Macro Allocation Fund

William Blair

Investment Review

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Risks:

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- **Macro Allocation is positioned cautiously in respect of systematic market risk (beta) and overall strategy risk as compared to the long-term expected averages.**
- **The near-term macro environment still presents risks that mitigate the attractiveness of fundamental opportunities across the opportunity set.**
- **Unsystematic market and currency exposures have been the dominant drivers of recent performance.**

Performance Summary

The Macro Allocation Fund completed the quarter with positive performance, with both aggregate market and currency exposures adding value. Within markets, the portfolio benefitted from relative exposures within emerging equities and sector positioning within U.S. equity. Negative contributors to performance in the market strategy were long exposures to Europe and Singapore equities. Within currencies, long exposure to the Turkish lira and Indian rupee added value, while long exposures in the Mexican peso and Colombian peso and short exposure in the Indonesian rupiah detracted.

Strategy Positioning

Market strategy remains long of equities, with an effective exposure of +16%, with net exposure being reduced slightly during the quarter. The strategy's largest risk exposures remain in developed Europe, U.K., and emerging equities. Market strategy is short of fixed income with a net exposure of -8%, with short exposure primarily in European government bonds.

Within currencies, strategy remains long of emerging currencies such as the Turkish lira, Philippine peso, and Indian rupee with the largest short positions in the Thai baht, Swiss franc, and New Zealand dollar.

Strategy Review and Outlook

Global equity prices fell in the fourth quarter. After declining almost 10% in October (measured by the MSCI ACWI, hedged into U.S. dollars), markets stabilized in November but then renewed their sell-off into December. Many equity markets ended the quarter with double-digit negative returns and, with very few exceptions, were down for the year. Among equity sectors, more defensive (value-oriented) areas including utilities and real estate outperformed growth-sensitive sectors such as information technology and consumer discretionary in the quarter. The energy and financial sectors remained relative underperformers. Emerging equities as a whole suffered less than developed markets in the quarter, with some significant differences among countries (such as in Brazil, where the market was strong, and Mexico, which performed particularly poorly). Bond yields declined modestly amid equity weakness—the returns for 2018 from the Barclays Global Aggregate Bond Index (hedged into U.S. dollars) posted a small (lower than cash) positive return. In currencies, sharp rebounds from earlier extreme weakness enabled the Turkish lira and Argentine peso to be the strongest currencies in the fourth quarter (inclusive of carry yield), reducing what had been a very large divergence in performance year-to-date. The U.S. dollar gained modestly against most other currencies in the quarter, and has also done so for the year. However, the strongest currency in our investment universe, in contrast to its equity market, was the Mexican peso, underscoring the importance of separating currency exposure from market exposure and accepting only that which is desired.

We entered 2018 with a low or well-below-average level of equity exposure, or "systematic risk," in our portfolios, and we generally reduced it further as the year progressed. In addition to this low equity beta posture, we have for some time owned additional protection from substantial market falls via put options in our strategies. Put options tend to reduce exposure to falling prices depending on where their exercise price is struck. Our put option exposures were struck below prevailing market prices ("out of the money"), meaning that the downside protection was and is expected to take effect in large market declines of more than 10%, hence the experience in the quarter was that this protection only mildly benefited our performance. However, we have retained the options positions, which are not all put options on equities, but also on high yield fixed income and some emerging currencies—prices that we anticipate will be positively correlated with falling equities in a large "risk-off" situation. This is because although significantly lower equity markets in general are not our base case (markets in aggregate are not fundamentally overvalued), we nonetheless are concerned that events could unfold to reveal severe vulnerabilities wrought by the removal of ultra-easy monetary policies, the proliferation of rules-based investment capabilities likely ill-equipped to weather a large market downturn, and our concerns about the lack of price-cushioning liquidity in such an event, all coupled with potentially harmful effects of myriad trading halts and "circuit-breakers" built into many market exchanges. We have delineated these four concerns in the past—in both blog posts and our recent "Navigating a Troop of Gorillas" paper—and therefore will not repeat them here.

Although 2018 did not witness a full-blown bear market in global stocks (defined as a fall of 20% or more), the down moves in the first and the fourth quarter may serve as a warning of such a market environment ahead. We avoided capturing the negative returns associated with the 2018 bouts of weakness and anticipate that the portfolios are not at great risk of downside beta capture looking forward. This is not only due to keeping our systematic market risk low (and protected via options), but also because we have tended to take investment risk in uncorrelated areas (non-systematic market risk) and in currencies. Despite being diversified away from sensitivity to market direction, these non-systematic and currency opportunities proved to be a challenge—and a drag on performance—in the middle two quarters of the year. But they were rewarded during the first quarter's pullback beginning at the end of January and have been rewarded significantly in the latest quarter, as global markets headed lower beginning in October. Our long exposure in the Turkish lira, which moved very far from fundamental value in the third quarter, was one of the largest positive contributors to performance from September onward. We increased the lira exposure in August because despite the severe adverse impact on the currency of President Erdogan's verbal interference in the operations of the central bank (Erdogan strongly and publicly favored easing monetary policy in the face of rapidly increasing inflation, in direct opposition to market orthodoxy), we had concluded that the president's "fight" with the markets was one he could not win, and that he would have to retreat from his stance. Furthermore, because of Erdogan's rhetoric, the lira had become a very deeply undervalued currency with a very high positive interest rate carry, which together provided a strongly compelling currency opportunity of a magnitude seldom seen, though not completely unprecedented. In addition, the risks, though considerable, were non-systematic: the lira's woes were wrought by specific developments in Turkey, not linked to any wider market influence, and not replicated elsewhere in our investment landscape. Again, this was underlined by the performance impact of lira exposure being uncorrelated with market direction: negative when global equities were relatively buoyant, and positive when they declined in price. As the lira rebounded, we partly reduced our long exposure in October, but the position remains significant.

In the realm of non-systematic market exposures, our relative equity sector positions have also provided diversification from systematic market direction, as the sectors we find unattractive (IT, consumer discretionary, communication services) have tended to be underperformers in environments of market weakness, while ones we find attractive (utilities, staples) have outperformed at such times. Sector contribution to performance was positive in the latter months of the year, but had been adverse for much of the year prior. We trimmed our utilities exposure in late October following the sector's outperformance, which resulted in a slight narrowing of forward-looking opportunity. Our long exposures in energy and financials (also fundamentally attractive sectors) have yet to be significantly rewarded. The fundamental opportunity across sectors remains significant, and we anticipate it will continue to provide macro diversification in a potential environment of global equity weakness should that transpire.

We also made some changes to our country-level equity exposures. We had reduced long exposure to Brazil (fundamentally attractive) in advance of the county's presidential election, but following this event (won by Jair Bolsonaro) we re-increased the position in several steps. Brazil is now among our largest long equity exposures in the portfolio, across developed and emerging markets. Although Bolsonaro imparts some populist risks to public policy, our assessment is that his economic plans are likely to be generally positive and market friendly, and his appointed finance minister is well respected. The Brazilian economy is recovering from a long and deep recession in 2015 and 2016, and thanks to the "Lava Jato" federal investigation into corruption, we believe that the direction of change in institutional quality and governance in the country is positive, albeit from a reasonably low base.

Contrastingly in Italy, where the populist coalition government is in confrontation with the European Union over the magnitude of fiscal spending, we reduced our equity exposure to flat. In Europe, our favored market exposures are now in Spain, France, the United Kingdom, and Greece. But we also reduced long exposure to the United Kingdom at the end of November while simultaneously cutting back our position long of the U.K. currency (GBP). Both the U.K. equity market and the currency remain below fundamental value, but political risks have risen—as we anticipated they would—as the timetable prescribed for the United Kingdom to exit the European Union has approached its end. The risk in respect of Brexit is that insurmountable disunity within the U.K. parliament may result in a disorderly "crash out" that represents a large negative hit to growth prospects. Our base expectation is for a much more moderate exit, but parliamentary agreement on this is currently hard to observe, which is a near-term headwind against an otherwise attractive U.K. exposure.

Our longer-term investment objective is to deliver positive investment returns above inflation through a market cycle. We remain grounded in fundamental valuation as our first step—we strive to take only compensated risks and are unwilling to extend exposures unduly in a reach-for-yield that would be dictated not by opportunities and risks, but by very low real interest rates. There will be environments in which we conclude that macro markets do not provide returns and risks compatible with portfolio objectives alongside other periods where compensation is abnormally high. During the last decade, the challenge of navigating these evolving environments has remained a significant component in the investment landscape, but we find our investment process, dialogue, and decision-making well-equipped to meet this challenge in an appropriate way. We remain vigilant as we assess new and relevant information to capture future investment opportunities in a timely manner and will continue balancing the relationship between risk taken and compensation expected.

Investment Performance for Periods ended 12/31/2018	3 Months	1 Year	3 Year	5 Year	Since Incept.*	Since Incept.**
Macro Allocation Fund (WMCJX) Institutional Class	2.95%	-0.94%	2.30%	0.73%	1.07%	--
Macro Allocation Fund (WMCIX) Class I	2.90%	-1.08%	2.19%	0.62%	--	4.59%
Macro Allocation Fund (WMCNX) Class N	2.87%	-1.30%	1.89%	0.34%	--	4.31%
BofA Merrill Lynch 3-Month U.S. Treasury Bill Index	0.56%	1.87%	1.02%	0.63%	0.61%	0.47%
HFRI Macro Discretionary Thematic Index	0.39%	0.47%	0.26%	-0.04%	0.06%	0.49%
U.S. CPI + 5%					6.52%	6.52%

* Inception: 10/21/2013
**Inception: 11/29/2011

Expense Ratios:

	Gross	Net
Institutional	**1.08%**	**1.08%**
Class I Shares	**1.18%**	**1.18%**
Class N Shares	**1.53%**	**1.47%**

Expenses shown are as of the most recent prospectus and include acquired fund fees and expenses. The net expense ratio reflects that the Fund's Adviser has contractually agreed to waive fees and/or reimburse expenses to limit fund expenses until 4/30/2019. The investor will pay the net expense ratio. The Adviser has contractually agreed to limit the Fund's operating expenses (excluding acquired fund fees and expenses, borrowing costs, brokerage commissions, taxes, other investment-related costs and extraordinary expenses) to 1.25% of average daily net assets for Class N shares until 4/30/2019. Please refer to the Fund's Prospectus for more information on the Fund's expenses.

Performance cited represents past performance. Past performance does not guarantee future results and current performance may be lower or higher than the data quoted. Returns shown are since inception total returns, which assume reinvestment of dividends and capital gains. Investment returns and principal will fluctuate with market and economic conditions and you may have a gain or loss when you sell shares. For the most current month-end performance information, please call 1-800-742-7272, or visit our Web site at www.williamblairfunds.com. Class N shares are available to the general public without a sales load. Institutional Class and Class I shares are available to certain institutional investors.

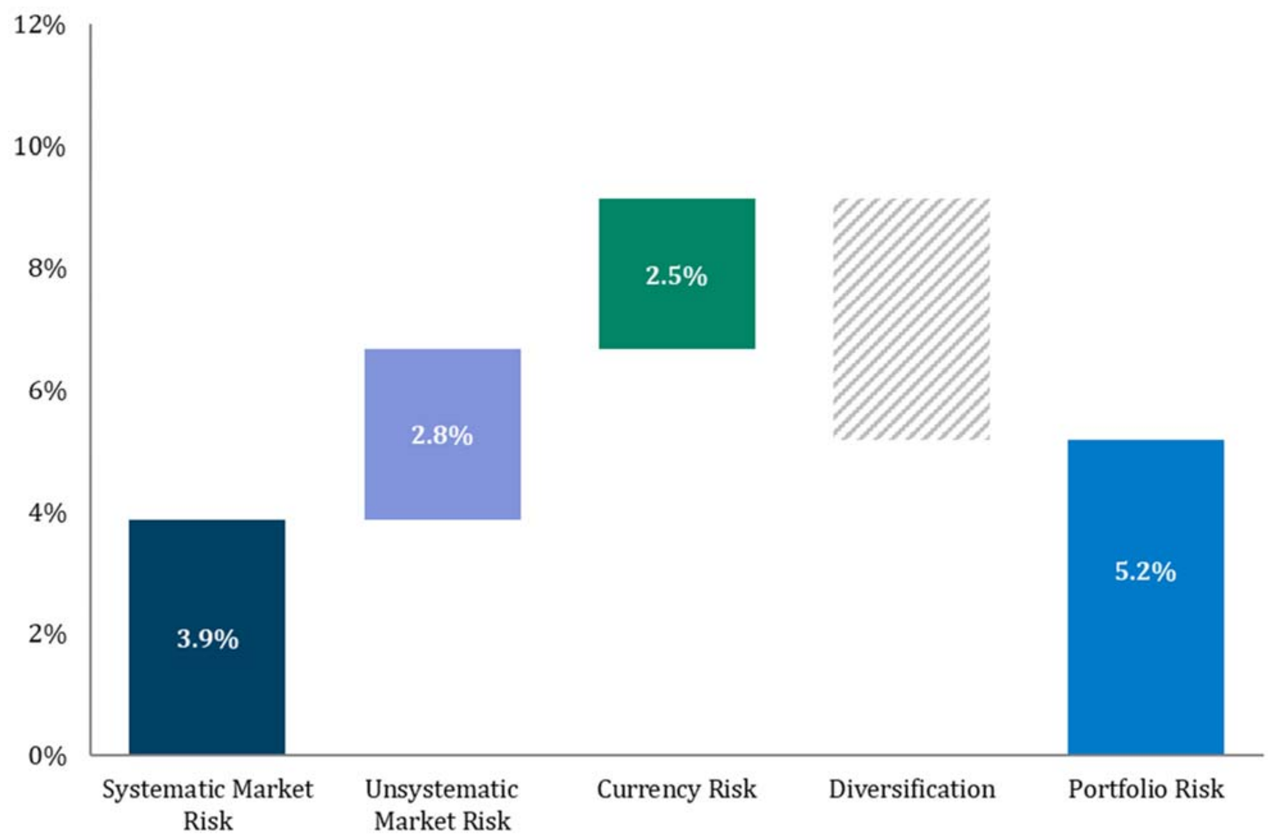
The BofA Merrill Lynch 3-Month U.S. Treasury Bill Index measures total return on cash, including price and interest income, based on short-term government Treasury Bills of about 90-day maturity. The index is unmanaged, does not incur fees or expenses, and cannot be invested in directly. The U.S. CPI + 5% is not a benchmark but is included as supplemental reference as the long-term return objective. The HFRI Macro Discretionary Thematic Index includes hedge fund strategies primarily reliant on the evaluation of market data, relationships and influences, as interpreted by an individual or group of individuals who make decisions on portfolio positions; strategies employ an investment process most heavily influenced by top down analysis of macroeconomic variables. Constituents are equally weighted and returns are reported net of underlying manager fees. The index is unmanaged and cannot be invested in directly.

The below table shows the calculated regional performance attribution of the Macro Allocation Fund by asset segment for the quarter.

Macro Allocation Q4 2018	Equity	Rates	Credit	Currency	Residual / Other	Total
North America	0.98%	0.66%	-0.21%	0.00%		**1.43%**
Developed Europe	-1.34%	-0.20%	-0.02%	0.13%		**-1.43%**
Developed Asia (ex Japan)	-0.26%	0.00%	0.00%	0.02%		**-0.24%**
Japan	0.36%	0.00%	0.00%	0.18%		**0.54%**
Emerging Markets	0.36%	0.00%	0.00%	2.43%		**2.79%**
Multi-Region	0.00%	0.00%	0.00%	0.00%		**0.00%**
Residual/Other						**-0.22%**
Total	**0.11%**	**0.47%**	**-0.23%**	**2.75%**	**-0.22%**	**2.87%**

Past performance does not guarantee future results. Portfolio exposures and attribution are based on the Macro Allocation Fund (Class N). Performance attribution is sourced from Cloud Attribution Ltd. Using the Karnosky-Singer performance attribution methodology.

The below chart shows the expected sources of investment risk* for the Macro Allocation Fund.



Source: William Blair
*The DAS team's expectation of the portfolio's volatility as viewed through the team's proprietary Outlook risk model, in which the team's near-term risk assumptions are quantified.

The detail below shows selected market and currency strategy exposures of the Macro Allocation Fund as of quarter-end.

Equity	**16.4%**
U.S.	0.1%
Canada	-3.6%
Europe (ex-U.K.)	2.8%
UK	2.5%
Asia Developed	1.3%
Emerging	13.3%

Fixed Income	**-7.7%**
U.S. Treasury & Credit[1,*]	0.5%
Non-U.S. Treasury & Credit[1,*]	-9.0%
Emerging	0.8%

Unencumbered Cash	**30.0%**

Active Currency	
U.S. Dollar (USD)	-9.3%
Canada Dollar (CAD)	0.0%
Other Americas	11.5%
Euro (EUR)	-6.0%
Switzerland Franc (CHF)	-9.0%
Great Britain Pound (GBP)	3.0%
Other Europe	1.5%
Australia Dollar (AUD) and New Zealand Dollar (NZD)	-11.0%
Japan Yen (JPY)	6.0%
China Yuan (CNY)	-2.9%
Asia (Excluding JPY and CNY)	2.2%
Other	14.0%

***Credit Detail**	
U.S. Investment Grade Spread	*3.1%*
U.S. High Yield Spread	*1.2%*
U.S. MBS Spread	*-0.1%*
European Investment Grade Spread	*2.2%*
European High Yield Spread	*0.0%*

***Select Exposures Detail**[2]	
Turkish Lira (TRY)	*10.0%*
Philippine peso (PHP)	*10.6%*
Indian rupee (INR)	*8.4%*

[1]Reflected as 10-year exposures

[2]Select currency exposures by largest expected contribution to portfolio risk

Not intended as investment advice. Allocations are subject to change without notice.

This section provides additional commentary relating to the strategy changes within the Macro Allocation Fund during the quarter.

3 October 2018: Increasing U.S. dollar (USD), South African rand (ZAR), Russian ruble (RUB) and decreasing Turkish lira (TRY)

From a fundamental valuation perspective, the Turkish lira (TRY), South African rand (ZAR), and Russian ruble (RUB) remain fundamentally attractive. While TRY remains fundamentally attractive, the decrease in exposure and addition of the U.S. dollar (USD) are driven by the "Why" stage of our process. The primary "Why" stage headwind that has been negative for TRY is the adverse combination of (i) high and rising inflation (which is itself exacerbated by prior TRY weakness) and (ii) the very unorthodox opposition of Turkish president Recep Tayyip Erdogan to the central bank's use of high interest rates to combat inflation. On 3 October, new inflation data was again sharply higher such that even the September rate increase looks insufficient. As a result, market participants have started to call for and price in expectations of a further rate increase when the TCMB next sets policy on 25 October. Given the adverse dynamic of presidential opposition to high interest rates, our suspicion is that the TCMB will be reluctant to increase interest rates again so soon. Accordingly, given evolving market expectations compared to our anticipation, we perceive an asymmetric short-term risk that TRY could again weaken as the market "tests" the resolve of the TCMB, against a relatively lower likelihood that TRY makes near-term gains. This strategy change decreases currency risk.

11 October 2018: Increasing U.S. credit convexity

From a fundamental valuation perspective, the U.S. high yield bond market is priced close to fair value, with a mildly attractive credit spread and an unattractive nominal rate component. However, the implied volatility of high yield credit (measured via an ETF) is attractive. Buying put options on high yield is very attractive since it gives our strategy convexity with respect to a market where liquidity can be erratic. In addition, high yield bonds by nature have a concave profile and can experience significant downside when the economic cycle turns. This positioning corresponds to our desire to slowly increase convexity as we progress further in the late business cycle. This strategy change slightly reduces portfolio risk.

11 October 2018: Increasing Brazil equity, Brazilian real (BRL) and decreasing Italy equity, U.S. dollar (USD)

From a fundamental valuation perspective, Brazilian and Italian equity markets remain attractive. This change is motivated by our assessment of Conventional Wisdom in the "Why" stage of our process. In Italy, the populist government coalition of the 5-star and Lega parties are implementing a budget that should result in a 2.4% deficit for 2019, well above the 0.8% deficit target that was initially planned. On 7 October, Brazilian presidential front-runner, Jair Bolsonaro, received a fairly strong victory in first round elections. We see Bolsonaro's potential election as one of the most beneficial outcomes of the Brazilian election for economic growth going forward due to his pursuit of market-friendly reforms and privatizations. This strategy change is neutral to portfolio risk.

18 October 2018: Increasing Brazil equity

From a long-term fundamental valuation perspective, Brazil equity remains among the most attractive markets globally. On 7 October, Brazilian presidential front-runner, Jair Bolsonaro, received the strongest support in first round elections. More recently, we have seen polls continue to affirm Bolsonaro's lead over Haddad ahead of the final round of voting on 28 October. We see Bolsonaro's likely election as one of the most beneficial outcomes of the presidential election for economic growth going forward due to his pursuit of market-friendly reforms and privatizations. We also believe economic policy will be driven to a large extent by his appointee as Finance Minister, Paulo Guedes, who is a knowledgeable reformist. In addition, the Lava Jato corruption probe has changed expectations of impunity in Brazilian politics. This is a positive institutional development, which we anticipate will lead to faster growth in Brazil thanks to better-functioning politics. The strategy change slightly increases portfolio risk.

23 October 2018: Decreasing Italy and Spain equity

From a fundamental valuation perspective, both Italy and Spain remain among the more attractive markets globally. This strategy change is not motivated by fundamental value considerations but rather driven more by macro headwinds from our "Why" stage. The Populism theme remains a headwind for European markets broadly and particularly for those with heavy weightings in financials. In Italy, this headwind is most acute with the populist government of 5-star and Lega due to a budget implementation that should result in a 2.4% deficit for 2019, well above the 0.8% deficit target that was initially planned. This strategy change slightly decreases portfolio risk.

26 October 2018: Intra-U.S. equity change

From a fundamental valuation perspective, the aggregate U.S. equity market remains slightly unattractive. However, on a relative basis—across sectors—we continue to see some notable divergence. Specifically, the utilities sector remains slightly attractive; however, its recent outperformance has been fairly pronounced and so the relative opportunity has narrowed. This outperformance has led us to reduce our exposure to U.S. utilities and offsetting it with a commensurate increase in U.S. equity. With respect to Conventional Wisdom, we have remained in an environment where U.S. growth continues to be a source of relative strength and stability on a global basis. However, the market is beginning to question the sustainability of this backdrop, particularly in light of guidance around future earnings expectations in the U.S., which have generally remained quite elevated. This strategy change is neutral to portfolio risk.

29 October 2018: Selling U.S. energy call options

From a long-term fundamental value perspective, the U.S. energy sector equity remains attractive on an absolute and a relative basis. The primary rationale for this change is our expectation that further upside to medium-term oil prices still appears unlikely. The 36-month price of oil remains above our longer-term equilibrium estimates. The confluence of our assessment of the Middle East game theater and the energy theme also suggest little further upside to near-term oil prices and much more likely an environment of "flat-to-down". This strategy change is neutral to portfolio risk.

29 October 2018: Increasing Brazil equity and decreasing U.S. equity

From a long-term fundamental valuation perspective, Brazil equity remains among the most attractive markets globally. On October 28, Jair Bolsonaro was voted the next president of Brazil with a wide margin, which makes us even more optimistic about Brazil's prospects. Longer-term, we believe that economic policy will be driven to a large extent by Bolsonaro's appointee as Finance Minister, Paulo Guedes, who is a knowledgeable reformist. As such, we maintain a more positive view of Bolsonaro as president than the market. This strategy change slightly increases unsystematic risk.

16 November 2018: Increasing Mexico equity

From a long-term fundamental value perspective, Mexico equity remains an unattractive equity market; however, after a notable sell-off, the valuation opportunity has narrowed. Since the election of Andres Manuel Lopez Obrador (AMLO), markets have now started to worry about the reality of AMLO pursuing populist, left wing policies he has promised. Recent moves, such as abolishing a project on Mexico City's New International Airport and setting a ban on banking commissions, are in line with what we expect from AMLO and the Conventional Wisdom has now moved closer to our view. This strategy change slightly increases total portfolio risk.

22 November 2018: Increasing U.S. investment grade credit convexity

From a long-term fundamental valuation perspective, the U.S. investment grade market continues to be priced close to fair value with a mildly attractive credit spread and an unattractive nominal rate component. We have observed that U.S. corporations used the low-rate environment since 2008 to increase their leverage. As a result, the average rating of the bonds in the U.S. investment grade market has deteriorated. As we move closer to the end of the current business cycle, forward-looking risks are becoming less benign. As we approach the end of a long economic cycle such leverage creates risks that we do not want to incur. This strategy change also corresponds to our desire to slowly increase convexity, as we progress further in the late business cycle. This strategy change decreases total portfolio risk.

29 November 2018: Increasing Swedish krona (SEK) and decreasing British pound (GBP)

From a long-term fundamental valuation perspective, the British pound (GBP) and Swedish krona (SEK) both remain moderately attractive. The reduction in long GBP exposure is primarily driven by geopolitical reasons from our second "Why" stage. For some time, we have regarded the political risks around Brexit as likely to be low for much of the period between the referendum and March 2019, but rising—perhaps sharply—towards the end. As a result of Prime Minister Theresa May's loss of majority in Parliament, she must now pursue approval for her Brexit deal without an absolute majority. At this stage, it remains highly unlikely that the UK will "crash out" of the EU; however, the risks of this event have risen with this development. Our central expectation remains that a "soft Brexit" outcome will prevail, possibly with some extension to the time frame but, in the meantime, the GBP remains exposed to these risks. This strategy change reduces currency risk.

29 November 2018: Increasing emerging market equity and decreasing UK equity

From a long-term fundamental value perspective, both UK and emerging market equities remain meaningfully attractive. With respect to the UK, we see Prime Minister Theresa May's proposed Brexit deal having a long road ahead with the loss of her party's majority in Parliament. Although we don't believe that the UK will "crash out" of the EU, we do recognize that this risk has become elevated due to this development. Most emerging market equities have been weak since the early part of the year driven in part by an early response to broad Conventional Wisdom that the combination of global economic activity and monetary accommodation was becoming less favorable. They have also been subjected to headwinds that we account for in two of our macro themes (China growth and Globalism vs. Protectionism) as well as the Asia Game Theater. This strategy change slightly increases total portfolio risk.

20 December 2018: Decreasing EMU equity

From a fundamental valuation perspective, most EMU equity markets are attractive on an absolute and relative basis globally. This change is primarily driven by risk considerations. We continue to manage our portfolio's exposure to downside risk. Given the most recent fall in EMU equity prices, we are decreasing our linear exposure consistent with a long option replication strategy we initiated in late October. In respect to macro risks, the Populism theme remains a headwind, particularly for European markets broadly and more so for those geared towards financials. Across the portfolio, we continue to maintain some modest downside convexity, including in EMU equity. This strategy change decreases total portfolio risk.

Glossary - Terms

Beta: A quantitative measure of the volatility of the portfolio relative to the overall market, represented by a comparable benchmark. A beta greater than 1 is more volatile than the overall market, while a beta less than 1 is less volatile, and could be expected to rise and fall more slowly than the market.

Risk (Standard Deviation): A measure of the portfolio's risk. A higher standard deviation represents a greater dispersion of returns, and thus a greater amount of risk. The annualized standard deviation is calculated using monthly returns.

Sharpe Ratio: A risk-adjusted measure calculated using standard deviation and excess return (Portfolio return – Risk Free Rate) to determine reward per unit of risk. The higher the Sharpe ratio, the better the portfolio's historic risk-adjusted performance.