As a result, there is impetus to rework the existing deal or reengineer a new one altogether. Alternatively, the government could seek an extension of the 29 March deadline from the EU, or hold a second referendum. Given the sheer number of Conservative MPs who voted down the deal brokered by their own prime minister, the government’s course of action remains anything but clear. However, if the market’s muted reaction augurs anything, it is that most investors believe that the government will find a solution that precludes a ‘no deal’ Brexit (the likeliest outcome favored by most MPs). Then again, most investors also believed that Brexit itself was not supposed to happen either.

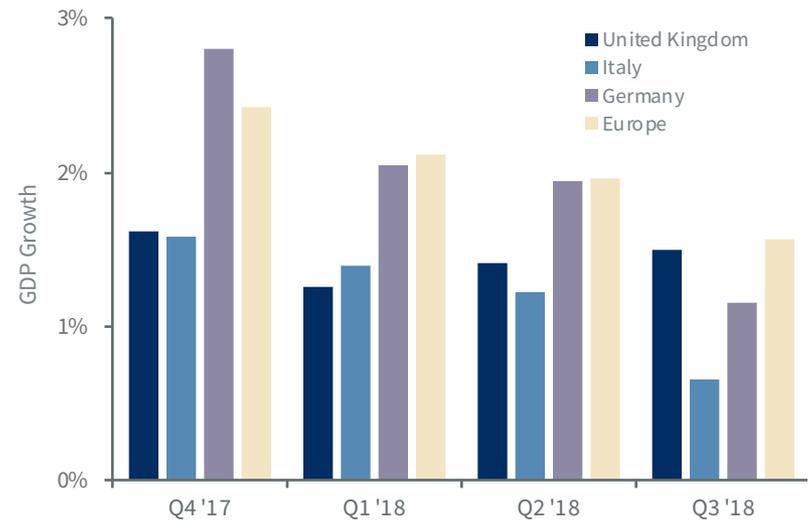
Separately, the other major story out of the continent was a positive resolution between the EU and Italy, which had long remained at loggerheads concerning the latter’s budget. On 19 December, Italy agreed to trim its government budget deficit from 2.4% to 2.0% of GDP, an arrangement the EU ultimately found acceptable. The most recent performance of British and Italian stock indices would suggest that most government-induced mischief now remains somewhat managed (see chart). Yet, Europe now faces a much more pervasive threat: slowing economic growth (see chart). The German economy (Europe’s largest) has slowed substantially, narrowly avoiding a recession in Q4 2018. Given that Germany has remained immune to much of the political turmoil that has plagued its neighbors (including the recent ‘gilets jaunes’ protests in France), its slowdown suggests the economic malaise is much more broad-based. Without a significant stimulus to spur a rebound in growth, it remains unclear how Europe will break free from its long streak of stagnation.

MISCHIEF MANAGED?



Source: FactSet as of 01/15/2019 (100 = 1 January 2018 Value)

GROWING, GROWING... GONE?



Source: FactSet as of 01/15/2019

COLLATERAL CONSEQUENCES

While the U.S. was recently and rudely reacquainted with the reality of the trade war and its pervasive impact on share prices (see *Ghosts of Markets Past*, p. 4), emerging markets have already been facing the fallout throughout the year. Since the U.S. government announced its first round of tariffs in February, share prices across the emerging world have come under significant pressure, particularly those in China (see chart). Given that China (by virtue of its sheer size) accounts for an outsized portion of emerging market indices, its underperformance has placed a significant drag on overall emerging market returns.

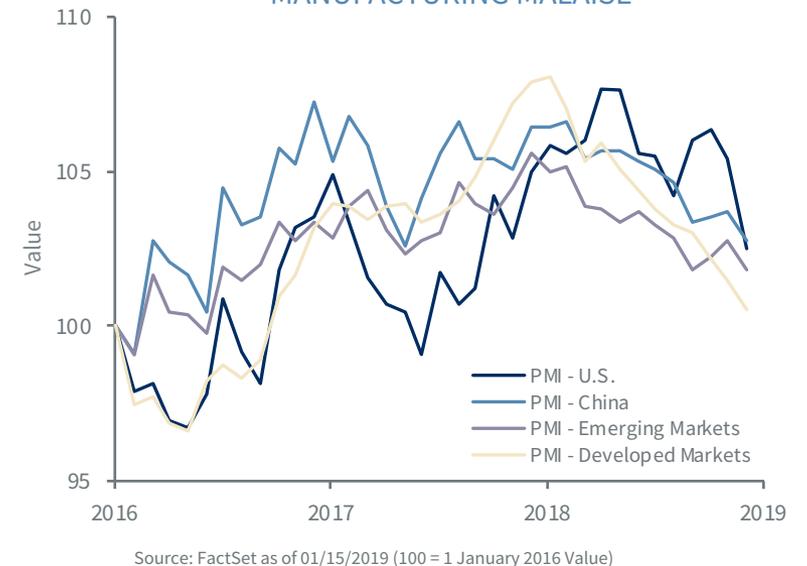
While emerging economies (including China’s) have had to contend with the effects of more hawkish Federal Reserve policy (see *A Vexing Vassalage*, Q3 2018 Global Market Observations), the proximate cause of China’s underperformance has been the trade war with its largest trading partner. The U.S. is far and away the largest market for Chinese exports (China’s exports to the U.S. totaled over \$500 billion in 2017). Although the U.S. set tariffs on a number of its trading partners in 2018, its primary target has been China. For a time, President Trump threatened to place tariffs on the entirety of China’s exports to the U.S. Such rhetoric has come at a cost. The interconnected nature of global supply chains necessitates a dependence upon certainty, especially in regards to trade policy. While recent negotiations have shown encouraging progress, trade policy was anything but certain throughout the majority of 2018. Signs are now emerging that economic damage has already been done as a result.

One of the collateral consequences of ongoing trade tensions has been a significant reduction in purchasing managers’ indices (PMIs), an important indicator of overall economic health (see chart). While the extent of its economic effects may not have been readily evident at the outset of hostilities, the trade war is beginning to take its toll on the global economy. The recent decline would suggest that uncertainty surrounding trade policy has begun to beget widespread malaise throughout manufacturing. Whereas 2017 witnessed a rather synchronized ascent in global PMIs, 2018 has marked a considerable reversal. As evinced by the increased volatility at the close of the year, investors remain concerned that falling PMIs portend a global economic slowdown. A PMI reading below 50 is considered to be a recessionary indicator. PMIs for China and emerging markets as a whole currently stand at 49.71 and 50.30, respectively. Should a lasting resolution to the trade war come to fruition, it would go a long way towards restoring lost certainty.

DRAGGING DRAGON



MANUFACTURING MALAISE



DOVISH DÉTENTE?

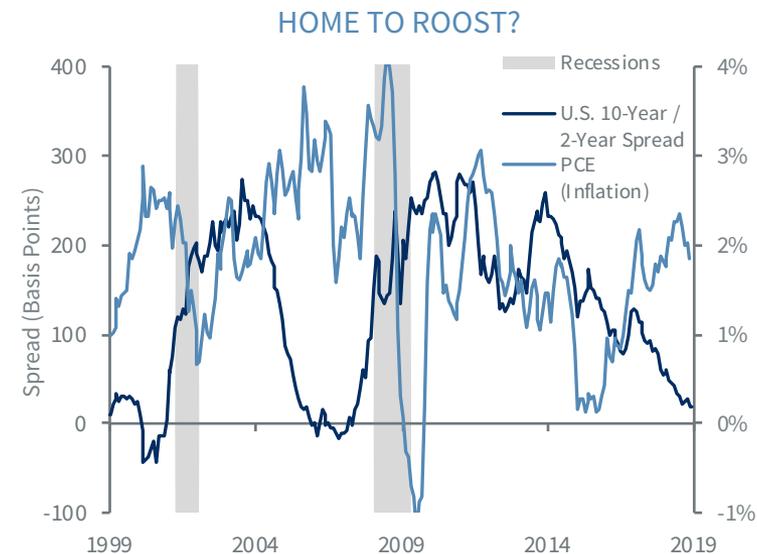
As volatility gripped the markets at the end of the year, investors fled from equities and flocked to government bonds. This ‘flight to safety’ precipitated a corresponding fall in global bond yields (see chart). Since bond prices rise as yields fall, government securities were one of the few assets that ended the year with positive performance (see *Ghosts of Markets Past*, p. 4). And there are yet more reasons why yields on government bonds may not have much more room to go up.

Throughout 2018, the Federal Reserve (Fed), America’s central bank, raised its benchmark discount rate four times. This was the highest number of hikes the Fed has made since 2006. While each increase was only 0.25% (25 basis points), the moves have flattened the yield curve substantially. In fact, the yield curve flattened to the point of inversion in between the 2- and 5-year maturity mark. That is to say, the 2-year Treasury Note had a higher yield than the 5-year Treasury Note. Given that longer maturity bonds should yield more than those with shorter maturities, yield curve inversions are considered irregular. When an inversion occurs in between the 2- and 10-year maturity mark (i.e., the 2-year Treasury Note yields more than the 10-year Treasury Note) it has historically heralded an oncoming recession (see chart). When the spread between the 2- and 10-year Treasury Note yield (dark blue line) falls below zero (indicating that an inversion has occurred), a recession follows (light grey bars). While the curve has not yet inverted in this case, it is only 0.18% (18 basis points) above zero.

Until recently, the Fed and its chairman, Jerome Powell, have struck a decidedly hawkish tone, meaning that they have been keen to raise interest rates. With unemployment falling to record low levels amidst a strengthening economy, the Fed is tasked with staving off runaway inflation, which would ‘overheat’ the economic expansion. Yet, in recent months, inflation (light blue line) has remained at (or slightly above) the Fed’s 2% target (see chart). This would seem to suggest that the Fed has successfully contained inflation without the need for a significant number of additional rate hikes. However, at its December meeting (during which it raised the discount rate for the fourth time in 2018), the Fed voiced a commitment to further gradual increases. This announcement came amidst an intensifying market selloff, which only worsened after the news. Seeming to recognize the need to temper the central bank’s future approach to further increases, Powell later indicated that mild inflation would indeed afford the Fed additional flexibility in setting policy. This more dovish tone (indicating a softer approach to rate hikes) was welcomed by the market. Barring an unexpected rise in inflation, it would appear that this dovish détente has come home to roost.



Source: FactSet as of 01/15/2019 (100 = 1 October 2018 Value)



Source: FactSet as of 01/15/2019

Recent data suggest that the economic expansion continued at a moderately strong pace in 4Q18, with low and stable inflation. Trade tariffs initially had a significant impact on some sectors, but only a modest impact on overall economic growth and inflation. However, the impact is broadening and there are risks of a further escalation of trade tensions in 2019. Fiscal stimulus (deficit spending) should continue to provide support in early 2019, but the impact will fade. Federal Reserve (Fed) officials expect that some further increases in short-term interest rates will be warranted, but the pace of tightening should slow.

DR. SCOTT BROWN
Chief Economist

	ECONOMIC INDICATOR	COMMENTARY
FAVORABLE	GROWTH	GDP growth is expected to remain moderately strong, although somewhat slower in 2019, reflecting job market constraints, trade disruptions, and the fading impact of fiscal stimulus.
	EMPLOYMENT	Demand for workers should remain strong and there may be some slack remaining in the labor market, but the pace of job growth is likely to slow as constraints become more binding.
	CONSUMER SPENDING	Job growth remains supportive. The drop in gasoline prices should add to purchasing power.
	THE DOLLAR	Trade policy conflicts and concerns about global economic risks have led to a flight to safety into U.S. Treasuries and the dollar. However, there is some risk of a softening as the Fed nears the peak of its tightening cycle.
	INFLATION	Inflation moderated in the second half of 2018, but should pick up somewhat in early 2019, reflecting higher labor costs (minimum wage increases in some states) and tariffs.
NEUTRAL	BUSINESS INVESTMENT	Sentiment remains strong, although there are some concerns about the negative impact of tariffs. Orders and shipments of capital goods have improved into 3Q18.
	MANUFACTURING	New orders and production have been mixed, but the pace has been generally moderate. Trade tariffs are a concern, disrupting supply chains and dampening expectations for growth in exports.
	HOUSING AND CONSTRUCTION	Builders continue to note supply constraints (a lack of skilled labor, and higher construction costs). Demand remains strong, but customers have balked at higher home prices.
	MONETARY POLICY	Fed policy is closer to neutral, but not there yet. Fed officials expect to raise rates further in 2019, but the pace of tightening should slow.
	LONG-TERM INTEREST RATES	There are a number of factors that would normally put some upward pressure on bond yields. However, investor anxiety has led to a flight to safety, pushing long-term interest rates lower (that may be transitory).
	FISCAL POLICY	Tax cuts and added spending provided support for economic growth in 2018 (a bit more than expected), but budget deficit projections have risen sharply (a long-term concern given the expected strains on Social Security and Medicare funding).
	REST OF THE WORLD	Fed rate increases have had a negative impact on emerging market economies and trade policy has disrupted supply chains. Nationalistic tendencies, Brexit, and Italy are concerns. China should do okay.

This report is intended to highlight the dynamics underlying the 11 S&P 500 sectors, with a goal of providing a timely assessment to be used in developing your personal portfolio strategy. Our time horizon for the sector weightings is not meant to be short-term oriented. Our goal is to look for trends that can be sustainable for several quarters; yet, given the dynamic nature of financial markets, our opinion could change as market conditions dictate. Most investors should seek diversity to balance risk versus reward. For this reason, even the least-favored sectors may be appropriate for portfolios seeking a more balanced equity allocation.

J. MICHAEL GIBBS
 Managing Director of Equity
 Portfolio & Technical Strategy

	SECTOR	S&P WEIGHT	TACTICAL COMMENTS
OVERWEIGHT	INFORMATION TECHNOLOGY	20.3%	Earnings revisions continue to tick lower; a trend that may persist in the near term. If trade talks fail to improve and tariffs move to 25% and expand, the sector will suffer adversely. Valuation does not provide the support it did during the last rough spot for the equity market (2015-2016). Nonetheless, with little evidence suggesting the current fundamental weakness is nothing more than slowing as opposed to outright contraction, we maintain an overweight position.
	HEALTH CARE	15.7%	The top performing sector in 2018 remains favorable. Still, we feel the sector is vulnerable to short-term underperformance given that significant market declines often end with leading sectors collapsing. Despite this near-term risk, the defensive characteristics, generally healthy fundamental trends, and reasonable valuation support an overweight stance.
	INDUSTRIALS	9.1%	Our overweight stance will continue to suffer if the flattening yield curve and equity market volatility are accurately forecasting slowing macro trends in the months ahead. However, if the current healthy economic data does not roll over, the sector is likely set-up for strong relative performance over the next 12-months. Valuation is compelling and current earnings growth projected for 2019 (+10.8%) is well ahead of overall growth expected for the S&P 500.
	ENERGY	5.5%	This overweight position is suffering as crude oil moves lower. With the sector deeply oversold, negative sentiment, and the equity market near (in our opinion) a decent bounce, we remain overweight. Additionally, supply and demand for this commodity-influenced sector will eventually move in favor of higher prices as low price levels will ultimately result in less supply and hence higher prices; assuming global demand holds up.
EQUAL WEIGHT	FINANCIALS	12.9%	Tight correlation to the flattening yield curve keeps us equal weight despite attractive valuation and expectations for solid earnings gains in 2019. Technical trends are weak and also justify an equal weight.
	COMM. SERVICES	10.0%	Potential increased government scrutiny of social media companies (largest weighting in the sector) influence an equal weight despite compelling qualities of the sector (valuation and improving relative technical trading trends).
	CONSUMER DISCRETIONARY	9.9%	Expensive valuation along with sluggish technical trading trends for the equal weight index (average consumer discretion stock) cause us to remain equal weight, despite what should be a favorable fundamental back-drop of ample jobs and low energy prices.
UNDERWEIGHT	CONSUMER STAPLES	7.6%	The defensive sectors, such as consumer staples, are performing relatively well in the risk-off mode of the equity market. Given our belief (an oversold bounce and eventually higher equity prices will transpire), we are not chasing the fundamentally-challenged sectors that are working now.
	UTILITIES	3.3%	Given our belief (an oversold bounce and eventually higher equity prices will transpire), we are not chasing the fundamentally-challenged sectors, such as utilities, that are working now. Q4 earnings are expected to grow by 0.15%, slowest of all sectors and downwardly revised from 9.84% on 9/30.
	REAL ESTATE	3.0%	The defensive sectors, such as real estate, are performing relatively well in the risk-off mode of the equity market. Given our belief (an oversold bounce and eventually higher equity prices will transpire), we are not chasing the fundamentally-challenged sectors that are working now. Q4 estimates have held steady at 8.9% expected earnings growth, although 2019 estimated growth is slowest of all sectors at 3.7%.
	MATERIALS	2.6%	The deeply cyclical materials are suffering in the market decline, and for now, we remain underweight. Sharp downward earnings estimate revisions for Q4, now reflecting 9.1% growth (from 17.7% expected on 9/30). 2019 earnings estimate is 5.9%.

All content written and assembled by Taylor Krystkowiak, Investment Strategy Analyst.

ADDITIONAL DISCLOSURES

Any charts and tables presented herein are for illustrative purposes only and should not be considered as the sole basis for an investment decision. There can be no assurance that the future performance of any specific investment or investment strategy made reference to be profitable or equal any corresponding indicated historical performance level(s). This information should not be construed as a recommendation.

The foregoing content is subject to change at any time without notice. Content provided herein is for informational purposes only. There is no guarantee that these statements, opinions or forecasts provided herein will prove to be correct.

Past performance is not a guarantee of future results. Indices and peer groups are not available for direct investment. Any investor who attempts to mimic the performance of an index or peer group would incur fees and expenses that would reduce returns. All investing involves risk. Asset allocation and diversification does not ensure a profit or protect against a loss. Dividends are not guaranteed and a company's future ability to pay them may be limited.

International investing involves additional risks such as currency fluctuations, differing financial accounting standards, and possible political and economic instability. These risks are greater in emerging markets.

High-yield bonds are not suitable for all investors. The risk of default may increase due to changes in the issuer's credit quality. Price changes may occur due to changes in interest rates and the liquidity of the bond. When appropriate, these bonds should only comprise a modest portion of your portfolio.

Investing in small- and mid-cap stocks are riskier investments which include price volatility, less liquidity and the threat of competition.

Not FDIC or NCUA Insured • No Bank Guarantee • May Lose Value

BROAD ASSET CLASS RETURNS

U.S. EQUITY | Russell 3000 Total Return Index: This index represents 3000 large U.S. companies, ranked by market capitalization. It represents approximately 98% of the U.S. equity market. This index includes the effects of reinvested dividends.

NON-U.S. EQUITY | MSCI ACWI Ex USA Net Return Index: The index is a market-capitalization-weighted index maintained by Morgan Stanley Capital International (MSCI) and designed to provide a broad measure of stock performance throughout the world, with the exception of U.S.-based companies. The index includes both developed and emerging markets.

GLOBAL REAL ESTATE | FTSE EPRA/NAREIT Global Net Return Index: This index is designed to track the performance of listed real estate companies and REITs in both developed and emerging markets. By making the index constituents free-float adjusted, liquidity, size and revenue screened, the series is suitable for use as the basis for investment products. Prior to 2009, this asset class was represented by the NASDAQ Global Real Estate Index.

CASH & CASH ALTERNATIVES | FTSE 3 Month U.S. Treasury-Bill Total Return Index: This index is a measurement of the movement of 3-month T-Bills. The income used to calculate the monthly return is derived by subtracting the original amount invested from the maturity value.

FIXED INCOME | Bloomberg Barclays Capital Aggregate Bond Total Return Index: This index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

COMMODITIES | Bloomberg Commodity Total Return Index: The index tracks prices of futures contracts on physical commodities on the commodity markets. The index is designed to minimize concentration in any one commodity or sector. It currently has 22 commodity futures in seven sectors. No one commodity can compose less than 2% or more than 15% of the index, and no sector can represent more than 33% of the index (as of the annual weightings of the components). The weightings for each commodity included in the Bloomberg Commodity Index are calculated in accordance with rules that ensure that the relative proportion of each of the underlying individual commodities reflects its global economic significance and market liquidity. Annual rebalancing and reweighting ensure that diversity is maintained over time.

DOMESTIC EQUITY RETURNS

LARGE GROWTH | Russell 1000 Growth Total Return Index: This index represents a segment of the Russell 1000 Index with a greater-than-average growth orientation. Companies in this index have higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values. This index includes the effects of reinvested dividends.

MID GROWTH | Russell Mid Cap Growth Total Return Index: This index contains stocks from the Russell Midcap Index with a greater-than-average growth orientation. The stocks are also members of the Russell 1000 Growth Index. This index includes the effects of reinvested dividends.

SMALL GROWTH | Russell 2000 Growth Total Return Index: This index represents a segment of the Russell 2000 Index with a greater-than-average growth orientation. The combined market capitalization of the Russell 2000 Growth and Value Indices will add up to the total market cap of the Russell 2000. This index includes the effects of reinvested dividends.

LARGE BLEND | Russell 1000 Total Return Index: This index represents the 1000 largest companies in the Russell 3000 Index. This index is highly correlated with the S&P 500 Index. This index includes the effects of reinvested dividends.

MID BLEND | Russell Mid Cap Total Return Index: This index consists of the bottom 800 securities in the Russell 1000 Index as ranked by total market capitalization. This index includes the effects of reinvested dividends.

SMALL BLEND | Russell 2000 Total Return Index: This index covers 2000 of the smallest companies in the Russell 3000 Index, which ranks the 3000 largest U.S. companies by market capitalization. The Russell 2000 represents approximately 10% of the Russell 3000 total market capitalization. This index includes the effects of reinvested dividends.

LARGE VALUE | Russell 1000 Value Total Return Index: This index represents a segment of the Russell 1000 Index with a less-than-average growth orientation. Companies in this index have low price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values. This index includes the effects of reinvested dividends.

DOMESTIC EQUITY RETURNS (CONT.)

MID VALUE | Russell Mid Cap Value Total Return Index: This index contains stocks from the Russell Midcap Index with a less-than-average growth orientation. The stocks are also members of the Russell 1000 Value Index. This index includes the effects of reinvested dividends.

SMALL VALUE | Russell 2000 Value Total Return Index: This index represents a segment of the Russell 2000 Index with a less-than-average growth orientation. The combined market capitalization of the Russell 2000 Growth and Value Indices will add up to the total market cap of the Russell 2000. This index includes the effects of reinvested dividends.

FIXED INCOME RETURNS

AGGREGATE BOND | Bloomberg Barclays US Agg Bond Total Return Index: The index is a measure of the investment grade, fixed-rate, taxable bond market of roughly 6,000 SEC-registered securities with intermediate maturities averaging approximately 10 years. The index includes bonds from the Treasury, Government-Related, Corporate, MBS, ABS, and CMBS sectors.

HIGH YIELD | Bloomberg Barclays US Corporate High Yield Total Return Index: The index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below.

CREDIT | Bloomberg Barclays U.S. Credit Total Return Index: The index measures the investment grade, US dollar-denominated, fixed-rate, taxable corporate and government related bond markets. It is composed of the US Corporate Index and a non-corporate component that includes foreign agencies, sovereigns, supranationals and local authorities.

SHORT-TERM BOND | Bloomberg Barclays US Govt/Credit 1-3 Yr Total Return Index: The index is the 1-3 year component of the Bloomberg Barclays U.S. Government/Credit Index. The Bloomberg Barclays U.S. Government/Credit Index covers treasuries, agencies, publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.

LONG-TERM BOND | Bloomberg Barclays US Govt/Credit Long Total Return Index: The index is a measure of domestic fixed income securities, including Treasury issues and corporate debt issues, that are rated investment grade (Baa by Moody's Investors Service and BBB by Standard and Poor's) and with maturities of ten years or greater.

MBS | Bloomberg Barclays US MBS Total Return Index: The index tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon and vintage.

TREASURY | Bloomberg Barclays US Treasury Total Return Index: The index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index.

U.S. TIPS | Bloomberg Barclays US Treasury US TIPS Total Return Index: The index includes all publicly issued, U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment grade, and have \$250 million or more of outstanding face value.

GLOBAL BOND EX U.S. | Bloomberg Barclays Gbl Agg Ex USD Total Return Index: The index provides a broad-based measure of the global investment grade fixed-rate debt markets, excluding the United States. Currency exposure is hedged to the US dollar.

T-BILLS | FTSE Treasury Bill 3 Mon Total Return Index: This index is a measurement of the movement of 3-month T-Bills. The income used to calculate the monthly return is derived by subtracting the original amount invested from the maturity value.

EMERGING MKT BOND | J.P. Morgan EMBI Plus Total Return Index: The index tracks total returns for traded external debt instruments (external meaning foreign currency denominated fixed income) in the emerging markets.

AGENCY | Bloomberg Barclays US Agency Total Return Index: The index includes native currency agency debentures from issuers such as Fannie Mae, Freddie Mac, and Federal Home Loan Bank. It is a subcomponent of the Government-Related Index (which also includes non-native currency agency bonds, sovereigns, supranationals, and local authority debt) and the U.S. Government Index (which also includes U.S. Treasury debt). The index includes callable and non-callable agency securities that are publicly issued by U.S. government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. government (such as USAID securities).

FIXED INCOME RETURNS (CONT.)

MUNICIPAL | Bloomberg Barclays Municipal Total Return Index: The index is a measure of the long-term tax-exempt bond market with securities of investment grade (rated at least Baa by Moody's Investors Service and BBB by Standard and Poor's). This index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and prerefunded bonds.

INTERNATIONAL EQUITY RETURNS

EMERGING MARKETS EASTERN EUROPE | MSCI EM Eastern Europe Net Return Index: The index captures large and mid cap representation across 4 Emerging Markets (EM) countries in Eastern Europe. With 50 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

EMERGING MARKETS ASIA | MSCI EM Asia Net Return Index: The index captures large and mid cap representation across 8 Emerging Markets countries. With 554 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

EMERGING MARKETS LATIN AMERICA | MSCI EM Latin America Net Return Index: The index captures large and mid cap representation across 5 Emerging Markets (EM) countries in Latin America. With 116 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

EMERGING MARKETS | MSCI Emerging Markets Net Return Index: This index consists of 23 countries representing 10% of world market capitalization. The index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalization in each of the 23 countries.

PACIFIC EX-JAPAN | MSCI Pacific Ex Japan Net Return Index: The index captures large and mid cap representation across 4 of 5 Developed Markets (DM) countries in the Pacific region (excluding Japan). With 150 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

UNITED KINGDOM | MSCI Pacific Ex Japan Net Return Index: The index captures large and mid cap representation across 4 of 5 Developed Markets (DM) countries in the Pacific region (excluding Japan). With 150 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

U.S. LARGE CAP | S&P 500 Total Return Index: The index is widely regarded as the best single gauge of large-cap U.S. equities. There is over USD 7.8 trillion benchmarked to the index, with index assets comprising approximately USD 2.2 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

JAPAN | MSCI Japan Net Return Index: The index is designed to measure the performance of the large and mid cap segments of the Japanese market. With 319 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.

FOREIGN DEVELOPED MARKETS | MSCI EAFE Net Return Index: This index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada. The index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalization in each of the 21 countries.

EUROPE EX UK | MSCI Europe Ex UK Net Return Index: The index captures large and mid cap representation across 14 Developed Markets (DM) countries in Europe. With 337 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across European Developed Markets excluding the UK.

EQUITY SECTOR RETURNS

ENERGY | S&P 500 Sec/Energy Total Return Index: The S&P 500® Energy Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Energy sector.

MATERIALS | S&P 500 Sec/Materials Total Return Index: The S&P 500® Materials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Materials sector.

UTILITIES | S&P 500 Sec/Utilities Total Return Index: The S&P 500® Utilities Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Utilities sector.

INFO TECH | S&P 500 Sec/Information Technology Total Return Index: The S&P 500® Info Tech Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Info Tech sector.

EQUITY SECTOR RETURNS (CONT.)

CONS STAPLES | S&P 500 Sec/Cons Staples Total Return Index: The S&P 500® Consumer Staples Index comprises those companies included in the S&P 500 that are classified as members of the GICS® consumer staples sector.

INDUSTRIALS | S&P 500 Sec/Industrials Total Return Index: The S&P 500® Industrials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Industrials sector.

TELECOM | S&P 500 Sec/Telecom Services Total Return Index: The S&P 500® Telecom Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Telecom sector.

HEALTH CARE | S&P 500 Sec/Health Care Total Return Index: The S&P 500® Health Care Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Health Care sector.

S&P 500 | S&P 500 Total Return Index: The index is widely regarded as the best single gauge of large-cap U.S. equities. There is over USD 7.8 trillion benchmarked to the index, with index assets comprising approximately USD 2.2 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

CONS DISC | S&P 500 Sec/Cons Disc Total Return Index: The S&P 500® Consumer Discretionary Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Consumer Discretionary sector.

REAL ESTATE | S&P 500 Sec/Real Estate Total Return Index: The S&P 500® Real Estate Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Real Estate sector.

FINANCIALS | S&P 500 Sec/Financials Total Return Index: The S&P 500® Financials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Financials sector.

MISC.

STOXX 600 | The STOXX Europe 600 Index is derived from the STOXX Europe Total Market Index (TMI) and is a subset of the STOXX Global 1800 Index. With a fixed number of 600 components, the STOXX Europe 600 Index represents large, mid and small capitalization companies across 17 countries of the European region: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

CAC 40 | The CAC 40® is a free float market capitalization weighted index that reflects the performance of the 40 largest and most actively traded shares listed on Euronext Paris, and is the most widely used indicator of the Paris stock market. The index serves as an underlying for structured products, funds, exchange traded funds, options and futures.

DAX | The DAX® index, the best known German stock exchange barometer, measures the performance of the 30 largest and most liquid companies on the German stock market. It represents around 80 percent of the market capitalization of listed stock corporations in Germany.

NIKKEI 225 | Japan's Nikkei 225 is a price-weighted index comprised of Japan's top 225 blue-chip companies traded on the Tokyo Stock Exchange. The Nikkei is equivalent to the Dow Jones Industrial Average Index in the United States.