MEKETA
INVESTMENT GROUP

Global Macro

WHITEPAPER
NOVEMBER 2022

CONTRIBUTORS
Jason Josephiac, CFA, CAIA
Ryan Lobdell, CFA, CAIA
Frank Benham, CFA, CAIA
Evan Gandler

Global macro strategies have been around for decades. While no two strategies are the same, this group of strategies has evolved over time and is characterized by a number of similar characteristics. First is the broad opportunity set in which they operate, which includes, equities, bonds, currencies, and commodities. Second is the strategies they employ in these respective universes. Third, and perhaps most important for many investors, is the return profile they generate.

Global macro managers tend to offer low correlation, lower volatility, and lower drawdowns relative to equities. While they have not typically kept up with equities during benign and bull markets, they tended to serve as a hedge against bear markets. This can make global macro a valuable investment strategy for a portfolio, especially when paired with other risk mitigating strategies.

Background

What is global macro?

Global macro strategies generally employ a top-down approach to investing, which starts by evaluating the overall global economic landscape, and then breaks it down by different countries, regions, and asset classes in order to develop investment ideas. This broad investment spectrum translates into a very large investable universe that, aside from liquidity restrictions, can include almost any tradable asset in the world. However, global macro managers have tended to gravitate toward equity indices, currencies, government bonds, interest rates, and commodities.

Global macro managers

The investment industry often divides global macro managers into two main groups according to their investment processes: discretionary and systematic.[1] Typically, discretionary funds are run by a single portfolio manager or team of portfolio managers who control and implement all investment decisions within a fundamental investment framework, where individuals, not computers, are responsible for the implementation of investment ideas, in addition to the evaluation of economic and financial information required to generate them in the first place. Discretionary funds may rely upon systematic models or frameworks to generate investment ideas, optimize portfolios, or complete trades, but the end decisions are viewed as discretionary.

[1] There are also funds that will implement a hybrid approach, combining systematic and discretionary strategies, though this is less common.

Systematic managers in contrast rely almost entirely on quantitative investment strategies in which computer models implement trades and investment decisions. While there is some amount of discretionary decision-making in setting up, creating, or researching the models, the end investment strategy is implemented systematically with minimal to zero discretionary intervention. They typically combine some blend of sentiment, momentum[2], fundamental, relative value, or carry strategies, in addition to other broad investment themes or trading strategies.

[2] Many in the industry categorize strategies dedicated to momentum (e.g., Managed Futures, CTAs) as a subset of systematic global macro, but we believe that the return profile and utility to an investor's portfolio of this group is unique, and hence we treat it separately.

Investable universe

Global macro investment managers have one of the broadest, if not the broadest, investable universes. Any asset that offers daily liquidity is potentially part of the opportunity set.[3] It is beneficial for managers to have such a wide array of tools at their disposal, as it gives them the liberty to express top-down global economic views using almost any liquid instrument imaginable. These instruments include direct ownership of stocks and bonds, and indirect ownership of most asset classes through derivative instruments such as futures, forwards, and options.

[3] Liquidity is important for global macro managers because it gives them the flexibility to quickly react to changes in macroeconomic conditions, in line with their generally top-down way of investing.

Sources of return

In this section, we describe some of the most popular types of trades implemented by global macro managers, to provide a better understanding of their sources of return and risks.

→ **Relative value/ arbitrage[4]:** These trades are usually the most common type found in global macro portfolios. Relative value implies simultaneously buying and selling a pair of assets (i.e., "pair trading") that are somewhat related, with the expectation that their valuation spread will either contract (i.e., a "convergence trade") or expand.

Relative value trades can take several forms and target many different objectives. For example: in equity, an investor could go long (i.e., buying) an industry sector and short the market with the expectation that the given sector will outperform the market. In fixed income, intra-curve relative value trades could involve being long a two-year bond and short a ten-year bond issued by the same government, to profit from an anticipated steepening of the yield curve.

While the essence of relative value trades is the same across different types of strategies and managers, the key distinction with regard to other strategies like relative value hedge funds, is whether such trades are implemented from the top-down or bottom-up. Global macro managers will often develop relative value trades at a "top-down" level, (e.g., equity index of a country relative to another, currency of a country relative to another, etc.) whereas other types of managers (including specifically relative value managers) tend to be more "bottom-up" focused (e.g., relative value of one US Treasury security versus another of a different maturity).

[4] Although the term arbitrage is sometimes used loosely in the investment industry to describe relative value/convergence trades, the true meaning of the term arbitrage refers to the instantaneous riskless profit obtained by buying and selling two assets that should trade at a similar value but currently do not. Most real-world *arbitrage* opportunities dissipate quickly and involve taking some sort of risk: liquidity, counterparty, valuation, etc.

→ **Mean reversion:** This approach refers to an outright long (short) position in an asset given the expectation that it will increase (decrease) in value over a given period of time.

These types of trades, which often are directional, may be less predominant in global macro portfolios during normal times, but they can have the highest allocations during times of market turbulence or crises. It is a widely held belief that market crises and crashes cause departures from equilibrium in the value of assets, so when a global macro manager has a thesis about a disruption in the market, they can establish outright long or short trades (i.e., directional) to capture the return to historical average of the asset's price or its perceived valuation equilibrium. In summary, relative value trades tend to be market neutral, while directional trades accept market risk.

Many prominent global macro managers earned their fame by successfully implementing directional trades that produced significant gains for their funds. George Soros earned notoriety by shorting the British Pound in 1992, forcing the UK to withdraw from the European Exchange Rate Mechanism.[5] During the Global Financial Crisis ("GFC"), Michael Burry bet against the housing market, an investment made famous by the book (and movie) *The Big Short*.

[5] This was the precursor to the Euro (currency).

→ **Carry:** One of the most popular macro trades, the carry trade, is a type of relative value or pair trade that involves shorting a security or currency with a low interest rate (e.g., the US dollar) and using the proceeds to go long a security or currency with a higher interest rate (e.g., the Brazilian Real). The carry trade can be implemented across asset classes but is most commonly implemented in currencies and fixed income.

The carry trade objective is two-fold: the first is to earn the spread between the two interest rates, and the second, which is perhaps most important for global macro managers, is to capture a widening spread (e.g., an expectation that the currency bought will appreciate against the currency sold). Managers may also engage in reverse carry trades by shorting a high yielding security and going long a security with low yield, in the expectation that the spread will contract.

The main risk for this trade is the same as in any pair trade - that the expected relationship reverses. For example, the currency bought might depreciate (rather than appreciate) against the currency sold to such a magnitude that it erodes the earnings of the yield spread. Furthermore, a carry trade is often implemented with several turns of leverage (e.g., 8 to 10 times), which helps magnify returns but can produce outsized losses if the trade is not managed appropriately.

- **Momentum:** This is one of the most commonly used models by many systematic macro managers, though it is also utilized by discretionary managers. Momentum refers to the practice of buying prior winners and selling prior losers with the expectation that the winners will continue to do well, and the losers will continue to perform poorly. This trade can be implemented across all the major asset classes.

  Momentum can be implemented using models with different time frames: short term can range from a matter of hours to less than a month; medium term (most common) is generally based on one-month to six-month signals; and long-term momentum looks at signals longer than six months. These strategies, as their name suggests, are most successful in trending markets, but can underperform during mean-reverting markets, especially when trends break. Furthermore, volatile yet trendless environments represent a potential risk for momentum strategies, as those environments can lead them to enter and exit trades continuously without gaining profits, resulting in losses and excessive transaction costs.

- **Long volatility:** Rather than a specific trade, long volatility refers to a strategic position that can be implemented through a wide array of trades. Most traditional assets, and especially equities, are "short volatility;" that is, they decline in value when market volatility increases. By having a positive exposure to the volatility of equities or bonds (i.e., they increase in value when volatility increases), these strategies can effectively hedge the negative performance of such assets during times of increasing volatility. However, this may come at the expense of trailing most assets or even experiencing losses during times of declining market volatility.

  A long volatility trade is usually implemented through options, and it implies buying puts or calls. A long position in an option, holding all else equal, is always favored by an increase in volatility,[6] hence the long volatility profile. As with other derivatives, options can also be used as return enhancers within the long volatility profile. For example, if a manager has a view that an asset's price will increase (decrease) in value, they can buy a call (put) that will give a long volatility profile as well as unlimited gains and limited losses.

[6] The volatility of the underlying asset is an input of the famous Black Scholes Merton option pricing model, and an increase in volatility, holding all else equal, generates an increase in the price of an option (either put or call), which translates into a positive return for the holder of a long position. This relationship holds true for all option pricing models.

Performance and characteristics of global macro strategies

Since 2001, global macro strategies have produced returns and exhibited levels of volatility that more closely resembles bonds than stocks (see Figure 1). Likewise, their max drawdown is more on par with bonds. Their historical defensive attributes are part of the reason why global macro strategies are attractive as diversifiers to traditional equity and bond portfolios.

	Discretionary Macro	Systematic Macro	MSCI ACWI	S&P 500	Bloomberg Agg
Annualized Return	2.6%	2.1%	6.4%	10.3%	3.0%
Standard Deviation	5.1%	6.0%	15.7%	15.2%	3.6%
Sharpe Ratio	0.66	0.37	0.24	0.34	0.76
Max Drawdown	-8.0%	-9.9%	-54.6%	-50.9%	-11.1%
Skewness	0.32	0.37	-0.62	-0.52	-0.49
Excess Kurtosis	0.57	0.90	1.62	1.09	1.14
Beta: MSCI ACWI	0.10	0.00	1.00	0.93	0.01

FIGURE 1
Trailing Period Returns and Risk

Source: HFRI for the period January 2001 – June 2022. Discretionary and Systematic Macro returns are all shown net of fees. Because of the way hedge fund indices are constructed, they are prone to biases in the data (e.g., self-reporting bias, survivor bias, etc.). Hence, historical returns and statistics based on them should be viewed with at least a little healthy skepticism.

In addition to volatility and drawdown, skewness and "excess" kurtosis[7] (two statistical metrics that characterize distributions of returns) illustrate that global macro strategies can behave quite differently than other asset classes such as equity and even fixed income.

Most investment portfolios are driven by equity returns, which have historically been volatile, negatively skewed, and with high excess kurtosis (i.e., larger and more common extreme negative events than a normal distribution). In contrast, global macro strategies have in general been less volatile,[8] positively skewed, and with lower excess kurtosis than equities. All of this means that while equities tend to be commonly[9] exposed to large negative tail events, global macro conversely has been more often exposed to positive tail events, with a smaller occurrence of extreme events in general.

Global macro strategies have exhibited very low correlations to equities and bonds, which, coupled with their stand-alone returns, should lead to diversification benefits when included in an equity and bond portfolio.

[7] Skewness refers to the symmetry of a return distribution. A normal distribution has no skewness because it is completely symmetric; there is equal probability for positive and negative tail events. However, a distribution with positive (negative) skew has higher than normal probability of experiencing positive (negative) tail events. Excess kurtosis on the other hand, refers to the size of the peak and tails of a distribution of returns relative to a normal distribution. A return distribution with positive (negative) excess kurtosis has larger (smaller) tails than a normal distribution, which means higher (lower) probability of experiencing tail events or extreme returns.

[8] Volatility is dampened for the index given the large amount of different approaches and number of managers; that is, volatility for individual managers can be much higher.

[9] At least more commonly than what a normal distribution would suggest.

	Discretionary Macro	Systematic Macro	MSCI ACWI	S&P 500	Bloomberg Agg
Discretionary Macro	1.00				
Systematic Macro	0.80	1.00			
MSCI ACWI	0.30	-0.01	1.00		
S&P 500	0.21	-0.07	0.96	1.00	
Bloomberg Agg	0.13	0.18	0.03	-0.01	1.00

FIGURE 2
Correlation of Global Macro to Equities and Bonds

Source: HFRI, Bloomberg & eVestment. Data is for the period January 2001 – June 2022.

Figure 3 shows that correlations go through cycles, with macro strategies' rolling correlations to equities topping out just before the GFC. It is worth noting that, because of their defensive nature, correlations typically decreased substantially during periods of equity drawdown (e.g., the GFC).

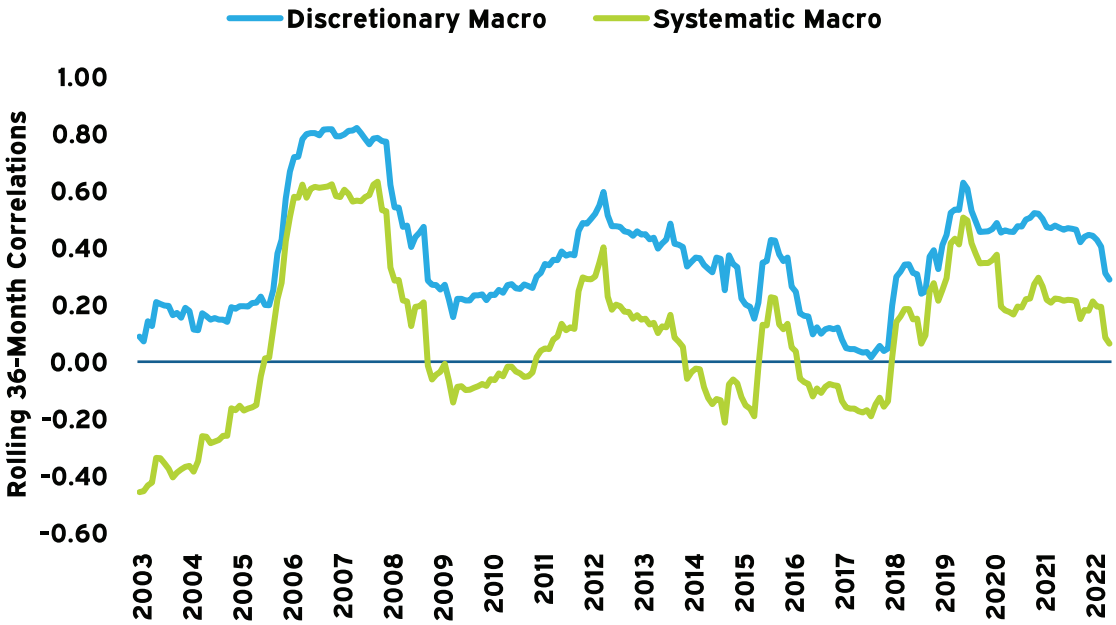

FIGURE 3
Rolling 36-Month Correlations to MSCI ACWI

Source: HFRI, Bloomberg & eVestment. Data is for the period January 2001 – May 2022.

Furthermore, global macro strategies have been historically effective at protecting returns during equity drawdowns, another defensive characteristic that is comparable to that of high quality bonds.

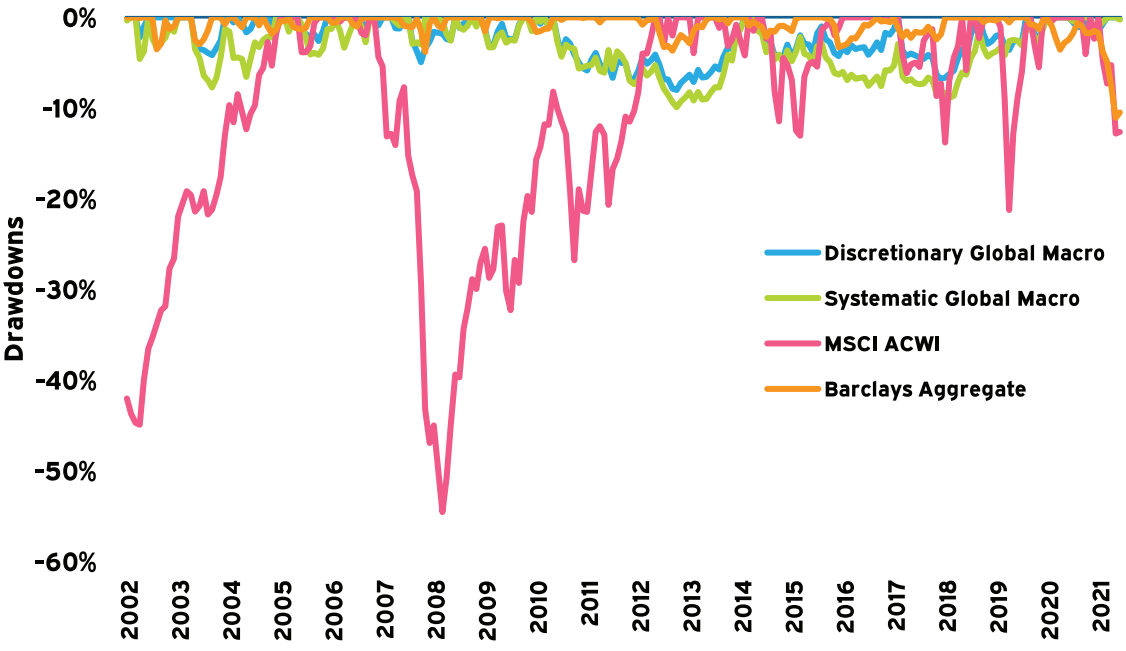

FIGURE 4
Drawdowns

Source: HFRI, Bloomberg & eVestment. Data is for the period January 2001 – May 2022.

Moreover, related to the earlier point about volatility and market disruptions, the chart below shows the performance of global macro, equities, and bonds at different volatility periods, as measured by the VIX index. There is a negative relationship between equity volatility levels and performance for equities. However, global macro strategies, similarly to fixed income, have historically been able to weather high volatility periods, though at the expense of muted performance in low or decreasing volatility periods. In summary, while high volatility is generally bad for equities, global macro strategies can serve as an effective portfolio hedge during such periods.

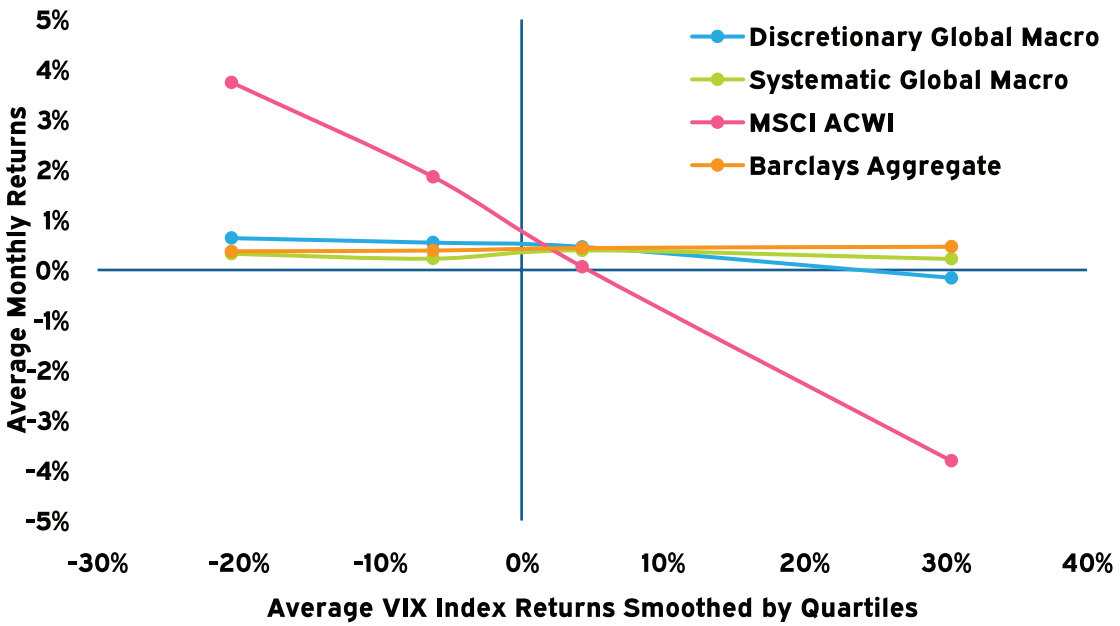

FIGURE 5
Performance by Volatility Quartiles

Source: HFRI, Bloomberg & eVestment. Data is for the period January 2001 – May 2022. Volatility is proxied by the VIX Index which measures the market expectations of volatility through S&P 500 index options.

Performance, a tale of volatility?

After reviewing some of the popular trades used by global macro managers, some periods are more favorable than others for global macro strategies. Managers (and computer models) implement trades based on economic views of market disruptions and imbalances, so deviations from perceived true value across the globe and in all instruments are the main sources of expected return.

This is where volatility comes into play. Volatility is usually seen as one of the main sources of risk for all finance assets. Although not directly observable like prices, volatility can also be high or low. When volatility is high and increasing, it usually signals times of turbulence and negative returns for most assets. Yet it is in an environment of high volatility that global macro managers may best perform. This is because disruptions to markets create an ideal framework for managers to implement trades that can profit from not just the disruptions, but from the return to fundamental value that should follow the disruptions in mean-reverting markets. It is their resilience during periods of volatility that can make global macro a valuable addition to a portfolio.

Implementation issues (fees, liquidity)

As of July 2022, the average management fee for commingled global macro strategies was 1.6%, with a wide range from 0.0% to 6.0%.[10] In addition, it is common for global macro strategies to charge a performance fee. The average performance fee is 18%, but there is a range from 0% to 30%. Operational costs also vary widely. Based upon our analysis, we anticipate operating costs to range between 0.1% and 0.4%, depending on the fund size and the type of strategy; systematic strategies may incur higher operating expenses if they require a more costly data and trading infrastructure. Typically, fees are negotiable depending on the size of the investment.

The majority of global macro managers offer commingled investment vehicles, although the market is seeing a rise in separately managed accounts (SMAs). Some global macro managers have also embraced the use of daily liquid mutual funds. Systematic Macro is most prevalent in the mutual fund offerings.

Liquidity for global macro managers ranges widely from daily-liquid Exchange Traded Funds to quarterly-open limited partnerships. The limited partnerships may carry various lock up or gate provisions based on the limited partnership agreement. The global macro manager may offer a more limited liquidity schedule in exchange for a lower management fee. Investors should be fully aware of illiquid securities used by or available to the individual manager, to gain perspective on the proper liquidity profile.

[10] Source: HFRI & eVestment. Strategies with low management fees may have higher than average performance fees.

Return dispersion issues

Global macro managers, as previously discussed, have a wide range of potential investments. Portfolios may vary dramatically by asset class, specific securities invested, and geographic exposure. Typically, global macro managers have the greatest amount of latitude of any active investment manager. The result is a significant amount of dispersion around the peer average and possibly the rest of an investor's portfolio. Figure 6 depicts the global macro peer universe relative to US large cap stocks and investment grade fixed income.

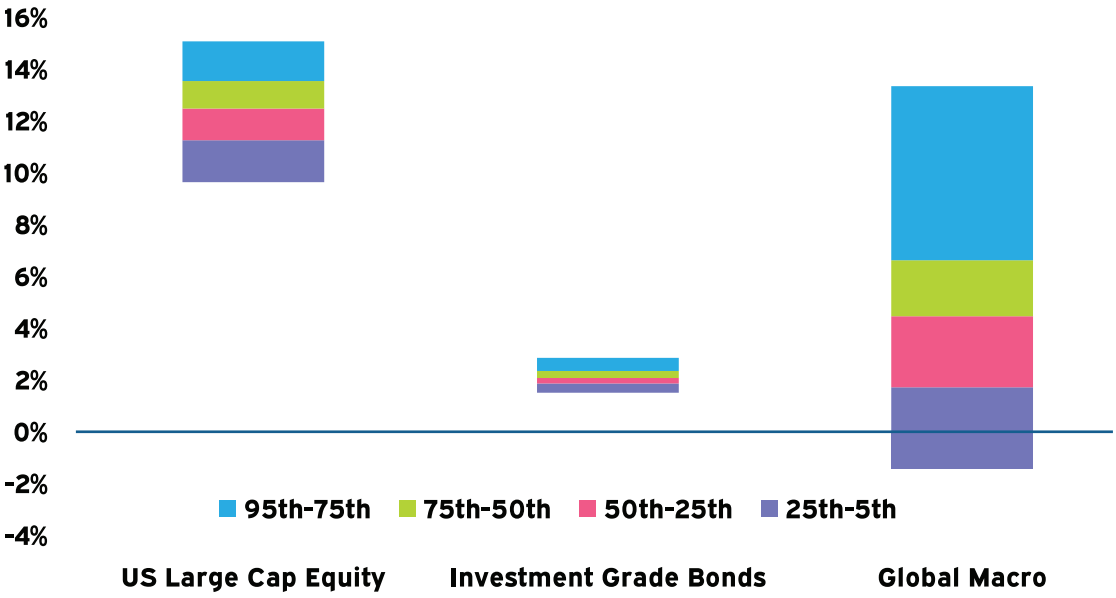

FIGURE 6
Manager Return Dispersion

Source: HFRI, eVestment. Represents 10-year annualized returns as of June 2022.

Allocating to global macro

As we have noted throughout this paper, global macro strategies can be valuable diversifiers to equity and bond portfolios. Their attractive defensive characteristics can provide benefits to an equity-driven portfolio. In particular, their low-to-negative correlation with equities combined with their positive skewness may serve as a hedge during extreme negative events, typically reducing downside risk in an overall portfolio.

Below, we provide general allocation guidelines for global macro strategies in investment portfolios, in the context of the most common allocation cases:

- Global macro as a stand-alone asset class: If global macro is considered as a stand-alone asset class in an institutional portfolio, it is usually allocated around 5% of the overall portfolio. As with any investment strategy, lower allocations make it difficult, or sometimes even impossible, for a strategy to have a material impact on a portfolio. In this case it would be important to have at least a 5% allocation to provide diversification benefits to portfolios with a high exposure to equities.

- Global macro as part of a balanced hedge fund program: When building a balanced hedge fund program that combines allocations to both directional and defensive strategies, global macro allocations can range from 10% to 50% of the hedge fund allocation, depending on the overall program objectives. As they do with other asset classes, global macro strategies can provide diversification benefits to more directional hedge fund strategies, such as long short equity and event driven, among others.

- Global macro as part of a defensive hedge fund program: when added to a defensive hedge fund program, global macro will often one of an array of strategies that work together to protect against the biggest risks that a typical investor's portfolio faces, namely, economic growth risk. Global macro allocations can range from 20% to 50% of a defensive hedge fund allocation.

Finally, given the high level of return dispersion in the asset class, investors may consider diversifying their global macro exposure by allocating to more than one manager. However, while the number of managers selected could be proportional to the size of the total global macro allocation, it is generally preferable to hold fewer managers. Similar to adding assets to a portfolio, the incremental diversification benefit of adding each new manager is often reduced as the number of managers already in the portfolio increases. Further, the extent to which the approach used by each global equity portfolio overlaps will also affect diversification.

Summary and conclusions

As the name of the strategy suggests, global macro managers make investment decisions based on the global macroeconomic landscape. Global macro managers typically have a very broad investable universe and are often able to employ a wide array of trades, such as carry, relative value, momentum, and others, in order to profit from perceived value disruptions in global markets.

Generally, global macro strategies have produced modest absolute returns, but attractive risk-adjusted returns, low correlations relative to equities, and tend to exhibit positive skew. Global macro strategies tend to provide diversification benefits when they are most needed, such as during turbulent or volatile markets for traditional assets such as equities. All these characteristics are attractive to investors looking to diversify an institutional portfolio that typically derives most of its risk and return from equity-like strategies.

Global macro strategies can be a valuable defensive tool for institutional investors. Due to their benefits, global macro merits evaluation for inclusion as an asset class in an equity-driven portfolio. In particular, we believe they can play a role within a broader RMS framework.

Disclaimers

This document is for general information and educational purposes only, and must not be considered investment advice or a recommendation that the reader is to engage in, or refrain from taking, a particular investment-related course of action. Any such advice or recommendation must be tailored to your situation and objectives. You should consult all available information, investment, legal, tax and accounting professionals, before making or executing any investment strategy. You must exercise your own independent judgment when making any investment decision.

All information contained in this document is provided "as is," without any representations or warranties of any kind. We disclaim all express and implied warranties including those with respect to accuracy, completeness, timeliness, or fitness for a particular purpose. We assume no responsibility for any losses, whether direct, indirect, special or consequential, which arise out of the use of this presentation.

All investments involve risk. There can be no guarantee that the strategies, tactics, and methods discussed in this document will be successful.

Data contained in this document may be obtained from a variety of sources and may be subject to change. We disclaim any and all liability for such data, including without limitation, any express or implied representations or warranties for information or errors contained in, or omissions from, the information. We shall not be liable for any loss or liability suffered by you resulting from the provision to you of such data or your use or reliance in any way thereon.

Nothing in this document should be interpreted to state or imply that past results are an indication of future performance. Investing involves substantial risk. It is highly unlikely that the past will repeat itself. Selecting an advisor, fund, or strategy based solely on past returns is a poor investment strategy. Past performance does not guarantee future results.